

## **What are the factors that influence the success of the BiSL framework for business information management?**

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### **Abstract**

*Business Information Services Library (BiSL) is a framework from Dutch origin that helps organizations shape Business Information Management. BiSL is not used by every organization in the Netherlands. The question is what moves organizations to start using BiSL or what motives do they have to reject the use of BiSL. The research question in this study is: What motivates the adoption (or non-adoption) of the BiSL Framework? To answer this question 18 interviews were conducted. The interviews have been held with organizations that do use BiSL and with organizations that do not use BiSL. Among the interviews were three interviews with experts in the field of BiSL. The conclusion of our research is that organizational readiness is the deciding factor to*

*use BiSL. To apply BiSL successfully there is a need of support, knowledge and a certain level of organizational maturity in business information management.*

**Keywords:** Business Information Management, BiSL framework, qualitative research, critical success factors, the Netherlands.

## 1 Introduction

In the 1990s work on the development of a framework for business information management was initiated. Several reasons for development of such a framework existed (Outvorst and Scholten, 2013):

- Organizations felt the need for structural governance and management of information and information technology (IT) due to the increasing importance and the rising cost of IT;
- Organizations that outsourced their IT felt the need to professionalize their remaining IT organization;
- Organizations were confronted with expensive investments in IT that in the end did not meet their expectations.

On the basis of experience and lessons from practice a framework for business information management, better known as the Business information Services Library (BiSL) was developed (Pols, Donatz and Outvorst, 2012). In 2005 the BiSL book was published and the BiSL framework was adopted by the ASL BiSL Foundation in which several large profit and not-for-profit organizations participate. Since the publication of the book, BiSL has become the Dutch industry standard for business information management.

Although this framework offers a lot of practical guidance to establish business information management in organizations, it seems that not everyone is adopting it and that there is some uncertainty about the contribution or value of the framework and the factors that may play a role in its successful use. Possible factors may be:

- BiSL is only successful when it fills certain gaps in the alignment between business and IT;
- Organizations are used to working with models, frameworks or standards, like Cobit5 (Isaca, 2012), ITIL (Bon, 2011) or TOGAF (The Open Group, 2009);
- Organizations recognize and understand the importance of IT;
- Organizations are only interested in international frameworks;
- Thinking about information and IT is mainly influenced by technology;
- Organizations are not familiar with the concept of demand and supply of information and information technology.

The main research question is therefore: What motivates the adoption (or non-adoption) of the BiSL Framework? In order to answer this main question the sub-questions are:

1. Why do organizations adopt BiSL?
2. Why do organizations not adopt BiSL?

3. When is BiSL regarded as being successful?
4. What are the critical success factors for application of BiSL?

The answers to the questions mentioned are to be used in further development of the BiSL framework.

After this introductory section the theoretical background of business information management is discussed. In section 3 the research method is described. The research findings are presented in sections 4, and the paper is finalized with the conclusions in section 5.

## **2 Theoretical background**

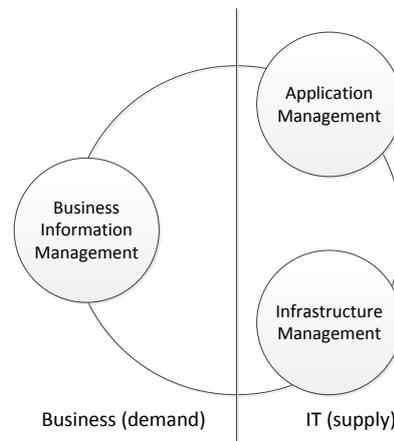
### **2.1 Organization of business information management**

The importance of information systems and information technology (IS/IT) for organisations is unquestionable. IS/IT is increasingly penetrating into the core of organisational performance and IT/IS usage is still growing (Azadeh, Keramati and Songhori, 2009). In general, the management of IS/IT is considered pivotal in ensuring successful use of information assets (Evans and Price, 2012). The scope of IS/IT management deals with a wide range of activities, starting with system initiation, through to design, realisation, system implementation and finally post implementation or system assimilation.

