

Effects of an Architectural Approach to the Implementation of Shared Service Centers

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Abstract

In this case study in architecture (as part of an action research program), we aim to discover the influence of architecture on the design of organization and ICT.

As a first step in realizing a Shared Service Center Securities, in 2002 the Dutch-based bank ING launched its "Foundations" program, resulting in a Business, Organizational and Application Architecture. In 2003 the first designs based on this architecture were made.

Main question of this case study is: "What was the role of architecture during design activities and how did the architecture guarantee that the designs still meet the original business and ICT-goals of 2002?" The source material was gathered during interviews, an internet closed question survey and a workshop.

The main added values of architecture appeared to be: (1) to create a common conceptualization of the Target situations for all parties involved; (2) to support project scoping and communication on investment decisions; (3) to help governance of operations and ICT in place.

1 Introduction

In our PhD research we focus on "how to guarantee compliance with operational agreements in alliances between independently operating entities". These entities can be completely independent organizations or independently operating units in a larger group. We want this investigation to result in useful tooling to support the effort to successfully implement such an alliance.

Architecture. An important tool is the concept of architecture. Architecture means to us a deliberately chosen set of limitations set to the designing process, consisting of (1) principles, rules and guidelines plus (2) a first sketch of the situation-to-be, supporting the process of conceptualization the final organizational structure and ICT-systems.

The architecture gives statements describing properties of the future situation, more specifically describing co-

operation between the organizations in the alliance and the ways to handle change of parties and agreements in the alliance.

We distinguish between business architecture and ICT architecture. Business architecture is architecture of behavior and operation of the business. It describes a/o products, actors, processes and organization in their mutual coherence. ICT architecture is architecture of behavior and operation of the applications. It describes a/o application systems, data-structures and infrastructures. Architecture, without any specification, is the sum of both.

In our studies we aim at firmly establishing this thesis (proposition):

Proposition. A correctly defined business-architecture has to be accompanied by a correctly defined ICT architecture. Both architectures -together with an adequate method of design- will result in an organization and ICT preserving the intended effects of the architecture, because of their subdivisions between the participating organizational units and between the supporting ICT systems.

By the terms "Correctly defined architecture" or "Sound architecture" we understand an architecture that clearly identifies as its elementary units: these units have the property that it is not feasible to assign the responsibility to more than one entity. By the term "Adequate method of design" we understand a method that respects these elementary units when forming higher level units. The elementary units are not split up, but still seen as elementary.

This brings us to a two-fold task: (1) to clarify how and why (for entities in an alliance) a correctly defined architecture has the intended effects in the resulting organization and ICT; (2) to discover useful, sound architectural concepts and select, develop and test tools to support architects in applying these concepts.

Shared Service Center. This case study focuses on the implementation of a Shared Service Center. Adopting

Immink's [1] approach, we define an internal Shared Service Center (SSC) as "... a professional organization, executing specific business functions for (internal) clients.":

- the emphasis is on the operational delivery of tangible services that already exist; only now they are shared;
- the SSC, typically supplies its clients on the professional basis of Service Level Agreements (SLAs), and is accountable for the services supplied;
- the SSC has a client-focused mind-set and is dedicated to providing high-quality, cost-effective, and timely service;
- the specific business functions can be secondary functions, back-office functions or front-office functions; the essential point here is that those specific functions are organized once only.

2 The research-method applied

The approach to the task described in the previous section, we chose to be the method of action research. In a series of cases we intervene by introducing new concepts or tools. The effects of using these concepts or tools are studied using the case study method. (Studying single cases can satisfy the standards of the natural science model of scientific research, as Lee argues [2]). In the cases we try to clarify if, why and how the intervention did indeed support or improve the use of architecture. This evaluation then leads to new concepts and tools to be used in the next case, etc. This repeating cycle of intervention, measuring, evaluation and improvement is called action research [3] (see Fig. 1).

