

# Cost Reductions Based on Application Life Cycle



For the past one or two years those ICT managers who are active within the context of application management, have increasingly faced the task of cutting costs. The potential reductions are substantial, because three quarters of application costs are incurred in the maintenance & control stage. But how is one to achieve a reduction in a responsible manner? In addition, how can one develop a cost-savings outlook for the future which also makes allowances for any required innovation? This *white paper* is the outcome of two evenings during which experts and interested parties exchanged ideas about such issues based on ASL (Van der Pols, 2001).

## Introduction

In order to improve the ASL framework and to share currently available knowledge and experience the ASL Foundation's Development Working Group regularly holds evening seminars (see the box entitled 'Evening Seminars'). Two evening seminars were also held to consider the ASL process cluster, Applications Cycle Management (ACM). You can consult the most important insights and findings in the ASL Foundation's white papers covering these evening seminars. In this respect the same structure is used as that of the programme for the evening seminar concerned. This white paper ends with conclusions about ACM.

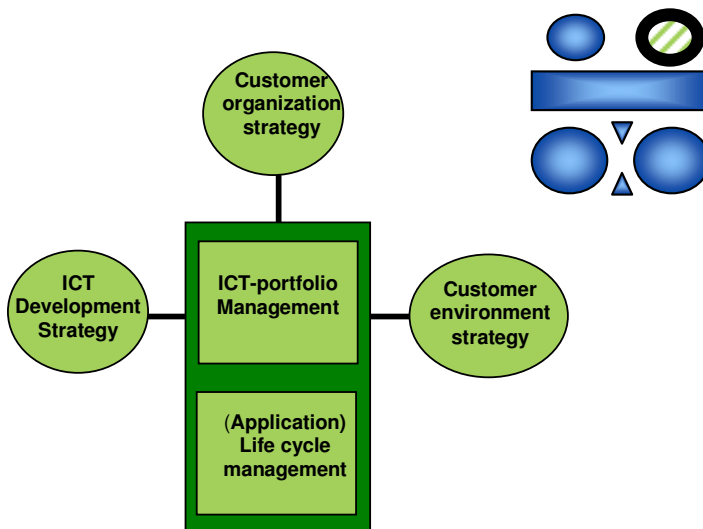
### Evening Seminars

The ASL Foundation regularly holds theme-based evening seminars for consultants and ICT managers who wish to know more about the background and practical use of the ASL framework. The aim of these gatherings is to share knowledge and experience, and to deepen our understanding of the purpose and application of the ASL framework. These evening seminars utilise a fixed formula, which has proven itself over time. A brief overview is provided of ASL, followed by a detailed explanation of those aspects of it those are to be dealt with during the evening in question. Case studies are also presented. The attendees are then divided into a number of discussion groups, which consider the different aspects of the subjects covered based on various hypotheses. This results in robust but interesting discussions and, in particular, to a deeper understanding. You can find more information about these evening seminars on the ASL Foundation website [www.aslfoundation.org](http://www.aslfoundation.org) (see the box entitled, 'ASL Foundation').

## Applications Cycle Management in a nutshell

ACM is a part of ASL (see the box entitled 'Background to ASL') which focuses on the future supply of information and the life cycle of the applications that constitute part of this. Using these processes, an application management organization develops a strategy for the next three to five years and stages for growth towards the new situation that has been outlined.

This occurs at the following two levels: at the level of 'an individual application' for a specific business process and at the level of 'all the applications' or portfolio of applications which support a number of business processes.



Before determining the strategy it is necessary to monitor trends in the field of technology, the business processes within a customer's organization, and the latter's surroundings, in other words, the entire chain pertaining to the applications that are managed.

It is vitally important that other relevant angles are also represented in this process, such as infrastructure (infrastructure management), the supply of information and product development (business information systems management).

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The ACM processes are as follows.