Important aspects of the way business information management is organized are the relationship between (senior) management and the user community on one hand and the management of change of IT on the other hand, with attention given to matters such as organisational alignment, the contribution of an information system to the performance of the organization, and other issues which have an impact on the working practices of individual employees (Booth and Philips, 2005; Liang et al., 2007; Orlikowski, 1992; Silvius, De Waal and Smit, 2009). The way business information management is organized can be explained by the following two indicators (Pols, 2009):

- a. **Business or IT:** Is business information management part of the business (demand side) or part of the IT department (supply side)? According to the model of Looijen and Delen (Looijen, 1998) there are three different domains: Infrastructure management, Application management, and Business information management. These domains are illustrated in Figure 1. In this model Business Information Management is positioned within the business and not within the IT department.
- b. **Centralized or decentralized:** Is business information management in an organisation centralized or decentralized? Centralized means that business information management is executed at one place and by only one single department. In this situation business information management takes care of multiple business units (Pols, 2009). Decentralized means that business information management is executed by multiple units within one organization. This usually means that there are several business information management departments throughout the organization which are responsible for the different divisions or staff departments (Pols, 2009). The choice to centralize or decentralize their business information management department is usually the

result of developments that happened in the past and not necessarily a choice that was based upon a clear vision (Goense-Van den Bosch and Donatz, 2008).



**Figure 1:** Model of Looijen and Delen

In the next section we shortly introduce the main concepts and processes of the BiSL framework.

## 2.2 BiSL Framework

The BiSL framework (Figure 2) divides business information management into three layers: The operational layer, the strategic layer and the managing layer (Pols, Donatz and Outvorst, 2012).

- Operational layer is concerned with the use and definition of the demand of the information or information systems;
- Managing layer is concerned with the profits, costs, contracts, and planning.
- Strategic layer is concerned with the long term plans for the information systems.

The BiSL framework is divided into seven clusters of processes. These clusters are shown in Figure 2.

