ASL and BiSL self-assessments: an analysis

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In 2003 an article by René Sieders was published in the IT Beheer Jaarboek entitled ***Experiences with self-assessment as a methodology for professionalizing IT management (in Dutch)***. This article is based on the experiences that had been gained until then with the ASL self-assessment, but is also applicable one-on-one for the BiSL self-assessment that was published later, in 2006. We have since gained much experience with both types of self-assessment. In this article, we describe the results of our analysis of several dozen ASL self-assessments and also a few dozen BiSL self-assessments in various organizations.

Introduction

Self-assessments appear to be a powerful tool in determining the best improvement possibilities for an organization. In recent years, the authors of this article have guided dozens of self-assessments. General conclusions can be drawn from these concerning the maturity and the strengths and weaknesses of the average application management or business information management organization. However, before going into the assessment results we gathered, we first present the content of the self-evaluations and we refer to the conclusions of an article from 2003 [Sieders] that describes the methodology and added value in detail. We also look briefly at the NEN 3434 standard for application management.

We assume that the reader is sufficiently familiar with ASL and BiSL themselves. If you would still like some explanation of these frameworks for application management and business information management respectively, please refer to the web site of the ASL BiSL Foundation. www.aslbislfoundation.org.

ASL and BiSL self-assessment

The self-assessments consist of lists of statements for each of the process areas within ASL and BiSL respectively, which can be checked or not, in other words criteria that have to be met to reach a certain capability level. These statements are subdivided into five capability levels, based on the maturity and capability levels of CMM and INK [1] : initial, repeated, defined and managed, optimizing and chain organized:

1. Initial
The organization has no stable environment in which to perform processes. Activities in the field of the process are implemented. Also some initiatives are taken and some activities are carried out to acquire insight and knowledge. The results and outcomes of the activities are usually not predictable.

2. Repeated
The organization carries out activities based on repetition. In performing, use is made of previous experiences and methods. A standard method begins to emerge. This offers some possibilities for control during execution of the activities. This control takes place based on expectations and outcomes.

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[1] For the comparison of ASL, INK and CMM see: [Meijer (2003)] and [Meijer (2004)]

3. Defined and managed

The activities and processes are visible, documented and defined. Consideration is given to the way in which processes have to take place. The processes are organized in such a way that quantitative and qualitative key figures are made available, based on which the organization can control and adjust.

4. Optimizing

The organization is configured such that continuous process improvement is in place. Mechanisms and processes have been developed to make improvements to the process possible in a continuous and controlled way. The renewal and improvement are built into the organization.

5. Chain

The focus of the organization regarding the design, improvement, and alignment of processes is geared towards increasing the added value within the process chain in which it operates. The focus, importance, and perspective are thus not purely oriented within the organization, but within the context of the place within the environment. The aim is to achieve maximization of added value of all parties within the chain.

Using the statement lists, the participants themselves determine the capability level of the organization/business unit for the relevant process.

Table 1 gives an example from the statement lists, developed for the ASL process of Software Control and Distribution.

Level	Software Control and Distribution
0-nothing	
1-initial	❑ … ❑ … ❑ …
2-repeated	❑ Agreements exist regarding the storage and distribution of application objects ❑ Various stages (archive, develop, test, and production) are recognized for application objects and are worked with ❑ Agreements exist for transfer of application objects from one to another stage, possibly supplemented with explicit relocation to another storage environment ❑ A group of application objects, which are processed within the framework of a certain change (release), can be recognized as a whole (change set/package) during and after the change ❑ The link with Configuration Management is an automatism ❑ It is possible to work on various changes (releases) at the same time, without this causing problems
3-defined Managed	❑ Clear agreements and procedures exist with regard to the storage and distribution of application objects. Compliance with those agreements is verified. ❑ Various stages (archive, develop, test, and production) exist for application objects and their correct use is required ❑ Roles/tasks/responsibilities regarding actions with application objects are clearly authorized. Unauthorized action is blocked ❑ The link with Configuration Management is secured (automated) and cannot be switched off. ❑ Change sets, change packages, and shipments are used to distinguish the various changes (releases) from each other. It is possible to work on various changes (releases) at the same time with limited risk. ❑ Alignment between the content of the storage environment and the content of the configuration database and cleaning takes place regularly and according to fixed rules ❑ Application objects are tested against applicable standards and requirements when a change is made
4-optimizing	❑ … ❑ ….
5-chain	❑ … ❑ …. ❑ …

Table 1: An example from the ASL self-assessment

The method here is as follows. Using the statement lists developed, the participants in a plenary session reach a joint/shared picture. The supervisor plays an important role in these sessions. The supervisor tests, through in-depth questions, the rough image for truthfulness ("what reveals that", "can you give an example", "what is the situation with…?") and establishes connections with the outcomes formed from the other processes. This can lead to occasional adjustment of scores by the individual participants. The scores lead as follows to a division into levels: the participant group looks at every process and every capability level to see that all statements are checked off. If this is the case, this capability level can be checked off. The capability level of a process is the highest level at which all statements are checked off.