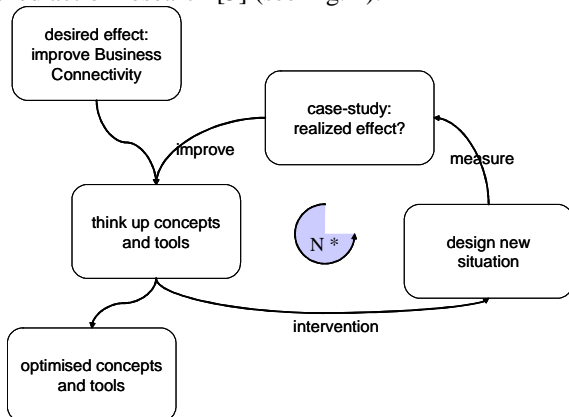


Fig. 1. The action research cycle

The first cycle in our research is the architecture approach used by ING in their implementation program of a shared service center in the Securities Domain.

The starting point of the cycle is the intervention made by introducing the architectural approach. This was done in a program known as *Foundations*. A short description

is given in the next section; see for a more elaborate one [4]. One of the authors was the leading architect for the Foundations program during 2002. In this phase of the program the business, operational and application architectures were developed. The set of architectures resulting from the Foundations program is referred to as *Architecture2002*.

The main focus of this paper is the next step in the cycle: the case study. In a case study, researchers have their point-of-view outside the process they are studying. They do not interfere [5]. We studied the status of the designs as observed 2003Q3/2004Q1. This status is referred to as *Design2003*. The case study is focusing on the role of *Architecture2002* on *Design2003*. What was that role and how did it guarantee that *Design2003* still meets the original business and IT-goals that were the starting points of *Architecture2002*?

To find an answer to these questions we followed this procedure. We did a series of free interviews with 4 key-players. Based on the findings of these interviews we constructed a closed survey question-list of approx. 250 questions. The answer to all these questions should give us a clear picture of the view of the respondents of the role and importance of *Architecture2002*. This survey was sent out through the Internet to 30 managers and architects, involved in the program. We received 18 completed forms. 5 respondents explained their answers in semi-closed interviews. We formulated the findings from this survey and its explanations in a series of statements. These were discussed and validated in an expert-workshop, attended by some highly involved managers and architects. The final outcome of the case study is based on interviews, survey and workshop, all held between December 2003 and August 2004. We present this outcome in section 4 of this paper.

3 The intervention: Architecture2002

3.1 Context of ING Securities [6], [7]

The Dutch-based global bank-insurer ING has a presence in 50 countries, employing a workforce of 115,000 and serving more than 60 million customers. In the course of the last few years, like many other financial institutions, ING has mainly grown by mergers and acquisitions. ING is characterized by an abundance of brands, products, and subcultures. Highly similar operations are currently performed using very different organizational forms and ICT platforms and applications.

ING has prioritized performance improvement by reducing cost levels. These cost levels have to be reduced by synergy and the use of shared services. While reusing the current organization and applications, ING wants to build a new collection of organizational and applicative entities (shared service centers), all servicing one another.

ING has placed the “cut” between the distribution channels and brands on one hand, and the product-oriented back-offices on the other hand. Integrated steering of these product-oriented back-offices for both operations and IT is placed in the organizational unit *OPS/IT*.

To implement this move to shared service centers, general principles and guidelines for organization and applications were drawn up at the level of ING EC (Executive Center) Europe. The principles and guidelines for the organization were available in the EC Business Architecture. Especially a split between front-, middle- and back-office responsibilities was prescribed. The principles and guidelines for the applications were available in the “ING Financial Services Architecture” (*IFSA*). *IFSA* consists of a number of main elements:

- a blueprint of the application architecture of ING EC Europe at the highest level,
- principles for the applications in the domains
- principles and tools for cross-domain communication

One of those Shared Service Centers is the “Service Center Securities” (SCS). Its mission states, “Service Center Securities must deliver single world class, customer-centric, high quality securities services at competitive conditions to all ING Group companies and their clients”. To blueprint this SCS, both from the operational and the ITC-point of view, the *Foundations* program was set up.