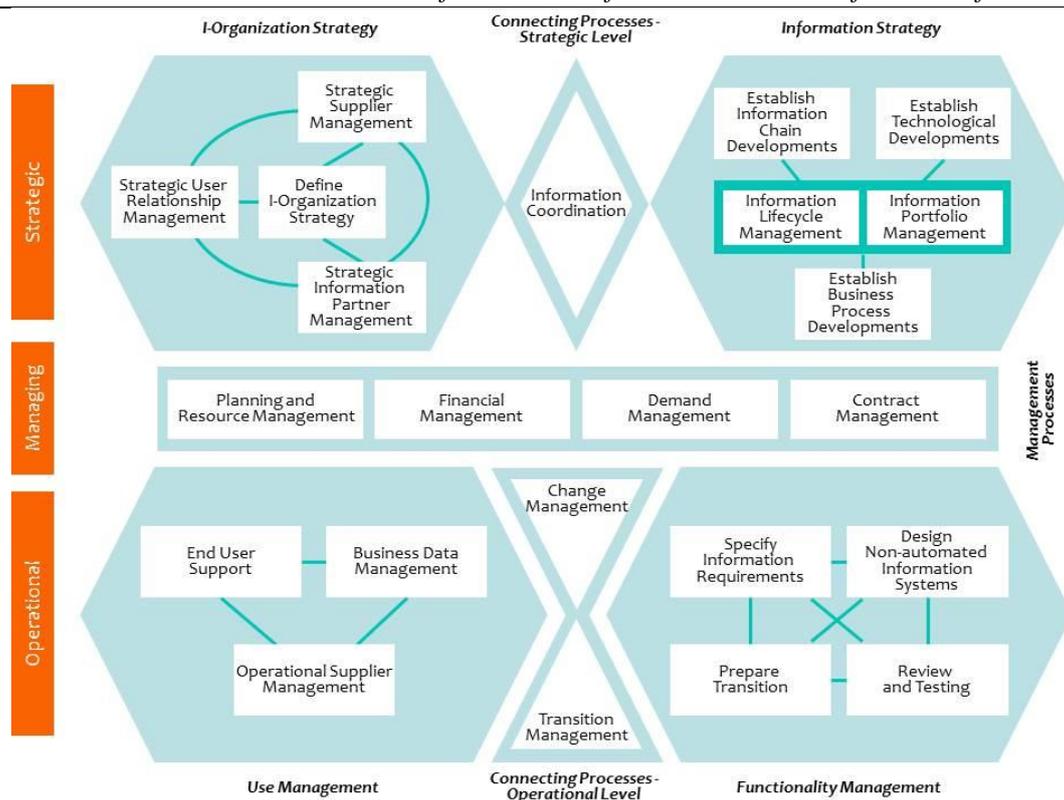
### *Process cluster 1: Use Management*

This cluster is build up with processes intended to create an optimal and continuous support for the user of the information system. It is about supporting the user in carrying out their tasks and managing the IT supplier (Pols, Donatz and Outvorst, 2012).

### *Process cluster 2: Functionality Management*

The process cluster functionality management describes the processes where changes are specified and carried out. The goal of this process cluster is to implement a change within the constraints defined while meeting the needs, goals and demands (Pols, Donatz and Outvorst, 2012).

## What are the factors that influence the success of the BiSL framework?



**Figure 2:** BiSL Framework (ASL BiSL Foundation, 2014)

### *Process cluster 3: Connecting Processes Operational Level*

In the third cluster the goal is to decide which changes will be realized. The other goal is to actually implement the change in the end user support (Pols, Donatz and Outvorst, 2012).

### *Process cluster 4: Management Processes*

The management processes initiate all BIM processes. The management processes monitor the activities in terms of costs, benefits, needs, contracts, service levels and planning (Pols, Donatz and Outvorst, 2012).

### *Process cluster 5: Information Strategy*

This cluster is to make sure the information technology is still relevant in the future when new demands are set. This cluster also solves the structural flaws in the current situation. Process cluster 5 is about formulating a long term information systems strategy. (Pols, Donatz and Outvorst, 2012).

### *Process cluster 6: I-Organization Strategy*

I-Organization strategy is about defining roles, responsibilities and forms of cooperation. Relevant parties need to agree about working structures, management and processes. (Pols, Donatz and Outvorst, 2012).

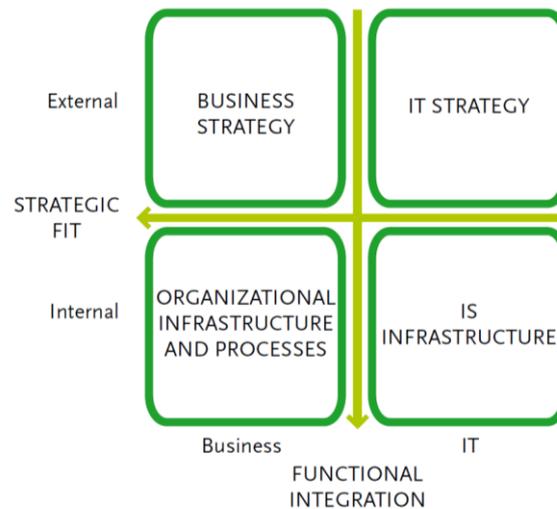
### *Process cluster 7: Connecting Processes Strategic Level*

Process cluster 7 connects the cluster of long term plans and policies for content and organization form. This connection requires a process by which all information plans by all different actors are aligned. (Pols, Donatz and Outvorst, 2012).

Just like other frameworks like ASL (Pols and Backer, 2006), ITIL (Bon, 2011) or CMM (Clerc and Niessink, 2004) the BiSL framework is a simplified reproduction of reality. BiSL can be used as a checklist or a tool for standardization. Apart from that best practices with experiences of different types of organizations are available (Bakker, 2014). BiSL requires a situational approach. That does not mean that BiSL can just be implemented by any organization when they feel like it. A vision about which parts from BiSL will be useful needs to be developed by the organization (Pols, Donatz and Outvorst, 2012).

