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ASL[®] 2

A framework for Application Management

Remko van der Pols



Colophon

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Foreword

ASL

This book describes ASL, Application Services Library, a framework for application management.

As a public domain framework, ASL is the most significant application management process framework. ASL provides you with support for the implementation of application management in your organization. In addition, ASL's best practices, which can be found on the ASL BiSL Foundation website, help you execute this task more efficiently. ASL is also a knowledge network. This knowledge network, aimed at professionalizing the process of application management, has developed by sharing knowledge and a distribution of best practices.

ASL interfaces with other frameworks such as BiSL® (framework for business information management) and ITIL®.

The implications and goals

Naturally, the implementation of processes should lead to an end result that creates optimum satisfaction for users and employees. Requirements for services, service delivery, and the application management environment can be vastly different. Therefore, according to the ASL approach, processes are pragmatically implemented, based on the specific organizational and environmental needs. During implementation, the following developments and requirements are taken into account, among others:

- External orientation. Processes must link explicitly to the demands and expectations of the external community and must constantly adjust themselves to suit developments in that community.
- Multiple suppliers. IT service delivery is almost always performed by multiple suppliers, so service delivery must fit into a situation involving multiple suppliers, and the processes must take into account the position of the organization in this situation.
- Information chains. Information is, to a large extent, digitally delivered by organizations in the external community, where the various information facilities of various organizations are linked to one another. These information chains are no longer an exception to the rule; however, the external community can rarely be directly managed.
- Anticipation. Processes tend to be reactive and rigid by nature because they are initially implemented for the purpose of control and organization, but predictable results and predictable service delivery are no longer sufficient. The organization and the service delivery are expected to keep up with current and future developments, while anticipating implicit needs and issues.

The changes

This book describes ASL 2, and you are correct in assuming that this is the second version of the framework. We will tell you more about the name later but first we will discuss the changes. ASL has been changed, but not completely.

Because of the future-proof and technology-independent design of ASL, its main structure remains unchanged. There are, however, underlying changes. The growing market dynamics have resulted in far-reaching changes to the managing and strategic processes within ASL. Business processes have also changed, but these changes are less dramatic; this has enabled a pragmatic growth scenario towards ASL 2. This was also taken into account during the design of ASL 2.

Such an evolutionary renewal fits in well with the ASL vision: don't change something that works well. A new framework is not a goal in itself and would not be very useful to organizations that have already invested heavily in the introduction of the previous version.

Despite everything, with regard to content, ASL has become somewhat more complex. The growing need for flexibility in the market has made this inevitable. As a result, the focus has been on suppliers of standard solutions, components, packages, etc., because that is the direction in which the market is heading.

To assist in dealing with this complexity, design and implementation factors have been identified to help address the impact of the market trends on the processes which you are going to implement.

Why call it ASL 2?

The name *ASL 2* emphasizes the fact that the new version is tailor-made for the current situation. However, the framework is upward-compatible to a large degree. Existing ASL users will not experience any limitations, but will discover additional possibilities.

Contributions

Many people have contributed to the development of this new version of ASL. The ASL Review Board has continually followed the development of the framework, kept a critical eye on it, and reviewed the results. My colleagues at The Lifecycle Company and at Getronics PinkRoccade (now Capgemini) have also contributed.

Constructive observations have also come from the issue log, and I would like to thank the people who sent them. However, most thanks should be given to the customers and users who delivered the practical experience leading to the creation of ASL 2 and ASL as a whole.

Remko van der Pols

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1 Introduction

1.1 Goal of this book

This book describes the ASL 2 public domain framework for application management. It describes a framework for application management processes as identified by ASL, together with more detailed descriptions of these processes. The book is used by the ASL BiSL Foundation to determine what ASL is. It is also the core study guide for the official ASL 2 Foundation examination, available via APMG.

This book has been written on the principle that the reader is familiar with application management, with the way in which it is executed, and with the activities concerned. It is not an application management textbook.

It contains tips and suggestions to assist in the implementation of processes, but it is not an implementation instruction manual: that is too complex an aspect to describe here. However, this book does form a starting point from which to set up application management processes.

1.2 Main changes in ASL 2 in relation to ASL 1

ASL 2 is a new version of the old ASL-framework, which we now call ASL 1. The main differences are outlined below, as are the most significant reasons for these differences.

1.2.1 The core changes

The structure of ASL's main features has remained largely unchanged. An in-depth analysis indicated that it was set up in a future-proof and structured manner.

However, this does not mean that little has changed: quite the opposite. Over the past decades, the market has become much more dynamic and complex, and the positions of internal and external suppliers cannot be taken for granted. The most significant changes to ASL 2 are a result of these developments. The most important changes are:

- From internal focus to external focus.

It has been observed that a uniform model for service delivery and process design does not work. The starting point for designing processes can be found in the external community and in how the organization fits into this external community. This has led to many degrees of freedom, which are all differently interpreted in the design and implementation of processes. Suppliers of standard solutions (such as packages) will be identified easily in ASL 2 as custom suppliers or applications management organizations that focus on integration.

- From single supplier to multiple suppliers.
Many frameworks, including ASL 1, mostly still assume that an organization has a single (primary) IT-supplier. There is a clear trend towards the componentization of IT services. Nowadays, the presence of multiple suppliers is the standard. In addition, multiple suppliers are often required to take care of IT services for individual parts of the greater application landscape.
- From information processes to chain information processes.
Over the past decades, the linking of information provisions among organizations has become common practice. Working with information chains has become the standard. This is complicated by the fact that the external community can rarely be directly managed.
- From stabilizing and organizing to anticipating.
Frameworks appear to be focused on implementing processes in order to create stability and clarity. As a result, management organizations are often considered to be rigid. The future demands constant changes to services and applications, constant adjustment of the scope in which activities are performed, and thus also the constant adaptation of processes.

1.2.2 Impact of these trends on ASL 1

The developments outlined above have changed the content of the ASL-framework to a larger degree than would have initially been expected. They have had a large impact at management- and strategic levels. These processes have undergone fundamental changes and a number of new processes have been added at these levels.

The business processes have also been affected by various changes, but these have been less drastic. Here, the processes have been adjusted to suit the activities performed in a specific environment and to the provision of services in conjunction with other suppliers. This has not created change for the sake of change: change is not an objective in itself. The result was a logical growth trajectory following from ASL 1. Previous investments in process implementation were not wasted because of the introduction of ASL 2 and the change in name. In some cases, extra attention has been paid to upward compatibility. Existing implementations of the majority of business processes will easily comply with ASL 2.

In addition, this book also describes implementation parameters by process cluster. These are parameters that have a major impact on the way in which a process is implemented.

1.3 Structure of the book

Chapter 2 provides an in-depth description of the developments and underlying principles of ASL 2. This chapter is quite detailed to provide insight into the challenges presented by application management, and also substantiates the options within ASL 2. It is a point of departure from which to gain an understanding of ASL 2 and its changes.

The framework is outlined in Chapter 3. In this chapter, the ASL 2 process clusters are described and explained. The next chapters elaborate on the various process clusters. Chapters 4 to 9 describe the various ASL clusters, starting with the operational clusters. These chapters have a consistent structure. The first paragraph describes the structure, the classification, and the implementation parameters of the clusters. Thereafter, individual processes are described in the following paragraphs. From this point in the book, when mentioning ASL, we are referring to the new ASL.

Chapter 10, the final chapter, focuses on the introduction and implementation of ASL. It is not intended to be an actual instruction manual for the introduction of ASL. If that were the case, this book would be twice its size. It is merely meant as a starting point.