- **ICT development strategy** examines which ICT developments could be interesting for a customer's organization and its supply of information. New system development technologies and new infrastructures, such as the Internet, can create opportunities for organizations, which have an impact on these applications.
- **Customer environment strategy** highlights demands and opportunities in relation to the applications and information supply used by a customer's organization within the context of chain development. Organizations are increasingly operating as part of a chain of organizations. Consequently, applications are acquiring closer links with each other. The potential for an organization's own information supply determines its place and position within these chain processes. Changing market conditions, and new and amended legislation and regulations also need to be considered in this process.
- **Customer organization strategy** charts developments within a customer's organization (such as marketing, policy and organizational changes), as well as obstacles, their impact on applications and opportunities for capitalising on this.
- **ICT portfolio management** entails establishing the significance and performance of the various applications for organizations, implementing corporate policy and defining a strategy for the future of the ICT portfolio. Matters that are considered, include investment issues, the life cycle of applications and how items are phased out. This ensures the achievement of optimum coordination in respect of the larger investments and changes in the supply of information. Within many customer organizations this process constitutes part of information policy or planning.
- **Life cycle management** involves formulating a future strategy for an application, detailing relevant action, so as to ensure that the application concerned is capable of providing optimum support for the business process in question in the years ahead. Opportunities and future requirements are matched in relation to one or more applications which support a business process. A strategy is then prepared to satisfy these future requirements. This process is more in-depth, more substantive and, compared with the preceding process, more sharply focused on the specific business process which the relevant application supports.

### **Case study: Department of Defence**

*Several years ago the Department of Defence decided in favour of a gradual switch to ERP applications. Its policy was 'COTS, unless', which meant that Commercial Off-The-Shelf programs enjoyed priority. The Department of Defence wished to confine further investments in those of its current applications that were to be phased out, to a minimum. This gave rise to the question as to where investments were at least to be directed and how this was to occur in order to safeguard operations, on the one hand, and to ensure a continued healthy application portfolio, on the other. Consequently, a need arose to acquire greater control over existing core applications and their life cycle, and to understand the minimum amount of maintenance and control that was required.*

*In 1999 the Defensie Telematica Organisatie [Department of Defence Telematics Organization] (DTO) was asked to present its advice on the question posed by the Department of Defence in*

*relation to the core applications. Together with Ordina (one of DTO's IT service providers), a research method was developed, which made it possible to determine the value and life cycle of applications within a relatively short period of time. In addition, it could be used to obtain an overview of the maintenance and control that was required in order to ensure that these applications were sufficiently healthy and that they remained so. This 'study of indicative life cycles' concentrated on the match between operations and ICT.*

*Changes in technology and corporate objectives have an impact on an application's useful life and added value. An obsolete application can make heavy demands on many organizations' maintenance and control budgets. It is necessary to upgrade or replace applications on time. An important question which therefore needs to be answered, is 'How can our applications still continue to be used?'. The value of an application is to be found in some of its 'corporate' and*

*‘technical value’. An application’s corporate value indicates how well it ties in with the relevant business objectives and processes (its fitness for use). An application’s technical value is a measure of its condition in technical terms, in respect of which considerations that play a role, include the platform, which is being used, the support provided by its supplier and its architecture.*

*The applications’ current ‘corporate’ and ‘technical value’ was ascertained through interviews and workshops held by the various people involved: their users, maintenance team, owners, administrators and so forth. In addition, the platforms in service were itemised along with the databases, programming languages, interfaces with other applications and so forth. In order to determine and present their corporate and technical value as objectively as possible the researchers used sets of parameters to which they assigned a weighting. This made it possible to present the applications in the form of diagrams, thereby making it possible to see at a glance to*

*what extent an application satisfied the relevant requirements in its current technical and functional condition. The future useful life of the core applications depended on internal and external events, such as the introduction of ERP and several changes in strategy. By estimating the effects of these changes on the parameters that were monitored, an outlook was produced covering changes in the value of these applications in the future.*

*The Department of Defence takes this method and these results seriously. This approach has led to changes in the relevant budgets and in the way the relevant applications are maintained in respect of the transitional period leading up to the implementation of ERP. DTO was instructed to conduct a ‘study of indicative life cycles’ throughout the Department of Defence. The latter is considering the inclusion of such studies in its regular planning and control cycle.*

## Hypotheses and discussions.

In order to involve visitors more closely in the subject matter and to obtain new insights discussions were held on the basis of the hypotheses listed below.