### 2.3 Relationships with other frameworks and models

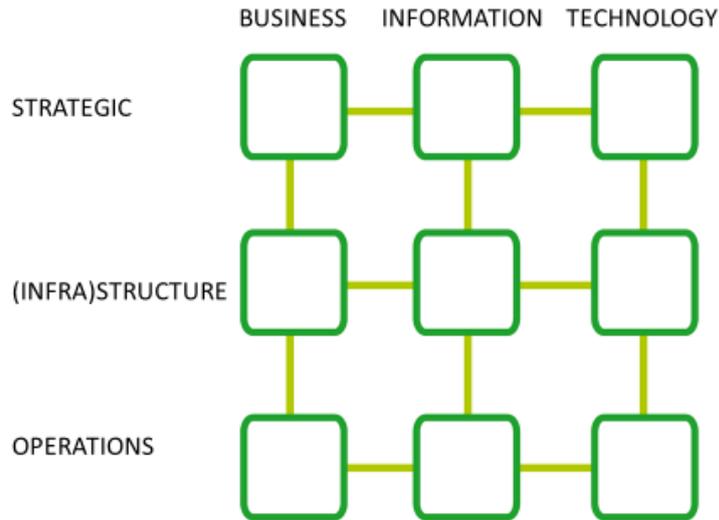
This section addresses the relationships between the BiSL framework and other relevant frameworks or models. Business information management is heavily influenced by the strategic alignment model of Henderson and Venkatraman (1993).



**Figure 3:** Strategic alignment model of Henderson and Venkatraman (from Van Bon, 2010)

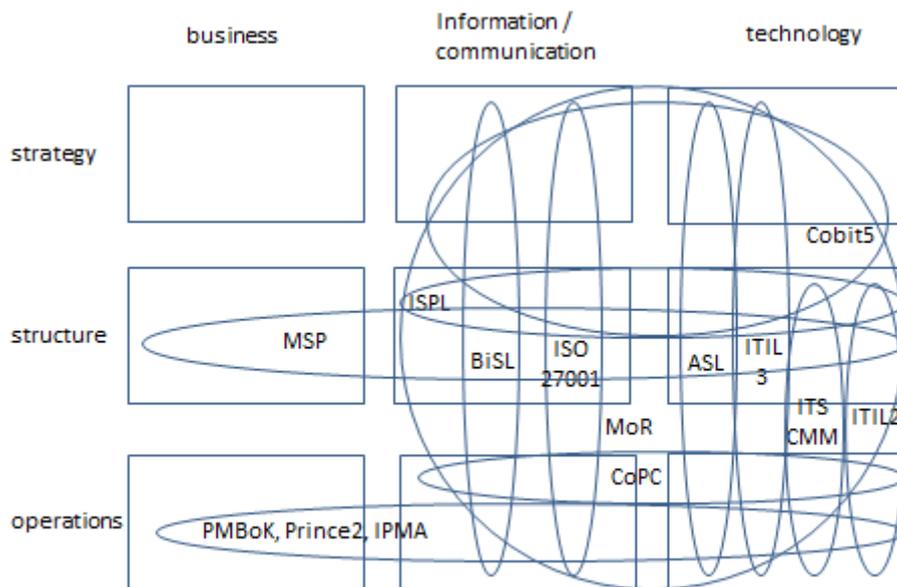
Henderson and Venkatraman (1993) recognize the dynamics and challenges in realizing a strategic fit between strategy and infrastructure and processes as well as a functional integration between business and IT.

In practice the distance between business and IT is fairly large, due to different responsibilities, different universes in which they operate and different languages they speak. In order to create connection between business and IT, business information management comes in place. A convenient way of looking at this connection is the Amsterdam Information management Model (AIM) or the Nine Square framework (Maes, 1999). This model is an extension of the model of Henderson and Venkatraman and basically offers connecting layers between internal and external focus and between business and IT. By doing this AIM can be used to identify a business information management column that is concerned with aligning use of IT and demand for IT on one hand with supply and implementation of IT services on the other hand. Also a tactical level can be identified which is concerned with aligning long term goals with short term actions and the present situation.