In this way, a genuine picture is finally created of the jointly perceived current capability level. Then, the participants determine together which relative strengths and weaknesses exist and what the desired capability level is. Then they consider whether the weaknesses lead to bottlenecks that have to be eliminated. Finally, an action plan is drawn up in order to select a (preferably limited) number of actions for implementation.

Experiences with the methodology for self-assessments

In 2003, much was written about the experiences that were acquired at the time with the implementation of self-assessments as a basis for professionalizing application management [Sieders]. In the article in question (in somewhat different terms) the following conclusions can be found.

A self-assessment is based on four major pillars:
- a shared (process) model. In this context, this is the ASL model,
- a mature resource. In this context, that is the ASL workbook with the statement lists and corresponding diagrams for establishing weakness, bottlenecks, and actions;
- a facilitator who is an expert in the subject area, as well as in the field of motivation, guiding, critical monitoring, asking questions, making connections, etc.;
- a true representation of the team where the self-assessment is being carried out. This means that the participants must have a role in the relevant processes, that they must have some understanding of what is happening in these processes and that they must be prepared for self-reflection.

If one of these pillars is missing, a self-assessment is doomed to failure.

A self-assessment provides an organization, in addition to a traditional audit, with a good aid for obtaining a reasonable picture, within a very limited time, of the strengths and weaknesses of process design in the field of the management of IT and the provision of information and, in association with this, to take improvement actions. It encourages the participants to go about their work in a different way and it opens their eyes to their own weaknesses. What else does a manager want?

Analysis of self-assessment results

Below we describe the results of the analysis of several dozen ASL self-assessments as well as a few dozen BiSL self-assessments. Some general characteristics of these self-assessments:
- the studies were carried out during the period 2002-2008. In some cases, the present version of the self-assessment workbook was used, but in some cases a previous version was used. This means that, in some cases, statements disappeared, were added, or were adjusted. In our analysis, we took the most recent edition of the workbooks as a starting point;
- the studies were conducted in various organizations (for profit and non-profit, outsourced or not, small and large);

- the average group size was around 10 people;
- in all cases, one of the two of us was always present as facilitator;
- all results are established based on consensus in the participating group;
- our analysis is confined to the operational and management (tactical) layer. The guiding (strategic) layer is therefore not included. The reason for this is that very little information was available about the strategic processes: usually, an organization confines itself to a self-assessment at operational and tactical levels.

ASL

At process level, we see the scores from Figure 1. This indicates what percentage of the organizations studied acts at which capability level, per process.

Process	Average process level	% level 0	% level 1	% level 2	% level 3	% level 4/5
1.1 Incident management	1,6	7	36	50	7	0
1.2 Configuration management	1,5	18	39	21	18	4
1.3 Availability management	1,4	0	73	12	15	0
1.4 Capacity management	1,2	32	39	14	11	4
1.5 Continuïty management	1,8	4	43	39	0	14
2.1 Impact analysis	1,4	4	64	18	14	0
2.2 Design	1,4	14	36	46	4	0
2.3 Realization	1,7	4	37	48	11	0
2.4 Testing	1,0	32	46	11	11	0
2.5 Implementation	1,8	7	37	26	30	0
3.1 Change Management	1,5	25	21	32	21	0
3.2 Program management and distribution	1,4	33	15	26	26	0
4.1 Quality management	1,0	29	50	14	7	0
4.2 Planning and control	1,5	0	50	50	0	0
4.3 Costs	1,6	19	27	31	23	0
4.4 Service Level Management	1,2	26	33	37	4	0

Figure 1: Score levels per ASL process

Points of note:
1. Most application management organizations score poorly in the ASL self-assessment in terms of process capability. In general, the average capability per process is around levels 1 to 2
2. The processes where level 3 or higher is most often obtained are: Implementation, Software Control and Distribution, Cost Management. If we look at the average scores for all teams, the highest scores are achieved by: Implementation, Continuity Management, and Realization.
3. The processes where levels 0 or 1 are most often obtained are Capacity Management, testing, Software Control and Distribution, and Quality Management. If we look at the average scores for all teams, the lowest scores are achieved by: Testing, Quality Management, and Service Level Management.
4. The greatest spread of scores can be seen for the processes of Configuration Management, Change Management, Software Control and Distribution, and Cost Management.