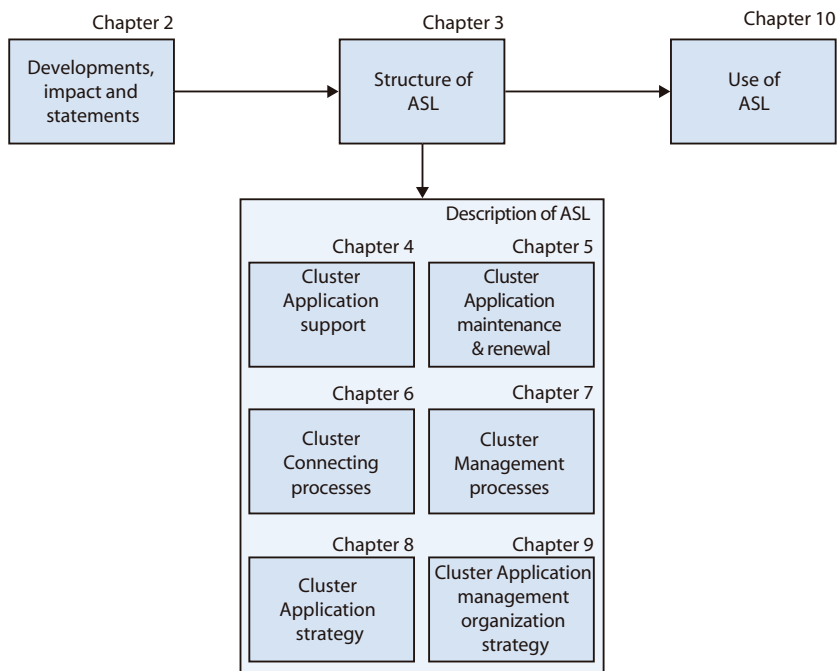


Figure 1.1 Structure of the book

Explicit attention is paid to two appendices. Appendix A contains the FAQs – Frequently Asked Questions. A number of commonly encountered questions or queries are listed here along with their answers. If you have any questions, you are likely to find the answers here.

Appendix B briefly summarizes the most significant changes at cluster- and process level in relation to ASL 1.

Further appendices cover the diagramming techniques for process models, consistency between ASL and BiSL, and a brief bibliography.

2 Application management in the 21st century

ASL statements

- The complexity and diversity of IT services has shown strong growth.
- Specialization and other trends lead to multiple supplier service delivery for customers.
- As a result, the integration of IT services is becoming the issue.
- Integration can only take place if interfacing is clearly defined.
- ASL can act as a framework for service components as well as a tool for service integration.

2.1 Introduction and chapter structure

This chapter deals with the application management environment, the developments that take place in it, its impact on the operation and control of application management and, finally, its interpretation within ASL.

This chapter will also benefit (operational) application managers, since knowledge about the correct goals, preconditions and rules of the game is essential for the execution and implementation of application management and its processes. Knowledge about processes and process steps is no longer sufficient.

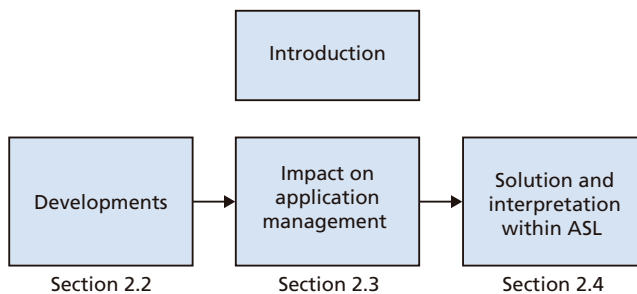


Figure 2.1 Structure of Chapter 2

In section 2.2, a number of developments are discussed, which apply to the past few decades and the next few years. These developments have resulted in multiple supplier service delivery becoming the norm.

The aims of various suppliers with different services and varied angles of approach have led to an increase in the complexity of the control of IT service delivery. The question that needs an answer is how these supplier chains should be controlled.

Two solutions for this problem are described in section 2.3. Should control be maximized and be made uniform, or should the required control be concentrated (minimized) by only focusing on essential matters?

Section 2.4 examines the direction chosen in ASL and this approach is adapted according to its interpretation within ASL.

2.2 Developments

This section discusses a number of developments that have occurred in the past few years and which are expected to happen in future years. These developments have a major impact on the organization of application management and the way in which application management must perform and position itself in the environment.

It concerns the following developments:

- Division into IT management domains.
- Subdivision of the demand organization within the user organization.
- Increasing componentization and specialization of services.
- Growing number of forms of services and differentiation between them.
- Necessity for specialization.

2.2.1 Division into IT management domains

A significant development that has occurred in the past few decades is the division between demand- and supply organizations. The normal position of the internal IT organization as IT service provider for an organization has disappeared. Because of developments such as outsourcing (including offshoring) and the professionalization of the internal IT organization, explicit customer-contractor relationships have come into existence. This has led to the creation of explicit demand organizations.

The division into the management domains has gone a step further. Here we see an even further separation between application management and infrastructure management. Looijen and Delen's model, with its three forms of IT management, has thus become a reality. Looijen and Delen identify three forms of IT management:

- Business information management;
- Application management;
- Infrastructure management.

ASL, as its name suggests, only focuses on application management, the second form of IT management.

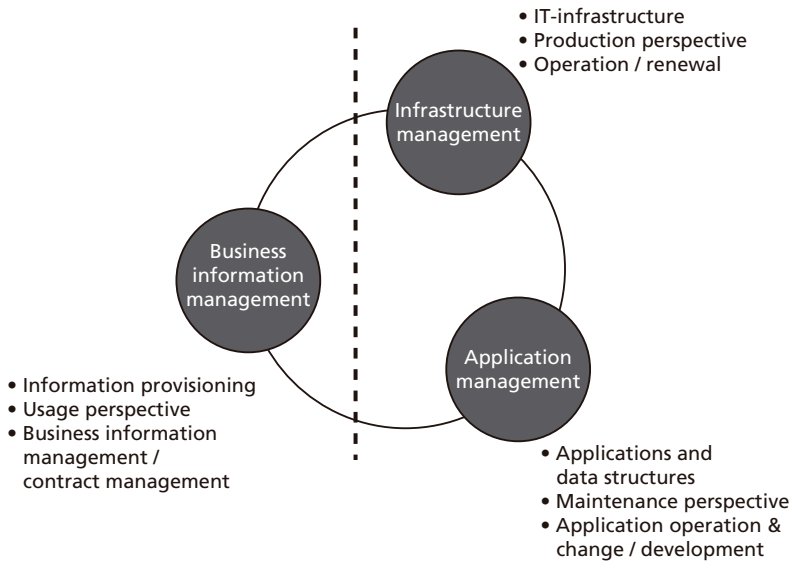


Figure 2.2 Looijen and Delen's model

Application management does not operate on its own. It does so in an environment, also involving other forms of management, such as business information management and infrastructure management. Looijen has identified these forms of IT management in the book *Beheer van Informatiesystemen* (see Figure 2.2). The division is also discussed in lectures and books by Thiadens, but there is an ongoing debate in the Netherlands about the naming of the forms of IT management and the business processes.

Business information management is, on behalf of the user organization, responsible for the management of the functionalities of an IT facility and the support of users. Business information management thus acts as owner and customer of the information system. BiSL is a well-known public domain framework.

Application management is responsible for the management of the application and the databases. This is the party that manages and maintains the information system (application). Requirements for this form of management include knowledge of programming, information system development, design, and impact analysis. Core qualities here are in-depth knowledge of the customer or (at least) in-depth knowledge of the customer's business processes.

Infrastructure management is responsible for managing the operation of the information system, including equipment, programming, and data collection. Another commonly used term describing this is technical infrastructure management. In brief, this is the organization that runs the information systems and ensures that the infrastructure remains in good order. This is also often called the computing center. A well-known framework that is often used in this domain is ITIL.

2.2.2 Growing number of demand organizations: differentiation in demand

The management of information provisioning within user organizations (business information management) is becoming more complex and more differentiated. The central management and coordination of information provisioning within a user organization is no longer something that goes without saying.

The significance of IT has caused the most important stakeholders in business ranks to independently manage certain aspects of information provisioning themselves. Thus, there are often separate customers for e.g. financial information provisioning, personnel information provisioning, various components of primary business processes, generic facilities, and infrastructure. As a result, various separate information domains have been created.