**Figure 4:** The Amsterdam Information management Model (from Van Bon, 2010)

Besides giving explicit attention to the various alignment areas within the overall business IT alignment, the model of Maes proves to be very convenient in comparing and positioning the different relevant models and frameworks that are used in the total area which stretches from corporate governance of IT to dealing with interruptions in IT services (see Figure 5).



**Figure 5:** The positions of frameworks in AIM (from Van Bon, 2006)

## **3 Research methods**

### **3.1 Interviews**

To answer the research question interviews were conducted in order to discover the experiences of different organizations with BiSL. In total 32 organizations were asked to participate in the interviews; 30 of these gave a positive reaction and with 17 an interview could be organized. In selecting the organizations for the interviews a large variation in the organizations was sought:

- Organizations that use BiSL, as well as organizations that do not, although on forehand it was not always clear whether organizations do or do not use BiSL;
- Organizations in as many industries as possible;
- Organizations that are highly dependent on information and IT and organizations that are less dependent (based on assumptions about the organizations on forehand);
- Large and smaller organizations.

In total 15 information managers of 14 organizations and 3 BiSL experts were interviewed in 18 interview sessions. The organizations were active in the field of semi government (3), public services (4), education (2), healthcare (2), financial service (2) business service (3) and engineering (1). The interviews were focused on getting answers to topics related to the motives to use the BiSL framework. Therefore, mostly open questions were asked to investigate the relationship between the experience with BiSL and success factors. In general, the outline of the interview was followed, but depending on the answers given by the participants, deviation occurred. The interviews took place in November and December 2014. The interviews were tape-recorded and a report was made from each (Patton, 2002). This report was sent to the interviewee for approval. Comments and corrections were incorporated into the interview report.

### **3.2 Analysis procedure**

The interviews were analysed using a cumulative editing approach (Runeson and Höst, 2009). Each interview report was read carefully by the researchers in order to determine the meaningful fragments of text. These fragments were coded using open coding. Fragments of text from within one interview and between interviews were compared in order to determine whether or not they had the same code. If necessary, it was decided to merge codes or to change a fragment to another code following an axial coding procedure. The last step was to structure the codes at the level of main- and sub-variables/dimensions using selective coding. Thereafter the interviews were compared which resulted in a structured identification of fragments relating to the different elements that are presented in the next section (Miles and Huberman, 1994; Neuman, 2002; Boeije, 2002).

## **4 Findings**

### **4.1 General setting**

Of the 14 organizations that were included in this study, 9 (64%) indicated that they had positioned business information management at the business side, while 5 (36%)

organizations had positioned business information management at the IT side. Eight (57%) of the organizations have their business information management department decentralized. All other organizations have their business information management department centralized.

Six (43%) of the organizations used BiSL as a reference model, three (22%) have partially implemented the framework (e.g. some processes are implemented) and another three (22%) have fully implemented the BiSL framework (e.g. all processes are implemented). Two (13%) of the organizations didn't use BiSL at all.

## **4.2 Motives to adopt BiSL**

This section describes the motives to apply the BiSL framework. The two main topics in this section are the incentives to use the framework and the benefits that are achieved by doing so. When analysing the results, it was taken into account the way business information management was organized and the extent to which BiSL was adopted.

### **4.2.1 Motives to use BiSL**

Two main motives for using BiSL were mentioned:

1. The first motive is professionalization. Organizations want to improve and monitor their processes of business information management. This can be achieved by creating more structure within business information management. BiSL offers a framework to support this. The respondents defined structure as twofold:
  - Uniform processes where everyone knows his or her role, responsibilities and working methods;
  - People having the same view on what business information management is about.
2. Another motive that emerged in the interviews was that BiSL supports the Business-IT Alignment. Business IT Alignment means being able to translate the business needs to operational IT services. BiSL offers a structure of processes that specifically aim at this alignment.