The scores at cluster level are shown in Figure 2. This indicates what percentage of the organizations studied achieves which maturity level, per cluster. The left-hand graph presents the formal scores: a level is only obtained if all processes in that cluster are at this level. The right-hand graph presents the informal scores: the mathematical average of the scores for all processes in that cluster. Of course, the scores are higher then!

	Average	% level 0	% level 1	% level 2	% level 3	% level 4/5
management	1,5	12	46	27	10	4
maintenance	1,5	12	44	30	14	0
connecting	1,5	29	18	29	24	0
tactical	1,3	18	40	33	8	0

	Average	% level 0	% level 1	% level 2	% level 3	% level 4/5
Management	0,77	38	46	15	0	0
Maintenance	0,77	38	50	8	4	0
Connecting	1,08	46	15	23	15	0
Tactical	0,65	42	50	8	0	0

Figure 2: Capability level per ASL cluster; on the left the formal level of a cluster, on the right the average for the individual processes

Points of note:

1. The Connecting Processes have the widest spread (i.e. varies widely per team studied).
2. The Management Processes in general score slightly lower than the Operational Processes.

What are organizations not good at? Some specific criteria that are poorly met by the organizations studied.

1. In almost half of the organizations, no link exists between Software Control and Distribution and Configuration Management (requirement at level 1). This implies that data about the launch of new software either do not find their way into the CMDB at all or are manually input. We have seen a number of examples of projects in which an automated link between the tools for version management and configuration management should be delivered. But, just as frequently, this automatic interface was scrapped because of a lack of time.
2. In two-thirds of the organizations, no report was given about use and performance and availability and reliability of the system (requirements at level 2). Organized and explicit feedback from the user organization about the performance of the system is also missing. As a result, it is hard to obtain a shared picture of these quality aspects.
3. In two-thirds of the organizations, no regular audits or other forms of quality assurance take place regarding applications, other products and services. In (only) one-third of the organizations, changes or releases are evaluated, such that they can be used when the next changes are made. Problem management is also poorly implemented. (These are requirements at level 2.) This means therefore that many organizations do not learn structurally from their failures or successes. The result is that there is a realistic chance of unnecessary errors and costs.

What are organizations good at? Some specific criteria that are usually met.

1. Decision-making about whether or not to work based on releases often takes place explicitly.
2. Unforeseen application errors rarely occur in production/operations.
3. One formal point of contact exists (help desk).
4. The cost of adapting programs is determined in advance. This estimate is recorded.

BiSL

At process level, we see the scores from Figure 3. This again indicates what percentage of the organizations studied acts at which capability level, per process.
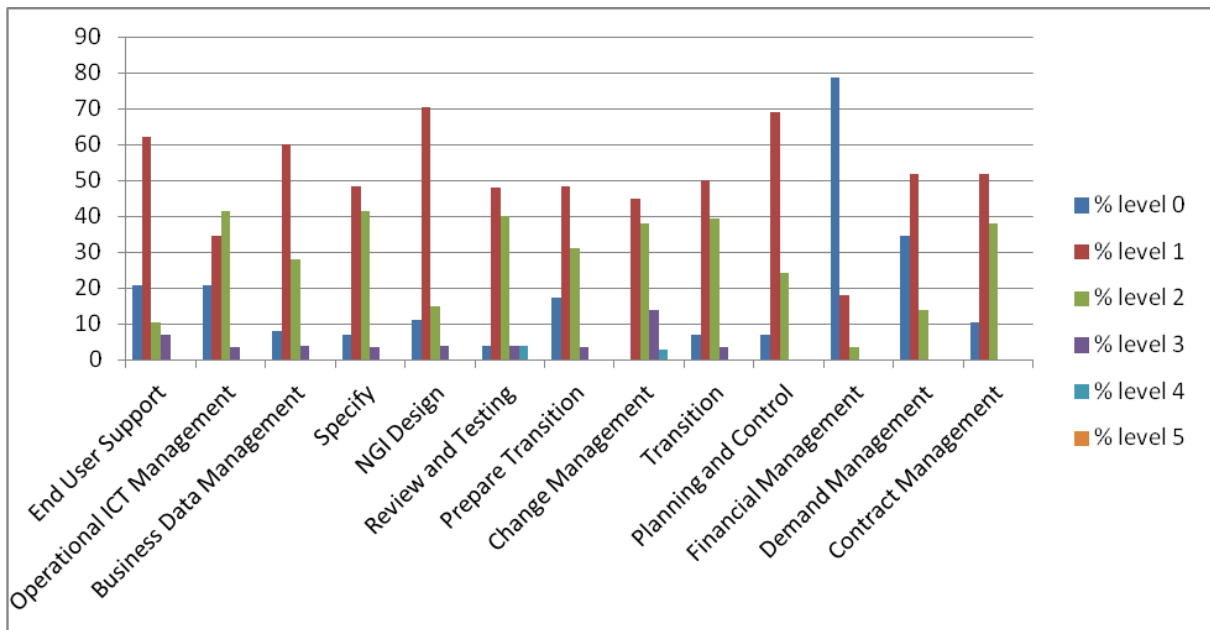
Figure 3: Score levels per BiSL process