Hypothesis 1: *ACM yields more than what it costs.*

This hypothesis induces one to consider the benefits of a long-term application strategy.

Arguments in Favour of the Hypothesis	Arguments against the Hypothesis
<ul style="list-style-type: none"> <li>• ACM boosts efficiency and quality.</li> <li>• ACM is a proactive and ongoing process.</li> <li>• ACM halves one’s costs.</li> <li>• Provides support for business processes now and in the future.</li> <li>• Short and long-term results.</li> <li>• Partnership of customers and suppliers.</li> <li>• Shared vision for the entire enterprise.</li> <li>• The risk of disposals is reduced.</li> <li>• Overview of architecture and structure.</li> <li>• Business benefits.</li> <li>• Time to consider the real issues.</li> <li>• Can be implemented in stages and related to core activities and planning.</li> <li>• Integration of business processes.</li> </ul>	<ul style="list-style-type: none"> <li>• Invest now but no yield is guaranteed.</li> <li>• Who dares to present a fixed price business case for it?</li> <li>• It is difficult to ensure that the benefits of ACM can be measured.</li> <li>• Focus on exceptions to the 80-20 rule. Exceptions cost more.</li> <li>• Who can predict the future?                             <ul style="list-style-type: none"> <li>- See the ‘Internet hype’.</li> <li>- See ‘Cobol is dead’.</li> </ul> </li> <li>• How do you show that ACM generates income?</li> <li>• Fuel for ICT engine.</li> </ul>

## **ASL Foundation’s conclusion and opinion in respect of Hypothesis 1**

No one can predict the future, although it does appear to be worthwhile to consider developments in the field of ICT, the organization and its surroundings on a regular basis. An application management organization is usually well aware of ICT developments. It can take an important step towards achieving business ICT alignment by sharing this knowledge with customers and by considering the impact of these developments on the various individual applications and its entire application portfolio.

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Sometimes people are surprised by events, such as the problems pertaining to the millennium. It also happens that people invest a good deal of time and money in something which is never put into service for all sorts of reasons. By implementing ACM one can change course in good time and it may even be possible to avoid such issues. As such, ACM presents an opportunity to cut costs.

Hypothesis 2: *ACM must be implemented by the business.*

A consideration of the various roles and the related division of labour produces an idea of how one can implement ACM in practice.

Arguments in Favour of the Hypothesis	Arguments against the Hypothesis
<ul style="list-style-type: none"> <li>Only the business people know what will be required in five years' time as a result of internal policy and external developments.</li> <li>The business has money and can or must set priorities.</li> <li>An ICT department or supplier is responsible for OCM.</li> <li>The ICT domain must not assume the role of a party making demands.</li> </ul>	<ul style="list-style-type: none"> <li>Owing to the subject matter, ACM must be led by the ICT domain albeit acting together with the business domain concerned.</li> <li>The ICT domain is familiar with the applications.</li> <li>The ICT domain possesses ICT expertise.</li> <li>The business domain needs to focus on the information requirements of its processes.</li> <li>Business ICT alignment is responsible for coordination.</li> <li>The business has money. The ICT domain converts it into value.</li> </ul>

### **ASL Foundation's conclusion and opinion in respect of Hypothesis 2**

A customer's organization bears final responsibility for the life cycle of its applications and its entire application portfolio. This is often realised through business information systems management. However, a great deal of expertise is required, if one is to be capable of making well-considered choices. In practice, this expertise is usually spread over various entities. It is possible to make appropriate decisions, which benefit both parties, thanks to the involvement of a substantive knowledge of the relevant applications and any other ICT expertise, and to share this with the business information systems management organization.

Hypothesis 3: *ACM must always be implemented together with OCM.*

Organization Cycle Management (OCM) and Applications Cycle Management (ACM) constitute strategic processes within ASL. There is a question as to how they relate to each other.

