

An introduction to BiSL®

A framework for business information management

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Introduction

In 2005, the Business Information Services Library (BiSL) was launched into the public domain as a library for business information management. The library consists of publications describing the process framework for business information management and a large number of best practices, white papers, articles and presentations. The library is promoted and supported by the ASL BiSL Foundation and sponsored by both user organizations and IT service providers that benefit from sharing their best practices and using a knowledge platform for business information management. The adoption of BiSL in the market was quite fast, and it was implemented in many organizations, primarily in the Netherlands. In 2012 a revised version of BiSL was published in which some of the terminology was slightly updated. This article is based on the introduction paper of 2005 and provides an introduction to the revised version of the BiSL framework.

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Why BiSL?

Since the nineties, ITIL® has been used to improve the maturity of service management processes, particularly in the area of IT infrastructure management. As it became apparent that application management had additional needs, ASL® (Application Services Library) was developed and introduced into the public domain in 2002. Similarly, once it was realised that the demand side of IT also had specific needs that were not addressed sufficiently by existing frameworks, there was a justification for a framework for this domain. Customers of IT organizations had very little focus on their own role and all hopes were set solely on the IT vendors and they were not capable to sufficiently influence the effectiveness and efficiency of IT on their own. The client or demand role is a crucial factor in achieving a situation where IT is worth its money.

BiSL is a comprehensive process framework for business information management. It is supported by a growing number of best practices. Through the publication of the framework and numerous publications and the establishment of a foundation to maintain it, BiSL has become part of the public domain. One of the most important benefits of the framework is that a common language and terms of reference are provided to the market.

In recent years various organizations started structuring and professionalizing their business information management activities. The reason for this increased attention and the ongoing professionalization of business information management follows from the following developments:

- The increasing pressure that expenditures exert on the information provisioning¹. Organizations need to cut costs. IT expenditure and investments have been significantly reduced in recent years. However, little attention has been devoted to the effectiveness of IT. Organizations are ceasing to develop systems themselves and are no longer innovating, facilitated by IT. People are looking for ways of breaking out of this impasse.
- A need to get a grip on one's own information provisioning. In practice, policy and its implementation sometimes appear to occur independently of each other. Policy on information provisioning is not communicated to the 'shop floor' and consequently does not stipulate parameters for implementation and relevant decision-making. At the other end of the spectrum, policy does not resolve any existing problems and difficulties, which arise from the day-to-day experience of IT on the 'shop floor'. The internal management of the information provisioning is fragmented. There is too little communication between the various layers involved in making decisions relating to the information provisioning.
- Outsourcing of IT activities. The continuing professionalization of IT suppliers and other developments in the field of outsourcing require mature customers (thereby ensuring professional business information management) in order to ensure that the demands of the customers can be met satisfactorily. Because outsourcing of IT happens more often, the informal nature of the relationship between a customer and a supplier has also disappeared. Business arrangements and contracts have replaced it. An immature demand organization has proven to be one of the major fail factors in outsourcing deals.
- Organizations are seeking internal consistency and uniformity in their information provisioning [De Beer, 2005]. In particular, large, complex organizations, which consist of various business units, have endeavoured to centralise their IT operations. This has not had the expected effects, which is logical, because, if the demand is not uniform, neither will the supply of IT be. If one wants a uniform information provisioning, one will need to define a uniform demand for it.

Based on the causes outlined above, business information management was discovered to be the most important organizational function in the information (technology) domain, since it is at the beginning of the information provisioning chain. Organizations are looking for a means to strengthen the client's role, and the strategic and operational business information management in order to bolster this function. Unlike for the other IT management domains, IT infrastructure management and application management, until the last decennium little theory was developed until for that of business information management. Training and practicable models were only available to a limited extent. People were looking for a generally practicable and accessible framework.

BIM and BITA

During the first half century of the existence of the IT industry, the business more or less meekly accepted whatever they were served up with. In the eighties and nineties this started to change and IT started getting pressured to come up with IT services that better served the needs of the business. Despite various efforts, this is still a major challenge for most organizations. Meanwhile the business became more aware of the fact that they had the responsibility to define well what they needed from the IT providers. This paragraph describes the concept of Business IT Alignment (BITA) and relates it to one of the central themes in this publication, business information management (BIM), the domain for which BiSL is developed.

In 1993, Henderson and Venkatraman proposed a model for business – IT alignment with the intention of supporting the integration of information technology into business strategy by advocating alignment between and within four domains.