Points of note:

1. In general, the average capability is at or slightly above level 1. This is therefore lower than for ASL.
2. The processes where level 3 or higher is most often obtained are: Review and Testing and Change Management. If we look at the average scores for all teams, the highest scores are achieved by: Change Management, Review and Testing, and Specify Information Requirements, and Transition.
3. The processes where levels 0 or 1 are most often obtained are: the Management Processes, Planning & Control, Financial Management, Demand Management, and Contract Management. If we look at the average scores for all teams, the lowest scores are achieved by: Financial Management, Demand Management, and End User Support.

At cluster level, we find the scores shown in Figure 4: the formal scores at cluster level are on the left and the informal scores at cluster level on the right.
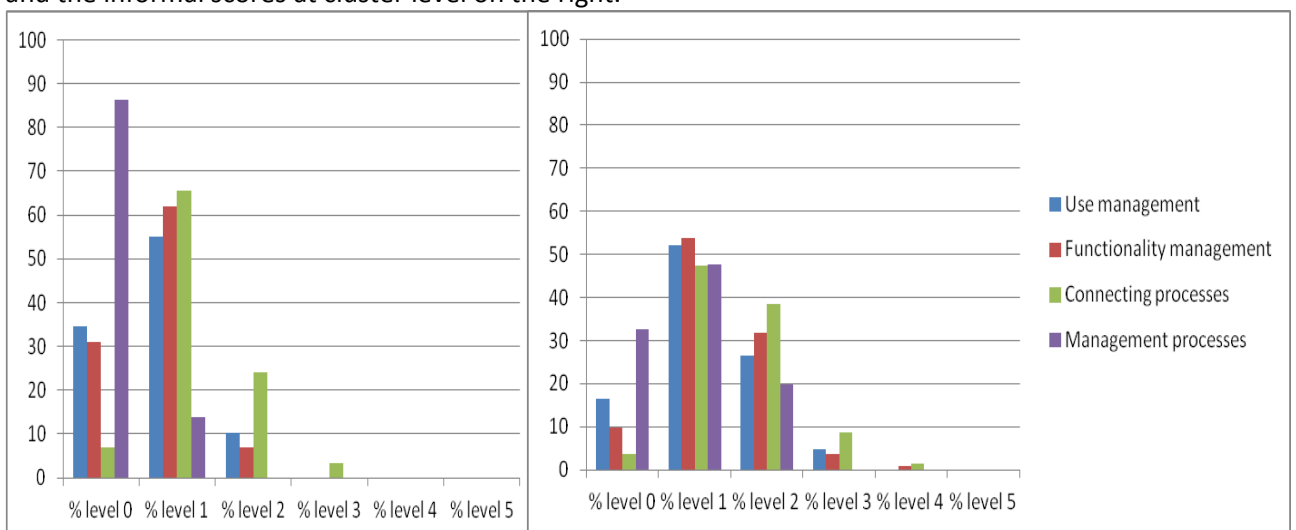

Figure 4: Capability level per BiSL cluster; on the left the formal level of a cluster, on the right the average for the individual processes

Points of note:

1. The Management Processes in general score lower than the Operational Processes

2. The differences among the Operational Processes are in general small, but the Connecting Processes score slightly higher

What are organizations not good at? Some specific criteria that are poorly met by the organizations studied.