Information chains, in which multiple different organizations have become responsible for the functioning as a whole, have been created. Consequently, customers or co-decision makers can be situated outside the user organization. Each of these organizations experiences a different information chain.

Application management thus deals with a demand organization that is growing ever more complex.

2.2.3 Increasing specialization and componentization

A second development is about specialization and reuse. For decades, IT has been characterized by explosive growth in expansion and effort. To keep costs at manageable levels (similar explosive growth of costs would mean that organizations would have to invest virtually all their resources in IT), organizations employ various strategies:

- Reuse of existing components forming part of the IT landscape. Examples of this include legacy renewal (modernization of existing systems) and the retention and improvement of existing components in future design. The ‘legacy is here to stay’ idea has broken through.
- Partial use of new components, such as the use of standard objects, packages, shared solutions such as Application Service Provider (ASP), Software-as-a-Service (SaaS) or shared infrastructure. The use of basic components and objects for the construction of applications also has become common practice.
- Transfer of functionality to technology. Functionalities previously programmed into applications, such as document information, workflow control, authorization and the exchange of data are now supported by separate resources and technologies.

Similar developments have also taken place in infrastructure management. A higher degree of freedom than previously experienced now applies to the interface between an application and the infrastructure.

The amount of resources and technologies required to develop, maintain and manage an application has greatly increased. As a consequence the number of suppliers has also grown.

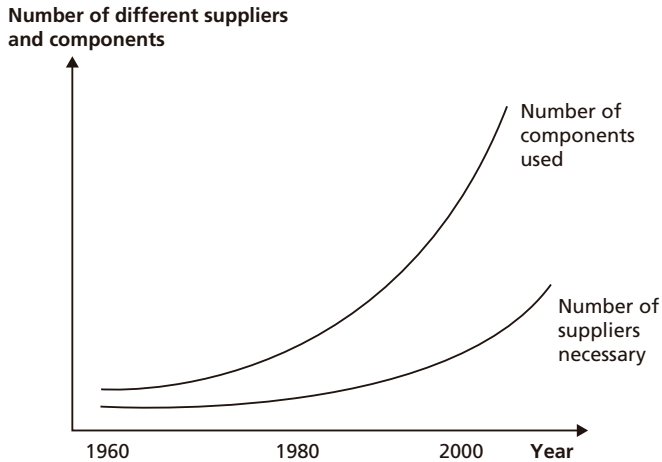


Figure 2.3 Resources and suppliers necessary for information provisioning

2.2.4 Differentiation between forms of service delivery

Forms of service delivery have also become more varied. During the previous century, there were at most two forms of application management service delivery:

- Development, maintenance and management of custom systems.
- Use of standard applications (and therefore the development and maintenance of these packages).

There was also a clear division between development on the one hand, and the usage phase (including support and maintenance) on the other. Over the past few years, the lines between these forms of service delivery have become blurred:

- The division between support and maintenance on the one hand, and initial development on the other, has faded. The systematic renewal of existing systems, the integration of new components into old systems, upgrading and rebuilding are all forms of service provision that divide maintenance and initial development.
- The strict division between packages and custom made has disappeared due to the use of standard components and platforms. Apart from that, both ends of the spectrum simply continue to exist.
- The traditional division of roles between application management and infrastructure management has also become more varied. In practice, numerous hybrid forms exist, such as ASP or SaaS.

Multiple forms of delivery

Many forms of service delivery have developed within application management. Examples of such forms of service delivery include, among others:

- The adjustor/implementer or integrator that amalgamates or combines services to create a functional whole.
- The party that produces a specific component (forming part of this whole), based on specifications provided by the integrator.
- The organization that supplies a standard product or standard component that is used by many organizations.
- The producer of configurable platforms (such as SAP or other packages) that are used and configured by third parties.
- The organization that configures and maintains such platforms for customers, either with or without integration with the underlying infrastructure.
- The organization that supplies custom services to an individual customer, either with or without integration with other systems or the infrastructure.
- The organization that supports a custom application, supports and maintains a custom application, or supports, maintains, and is in charge of the renewal of a custom application.

These forms have a significant impact on how the processes are implemented and operated.

The application management organization operates together with infrastructure suppliers and other application suppliers. Sometimes an application management organization is responsible for the functioning of the entire service delivery, but this is not always the case.

Multiple forms of control and invoicing

Differentiation has occurred in the various forms of control and invoicing. In the past, job order costing based on time spent and materials used was the dominant model, but currently there is a clear trend towards working with cost units that are more recognizable to customers. Examples of cost units that are defined in more functional terms are function points, subscriptions or costs per service. Units related to the primary process of the customer (such as the number of customers of the customer) are not uncommon anymore.

2.2.5 Specialization of application management

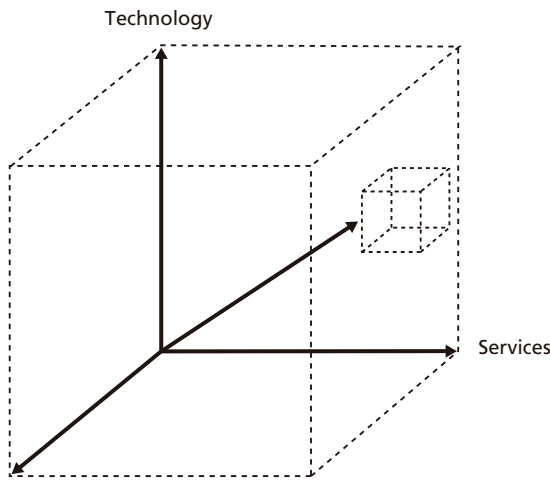
Due to the separation of supply and demand, application management has entered an explicit competitive market. This is a major change for internal IT organizations. Application management organizations must now make conscious decisions about their future services and its core qualities.

They must simultaneously specialize in three areas:

- The market: the customer, type of customer (sector) or type of business process. Knowledge about the business processes, the market and/or the sector is often essential, since applications support or shape the customer's business processes.

- The type of service delivery: the type of application management service delivery (integrator, package supplier, custom supplier) and the way in which financing is set up. Each type varies in design and in the necessary expertise.
- The tools and technology used. Within application management, expertise and experience in the technology used remain a significant factor influencing the quality of services.

This is why application management must make decisions about the market sector (customers), the technology to be used, and the desired type(s) of services. The services that can be supplied only forms a small part of the total possible scope of services, so decisions must be made.



Market segment or business process
Figure 2.4 Three-way specialization for application management

Even more important than making the correct decisions is the implementation of this innovation strategy into a working scenario. After all, from a customer's point of view, a particular application management organization can be very easily exchanged for another one.

2.3 Impact on application management and its design

2.3.1 Introduction and summary

This section deals with the influence of these developments on application management. We will start with a brief summary. Further elaboration and differentiation will follow in the subsequent sections.

The developments outlined above lead to a situation in which multiple suppliers, as a rule, are necessary for service delivery. This leads to complex supplier constellations.

Two strategies can be used to make the service delivery process as a whole, and the various suppliers, manageable:

- The first strategy is the realization of uniformity and standardization.
- The second strategy is about focusing on managing the essentials and treating the rest as a ‘black box’. Here the focus is on controlling the interfaces.

ASL mainly uses the latter strategy. This results in the following consequences:

- The interfaces between application management and the environment influence the design of application management to a large degree.
- Process design and control of the application management processes become primarily an internal matter for the IT service provider.
- The location, role and integration of service delivery into the environment define services and process design. The environment and environmental demands thus become the starting point for the process design.

2.3.2 Management of the whole: the challenge

Due to the developments described in section 2.2, complicated demand and supplier constellations appear. Figure 2.5 describes an example that is extremely simple when compared to the situations of somewhat larger organizations.