¹ Information provisioning is the total of automated and non-automated information systems, procedures, infrastructures, etc. necessary to provide all of the information that is needed to perform the business processes

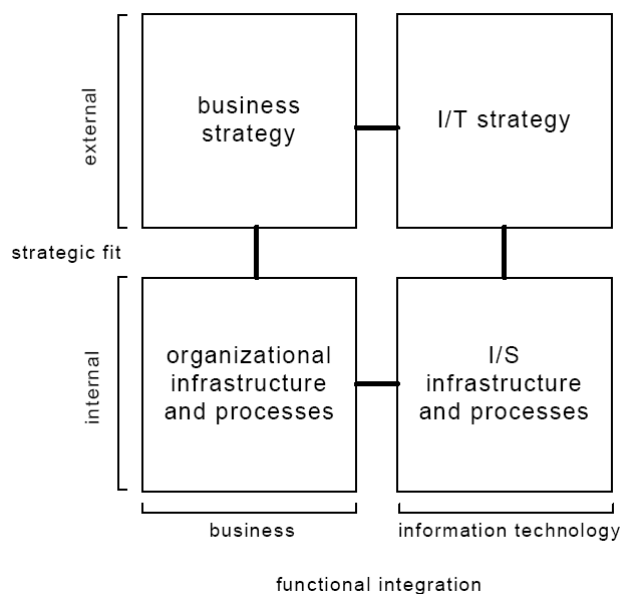


Figure 1 - Strategic alignment model

Alignment can be achieved in two dimensions: strategic fit (external versus internal domain) and functional integration (business domain versus IT domain). This model aimed to provide a way to align information technology with business objectives in order to realize value from IT investments. The potential strategic impact of information technology requires both “an understanding of the critical components of IT strategy and its role in supporting and shaping business strategy decisions” and “a process of continuous adaptation and change”. The authors presented a model “that defines the range of strategic choices facing managers”.

The introduction of these powerful concepts in the Strategic alignment model drew attention to the interfaces between the four areas, in which the actual alignment is realized. In order to focus on this alignment, models were developed to expand the Strategic alignment model. Maes developed an enneahedron (AIM, Figure 2) in which additional horizontal and vertical dimensions are introduced, thus creating the domain in which business information management operates.

In 1999 Maes introduced a central column in the model of Henderson and Venkatraman, representing the internal and external information and communication aspects. He stated that the “most intriguing part of the model”, the connections between the domains needed more attention, being: (a) infrastructure as the linking pin between strategy and operations, and representing the permanent power (or lack of power) of the organization; (b) the information building the bridge between IT and business. That is how he arrived at the enneahedron of figure 2.

Maes’ generic framework for the business - IT relationship can be used to discuss the mutual responsibilities, roles, processes and relationships between the demand and supply side of the information provisioning.

From right to left, the horizontal axis of this figure schematically represents the providing technology, infrastructure, applications and databases (right column), the interpreting information, communication and knowledge (sharing) processes (middle column) and the utilisation as business expertise (left column) of the information processing spectrum.

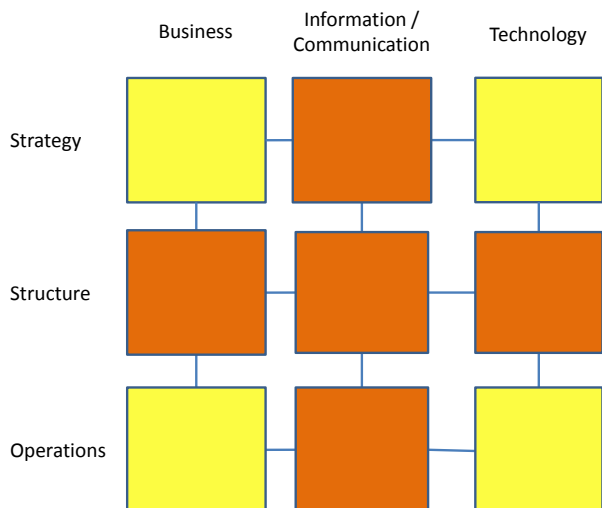


Figure 2 - Maes' generic framework for the business – IT relationship (AIM)

The generic framework gives a clear indication of the issues to be considered at the different levels. Maes states that the strategy level deals with decisions regarding scope, core capabilities and governance. The structure level is basically concerned with architecture and capabilities, the operational level with processes and skills. At each level and for each column, different roles can be derived. A very central overall role has to do with the middle row, where business architects, information/communication architects and technology/implementation architects deal with the structural, permanent components of the organization.

The middle column and middle row are most important in business-IT alignment. The middle column coincides with the business information management domain.

Activities the Business Information Management domain comprises are:

- defining which information (provisioning) is needed to support the business processes;
- defining the requirements;
- accepting new or changed information systems;
- preparing the organization for the use of the new information provisioning;
- supporting the end user organization;
- the strategic activities necessary to decide on the future of the information provisioning that is necessary to support business processes and to define the way this all is organized;
- managing these activities and the IT suppliers.