3.2 The plan for ING SCS / Foundations

Objectives of the Foundations program. At the end of 2001, the situation at ING SCS was as follows:

- a business case was prepared for implementing a SSC in the area of Securities
- formally, the back-offices and product-development for Securities were already functionally reporting in a matrix organization to the COO of ING SCS and the CIO of ING Transaction Banking
- an operational strategy for SCS had been selected, the so-called “thin utility approach”; in this approach, SCS will coordinate activities based upon existing organizations; the operations will be rationalized with existing brands taking on one or more roles within the SCS as their focus; the rest of the group then uses that brand as a service provider.

The objective was to define a project portfolio (“roadmap”) by mid 2002, enabling ING SCS to set up the SSC with the first benefits (probably employee cost savings) being expected within 2 years.

This was the objective of the Foundations program: “draft this roadmap, based on an architecture, and revisit the business case”. The idea behind this was that during

the Medium Term Planning (MTP) budgeting cycle, at the beginning of the autumn of 2002, decisions could be taken and the first projects started.

The Foundations program wanted to improve the success-rate of the projects in the roadmap. Using an architectural approach should introduce a common language and should base the project scoping on insight in the domain-coherence.

Deliverables & process of the program. An international team of 17 ING and CGEY architects drafted the architecture. The Target Business Architecture (TBA) was drafted by the OPS and IT architects together. After that, the program was split into an OPS and an IT stream. The OPS stream designed the Target Operational Model (TOM) and the Recommended Operational Model (ROM). The IT stream designed the Target Application Architecture (TAA) and the Recommended Application Architecture (RAA). After that, the architects together drew up an initial Migration step containing some 20 investment/project proposals with a 6 – 9 month delivery time.

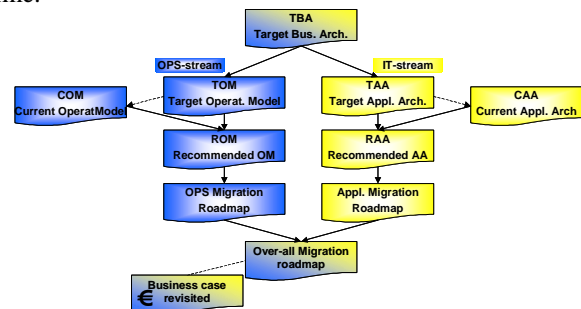


Fig. 2. Foundations: process and deliverables

The intended added value of the deliverables was as follows. In the TBA, only those aspects of the business were defined and structured, which depend on the mission and products of SCS. In the TAA and TOM, an “ideal” solution for application and organizational coherence was drafted, roughly on a 5-year time scale. Based on RFI-answers, the current situation of applications and organization was recorded according to the TAA/TOM structures in the Current Application Architecture (CAA) and the Current Operational Model (COM). RAA and ROM should present a “feasible” solution for applications and organization, roughly on a 2-year time scale. Finally, the roadmaps with the proposed investment decisions were reviewed against the business case prior to implementation.

3.3 Architecture results [8]

In this section, we will concentrate on the more generic results of the program, especially from the TBA, TOM and TAA.

Target Business Architecture (TBA). The first result of the TBA was the *business- and IT-principles* set: the starting points and boundary constraints for the architecture and the realization of the SCS. Further on, the *services* and *actors* of the SCS were defined: an actor is any party (external or internal) that interacts with the SCS (via services or other relations); a service is a (marketable) offering of SCS to one or more customer types.

Thus defined, services are the access point for the customer of SCS: actors outside SCS know that they can ask for that service and can have a Service Level Agreement for it. Services describe the black box behavior of SCS as a whole.

To actually provide a service, multiple activities have to be executed. The architect team chose a level of description that was called *responsibility*. A responsibility is an activity:

- as elementary as possible
- at the same time no smaller than a unit of work we felt to be suitable for both insourcing or outsourcing
- with a clearly defined result in terms of the business (“is a new fact actually created”)
- without making pre-suppositions about the way the result has to be produced (arrangement-independent).