Arguments in Favour of the Hypothesis	Arguments against the Hypothesis
<ul style="list-style-type: none"> <li>ACM outcomes must be achievable (OCM in line with ACM).</li> <li>ACM choices depend on existing and potential OCM.</li> <li>No sense in an independent OCM process.</li> <li>'In combination with', i.e. OCM staff active in ACM and vice versa.</li> <li>Modifying applications or restructuring the relevant organization can accommodate effects on ACM.</li> </ul>	<ul style="list-style-type: none"> <li>ACM's focus is external while that of OCM is internal.</li> <li>People other than those active in OCM are involved in ACM.</li> <li>OCM follows ACM.</li> <li>All roads lead to Rome.</li> <li>Type of organization can vary.</li> <li>How OCM is structured is also related to the nature of the organization concerned.</li> <li>ACM is complex enough on its own.</li> </ul>

### **ASL Foundation's conclusion and opinion in respect of Hypothesis 3**

OCM helps application management organizations ensure that their services keep pace with developments in the market, at their customers', and in the fields of ICT and staffing. The OCM processes are related to various strategic organizational processes, such as portfolio management, for example. ACM focuses mainly on long-term application strategy. If one is involved in OCM processes, it is possible to reuse the output of the various ACM processes. In themselves, the ACM and OCM processes are not linked to each other directly and can be executed entirely independently of each

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other. In practice, other personnel are therefore often involved in these clusters: the management of the relevant application management organization in the case of OCM, and often consultants where ACM is concerned.

Hypothesis 4: *ACM is not necessary in the case of package suppliers.*

Application management occurs for various types of applications. Even suppliers of standard software packages can use ACM. Naturally, the question is whether this makes sense in the case of package suppliers.

Arguments in Favour of the Hypothesis	Arguments against the Hypothesis
<ul style="list-style-type: none"><li>• The market dictates and not an individual customer.</li><li>• Customers do not know what they want.</li><li>• Not prudent in economic terms.</li><li>• More tailored work translates into more money.</li><li>• Not their task.</li><li>• It costs time and money.</li><li>• Portfolio management is unnecessary owing to the limited number of programs.</li></ul>	<ul style="list-style-type: none"><li>• The supplier is responsible for directing development.</li><li>• One needs to keep pace with the market in relation to development for the platforms in service.</li><li>• One will need to retain one's market, however difficult that may be (expansion).</li><li>• One is better able to structure the development of one's application.</li><li>• HENCE, ACM is product management.</li></ul>

## ***ASL Foundation's conclusion and opinion in respect of Hypothesis 4***

Package suppliers are often unable to address the requirements of all their individual customers. Nevertheless, they will need to address the largest common denominator of relevant developments in order to continue to satisfy market demand. ACM also helps package suppliers consider developments in ICT, in their external markets (What are other competing package suppliers doing?) and within their own organization. In view of the fact that a package supplier actually also plays the role of an owner for the purposes of business information systems management, it can set its own priorities and determine further implementation. At any rate, ACM can certainly be used depending on the approach that is adopted and the penetration.

## **Conclusions**

**Business ICT alignment must be imbedded in a regular process and should be performed at set times. ACM can play a serious role in this respect and enables an application management organization to consider matters together with its customers. ACM makes a contribution to long-term customer relations and helps avoid surprises. In this way a business and its ICT provider can take the time to think proactively about those issues which are relevant for the future, which is also clear from the Department of Defence case study. Policy and decisions receive support thanks to a shared vision of the organization's information supply. Application management can take the initiative or even assume the leading role in this respect but ACM will fail if the relevant business and its infrastructure service providers fail to participate sufficiently.**

**Monitoring trends and studying life cycles within an application portfolio help secure operations and optimise maintenance and control. As application management continues to mature, ASL's well-considered concept of ACM will rapidly become generally accepted. In addition, we believe that ACM and the management of life cycles can constitute the basis for cost reductions.**

If you wish to learn more about ASL in general or ACM in particular, you are always at liberty to contact the ASL Foundation (see the box on the ASL Foundation).