IT services consists of services provided by multiple independent parties. Most suppliers provide services to multiple organizations that have nothing to do with one another. It is not unusual for suppliers to provide the same solutions to

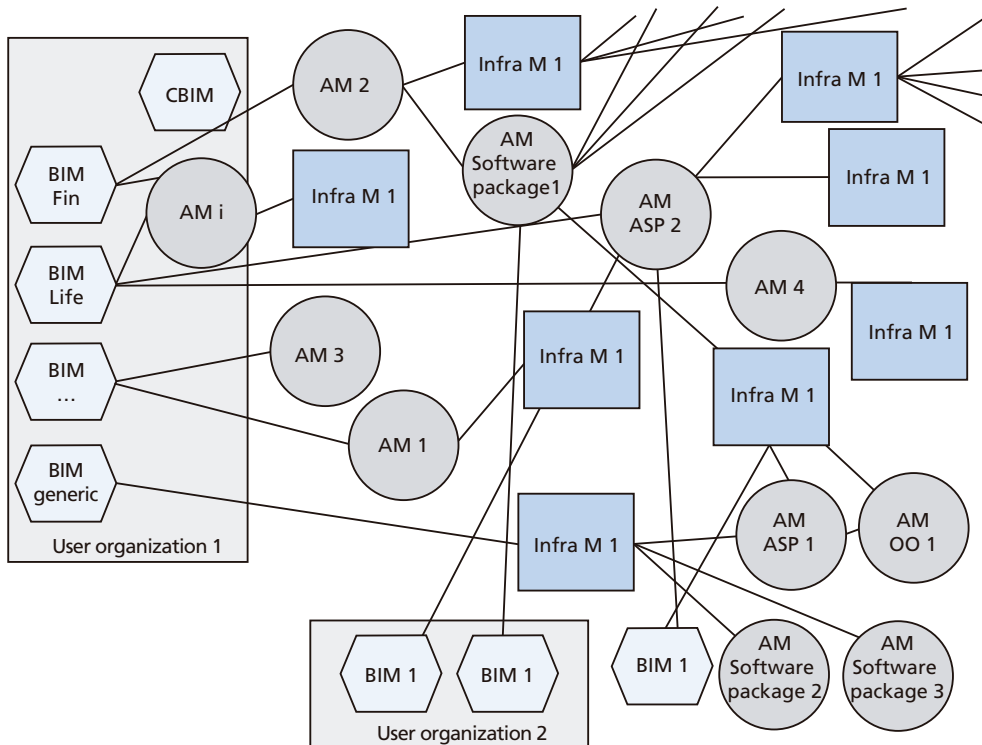


Figure 2.5 Modern supplier constellation

multiple parties (e.g. packages). This is why it is almost impossible to have just one customer organization being the director in this setting.

Unequivocal demands and unequivocal IT orchestration from a single point are (generally) no longer possible.

2.3.3 Solutions to this control problem

This growing operational complexity poses the question of how service delivery can be managed and controlled. Two strategies can be considered:

- The harmonization and standardizing of the service delivery chain. Processes are designed in such a way that they can be controlled or prescribed from a single point. To make this complexity manageable, the processes must be standardized and made uniform. This creates integral process chains on top of the service delivery chain. The essence of this strategy is maximization of control.
- The minimizing of control and focusing control on the components that are essential and well understood.

a. Integral processes and integral service delivery

The first way of solving this control problem is by creating a generically comprehensive IT organization, generically comprehensive processes and a central point from which everything is controlled. In order to keep this manageable, generic process models are needed, which bring everything together as much as possible.

It is plain to see that this approach will often be difficult to implement in practice:

- The first consequence is that suppliers will have to be fitted into a standard customer model. The integration of a supplier into multiple different integral customer processes is impossible, since every customer's demands, agreements, process implementations, and resources will differ.
- A second consequence is that this leads to a strong concentration of control in the area of information provisioning in a single (component of an) organization. A constant trend observed in the past few years is that control of information provisioning is further dispersed throughout the organization: in practice, a movement in the opposite direction is actually observed. Thus, the historically dominant position of the internal IT organization has completely disappeared.
- This has led to a high degree of inflexibility. If a customer changes to a different supplier, processes must be implemented all over again.
- And finally: the accountability and responsibility for results from the supplier are diminishing. After all, the process designer is primarily responsible for the desired result, because they have designed the controls.

b. Restricting control

According to the second strategy, complexity and control are minimized by especially focusing on the issues that are really important to the customer and which are within the field of expertise of the customer (e.g. use in business processes).

A comparison

Hardly anyone knows exactly what takes place when a car is taken in for servicing. Likewise, when buying a car, nobody knows how and with what it is produced. We are not familiar with the underlying processes and we also cannot be bothered with the details. The buyer does not want to control the integration of all the car factory's subcontractors, the car manufacturer, the garage and the garage's subcontractors into a single large process. This is impractical.

On the other hand, the car buyer knows exactly how the car will be used. They know exactly what their demands and requirements are.

However, this control problem is not new and also not unique. Application management in particular has had to deal with the complexity of control, especially in the area of content. It concerns the question "How do we control the complex control structure within applications?"

For many years, the same strategies have been chosen and followed in achieving this. The final step here is SOA, Service Oriented Architecture.

SOA

In the development and maintenance of large-scale applications, a comparable control problem and a consequent development line for solving this control problem have been identified.

The (immediate) solution was SOA or SaaS, but this was simply a step forward towards long term development. This development started with modular programming, in which programs were seen as a black box, and in which no use could be made of previous knowledge of the internal setup and structure of the program.

The next step was object-oriented programming and development and, as a result of this, the identification of components. In this case, the internal data and the internal implementation of the data were invisible to the external community.

In the step towards SOA and SaaS the entire implementation, the database management system in use and the infrastructure in use were, once again, invisible to the external community. Communication only took place via messages. Agreements about what should take place were sent by message and messages were returned containing results or confirmation of action.

The control of service delivery in the IT sphere is starting to behave in similar ways more and more:

- Multiple suppliers work together (whether or not required by a customer/business information management) and create a set of circumstances that provide a working information facility (compare the 'SOA' architecture).
- Here, every supplier has their own process and interpretation, which is not arranged or determined by a third party. This internal process design is seldom essential to the external community. The internal resources are also invisible to the external community (black box component approach).

- Only the interfacing and the guarantees are of importance. While products are exchanged and services employed between the various domains, these are produced, executed or consumed within the domains (“the messaging”).

This approach holds various benefits for the customer and the supplier.

- It allows suppliers to be flexible. Because agreements only relate to the interfacing and not to the internal processes and the resources used by the supplier, it becomes easier to change suppliers. There is no dependency on internal processes or internal tooling.
- It offers flexibility in design. As has been indicated, the diversity of operations and processes is only unusually large in the application management sphere. A broad, all-encompassing standardized process will never provide the flexibility necessary for all the various situations, but from a demand point of view, this is not necessary. The supplier is permitted to implement their own process. All that counts is the result.

2.3.4 Consequences of this approach

The black box strategy has the following consequences:

- The interface between customer and supplier is becoming decisive. Because only ‘buying’ takes place on the exterior, the organizing/designing of the ‘interface’ is of critical interest to the demand organization as well as the supply organizations.
- The customer will not need to be as active in controlling the way in which a product is produced and the process used to produce it. Process, technology, and resources mainly become internal issues.
- In service delivery, the question is becoming “How is coherence and integration created?”. This question applies to the service delivery as well as to the content of the solution (applications).

a. The ‘interface’ is becoming decisive

Because sales are ‘merely’ driven by the external appearance, the designing and reasoning processes contributed by customers and suppliers with regard to this interface are essential. This has led to a number of changes to this interface:

- The interfacing is becoming highly functional and output/outcome oriented. The demands on the design of the internal process and on how the solution is internally created have become less important. Whether the solution does what is expected or agreed upon and whether the agreed results or expectations are realized has become important.
- Interfacing is becoming broader and, from an IT point of view, sometimes even immaterial or irrelevant. It does not only concern the functionalities of the solution and the services. The applicable conditions, the underlying intentions, the method of cooperation and the corresponding costs are part of the interfacing agreements. From an IT point of view, this could also include ‘less relevant’ issues, such as emotions (“Am I being heard”, “Do people understand me”, “Does it make me feel good”).
- The agreed-upon interfacing is not exhaustive and also not rigid. Customers often do not know beforehand what they want or are looking for. Their requirements will

also often change, so it is important to constantly assess and adjust the relationship to take developments and changing requirements into account.