When it comes to actually selecting a framework, in all situations BiSL was an obvious choice because it is regarded as the industry standard. Every organization that took part in the study was familiar with the BiSL framework. Even the organizations that don't use BiSL agree with the statement that BiSL is the standard. In fact, BiSL is the only available model in this field. Only one respondent positioned an approach as an alternative to BiSL: Functional Service Management (FSM) (Bon and Hoving, 2013). FSM is based upon BiSL and uses a lot of elements from the BiSL framework. FSM prescribes how to use these elements like a recipe, which is contradictory to the situational approach of BiSL. FSM is not used by any of the organizations.

### **4.2.2 General benefits from using BiSL**

In general BiSL satisfies the initial needs that were mentioned as motivation for using the framework. Almost every organization mentions the support to "structure" the working process of business information management as a benefit of BiSL. Setting up a proper way of working within the business information management department is seen

as the biggest benefit from applying the BiSL framework. The majority of organizations focuses on the operational level of the framework.

Another benefit that comes directly from using BiSL is the expected improvement of cooperation and relationships between the organization and their IT services provider. A lot of IT services providers also apply, or have knowledge of, the BiSL framework. This enables better communication and understanding.

A third benefit that comes directly from the previously discussed benefits is the probability that using a framework like BiSL eliminates certain risks. Standardizing the way of working within business information management eliminates the risk of mistakes that could be made when employees are forced to improvise. The other way of eliminating risk is that of making clear good agreements with suppliers while both applying the BiSL framework prevents problems in later stages of the collaboration because both parties have a clear picture of their roles and responsibilities.

A few other benefits that were pointed out in the interviews:

- Using BiSL and being a member of the ASL/BiSL foundation also gives you the opportunity to hear about the way other organizations and branches use the framework to their advantage. The foundation also publishes a lot of templates, white papers and best practices about the framework to share knowledge.
- The business information management department starts to be more critical of the work they do and the way they do it.
- Organizations start to think about their long term plans for their information and information systems.

### **4.3 Motives not to adopt BiSL**

#### **4.3.1 The two organizations that do not use BiSL at all**

In our research only two organizations indicated that they do not use BiSL at all. The specific reasons mentioned for these two rejections are:

- No need for a specific business information management framework because business information management is integrated in an overall IT department that uses a process model of its own;
- No need for any process framework at all, because these frameworks do not support the variety of the business information management processes in the organization.

All in all there are only two organizations that did not adopt BiSL. The way business information management was organized for these organizations did not significantly differ from the way it was organized in the other organizations that were studied. Because of this it is not possible to come to overall findings explaining why organizations do not adopt BiSL.

However, in the interviews a number of disadvantages and possible improvements came forward.

### **4.3.2 Disadvantages and possible improvements BiSL**

Weak spots of the framework that were mentioned regularly in the interviews:

- BiSL needs more references to other frameworks. The question that needs to be answered here is: What is the relationship between BiSL and other frameworks? ITIL was the most frequently mentioned framework here. Other frameworks that came forward in the interviews are: ASL, Prince 2 and Agile.
- Some process clusters of the framework are not clear. The most confusing cluster is the cluster information coordination according to the respondents. The goal of this cluster is clear but the activities within the cluster are not. The most confusing layer is the strategic layer.
- BiSL is written in a scientific way and the BiSL book does not contain prescriptions how to apply the framework in practice. Because of this, it is difficult to translate the framework into daily business practice.

Other disadvantages/possible improvements that were mentioned only occasionally are:

- The operational layer of BiSL offers too little control over the IT-supplier.
- BiSL isn't well known worldwide, this makes it difficult to interact for organizations who do business worldwide.
- When using BiSL, you start to use a different terminology. Communicating with people who are not familiar with this terminology can become increasingly difficult.
- Implementing a framework like BiSL costs a lot of money and time, and creates bureaucracy.
- It is sometimes difficult to convince management to implement a model. By making the framework visually more attractive it might be easier to convince management.

## **4.4 Success of BiSL and critical factors**

It is difficult to determine whether the application of BiSL is a success. Organizations that were interviewed usually say there is no intention to make BiSL a success, "it's just a tool to reach a goal". That goal being to make business information management a success. Apparently there is no need within organizations to assess or monitor the use of the tool BiSL.