Figure 3 - The scope of the business information management domain

Recent ideas relating to business information management

The last decade has shown the inevitable evolution of ideas concerning business information management and the management of organizations. This section considers four developments, which have also had an effect on the nature of BiSL.

These four important developments are:

1. business information management as a key between business processes and the information provisioning;
2. thinking in terms of business processes and not in terms of information systems;
3. business information management as a portfolio holder;
4. the essence of the interrelationship of domains.

1. Business information management as a key between business processes and the information provisioning

When implementing business information management, one has to deal with limitations and forces coming from four directions.

In the first place one has to deal with a business process in which the information provisioning plays an important role. In many organizations the information provisioning largely determines the business process, for example, in the case of banks, insurance companies, government and so forth. Insufficient support, necessary changes, an existing process with existing customs and users who are used to it play an important role.

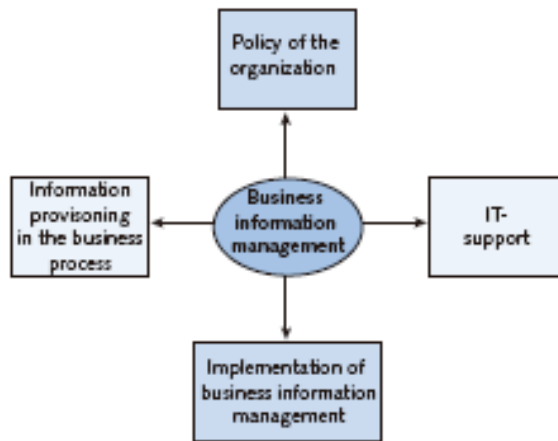


Figure 4 – The areas of tension in business information management

In the second place, there is the domain of IT support. The automated part of the information provisioning costs money and is structured in a specific manner. Technological developments also play an important role in this respect. The need for information provisioning in the business processes is partly translated into IT solutions. This entails costs, possibilities and impossibilities. In the third place, there is an organization, which pursues a specific policy. The latter has an impact on the information provisioning and this in turn has an effect on policy. Finally, there is a business information management structure (or multiple ones), which needs to be able to effect changes in the information provisioning.

When implementing business information management, one needs to achieve the best possible outcome in the midst of these areas of tension.

Understanding this has led to changes in how people think about business information management and also to a specific manner in which the framework is implemented. In the past business information management was largely positioned and implemented as the driving force behind IT and its organizational structure. There has been a clear shift in attention towards requirements: familiarity with the relevant business processes, the determination of requirements and the translation of this into the information provisioning within an acceptable scope (for example, in the field of finance).

2. Thinking in terms of business processes and not in terms of systems

The management of the information provisioning in organizations has also shifted up a level.

There are three levels at which one can manage the information provisioning:

- the level of the information system or the infrastructure – one manages it while checking matters at the level of the information system. Frequently, a breakdown is possible whose nature is technical and focussed on solutions. In practice, this is the most common for of management. This is naturally also due to the fact that an IT supplier is managed at this level;
- the level of business processes – in this respect one considers the information provisioning for the purpose of supporting a business process. Often a number of information systems (including ones that have not been automated) are used to support a business process. In practice management rarely occurs at this level;
- the level of the corporate information provisioning – this refers to an organization’s entire information provisioning. Although a great deal of talk and thought occurs at this level, it rarely has any effective impact on lower levels. This is largely due to the fact that operational management is not located at the corporate level but at that of the business units.

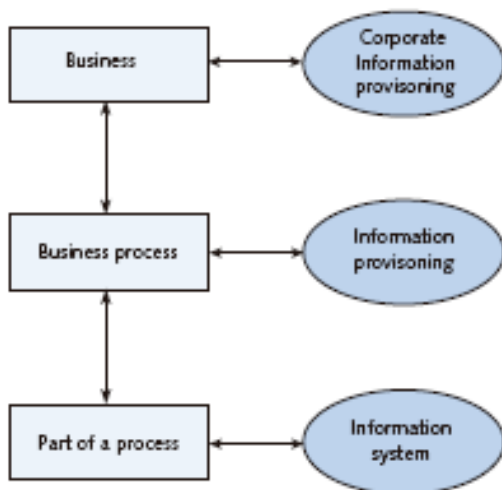


Figure 5 – The three levels of the information provisioning

One can see a clearly discernible tendency towards management at the middle level, that of business processes. This tendency is also closely related to the above-mentioned trend.