With this approach, the notion of Service Level Agreements (SLAs) and the product-service catalogue have not disappeared. They form part of a broad union of agreements that are summed up under the 'contract' denominator.

As is the case here, there is an exception to every rule and law.

Despite the interface becoming more functional, there will always be situations in which a customer still attempts to set technical demands or demands related to the supplier's internal process. This can occur when, for example, the customer is a different application management organization. In addition, there is a difference between the design of the supplier's internal process and the demand that this process fulfils certain requirements, such as traceability.

A customer can, for example, also demand – on condition that the agreements allow for this – that an audit on the internal progress of a process or the internal quality is carried out by an expert party. Such an audit can be a useful instrument in giving the customer a good feeling, along with the service provided (or it can sometimes be a denial or an actual confirmation of a negative feeling).

b. The process is becoming internal

The design of processes and the use of process models is thus becoming a predominantly internal matter, important to the internal organization, but seldom of importance to customers. The issue about which process model is used and how it connects to the external community is thus becoming less relevant (to the external community!).

The question about the coherence of different management models has also become less relevant. What is important is that the interfaces are attuned and agreed upon.

An example

As a rule, in a customized system, the customer prepares a specification at detail level. The goal of the specification process is the specification of the demand. These specifications provide process design input for application management. Based on this, a plan is created and the building process can start. But before building starts, the plan must be approved by the customer.

In the case of a standard application component (standard application), the supplier designs and produces this first. It is not subject to design approval from the customer. From a customer's point of view, the design has been in place before their specifications were created. More than that, the design creates input for the 'specification' process within BiSL. The solution is offered and delivered and the customer can create their specifications based on it.

You will have noticed that in these two examples, the processes between the various control domains take place in different ways. There is no strictly defined, fixed order for these processes.

The agreed upon interface and demands form the starting point of a process (as well as the end point of another process). As a result, the internal process must always be implemented according to what has been agreed, or agreements must be made to suit the existing processes.

If the interpretation deviates too much from what an application supplier can do or is willing to do, another subcontractor (who is able to supply this service) will have to be located or a different service delivery model will have to be implemented.

A larger application management organization will identify multiple versions of processes to suit various forms of services or the different demands that are set. This means that different processes are identified for e.g. services with low costs as the goal, or services in which high reliability demands are set.

So, now the application management implementation issues have become:

- Which export products have been agreed upon?
- What kind of import has been agreed upon?
- Which (ASL) processes lead to which agreed export product?
- Based on which import products?
- How are the requirements for this monitored?

In this implementation, there are questions like:

- Can I comply with the agreements made: management of the external aspects.
- Am I producing the product using the correct method: management of the internal aspects.
- Are my subcontractors providing me with the right products and quality: management of the back end.
- Is this all well balanced: management of the whole.

This means that processes and process models are not redundant. More to the point, processes are unavoidable in order to internally 'guarantee' that the necessary service delivery is realized. Process models also provide a starting point from which to identify interfaces.

By separating the internal processes from the external processes (internal processes of others), flexibility in supplier relations is created.

c. The place in the service delivery chain and integration are the issues

IT service delivery is structured by customers or suppliers through the design, integration and modification of service provider- and subcontractor (sub-supplier) solutions. The design, fine-tuning and managing of this situation is becoming the third major challenge.

An application management organization can hold a different position in this entity, which can differ depending on the situation, and its role in service delivery can

differ by contract. The application management customer is therefore sometimes an actual end-user organization customer, but in other cases it can be a previous service integrator or main customer.

As a result, depictions are created that can be described as service delivery architectural designs, supplier architectural designs or service architectural designs. Figure 2.5 (shown earlier in this chapter) illustrates this.

2.3.5 Generic demands

A number of application management demands remain standard. These demands are:

- *Understandability*. The understandability of service delivery and an understanding of the costs involved are standard demands. The costs of not conforming to the marketplace are simply too high.
- *Controllability* of costs, applications and services. Understandability is pointless if control is not possible. In many organizations, the importance of applications is determined by the immediate business process.
- *Transferability and comparability* of people and application management. Information provisioning is critically essential to many companies; without functioning information systems, organizations would cease to exist. The continuity of information systems is becoming an important precondition for the continuity of an organization. Dependence on individual persons (designers, programmers) is not an option anymore.
- *Flexibility* of applications and an active outlook on the future. Information systems have become so extensive that in most cases, replacement takes a number of years. Applications structurally last longer than expected. Roughly 80 percent of existing applications will still be in place in five years. Because applications are at the heart of the organization, they determine the competitive position of a company, and this will also apply after five years. The time has come for a more forward-looking outlook on these information systems.
- *Reliability*. The inadequate operation of an information system poses direct and drastic continuity risks to an information-intensive organization.
- *Connectivity* of application management and the mutual connectivity of applications form a more critical success factor due to the explosive growth of connectivity between organizations.

2.4 Impact and consequences within ASL

The statements of ASL are a logical consequence of the developments described above. These statements are:

- ASL provides the opportunity for employing the framework and underlying services, for isolated applications as well as integral application services.
- The interface between customers and suppliers and the agreements about this is becoming decisive. The external quality has been completely separated from the internal quality.

- In all service delivery, the integration issue is becoming a variable that requires decisive action.
- Pro-activity in service delivery and innovation regarding applications is becoming essential.
- Exchange of knowledge and affiliation with the public domain are becoming more important.

2.4.1 ASL as a component for service delivery and as a total framework

ASL 2 can be used as a framework for a separate service component, but also as a framework for application management that realizes the integration of underlying service delivery. Here are two examples reinforcing these two approaches:

- Sometimes, application management only provides a part (component) of an application and the responsibility for correctly linking to other parts of information provisioning lies with another party. In this way, it acts as a component and is not responsible for other components.
- But sometimes application management acts as an application service provider (ASP) (with agreed or perceived responsibility for the underlying infrastructure). Application management also sometimes acts as a system integrator and has explicit responsibility for the performance of the subcontractors.

There are still more degrees of freedom, e.g. a service is provided for a single customer, or a number of customers are identified for the service. This differentiation also has a great impact. ASL 2 can be used for all these forms.

2.4.2 Separation of the external and internal aspects of service delivery

The developments described with regard to the componentization of service delivery have led to the separation of internal and external aspects of service delivery. Internal quality has been disconnected from external quality. The internal aspect is becoming a black box. The following consequences can be perceived:

- The internal and external quality concepts are completely separate.
- There is a need for a broader interpretation of external quality: contract management is the central process at the front (the side of the customer).
- The controllability of costs in relation to ambition level is becoming important.

a. Difference between external quality and internal quality

Internal quality is what the supplier deems important and what is important in order to provide adequate service. Examples of this are well-structured software, current and comprehensive documentation, clear and well-outlined processes, the right people, etc.

External quality is often a different matter. Examples are an agreeable way of communication and managing, agreements and service delivery with regard to time, reliability or costs, flexibility in service delivery (or lack thereof), thinking in conjunction with the customer (or not).