For each responsibility, the architects defined the name, the (success-)result, the initiator (actor requesting the result) and the executor (actor responsible for delivering the result).

For those readers familiar with the DEMO concepts [9]: the concept of responsibility closely matches the DEMO transaction. In DEMO the “essential model” does not change with in- or outsourcing; indeed only the allocation of actors (e.g. “risk reviewer”) to persons is changed.

Target Application Architecture (TAA). We will describe two parts of the TAA we generated in detail here, the Information System (IS) services and the Information System components.

An *IS service* is a service, to be delivered by an (automated) information system. We started by stating that one IS Service would support a maximum of one responsibility, thus enabling in-/ outsourcing in the area of information systems as well. An *Information System component* is a clustering of IS services.

Target Operational Model (TOM). The TOM clusters responsibilities in operational units. In this situation, two types of units were discerned: a local unit per country (the so-called local factory) and one common unit (the common factory).

Sometimes a redundancy of responsibilities at local and central levels had to be maintained. For instance,

corporate action handling takes place in the local unit at a detailed customer level and in the central factory at sub-custodian level. On the other hand, maintaining local units is currently seen to be an inevitable consequence of close customer contact and language preferences on the one hand, and current regulatory, legal and tax requirements in Europe on the other hand.

The duplication of “responsibilities” does not create an organizational problem in practice: the units are serving different clients. The local units serve local customers; the common factory serves wholesale customers.

3.4 Use of the Foundations-results during 2002

During the Foundations program itself, the architecture has been used as follows:

- the TOM was used to make an inventory of organizational capabilities (in the COM) and to decide which unit would serve which product/market combinations
- the TAA made it possible to compare the current systems (in the CAA) comparable by using the IS-services in the TAA;
- it served as basis to create the project-portfolio / roadmap: 21 well-scoped projects have been defined as a quick win (some of them realizable within 6-9 months), e.g. to enable BBL to provide cash clearing services on Euronext Amsterdam by using existing ING capabilities in the Netherlands.

During and after the Foundations program, the architecture has frequently been used as a glossary, to keep the common view and understanding of services, objects, etc. E.g. on terms like “depository bank” and “fund administration” it was possible to internationally agree on a common meaning.

Whenever processes and IT are newly arranged, the TOM and TAA are referred to and used to scope the change. This enables an evolutionary, rather than a revolutionary change, which is yet steered by a common vision on the future.

In European context the results are used as a frame of reference, when talking about OPS-arrangement and OPS-accountability, and also in drafting a more elaborated IT-vision for the next few years.

In the Netherlands, the models have been used to scope areas of change in commonly agreed terms. It enabled e.g. the elaboration of a vision on the retail-business for MC Netherlands and its coherence with the wholesale-business.

4 Effects of Architecture2002 on Design2003

The effects of Architecture2002 on Design2003 have been measured, using the following themes:

- business- and ICT-goals at Architecture2002- and Design2003-time;
- the subdivisions in Design2003, compared with those in Architecture2002;
- the perceived added value of Architecture2002;
- the communication about Architecture2002.

For each theme we will discuss the survey-results, the input we received from experts during interviews and a workshop and some conclusions.

4.1 The business goals

Survey-results. From the business-goals beginning of 2002, synergy, cost-reduction in operation and economies of scale are most important today. In Architecture2002, apart from synergy, those goals are not strongly visible. In Design2003, however, they are recognizably in the lead.

We see shifting in priorities during this period. The emphasis on cost-reduction, economies of scale and the international use of local specializations has increased. Simplifying in-/outsourcing and alliances, broader access to ING-group capabilities and decrease of only locally used specialization became less important.

Expert-input. ING appears to expect cost-reductions within a reasonable timeframe mainly from internal re-use. Re-use is to say “when something works OK for this country, we are going to apply this to another country”. By doing this, also local specializations come available for international use.