3. Business information management as a portfolio holder

A third development is that business information management will be acting as a ‘portfolio owner of the information provisioning’. When structuring their business information management, many organizations have done so by establishing it as a service centre, which can be managed and judged on its results, analogous to concepts such as ASL and ITIL. As such, these business information management service organizations do not act as a confidant of the business but as a service provider. As a result, the line manager still is solely responsible for managing the information. One needs to realize that the business information management domain occupies a distinct position in relation to other IT management domains. It represents the demand function. One frequently sees this in practice in that a department that is responsible for the business information management function assigns decision-making powers completely to the relevant business management.

4. The essence of the inter-relationship of the domains

It has already been stated that IT management is often fragmented within organizations. There are information system owners, there is an information management function, which formulates policy, and there is a staff for operational business information administration activities. They need to cooperate.

Without proper cooperation, it is impossible to ensure the proper management of the information provisioning to and from the three levels (operations, management and strategy). The importance of

the inter-relationship and cooperation between the various levels of BiSL has become clear in practice. Precisely those relationships and the information flows between the operational, managing and strategic processes are important to ensure the proper management of the information provisioning and ultimately to an effectively supporting information provisioning.

What is BiSL?

BiSL is an abbreviation of Business Information Services Library. It is a vendor independent public domain library for the implementation of business information management in the broadest sense of the word. BiSL aims to professionalize the demand function. Not only within an organization, but also as a unifying factor between different organizations. It aligns with ITIL, a standard framework on service management which is designed from the point of view of the IT supply organization. The BiSL library consists of a framework and a large number of best practices in the area of business information management. The standardized approach of BiSL contributes to the professionalization of the demand organization and facilitates a more efficient way of working, cost effectively and better understanding and communication between the involved parties.

The BiSL Framework

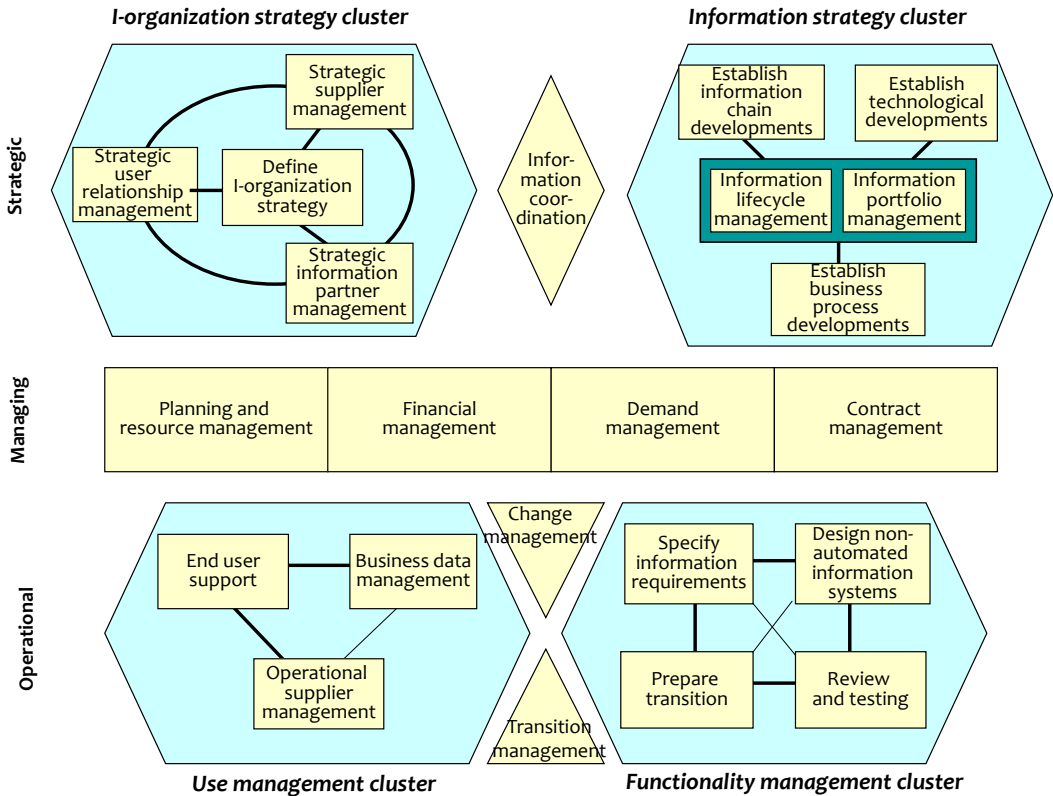


Figure 6 – The overall BiSL framework

BiSL identifies processes at the following three levels:

- **operational** – the operational processes involve the day-to-day use of the information provisioning, and designing and effecting changes to the latter;
- **managing** – the management processes involve costs, benefits, planning, and quality of the information provisioning and arrangements with IT suppliers;
- **strategic** –the processes at the strategic level define the nature of the information provisioning in the long-term and also how its management should be structured.