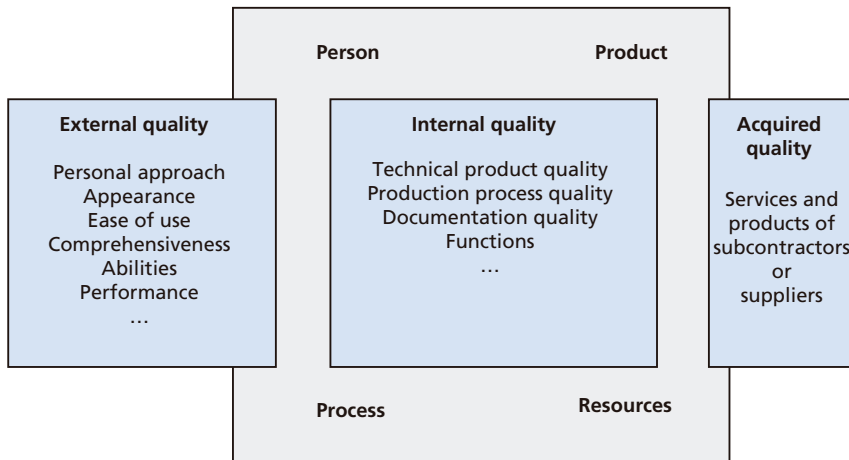


Figure 2.6 Difference between external and internal quality

Differentiation between the concepts of external quality and internal quality is important:

- The supplier's quality is, to a large degree, judged by the customer according to the extent to which the supplier realizes the external quality (and possible explicit expectations).
- Internal quality is generally 'technical' by nature and is strongly aimed at the internal realization process of the solution. The customer is usually not interested in this and, for the most part, does not have the expertise to form an opinion. Besides, they assume that everything should and will go well; even if an agreement is made to the contrary, they will often still expect otherwise. If a customer does have concerns about internal quality, they will have an external expert perform an audit since they do not have the expertise to form an opinion.

Internal quality is thus mainly an internal issue for suppliers. This does not mean that internal quality is not important. On the contrary, the importance of explicitly controlling this quality is now much greater, especially because external control is lacking. And sufficient internal quality is precisely what enables the realization of external quality.

This responsibility is also relevant to the linking of subcontractor processes, services and products to what the organization itself supplies.

b. Contract management as a central process in the foreground

An organization is generally 'judged' by customers according to external quality. Clarifying and describing this external quality is therefore essential. Contract management is the process that manages this.

Reasonableness and respect

Although agreements are becoming broader and more comprehensive, they will never be complete. There is simply too much content involved and parties do not always want records of all agreements. This brings us to the second consequence.

Respect is becoming an essential service delivery condition.

Both customer and supplier must handle mutual interests with respect. Respect oils the gears of service delivery. Among other things, it requires the following actions from customers:

- Providing suppliers with reasonable room for maneuvering and acting maturely with regard to planning and budgeting.
- Acting in a mature manner when faced with errors made by suppliers.

From the suppliers, it requires the following attitude, among other things:

- Not ‘milking’ customers and not only focusing on the increase of profit.
- Accepting that customers may not always exactly know what they want, and actively assisting in the search process. Investing in the customer and in the relationship.

c. Costs and transparency

Because the internal and external aspects of service delivery are now separated, it is important to have a pricing model that is independent from internal and technical costs.

In addition, customers need to be able to compare various cost scenarios to one another. They do this by considering other options, functionalities, different activity levels, and other services while formulating their query. The aim of this is to attain a sensible balance between the services provided and performance, and between service levels and the relevant costs.

This requires supplier insight into the costs related to the various options and activities, as well as insight into a pricing model that the customer can understand.

This leads to the following underlying demands:

- Insightfulness of service delivery and the relation to the connected costs/prices.
- Prices and types of service that the customer can comprehend.
- Controllable and predictable (internal) costs, costs for application management and possible subcontractors.

This means that application management must have a pricing model that applies to the services to be provided. Application management has to deal with two business cases:

- An external business case, that of the customer. Although this is the customer’s responsibility, application management should take it into account.

- An internal business case, the business benefits (for the customer) in relation to the costs actually incurred.

2.4.3 The integration of service delivery and the service team concept

The third consequence and implication of ASL 2 concerns the integration issue. The integration issue applies to both the content of services and process control.

‘Content’ implies the way in which the application (or applications) communicates and connects to its environment (with other applications or application components), and cooperates with the infrastructure.

The process-oriented integration issue concerns the incorporation into the supplier constellation and the connection to the service delivery processes of the environment.

a. The service team

ASL recognizes the *service team* concept as a best practice: this is a single body responsible for the control of the entire information provisioning life cycle. The service team arranges the defining of the desired services and service levels, and monitors compliance and reports on realization.

The service team acts as the contact point and responsible contractor for the customer. It acts as a bridge between the customer and the body of suppliers as a whole and offers the customer a single point of contact.

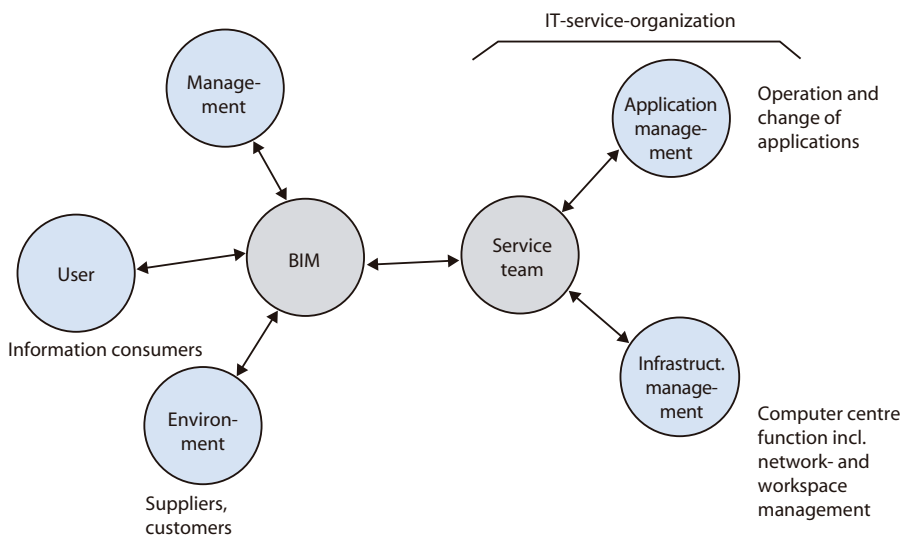


Figure 2.8 The service team

b. Integration as a decision topic

A service team is not a mandatory solution. Customers will have their own ideas about how delivery chains are designed and about their roles and positions in them. Other IT organizations will also have their own perceptions.

The key decision-making topic is the integration issue, the question being “How the integration of service delivery is organized and who is responsible for it”. No mandatory standard solution is possible in advance, nor is a standard solution desirable. This is why the integration issue is a crucial topic, about making agreements when defining and establishing service delivery.

2.4.4 Pro-activeness

The fourth implication concerns the pro-activeness of service delivery: the independent recognition and anticipation of evolving developments and situations. Pro-activeness is becoming perhaps the most important precondition for survival as a service provider: the exchangeability of IT organizations in the competitive market has already been discussed at an earlier stage.

Pro-activeness must be considered at all levels of service delivery:

- In application management organization policy and strategy. The aim of the application management organization strategy process cluster is the adjustment of policy and service delivery at an early stage, to suit future demands.
- In the application strategy process cluster, where application scenarios are created, so that migration paths towards the desired situation can be created.
- In the execution of processes and the provisioning of services, for instance in management process quality management (including problem management).
- In use support, including proactive communication and reporting.

These points are expanded upon below. Discussion about pro-activeness will recur elsewhere: it forms an essential part of ASL 2.

a. Application management organization strategy: renewal of services and service delivery

More so than in the past, application management organizations must find their own way – in keeping with future market demand and their own abilities – when supplying services. Customers expect quality services today: the supplier cannot regard service delivery as a learning phase any more.

Practical experience has shown that the implementation of processes often leads to application management that operates highly professionally, but which acts inflexibly.

This means application management organizations must now follow a policy of being able to provide the required services within the medium to the long term. It is important that IT suppliers do not only *do things right* now, but continue to do the *right things*.

Making the right decision is becoming more difficult because it is not possible to provide the complete spectrum of services any more. The Application management organization strategy cluster contains the processes that convert this policy formulation and its execution into actions. It contains the choices that are made, as well as derived choices, such as:

- Which services will not be provided.
- As a derivative of this, which subcontractors could be used to realize the desired services as a whole.

b. Application strategy: renewal of applications

A second form of pro-activeness is the application strategy cluster. A pro-active strategy applied to the future of applications and the application portfolio is a necessity for the customer and the supplier.