Therefore, it could be expected that especially replaceability would have a low priority. Replaceability says “this part we currently do ourselves, another party can do this better, OK, let's shift this work to the other party”. This explains the low priority for simplifying in- and outsourcing.

Conclusions. Architecture2002 contributed to the business goals. It helped in shaping a working solution with mutual coherence for the Securities domain. Whether that helps simplifying in- and outsourcing or eases entering and leaving alliances or not, is not the primary concern now.

For propagating the business goals Architecture2002 was not necessary. Design2003 has been directly steered by those business goals, in line with the 2003 perception of relative importance of these goals.

4.2 The ICT-goals

Survey-results. From the ICT-goals beginning of 2002, service-based architecture, message-based communication and a consistent time-to-market are the most important. Least important are the enabling of 3rdparty / outsourcing solutions and a workflow which can be changed easily.

Compared with Architecture2002, in Design2003 the emphasis on connectivity / interoperability has increased remarkably and also the emphasis on message-based communication has decreased remarkably.

Expert-input. ING's strategy has shifted towards re-use of ING solutions. This explains the low interest in 3rd-party/outsourcing solutions, and also the low attention for portability and multi-platform requirements in both Architecture2002 and Design2003.

For re-using ING solutions, connectivity and interoperability remain necessary, but only coarse, at a low level of granularity. E.g. it should be possible to easily connect the whole area of custody to that of order processing, but within the area of custody the requirements for interoperability are low.

Service-based architecture and message-based communication are the preferred solutions for that, though sometimes point-to-point interfaces have been chosen because of time-constraints.

Conclusions. Architecture2002 helped to sustain the priorities in connectivity and interoperability on a low (coarse) level of granularity in Design2003. Service-based architecture and message-based communication were supported as mechanisms for that. This fits into ING's emphasis on re-use.

Because 3rd-party/outsourcing solutions were not preferred, portability and connectivity/interoperability on a higher level of granularity (fine) didn't get priority.

4.3 Usability and dispensability of parts of Architecture2002

Survey-results. The architecture as a whole, Target Business Architecture (TBA) and Target Application Architecture (TAA) have been useful, just as expected, and not dispensable.

The Target Operational Model (TOM) and Current Operational Model (COM) show a strange pattern: many expected it to be useful, only roughly half of the surveyees experienced it to be useful. Yet again, many say it was indispensable.

Expert-input. TBA, TOM and TAA had, as expected, a conceptual nature. Each shaped a common language. TOM helped define the management structure for operations and enabled the choice of location for the “common factory” of the operations. TAA served as common reference for application functionality.

The joint drafting process of the Target-parts (TBA, TOM and TAA) revealed the entities of ING had lots in common. Before this exercise the expectations for commonality (e.g. between wholesale and retail) were pretty low, after Architecture2002 the belief was developed to say 50%. During Design2003, by the way, in

an area like “order processing” commonality appeared to be more than 80%.

The Recommended-parts (RAA en ROM) gave little direction and grip for the designers. Design-staff expected specific results there, names of organizational units and names of applications. Causes for this level of quality:

- staff who drew up the R** moved to other positions after that, their engagement was noncommittal
- the governance at that moment was not adequate yet, still along national lines instead of functional lines

A way to strengthen the commitment is to let staff really propose solutions for which they can be held accountable. These proposals should be made comparable with offers from other e.g. external suppliers.

The governance-issue is a chicken-egg problem, however. By drafting the RAA and ROM, the need for different governance became explicit.

Conclusions. The Target-parts of Architecture2002 clarified commonality in ING for all participants. This helped defining management structure and location.

The process of drafting the Recommended-parts of Architecture2002 helped in shaping the governance and also in better understanding and co-operation. The big picture is clear enough for planning the business and ICT transformation.

The results of the Recommended-parts however were not specific enough for Design2003. A stronger commitment for the drafting staff and management is required. This could be done by making this an open “beauty contest” of several units from ING, together with external proposals.