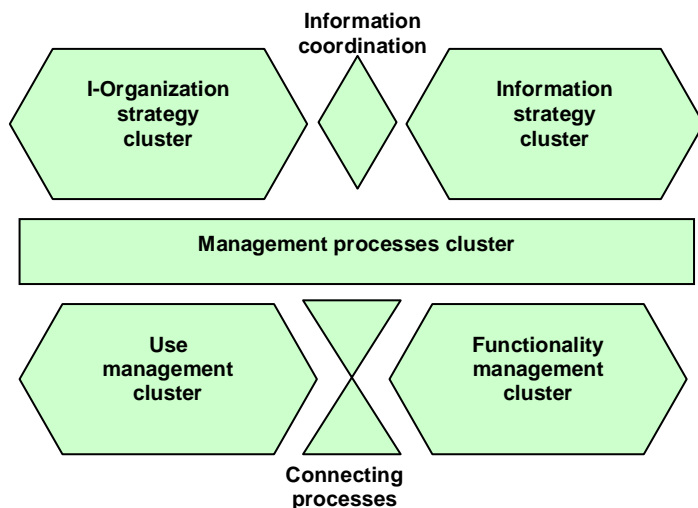


Figure 7 – Clusters within the BiSL framework

BiSL consists of 7 process clusters and a total of 23 processes on three levels. Within the framework the three levels, seven process clusters (a, b,) and number of processes () are:

1. Operational:
 - a. Use management (3)
 - b. Functionality management (4)
 - c. Connecting processes at operational level (2)
2. Managing:
 - a. Management processes (4)
3. Strategic:
 - a. Information strategy (4)
 - b. I-organization strategy (5)
 - c. Connecting processes at strategic level (1)

These 7 process clusters are discussed in detail in the following section.

1a Use management cluster

As Figure 8 shows, the use management cluster distinguishes three processes; these are directed towards ensuring an optimal and continuous support in daily use of the information provisioning by end users.

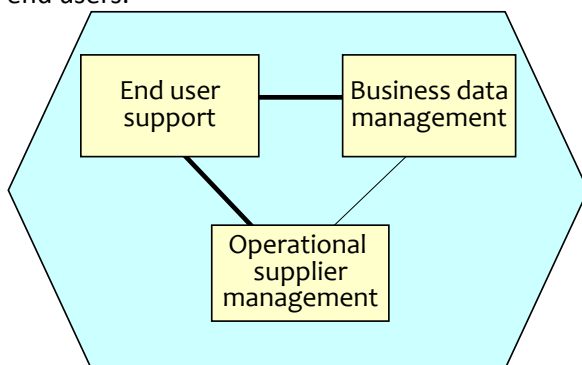


Figure 8 – Processes in the Use management cluster

The aim of the *End user support* process is to support, help and guide users in their everyday use of the existing information provisioning, so as to ensure that they can work as effectively as possible with it. On the one hand, requests for information, complaints, requirements, orders and the like are received from users and are dealt with. On the other hand, users are pro-actively informed about developments affecting the information provisioning with the aid of newsletters, meetings, training and instructions, and they are provided with support when using it.

The *Business data management process* focuses on achieving the appropriate structure and nature of the data used in the information provisioning (and hence also in the information systems). Amongst other things, it entails the administration and quality of centrally located tables, the appropriate use of a corporate information model, the adoption of measures to ensure data integrity, and the provision of ad-hoc data and management information.

The *Operational supplier management process* comprises the operational management of the IT supplier. This management occurs within a framework that is defined on the basis of processes at the strategic (master agreements) and managing (contracts and SLA's) level. Based on business processes requirements for the aspects of availability, capacity and continuity, contracts are awarded and the services provided by the IT supplier are controlled. In this respect business information management stipulates requirements, controls, monitors and reports in terms of the user organization.

1b Functionality management cluster

The processes that are part of the functionality management cluster cover the following two areas of focus:

- *the design* – functionality management focuses on the design of the required changes in functionality. These processes are of a substantive nature;
- *the transition* – functionality management involves preparation for and the initiation of the requisite transition and the implementation of the required changes.