Pro-activeness from a customer's point of view

More so than in the past, customers expect controllable innovation from their information facilities. For a number of reasons, a growth scenario is preferred:

- In many organizations, information facilities make up the core of the business process. The majority of organizations have automated the necessary processes long ago. Organizations, users and management have fully focused on this. A complete and drastic initial development demands such a change over from the organization and users that this cannot be controlled from within the organization any longer. And here we have not even considered the scope of the investments made.
- Most organizations are faced with a replacement issue. The desired future functionality in most cases overlaps the existing functionality to a large degree (more than 80 percent). It seldom occurs that existing information facilities are completely redundant, so it is not necessary to redesign and rebuild everything.

With the spreading of risks and investments in mind, customers prefer renewal and innovation to take place in small steps, rather than in 'big bangs'. This has a number of consequences:

- Because of these risks, it is expected that the supplier avoids necessitating drastic and complete initial development. The supplier is expected to foresee the future and define growth trajectories for it.
- This way, in the long term, old and new parts of the IT architecture will work together. An application landscape has been created, in which existing systems work with new components and in which new systems must work with existing data (and its limitations).
- Because the market is dynamic, applications and their components exist for much longer than was originally expected and planned. Many existing applications have been replaced five times in the past during planning, but they still work. The need for future-proof application support, maintenance and renewal has thus become critical.

It occurs more and more that continual improvement – in keeping with the changing business process and new developments – is demanded as part of maintenance.

Pro-activeness from a supplier’s point of view

Customers expect a proactive vision about the future of the application from their application service providers. This is also of interest to application management:

- Through the continual and timely anticipation of developments, abrupt changes to applications are avoided. This has led to an increase in the future-proof nature of the solution provided and also to greater continuity in the services concerned. Application management would still like to be ‘in business’ after five years.
- In addition, return on investment is assured: application changes are in keeping with a future perspective. Through this future-proof maintenance and constant renewal, in the long term, the total costs will decrease.

As a result, ASL describes the application strategy cluster containing processes such as life cycle management and application portfolio management.

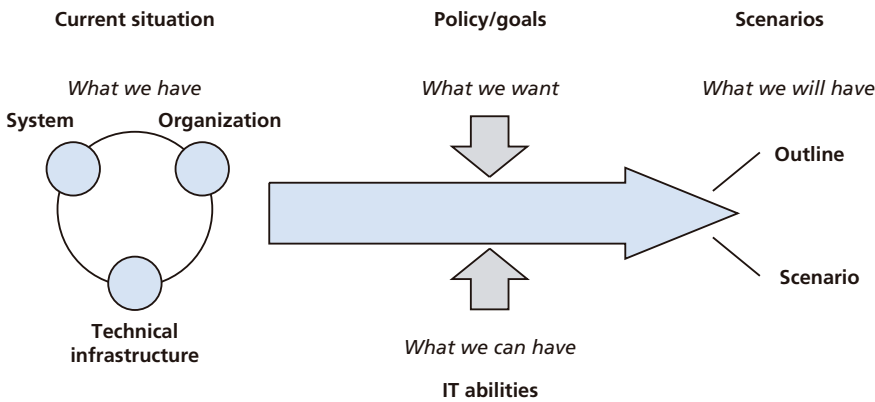


Figure 2.9 Life cycle management

Growth approach

This growth approach starts in the present: determining to what extent the application is aligned to the existing situation, with the expected future situation, and determining what must be done to ensure that it remains aligned.

The output from this exercise is a scenario and an outline that also applies as an application support, maintenance and renewal benchmark. Through this, application management can ensure that applications keep up with customers as they move towards the future.

c. Quality management

External quality is important (because suppliers are primarily judged according to it), and internal quality is no less important. Quality management is the process responsible for this.

The goal of this process is to ensure that process-, product-, organization- and quality system values are adequate to realize the agreed external quality. This requires further measurability of the internal quality and the active solving and prevention of problems/obstacles to service delivery.

Problems and the prevention of problems

The goal of quality management is not only the solving of problems before they lead to incidents and failures, but also the prevention of problems.

One of the topics within quality management is the management of 'problems'. These problems include shortcomings in the quality system, organization, product, or process.

As a result, no explicit 'problem management' process is linked to 'incident management' in ASL. The philosophy behind this is that an incident should not have to take place before a problem is identified and solved. In other processes, problems can often be thoroughly identified and solved before they lead to an incident.

Problems and incidents must be prevented and this is the responsibility of quality management. Problems must be solved before they become visible to the external community. And if problems do exist, quality management is the process responsible.

Quality management is also responsible for ensuring that future service delivery outlined in Application management organization strategy is applied to the quality system – processes, people and organization – so that the services can be provided. The tactical application and active implementation of this policy is becoming crucial.

d. Active instead of reactive approach to use

ASL describes the *use support* process, which encompasses the incident control or incident management that is found in other processes. But ASL has also recognized proactive communication and now places more emphasis on it. The idea is that issues, complaints and obstacles should not only be correctly dealt with, but that these issues, complaints and obstacles should be prevented through active communication with users or customers (depending on the situation).

2.4.5 Sharing of information

The application support, maintenance and renewal is taking place in an ever-broadening setting:

- Information chain integration occurs more and more. The Internet has made it possible to link the simpler information systems of different organizations together. This has led to interconnected information systems or so-called information chains.
- The integration/linking of multiple forms of IT service delivery. This has been comprehensively dealt with in this chapter.

The application management departments of various organizations will thus acquire many mutual dependencies and relationships. Public domain concepts and the sharing of information will become more important in this more complex setting. There are a number of reasons for this:

- There must be a common basis and common understanding, as well as common definitions, about the forms of management.
- Processes will need to match the specific situation ('custom'), but will also need to be quickly implemented.
- Concrete and adaptable best practices will be needed, which describe how things should be done in certain situations. The practices act as components/building blocks for process implementation.

For these reasons, it is the aim of ASL to be a public domain framework. ASL's range of ideas and best practices are managed by a foundation that incorporates various large organizations.

The goal of this foundation is to update and improve best practices, present new best practices, adapt the framework, and help it keep up with practical developments.

The aim is to not allow ASL to become a static entity from which various dialects arise, but to put the knowledge and experience gained by organizations who work with it back into ASL. In this way, the ASL BiSL Foundation is becoming a knowledge organization.

3 The ASL framework

ASL statements

- To be an accountable, proactive application management organization, operational, management, and strategic processes must be performed.
- The operational and management processes monitor stability, continuity, and alignment with the customer’s business process, and agreements with the customer. The strategic processes ensure long-term alignment.
- The pillars on which application management is built are service focus and domain knowledge (regarding the customer’s business process).

3.1 The framework for application management

This chapter explains the ASL framework in general terms. It explains the general structure of ASL and the division in the different process clusters.

The ASL process clusters are described in this section. The following section explains the ‘design criteria’ behind the ASL framework structure.

The ASL framework consists of six process clusters (see Figure 3.1).

Every process cluster contains a number of processes. The processes within a cluster operate in closely interfaced. In addition, the processes within a process cluster realize a clearly defined goal.

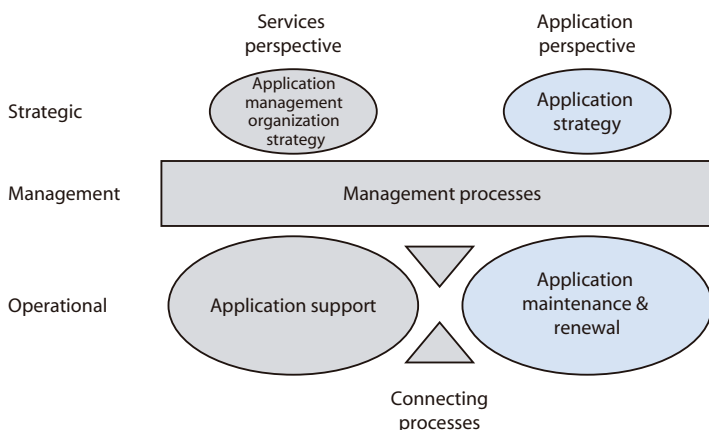


Figure 3.1 An outline of the ASL framework

The six process clusters are:

1. Application support
2. Application maintenance and renewal
3. Connecting processes
4. Management processes
5. Application strategy
6. Application management organization strategy.