Although the success of business information management is not the scope of this research we diverge to this issues at this point in order to contextualise our findings. It illustrates that BiSL is considered as a de facto tool for which quality and success are not disputed.

In 2010 a whitepaper was published on which indicators can be identified to measure the use and success of BiSL. This whitepaper suggests which criteria and measurable points of interest can be used (Faassen et al., 2010). Surprisingly none of the respondents in the interviews or the survey pointed out that they used this whitepaper or that they know about its existence.

When the focus is shifted from the success of BiSL to the success of business information management the following criteria are the ones that are usually measured, according to the respondents:

- Customer satisfaction
- Lead time of calls
- Employee happiness
- Cost reduction

Customer satisfaction is the number one criterion for business information management to be successful. This is also the one that almost every organization actually measures. The lead time on calls was pointed out to a lesser degree. Employee satisfaction and cost reduction were only mentioned a few times.

One way to test how processes and activities of business information management are designed is by using the BiSL self-evaluation. This evaluation shows both what the processes look like now, as well as the flaws of the organization with the possible consequences (Donatz, 2014).

Not all organizations that were interviewed measure the performance of the business information management department. The reasons for this is that organizations don't really "think about it" or the department is still in development and not ready to be measured. Initial assessments are not executed. Criteria will still have to be determined for those organizations.

In the interviews the respondents were asked which critical factors influence whether or not BiSL can be made into a success for the organization. The following statements were given:

- The organization needs to be conscious about working with BiSL and the value it adds.
- There needs to be support from management. To make sure the departments in question can work with BiSL in a successful way, not just those departments but also management need to be convinced about the value that the framework will add. If management starts sceptical and remains sceptical chances of successful implementation are small.
- It is important to understand that BiSL is a tool, not a goal in itself.
- Education about the BiSL framework is important.
- Create and maintain contact with the user. Customer satisfaction may be an indicator for this. Staying on top of technological developments.
- The business information manager needs to have the right skill set: communicative skills, sense for organizing, and empathy.

## **5 Discussion and conclusion**

In this paper we look for an answer to the question what factors influence the success of the BiSL framework for business information management. In order to find this answer four sub-questions are defined:

1. Why do organizations adopt BiSL?
2. Why do organizations not adopt BiSL?
3. When is BiSL regarded as being successful?
4. What are the critical success factors for application of BiSL?

### *What are the factors that influence the success of the BiSL framework?*

All organizations included in this research know of BiSL and agree in BiSL being the (Dutch) industry standard for business information management. There is no real alternative for BiSL. Motives to make use of BiSL are a drive to professionalize business information management and a need to improve the business IT alignment. Organizations adopting BiSL are not disappointed by the results. Using BiSL results in a better structured information management and a better performance in business IT alignment. Other benefits are a better collaboration between business and IT department or an external IT services provider and an effective way to manage risks.

Having pointed out the benefits of the use of BiSL, the research also shows not every organization has adopted BiSL. But there are only very few organizations that do not use BiSL and the reasons for not adopting the BiSL framework cannot be made valid in general. The reasons mentioned seem to be dependent on the need for the organization for an integrated overall IT process model on one hand and the aversion to uniform processes within the organization on the other.

It is very striking that organizations have certain intentions when adopting BiSL and indicate they achieve their goals, but are not interested in explicitly evaluating the use of BiSL as a tool. However, several points that can be improved in the BiSL framework were brought forward in the interviews. These point will undoubtedly be of value for further development of the BiSL framework and are related to relationships with other frameworks, more comprehensible and accessible descriptions and use of the framework in the daily practice.

Finally the findings reveal that the influencing factors for success of BiSL are very much alike influencing factors in any other organizational change:

- The value BiSL adds needs to be clear to everyone and management needs to support the adoption of the BiSL framework;
- It is important to keep in mind that BiSL is just a means, not a goal in itself;
- People need to be educated about BiSL;
- Contact with the user is important to validate if business information management is still on the right track;
- The business information management people need to have the right skill set: communicative skills and organizational sensitivity and organizing abilities.

### **Acknowledgement**

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