1. Financial Management is poorly implemented in many organizations. Allocation of costs to departments takes place in under one quarter of cases. Benefits of the information provisioning are occasionally included in less than one third of the organizations (requirements at level 1) and regularly in less than 10% (level 2). The result of this is that investment decisions in the information provisioning are taken based on an incomplete business case and therefore are in fact inadequately supported.
2. Demand Management also scores poorly. Only one out of seven of the business units studied regularly examined the satisfaction of the organization, end users, and management with the information provisioning. One in five organizations has made arrangements concerning standards, resources, and methods, which are generally used (level 2 requirements). Both can easily lead to a provision of information that is seen as qualitatively inadequate.
3. In approximately three out of four organizations, when a change (release) takes place, no time is regularly scheduled for drawing up and/or updating procedures, manuals and the like (level 2 requirement). As a result, the costs and lead time of a change are not sufficiently known, which can lead to overrunning of the activities in time and money.

What are organizations good at? Some specific criteria that are usually met.

1. The change management process is generally correctly implemented. In over half of the organizations formalized arrangements exist concerning the way in which change requests are submitted and approved and in just as many organizations all (level 3) and in all organizations most (level 2) changes are tested for use and need.
2. Acceptance tests generally take place (level 2) in virtually all organizations.
3. In four-fifths of the organizations, the information needs of the organization are identified. This takes place such that the functionality delivered leads in less than one fifth of the organizations to unforeseen effects in terms of agreed functionality (level 2).

General conclusions

1. In general, the scores are low for ASL and for BiSL.

   Various possible causes can be indicated:
   - the self-assessments impose high requirements, even at a low capability level;
   - our database only contains data for relatively immature organizations;
   - those questioned have a high degree of self-criticism (perhaps controlled by the consultants);
   - most organizations have a low level of process capability.
   We ourselves think that the last cause is the most likely.

2. ASL achieves higher scores than BiSL.

   This is also logical:

- IT management organizations have been busy professionalizing their processes for years, starting around 1990 with ITIL, followed by ASL at the end of the 1990s. Business information management has only been seen as a true subject area much more recently. BiSL only appeared over the course of the past decade. Many organizations still do not realize what processes and activities are involved in the creation and maintenance of the required provision of information.

- Application management is somewhat easier to organize in a process-related and structured way than business information management or information management, where much more politics is involved and many more parties (want to) play a role: business management, users, business information administrators, IT suppliers.

3. At tactical level, the scores are lower than at operational level.

   Here too, various possible causes can be indicated:
   - our database only contains data from relatively immature organizations, where management in particular is not up to scratch (and, as a result, nor are operations, although to a lesser extent);
   - managers were under-represented among the participants It is easier to criticize another than to criticize oneself.
   - in most organizations, less attention is devoted at tactical level to quality and process design.

   We ourselves think that the last cause is the most likely. In practice, the Management Processes are often a measure of the maturity of an organization. It is typical for the Operational Processes to be better than the Management Processes in organizations that are not yet at level 2.

What have we not examined?

The scores from a self-assessment are not intended as the end result of a meeting. A complete self-assessment produces a summary of necessary and priority improvement actions and, on that basis, should hopefully lead to improvements.

The strengths, weaknesses, and bottlenecks described in the self-assessment sessions are unfortunately too diverse to be able to draw firm conclusions from them. We do however have some insight into the defined improvement actions, but virtually no insight into their results. For the time being, therefore, no conclusions can be drawn from the available data about the improvement actions. This therefore forms the subject for a subsequent study.

The ASL self-assessment and the NEN 3434:2007 standard for application management

The ASL self-assessment was published in 2003. The standard for application management NEN 3434 was added in 2007. You may well be wondering: what is the relationship between the two? The NEN standard is partly based on the ASL self-assessment but is broader and also more exact (in the self-assessment, qualifications are referred to as "more or less" and "sometimes"; in the NEN standard, percentages are more common). The NEN standard is not intended for self-assessment, but for a formal assessment. Of course, the standard can be used for a self-assessment (this is even recommended in the initial phase of a formal assessment). However, since the NEN standard is very extensive and formal, we recommend first doing the 'lite' version: the self-assessment and moving on to the NEN standard only if there is a need for independent review.

To be(nchmark) or not to be(nchmark), that is the question

With the data we have collected, we think that we have a basis for creating a benchmark. The question, however, is how worthwhile that is. Two underlying questions have to be asked:
- How objective are the values obtained?
- Why would we want to compare our own results with those of others?

Objective or not?