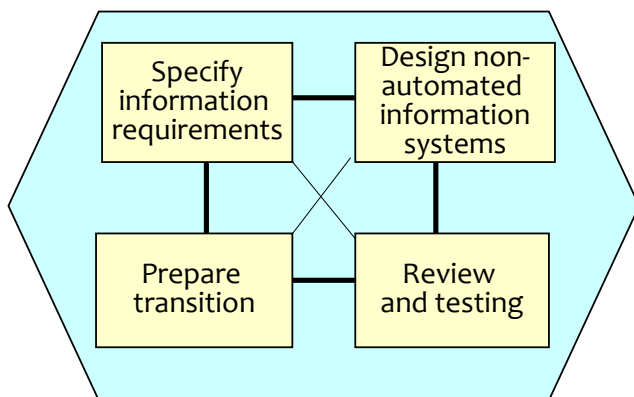


Figure 9 – Processes in the Functionality management cluster

The aim of the *Specify information requirements* process is translating the desired changes indicated by change management into intrinsic and non-intrinsic solutions, and to record them for the purposes of the further implementation of the automated and non-automated information provisioning. This needs to occur in such a way as to facilitate the unequivocal acceptance of any services provided by IT suppliers. The Information requirements specification process is one of the most important processes, because it is precisely here that needs and demands are translated into solutions. This process consequently has a significant impact on the cost and quality of the information provisioning.

The *Design non-automated information systems* process focuses on creating and maintaining relevant documentation for everyday use and for business information administration of the information system (procedures, working directions, manuals and the like). Naturally, these organizational aspects are highly dependent on the automated system. The process focuses on procedures and manuals as well as on the other aspects of the non-automated information provisioning, like its design.

The purpose of the *Review and testing* process is to ensure that the desired changes are smoothly implemented in the organization and that the tools, resources and other forms of support that are used, are appropriate and working properly. The user acceptance test is the part of this process that is best known.

The *Prepare transition* process ensures that any new and/or modified functionality is put into service without any difficulties by establishing the required pre-conditions in such a way that the desired changes can subsequently be effected without any problems.

1c Connecting processes on the operational level

The processes in the Use management cluster provide day-to-day support for the information provisioning. The processes in the Functionality management cluster are responsible for effecting changes to the information provisioning. The synchronisation of these two areas of focus and the communication between them occurs through the linking processes. The linking processes are *Change management* and *Transition management*.

The aim of the *Change management* process is to make correct decisions about introducing small and big changes to the information provisioning. To this end, *Change management* includes a mechanism for listing, evaluating, prioritizing and implementing changes in the information provisioning.

The *Transition management* process focuses on the actual deployment of the change to the end users, which has been prepared within the processes of the *functionality management* cluster and the associated activities of the IT supplier. *Transition management* forms the governing mechanism for taking changes or renovations into operational use. Following the formal acceptance of the change and preparation of the transition, the changed information provision actually comes into use during the transition phase.

2 Management processes

The management of the information provisioning in an organization entails the control of the substance and functionality (what), the costs (how much), the schedule (who and when) and the supply (how and with what). These four types of management produce four distinct processes (see Figure 10).

Planning and resource management	Financial management	Demand management	Contract management
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Figure 10 – The management processes

The objective of the *Planning and resource management* process is planning, monitoring and adjusting the activities of the organization involved in providing information so that the necessary use of information provision in the organization is realized on time with an optimal use of capacity. What is essential in this respect is that planning and control occurs across various domains, not only for the effort involved in business information management but also for the work that is performed within the users organization for the purposes of structuring and maintaining the information provisioning.

The objectives of the *Financial management* process are the preparation, maintenance and monitoring of a cost-effective information provision from a financial and business perspective, and the cost-effective use of IT resources for support and carrying out of the business processes of an organization's business processes. . Cost-effectiveness is not only determined by expenditure but also by income. One can therefore see the business case reflected in this process.

The goal of *Demand management* is to ensure that an organization’s business processes are supported or implemented through the proper information provisioning and an appropriate business information management function. Demand management is responsible for ensuring that the new and existing requirements of a business process are recognized and that decision-making for this takes place. This process includes quality management aspects. The quality of the information provisioning (including any deficiencies and required changes) in relation to the business process is the main issue of this process.

Contract management is responsible for defining appropriate agreements for the automated information provisioning and the provision of services by the IT supplier. In addition, it is responsible for monitoring these arrangements and improving them where necessary. Important “deliverables” of this process are, for example, an IT service contract, a service level agreement (SLA) or other types of contracts and arrangements, such as underpinning contracts (UC’s), operational level agreements (OLA’s) and so forth.

3a Information strategy cluster

The Information strategy cluster is aimed at defining policy concerning the information provisioning in the medium and long term. This policy is based upon changes in one’s own organization, its environment and in technology, so as to ensure that the information provisioning correlates with the relevant business processes in the future as well. This cluster consists of five processes as shown in Figure 11.