4.4 Subdivisions in Design2003 and Architecture2002

How have the subdivisions, made in Architecture2002, helped to develop and design organization and ICT during 2003?

Survey-results. Always or most of the time (together 79%) the subdivisions in Design2003 are the best solutions to comply with the Foundation-goals. The subdivisions in Design2003 however do not necessarily follow those in Architecture2002: 27% completely yes, 18% completely no and 46% somewhere in between.

Many (80%) saw the use of “responsibilities” as a building block in Architecture2002 as useful.

The main criteria for subdivisions in Design2003 were, in that order: (1) central / decentral, (2) service-level and (3) retail versus wholesale.

Expert-input. Long term criterion for central (common) and decentral (local) was: “solution can be

central/common if one language, one regulation, one legal & fiscal system”.

Wholesale-retail is mentioned as a criterion for subdivision, but in all examples mentioned this can be reduced to service-level. “Wholesale” corresponds to service-levels like complex and tailor-made; “retail” is similar to simple and confection. ING follows the policy to create one solution per service-level.

Differences between service-level appear in the front-office, in the way the customer is treated. The back-office processing (“the factory”) is uniform for all service-levels.

The subdivision “client side” (facing towards ING-customers) versus “street side” (facing towards market actors like exchanges, regulatory bodies) plays an important role too. In it, street side is THE potential area for synergy.

Legal and fiscal criteria are not leading for subdivisions, but can impose constraints.

Conclusions. All subdivision-criteria in Design2003 were already present in Architecture2002. The survey showed a difference in subdivisions in Design2003 and Architecture2002; this could not be confirmed or illustrated by the experts.

4.5 Added value of Architecture2002

Survey-results. The value of Architecture for Design is decomposed in several sub-values. A weighed average score was constructed. “Creating a common language and terminology” and “Directing the conceptualization of the To Be situation” scored highest (>70%). Lowest mark was for “Improving Staff Motivation” (30%). All other factors scored average (40% - 60%).

Expert-input. Architecture2002 had the important value of creating a shared terminology, vision, conceptualization of the final situation with people from the different entities/countries involved. This made possible that Architecture2002 has an important role in the steering of the design process: it enables the right project scoping, clear communication on decisions about investment of resources. For this the first generation of the Target models was useful. During the Design phase these models were considered to be too simple, too high level. For the content steering of Design more detail in Architectural models is needed. The high level models left designers with too much freedom in interpretation. New elements are introduced that have impact on the Design: local (regulatory-imposed) practices, existing IT-solutions, order of realization.

Costs are made more transparent: Architecture2002 identified the processes in the organization where costs (headcount, IT-costs) are measured. Cost reduction is expected as a long-term (4 - 5 year) result.

Architecture2002 focused on the primary processes. Supporting processes are not easily measured this way. Cost-figures are, until now, collected for processes. This implies that cost-allocation to Responsibilities (as should be done) is not feasible yet.

Conclusions. The value of Architecture2002, as perceived in Design2003, is primarily:

- reaching consensus on the shared interest of the three countries involved;
- creating a shared language, terminology, and conceptualization of To Be;
- contributing to long term cost-reduction.

Architecture is not a uniform static set of models. The models should evolve in more detail during the Design. Design needs more than what is sufficient for decision making in the first phases.

Architecture by itself does not create the governance of the processes. It is the task of the management to establish the correct governance, to create “maturity” with the local managers. They have to accept and support the concepts of the architecture, and to abandon the specific local solutions. Only then the value of Architecture will be realized in Design.

4.6 Communication about Architecture2002

Survey-results. At least 80% of the respondents are at least familiar with almost every part of the architecture. This is not always caused by formal communication, because 30% reports not to have received such communication. Of the respondents which explained the formal communication they received, 80% experienced it at least as recommended.

Expert-input. The initial communication about architecture, including the formal part, has worked well. Especially during the setup of the Service Center, architecture as “common conceptualization for all stakeholders” functioned as communication-vehicle.