It is clear that a self-assessment revolves around recording one's own opinion of one's own action. Some people are pessimistic by nature, but many are optimistic about their own skills. One team is more open, another more reticent. This means that the results of a self-assessment are not entirely objective, even if an experienced ASL or BiSL consultant is present as facilitator. This is not in itself serious for a self-assessment. It is about consensus and the shared feeling of urgency in making improvements. A formal audit is different. First, the criteria for meeting the lowest capability levels are "stricter" (in the self-assessment, words such as "sometimes" and "usually" are used) and, second, the auditors are stricter: they will convince themselves that evidence exists to support the answers given. Therefore: a score of level 3 in the self-assessment is no guarantee of a score at that level (or even the level below) in a formal audit.

The use of the comparison

As also indicated in the 2003 article, the aim of a self-assessment is usually to determine where the strengths, weaknesses, and bottlenecks can be found in one's own organization and, on that basis, to find areas for improvement. This has nothing to do with a comparison with others. What is an important process or component for improvement for one does not have to be the same thing for another. This scope of areas for improvement is usually clear in a self-assessment session, but cannot be found in the recorded results. The most you will gain from a comparison with others is, "how am I doing compared to colleagues?". The question is what you want to do with that knowledge. You could look at the best practices of others and examine what you can learn from others. Despite the fact that we have conducted dozens of self-assessments, we do not know for certain how representative our data are with respect to the market. On the one hand, we can imagine that organizations with a high level of process capability may be less inclined to conduct a self-assessment but, on the other hand, that it does not even occur to very immature organizations to do a self-assessment or that they are too afraid of bad results.

How worthwhile is a (formal) benchmark based on a self-assessment? We believe that it is not worthwhile. What you can do is to make a global comparison as long as you are aware of the relative value of, firstly, the master data (a database filled with all kinds of subjective values) and, second, your own maturity measurement, which will also contain a subjective opinion despite the role of the external process supervisor (consultant). That is something different than a benchmark, which still has to be more formal and independent.

We are sometimes asked for a benchmark based on the NEN 3434 standard. How worthwhile is that? It is worthwhile if:
- a substantial quantity of research results is still available (in other words: dozens of audits were conducted);
- these results were obtained by certified auditors (in other words: the study was independent).
Given the number of audits carried out so far based on NEN 3434, we believe no basis yet exists for this type of benchmark at this point. All the more since many organizations still have many processes at capability level 0 or 1 and level 1 is not tested by the standard. But, if the whole branch becomes somewhat more mature and the standard is widely applied as an audit tool, it could be a good idea, provided it is formalized.

In other respects, our advice is: start with the self-assessment and only move on to NEN 3434 if the self-assessment reveals that your organization is mature enough that level 2 is clearly within reach.

Finally, we are making an appeal for consultants who have guided self-assessments. We would be happy to receive data from self-assessments. We can then incorporate these into our database so that we can publish the measurement data from time to time.

Dr. Machteld Meijer is an independent senior consultant and trainer and has worked and published extensively on ASL and BiSL. René Sieders is a principal consultant employed by the Lifecycle Company. Their areas of specialty are the configuration and professionalization of application management and business information management. He is the author of various articles about ASL and BiSL. Both are members of the standardization working group of the ASL BiSL Foundation and in 2007 became members of the NEN committee NEN 3434:2007 Standard for application management. Comments, suggestions, and best practices regarding this topic are welcome and can be sent to rene.sieders@thelifecyclecompany.nl or machteld.meijer@maise.nl.

Literature consulted

- **Deurloo, Kees, Remko van der Pols and René Sieders**, *ASL self-assessment.* Ten Hagen & Stam, 2003/2004 (in Dutch/English).
- **Donatz, Ralph,** *BiSL self-assessment*. Academic Service, 2006 (in Dutch).
- **INK**. Manual of Position Determination based on the INK management model – Companies. INK, 2000 (in Dutch).
- **Meijer, Machteld**, 'ASL big step towards INK level III', in: *Informatie, 2003, 10.* Ten Hagen & Stam (in Dutch).
- **Meijer, Machteld and Harry Meijer,** 'How can I improve my application services? How ASL and CMMI can contribute', in: *IT Service Management best practices 2004*, ITSMF (in Dutch; also available in English).
- **NEN,** *NEN 3434:2007 Standard for application management,* 2007 (in Dutch).
- **Sieders, René,** 'Experiences with self-assessment as methodology for professionalization of IT management', in: *IT Beheer Jaarboek 2003*. Ten Hagen & Stam (in Dutch).