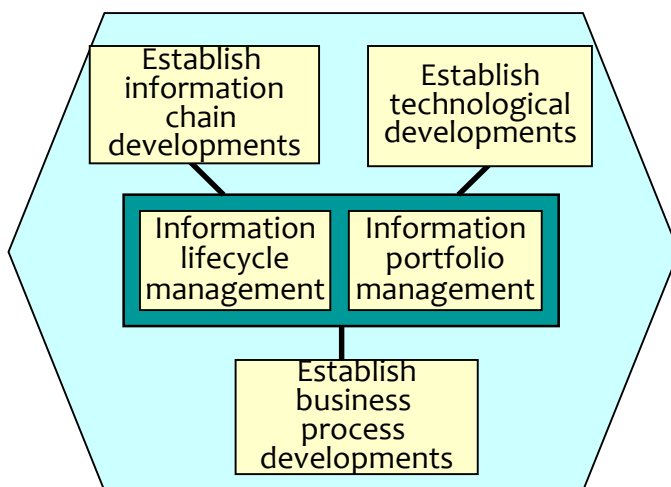


Figure 11 – Processes within the Information strategy cluster

The *Establish business process developments* process maps out the developments that will occur in an organization and its business process in the long term. In this respect one might consider changes in the field of finance, the products that are used, the structure of processes, staffing and the like. The developments that are mapped out, are analysed and translated into implications for the information provisioning. What is identified as implications for the information provisioning in the long term, serves as input for the eventual formulation of information policy.

The *Establish information chain developments* process involves the determination of chain developments and focuses on the information provisioning within and between multiple organizations. An assessment is made of the implications for one’s own information provisioning as a result of interaction with other organizations and changes in the information provisioning of one’s partners in the chain. The purpose of this process is to ensure that one’s own business processes continue to accommodate one’s surroundings in the longer term through the effective and efficient interaction of one’s information provisioning with those of one’s partners.

The *Establish technological developments* process determines whether any technological developments are occurring which, when viewed from a business perspective, could have an impact on an organization and its information provisioning. Although the focus of business information management is directed at business process requirements (the demand side), it is nevertheless also important to have an insight into technological developments (the supply side). Any new features which new technology offers, a supplier’s decision to phase out technology which an organization uses, or the significant costs involved in a specific technology, could have major implications for its information provisioning.

The objectives of the *Information life cycle management* process are to create a strategy for information provision, translating this into actions and investments and ensuring this is

implemented. An analysis is made of the future alternatives for IT management, maintenance, enhancement and renovation within any information domains that have been identified (many are linked to business processes). When determining these requirements, consideration is given to developments affecting business processes in the longer term, on the one hand. On the other hand, regard is also given to the current state of the information provisioning and any bottlenecks and problems existing within it.

The *Information portfolio management* process ensures the overall coordination and uniformity of the entire information provisioning throughout an organization. The structure of the information provisioning is an important issue in this respect. This refers to the manner in which the information provisioning is broken down and what the relationship is between its various components. In the case of information portfolio management attention is also devoted to the totality of all the required and planned changes and potential solutions for the entire information provisioning. At an overarching level all changes are brought into line with each other and optimum cohesion is achieved between the business processes and the information provisioning in the future. Lastly, information portfolio management defines what arrangements are made about the deployment of IT tools. This involves the establishment of an infrastructure and development architecture.

3b I-organization strategy cluster

The I-organization strategy cluster comprises four processes which focus on defining the manner in which the management of decision-making concerning the information provisioning is structured.

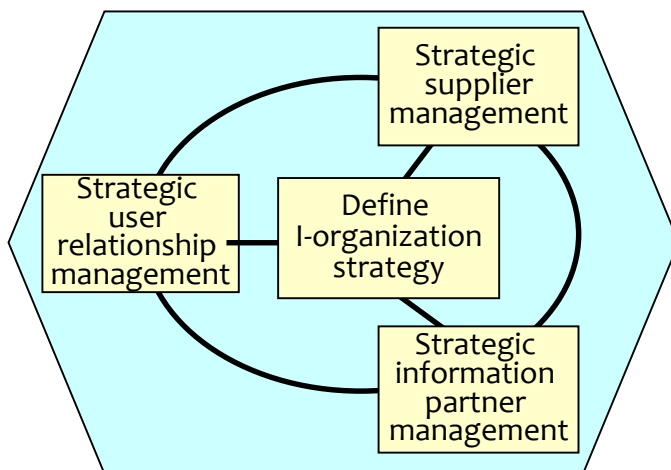


Figure 12 – Processes within the I-organization strategy cluster

The *Strategic supplier management* process determines which IT suppliers are the most suitable ones to contribute the resources and expertise required for the information provisioning. In addition, this process determines the roles and responsibilities required by the IT suppliers that are chosen. Arrangements are made in this respect with the suppliers and are monitored as part of the process of managing suppliers. These arrangements, which cover matters relating to the suppliers, constitute the framework for the agreements governing service-related issues, which are managed as part of the process of contract management. Master and outsourcing contracts are examples of agreements made as part of this process.