However, persistency in that communication has been lacking. As soon as new staff arrived or current staff got another role, this new staff has insufficiently been informed about the architecture. As a consequence, the knowledge about the architecture and its importance decreased among non-architects. Among architects on the level ING Europe, Architecture2002 is known and shared.

For such a persistent communication (“selling”), more time and money should be spent. Especially the target and target-group should be made specific, in order to make this communication effective.

A hindrance to effective communication has been the non-committal attitude by part of the management. No penalty exists for trespassing against the architecture.

Now the right governance is in place, this effect should diminish.

Conclusions. Architecture2002 is rather good known by all target-groups. Still more time & money should have been spent on its persistent communication. Only when designers and implementers are familiar with the architecture and management is supporting it by adequate governance, architecture can lead to synergy.

5 Conclusions

5.1 Conclusions on the level of this case

Did architecture help to propagate ING's goals into the designs? In the building world, the architecture should completely reflect all goals and principles in a balanced way in its models and drawings. The constructor then has simply to follow the architecture and need not go back to the original requirements of the principal.

Reasoning analogously, in our world of business and information architecture we would also expect the architectural models, especially the “recommended models”, to completely reflect the optimum of all business- and ICT-goals and –requirements.

Architecture2002 indeed formulated “recommended models” for a situation feasible in say two years. This attempt was good, because it brings the line of thought in the right direction. This direction was clear enough to regulate a usable governance of organization and ICT and also to start design-activities.

At the same time, the Architecture2002-result appeared insufficient to completely steer Design2003. In Design2003 still choices for optimization had to be done, directly steered by ING's business- and ICT-goals and –requirements and not only by Architecture2002.

How did architecture influence the design? Architecture2002 created a common language and terminology. Also it directed the conceptualization of the To Be situation. It steered the design process in right project scoping and communication on investment-decisions.

The subdivisions of Architecture2002 are reflected in Design2003. During Design2003 some criteria for subdivision were added, especially local (regulatory-based) practices and current ICT-solutions.

The communication of Architecture2002 has been rather effective. More persistency in communication for staff in new roles would have strengthened the knowledge and application of Architecture2002 during Design2003.

What part of the architecture caused the influence in the design? Target Business Architecture, Target Operational Model and Target Application Architecture were indispensable for the design. Current Application

Architecture and Current Operational Model were simply acknowledged as necessary for a common view on the As Is situation.

About the Recommended Operational Model and the Recommended Application Architecture discussion exists. It was not a sufficient starting point for the design & implementation. But it appeared useful in streamlining the steering of the Service Center.

5.2 Conclusions on the level above this case, in the action research

In terms of our section 1 thesis (proposition) the architecture of ING SCS was partly correctly defined. TBA, TOM, TAA and ROM identified those elementary units, RAA did not. We don't count CAA and COM in this, because both describe an As Is situation.

To what extent was Design2003, in our terms, an "adequate design"? For the business-side Design2003 appears to be "adequate design". Seven main processes were shaped as higher level units, combining the responsibilities. The same holds for the shaping of central and decentral organizational units.

For the ICT-side Design2003 appears not completely to be "adequate design". During Design2003 the (ICT-)units of RAA were split up because of local (regulatory-based practices) and current ICT-solutions. It is not clear whether this is caused by a defect in RAA or by a defect in Design2003 for the ICT.

Intended effects for ING SCS were mainly cost-reduction in operations, synergy, economies of scale and international use of local specializations. The combination of Architecture2002 and the design-method applied was necessary but not sufficient to reach those effects. Architecture helped especially in shared vision, common language and right project scoping and gave direction to better governance. Direct steering by ING's business- and ICT-goals and –requirements remained necessary.

It is quite early to generalize the conclusions of the ING SCS case to co-operation of alliances in general. Currently ING SCS exists of internal parties with partly overlapping capabilities. The final situation ING SCS is aiming at is an "internal alliance". It would be interesting to compare this to other types of alliances, in which already existing and complementary parties are joining forces.

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