The process clusters are described below.

3.1.1 Application support

The operational level has three process clusters. The first cluster of application management is application support. The goal of the application support cluster is to ensure that the applications – in their current state – are optimally applied to support of the business processes using the minimum resources and with the least possible operational disrupting. This is the goal of the applications: they have been developed and are maintained in order that they are use. Therefore the applications must run and work properly.

3.1.2 Application maintenance and renewal

The next cluster is application maintenance and renewal. Organizations change and, as a consequence, the requirements for applications also change. This is why applications need to be modified.

The goal of this cluster is to ensure that the applications are adapted to suit the changing demands and wishes resulting from changes in the environment and business processes. This results in applications that continue to support the business process optimally in the near future. So in these processes the necessary adjustments are made to the software, documentation and data models of the applications.

This ‘maintenance’ can be small-scale (such as corrective maintenance), but it can also be very large-scale, such as the renewal of a system where large parts of the system are rebuilt.

3.1.3 Connecting processes

The two previously mentioned process clusters do not operate in isolation from each another: they are closely related. For example, they deal with the same application objects. What complicates this matter is that, in different situations, different versions of applications or application components can be used in different locations and possibly also on different platforms. Not all customers use the same version of a particular component or software package.

In addition, users of components generally use packages or components simultaneously from multiple suppliers, and there will be products from different application suppliers on the infrastructure.

This means that synchronization and alignment between the application support cluster and the application maintenance and renewal cluster are important. The connecting processes deploy changed software and data from application maintenance and renewal to application support. Because of the complex relationship between applications and infrastructure, the importance of organizing this synchronization effectively has grown. There are two processes that organize this alignment.

3.1.4 Management processes

The management processes cluster ensures that the previously mentioned process clusters are integrally managed. The management processes address application support, maintenance and renewal. The aim of this cluster is to ensure that existing activities are performed according to goals, agreements and chosen strategies.

3.1.5 Application strategy

Organizations innovate, and likewise, information facilities and applications must innovate and modernize. The increasing need to grow from the existing situation towards a new one has already been explained in section 2.4.4.

Business processes and organizations change and, over longer periods of time, structural changes can occur. Applications are built with a specific structure on the basis of specific technologies and starting-points; these can all go out of date. Often, these starting-points lose their validity over time; technology becomes outdated and is faced with new demands. By observing these structural changes at an early stage, they can be anticipated and acted upon in good time. In this way, potential or future bottlenecks to the information provisioning and information systems can be avoided.

The goal of the application strategy cluster is development of a long-term strategy for the various application objects forming part of the information provisioning as a whole, for one or multiple organizations. By applying application strategy, the suitability of applications and application landscapes for future use is determined in an early stage, so organizations are not forced to abruptly change the information provisioning ('big bang') with major risks involved.

3.1.6 Application management organization strategy

It has also been observed that pro-activeness and innovation in service delivery is becoming a critical characteristic.

In these times of achieving more flexibility, it no longer goes without saying that an IT supplier will provide application management for ever and that existing services will always be continued. The user organization can switch to other suppliers and this also applies to the services of an internal application management organization. Offshoring is an example of this.

In addition, there exist many degrees of freedom in services which application management can supply. For this reason, decisions must be made. Within application management organization strategy, decisions are made regarding what the application

management organization's services should be in the long term, and what measures must be taken to ensure that this can be realized by the organization.

The aim of the application management organization strategy cluster is to ensure that the service organization's policy and its future are correctly shaped. In application management organization strategy, the service organization's (i.e. the application management organization's) future services is determined and translated into policy and measures.

Application strategy and application management organization strategy are two different topics, for which separate policies are created.

Application strategy addresses the objects that are provided. Generally, the market and the customers influence the direction of these objects. Application management organization strategy addresses the services supplied by an application management organization. The organization itself primarily determines the direction.

The separation of both points of view enables an optimal choice of policy for both these fields.

As a result, strategic decisions about the future of the information provisioning, such as SaaS/ ASP, ERP, or the technology to be used, are separated from the issue as to what the application management organization can and should provide. What the market demands in an existing application landscape is not always what the application organization can effectively provide. Differences can occur.

Table 3.1 'Process cluster characteristics'

Process cluster	Perspective	Capacity	Time aspect
Operational and connecting processes	Current	High	Continuously
Management processes	Current and next year	Low	Continuously
Strategic processes	Years to come	Low	Periodic

3.1.7 Application management consists of a chain of process clusters

Effectiveness and efficiency in application management can only be realized if these different clusters cooperate, share information, and are aligned with each other. ASL does not consider these clusters to form a chain. It is precisely the adjustment and

alignment between the clusters that make application management work and also make it effective and efficient in the long run.

3.2 Structure of the ASL framework

In the ASL framework, two different clustering criteria are identified for the application management processes. This is addressed in the next two sections. They are:

1. Differentiation between the services perspective and the applications perspective. The latter perspective makes it different from other forms of management, such as infrastructure management.
2. Differentiation between strategic (policy-determining) management and business processes.

3.2.1 Service orientation versus application orientation

From an ASL point of view, application management has two important perspectives:

1. Service orientation: providing services to the external community.
2. Application orientation: knowing and anticipating developments in the business processes. This requires knowledge of the business subject matter and is aimed at applications.

Service orientation

The real goal of application management is to ensure that the developed applications are made available to the users of an organization. This is clearly a service oriented aspect.

The future of the application management organization, the services one wants to provide and the demands relating to that service provision, are also aspects that have a clear service oriented perspective. The service oriented perspective focuses on the provision of services to individuals or organizations.

Application orientation

Applications support business processes of organizations, and often form part of these processes. To keep applications up and running in the future, they must change along with the business process of the user organization. This means that there needs to be a lot of expertise within application management, relating to the business process of the user organization, its customers' circumstances, the developments in this field, and the actual applications.

The second perspective of application management is the change of applications in relation to changes in the business process. The processes that follow this approach are, to a large extent, content-based. In order to structurally execute these processes, a large number of methods have been developed that support and shape the content-based nature of the processes.

Examples of these include the steps necessary for creating a design: techniques, phasing, necessary models, types of documentation, etc. These substantive methods are not part of ASL. ASL does not prescribe any standards in this area, and allows various organizations to make their own choices, such as DSDM, Yourdon, Structured Programming, OOS, RUP etc.

3.2.2 Strategic, managing and operational

ASL has three levels of processes:

- Operational;
- Managing;
- Strategic.

Operational

The business processes are, of course, the most important and therefore first in line. Without these processes, nothing will take place, and they are the goal of an application management organization. Operational, from an ASL point of view, does not just mean 'non-managing or non-strategic' In any organization with responsible people and a standard of high training levels a high degree of self-guidance and learning ability should be self-evident.

Managing

Midway between the operational and strategic processes are the management processes. The demands on control have drastically increased and, at precisely this level, the environment requires flexibility and constant change.

Management processes form the dividing line between policy and operation (as in every business). This process cluster ensures that the market dynamics remain in balance with strategic improvement and operational quality. As a result, the significance of these processes has increased enormously during the past decade.

Strategic

A number of processes have a strategic nature. Here, existing structures and working methods are disregarded and the future is fundamentally approached with a fresh outlook, and, based on the various developments, a direction is chosen. The word 'strategy' is used to indicate that this is a direction taken, and not the sole and sacred objective. Adjustments will still be made continually. The word 'direction' can also be used in this context.

From an ASL point of view, these exercises do not continually take place. Generally, they will be executed once or twice a year. They take place by structural observation of the current situation and of developments in the external environment, through the setting of desired goals, through the testing of feasibility and, based on this, devising a strategy.

These process clusters will be more closely examined in the next couple of chapters.