**Interested in finding out more?**

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## Credits

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## Literature

1. Meijer-Veldman M.E.E. and Van der Pols R., '*ASL, second generation application management*', the English version of the Dutch article in *IT Beheer Jaarboek 2001*, Ten Hagen & Stam, The Hague, 2001.
2. Van der Pols R., *ASL: a Framework for Application Management*, Van Haren Publishing, 2004, ISBN 90-77212-05-1

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## Background to ASL

The aim of ASL, the Applications Services Library, is to professionalise application management, not only within a single organization but also as a standardising factor covering various ones. Amongst other things, it fits in with ITIL, which mainly focuses on the establishment of technical management organizations. ASL consists of a framework and a library of best practices in the field of application management. In this respect, application management is the 'entity' which maintains the functionality and operations of applications (software, databases and administrative documentation). ASL seeks to use information systems to provide optimum support for business processes throughout the latter's life cycle.

### Main aspects of the ASL framework

This framework describes the AM processes spread over the strategic, tactical and operational levels. Each of the circles and the rectangle in the middle represent a cluster of processes.

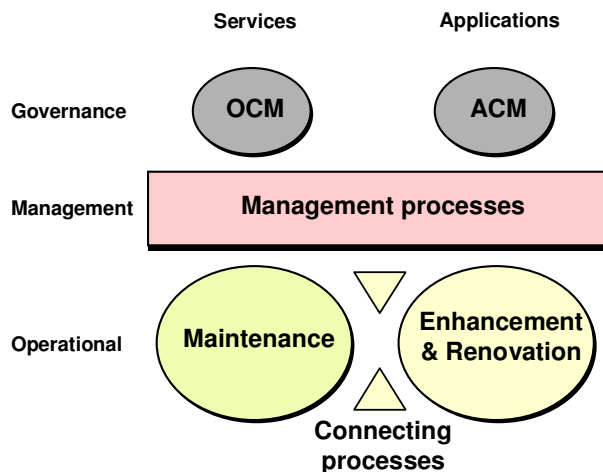
**Maintenance** – These activities focus on the optimum use of applications. They are responsible for the optimum deployment of the applications that are currently in service, for the purpose of supporting business processes with a minimum of resources and malfunctions during operation.

**Enhancement and renovation** – Because information systems are closely related to ever-changing business processes (and their surroundings), applications also need to change accordingly. This cluster of processes is responsible for the requisite application modifications to accommodate new needs and requirements. The requisite adjustments are made to the data models, the software and the documentation.

**Tactical processes** – The management processes of planning and control, and cost, quality and service level management are responsible for determining the overall direction of the maintenance and enhancement and renovation activities. The tactical processes are 'driven' by the strategic processes which provide the policy input. The tactical layer thus ensures that policy is translated into action. In turn, the management processes are fed by the operational processes, which is also translated into input for the strategic processes.

**Applications Cycle Management** – Based on the realisation that 80% of current applications will still exist in five years' time, it is essential to develop and implement future scenarios. Through this cluster of processes AM proactively produces a long-term strategy for the applications and the entire information supply for an organization of users or customers in relation to the long-term policy of this organization.

**Organization Cycle Management** – Nowadays AM organizations are increasingly under pressure to provide better service at ever-lower cost. Internal AM organizations are having to contend with competition from outsourcing contractors. AM organizations need to think proactively about the people they wish to serve (or start serving) and the services which they would like to provide in the future. This cluster of processes focuses on the development of a vision for the future and its translation into policy on upgrading AM services (Meijer, 2001).



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## ASL Foundation

The aim of the ASL Foundation is to professionalise the application management sector by presenting a framework within which relations are established between the various application management processes. In addition to this framework, the ASL Foundation also publishes best practices, articles, books and white papers and regularly organises events. The ASL Foundation stimulates regular educational and training services on Application Management.

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Two e-mail addresses are available if you require additional information. The first is that of the Expertise Informatiepunt (EI). The EI can answer all the questions you have about the nature of ASL: [ei@aslfoundation.org](mailto:ei@aslfoundation.org).

The second e-mail address is for general information about the foundation or if you require information about how you can introduce ASL in your own organization: [info@aslfoundation.org](mailto:info@aslfoundation.org).

You can also become a participant or knowledge partner of the ASL Foundation and make substantive contributions. A large number of organizations have already done this (status May 2005).

**DTO** |



### Knowledge partners:

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