The purpose of the *Strategic user relationship management* process is to define and control the consistency, cohesion and communication between the information provisioning function and the users organization. Developments affecting the form in which the users organization is managed, are monitored and translated into an appropriate breakdown of responsibility for the management of the information provisioning. In addition, the communication channels between the users and BIM-organizations are defined by this process.

The *Strategic information partner management* process enables information to be exchanged between various organizations. This exchange is made possible by defining interfaces

in the area of information provision and maintaining these interfaces. In this process is the exchange of information between organizations often an absolute precondition. This process makes it possible for various organizations to share information with each other. The responsibilities of each of the partners in the information chain are defined.

The aim of the *Define I-organization strategy* process is to define the required structure of the functions which regulate the information provisioning within an organization. In the course of defining its attention is devoted to the type of organization, responsibilities, implementation and cooperation between the various sections of the organization, which are involved in business information management. Usually, business information management is implemented in various places and at different levels of an organization. The process involving strategy for structuring the information provisioning function ensures that there is a consistent, unambiguous and coherent method of operation within the overall domain of business information management.

3c Connecting processes at the strategic level: Information coordination

Within the different levels of business information management and also at various levels in the business structure all sorts of plans are made, which relate directly to the information provisioning or which overlap the latter. These plans are aligned with each other within this cluster of processes. Only one process has been defined within the *Connecting processes* cluster at the strategic level. The *Information coordination* process assists with the achievement of an alignment and controls the interrelationship between the various plans for the information provision, which have been drawn up by the various entities involved in the information provisioning. All sorts of plans are drawn up at various levels within business information management and the business structure, which directly or indirectly affect the information provision, for example, portfolio-related plans at the corporate level, the various plans of system owners for the future of their information systems, plans for structuring the information provisioning and also plans for structuring business processes. All of the relevant entities have different, divergent interests, which need to be aligned with each other to ensure the effective information provisioning.

What can you do with BiSL?

Given the growing importance of business information management, an increasing need has emerged for a generally recognised framework for business information management. BiSL provides guidance to help you to structure and visualize the activities that take place within your business information function and to locate any gaps between what should be done and what is done in reality. BiSL can also help as a communication instrument because with a clear definition of concepts and activities it may smooth the communication between the supply and demand functions within your organization. The ASL BiSL Foundation's website provides access to articles and best practices from other customers, clients and suppliers and these can help you to gain a further understanding of how BiSL can support your organization. The recommended approach is to 'cherry pick' and use the parts of BiSL that appeal to you while applying common sense in translating them to your particular situation.

BiSL in relation to other frameworks

Supply and demand are multi-interconnected. There are other IT management domains and standards/frameworks to consider. For instance there is ITIL which deals with IT service management as a whole with an emphasis on the IT infrastructure management domain (Meijer 2011). Next to the operations perspective, one can look at the application management perspective. Application Services Library (ASL®) aims to professionalize the management of applications. Where BiSL is more oriented to the demand perspective, ITIL and ASL focus on the supply perspective.

More information

The official website of the ASL BiSL Foundation contains many best practices, publications and articles on ASL: <http://www.aslBiSLfoundation.org/en> .

This paper is based on

- Frank van Outvorst, Ralph Donatz, Remko van der Pols and Machteld Meijer, An introduction to BiSL: A framework for business information management, IT Service management best practices, 2005.
- Van der Pols R., Donatz R. and Van Outvorst F., *BiSL, een framework voor business informatiemanagement, herziene druk*, Van Haren Publishing, 2012.

Additional literature

- De Beer R., Van der Pols R., Engelhart P. and Van den Berg D., 'Inrichting van functioneel beheer in grote organisaties' in IT Service Management Best Practices, Part 2, Van Haren Publishing, 2005
- Henderson J.C. and Venkatraman N., 'Strategic Alignment: Leveraging Information Technology for Transforming Organisations' in IBM Systems Journal, Vol. 32, No 1, 1993, pp. 4-16,
- Maes, Rik, Information Management: a Roadmap, PrimaVera nr 2004-13
- Maes, R., A Generic Framework for Information Management, PrimaVera nr 1999-03
- Machteld Meijer, Mark Smalley, Sharon Taylor and Candace Dunwoodie ITIL® V3 and BiSL: Sound guidance for business IT alignment from a business perspective, TSO, 2011.

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