

IT Governance Structures, Processes and Relational Mechanisms Achieving IT/Business Alignment in a Major Belgian Financial Group

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Abstract

IT governance is one of these concepts that suddenly emerged and became an important issue in the information technology area. Some organisations have started with the implementation of IT governance in order to achieve the fusion between business and IT. This paper describes how an organisation can implement IT governance, using a mixture of processes, structures and relational mechanisms, and analyses the IT governance implementation at KBC, a major Belgian financial group.

1. Introduction

Today, IT governance is on the agenda of many organisations, and high-level IT governance models are being created. However, having developed a high-level IT governance model does not imply that governance is actually working in the organisation. Conceiving the IT governance model is the first step, implementing it into the organisation as a sustainable solution is the next challenging step. This paper wants to contribute to that part of the IT governance body of knowledge, by describing how an organisation can implement IT governance, using a mixture of processes, structures and relational mechanisms, and by analysing how these practices are used at a major Belgian financial group.

The first part of this paper defines IT governance, explains its relationship with enterprise governance and provides an IT governance implementation framework, composed of structures, processes and relational mechanisms. The second part describes how the case company under review used these practices. Finally conclusions are drawn regarding the described implementation and new research opportunities.

2. IT governance definition and framework

2.1. IT governance definition

Recent years, a lot of IT governance definitions were developed (e.g. Ministry of International Trade and Industry [17], Peterson [21], Weill and Woodham [33]). In this paper we retain the definitions of Van Grembergen [30] and the IT Governance Institute (ITGI) [11]:

“IT Governance is the organisational capacity exercised by the Board, Executive Management and IT management to control the formulation and implementation of IT strategy and in this way ensure the fusion of business and IT” (Van Grembergen [30]); “IT governance is the responsibility of the Board of Directors and Executive Management. It is an integral part of enterprise governance and consists of the leadership and organizational structures and processes that ensure that the organization’s IT sustains and extends the organization’s strategy and objectives” (ITGI [11]).

Although these definitions differ in some aspects, they focus on the same issues such as achieving the link between business and IT and the prime responsibility of the Board. In Van Grembergen’s definition, it is indicated that also IT management is an important player in the IT governance process. However, there is a clear difference between IT governance and IT management. IT management is focused on the effective supply of IT services and products and the management of the IT operations. IT governance in turn is much broader and concentrates on performing and transforming IT to meet present and future demands of the business and the business’ customers (Peterson [21]). The definition of the IT Governance Institute also states that IT governance is an integral part of enterprise or corporate governance. ITGI’s “Board Briefing on IT Governance” [11] argues that “IT governance responsibilities form part of a broad framework of enterprise governance and should be addressed like any other strategic agenda item of the Board. In simple terms, for critically dependent IT systems,

governance should be effective, transparent and accountable.” The market research company IDC [7] concurs: “Just as the cyber world is intertwined with, not independent of, the traditional world, IT governance is not independent of enterprise or corporate governance.”

2.2. Previous research

As mentioned in previous section, ultimate goal of IT governance is achieving strategic alignment between the business and IT to make sure that money spent in IT is delivering value for the business. This alignment discussion is certainly not new. Henderson and Venkatraman [10] developed already in 1993 their Strategic Alignment Model (SAM) and many authors have provided comments and additional insight to this concept, e.g. Burn and Szeto [2], Croteau and Bergeron [5], Feurer et al. [9], Luftman [14], Luftman and Brier [15], Maes [16], Morgan [18], Patel [20], Pollalis [22], Smaczny [27] and Teo and Ang [28].

Although the strategic alignment discussion has been going on for many years, we are not sure when the term of IT governance exactly emerged. Gartner introduced the idea of “Improving IT governance” for the first time in their Top-ten CIO Management Priorities for 2003 (ranked third). Some years before that, in 1998, the IT Governance Institute was founded to disperse the IT governance concept. In academic and professional literature, articles mentioning IT governance in the title began to emerge from 1999, for example Sambamurthy and Smud [26] with “Arrangements for information technology governance: A theory of multiple contingencies”, and Van Grembergen in 2000 [29] with “The IT balanced scorecard and IT governance”. We therefore conclude that the IT governance concept emerged late nineties, but that a lot of the underlying elements of the strategic alignment discussion attracted attention many years before.

2.3. Introducing an IT governance implementation framework

The research question in this paper is how organisations can pragmatically implement a sustainable IT governance framework. As proposed by Peterson [21], Van Grembergen, De Haes and Guldentops [31] and Weill and Woodham [33], IT governance can be deployed using a mix of structures, processes and relational mechanisms. Some examples of these structures, processes and relational mechanisms are provided by Figure 1.

<i>Structures</i> : Roles and responsibilities, IT organisation structure, CIO on Board, IT strategy committee, IT steering committee(s)
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<i>Processes</i> : Strategic Information Systems Planning, Balanced (IT) scorecards, Information Economics, Service Level Agreements, COBIT and ITIL, IT alignment / governance maturity models

<i>Relational mechanisms</i> : Active participation and collaboration between principle stakeholders, Partnership rewards and incentives, Business/IT co-location, Cross-functional business/IT training and rotation

Based on: PETERSON, R. 2003, *Information strategies and tactics for information technology governance*, in *Strategies for information technology governance*, book edited by Van Grembergen W., Idea Group Publishing

Figure 1. Structures, processes and relational mechanism for IT governance

Structures involve the existence of responsible functions such as IT executives and a diversity of IT committees. Processes refer to strategic decision making and monitoring via e.g. the IT balanced scorecard. The relational mechanisms include business/IT participation, strategic dialogue, shared learning and proper communication. Each of these practices serve specific or multiple goals in the complex IT governance challenge. However, dividing the complex IT governance problem into smaller pieces, and solve each problem separately does not always solve the complete problem. A holistic approach towards IT governance acknowledges its complex and dynamic nature, consisting of a set of interdependent subsystems that deliver a powerful whole (Duffy [6], Patel [20], Peterson [21], Samamurthy and Zmud [26]). The necessary set for a successful IT governance implementation framework therefore consists of a mix of structures, processes and relational mechanisms, as visualised in Figure 2. Depending on multiple contingencies, the optimal mix will be different in every organisation. (Patel [20], Ribbers et al. [24])

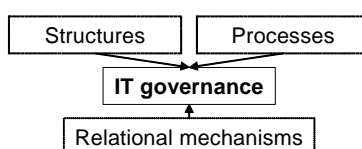


Figure 2. Elements of IT governance framework

3. Research methodology

This paper describes the case of an IT governance implementation in a Belgian financial organisation. Case research is particularly appropriate for research within the IT area because researchers in this field often lag behind practitioners in discovering and explaining new methods and techniques (Benbasat et al. [1]). This is certainly true for the concept of IT governance. As already mentioned, IT governance is now on the agenda of many executives, and consultants are dispersing the concept. Like Benbasat et al. [1] we believe “that the case research strategy is well-suited to capturing the knowledge of practitioners and developing theories from it”.

Two researchers collaborated on this case, taken into account that “two researchers can capture greater richness of data and rely more confidently on the accuracy of data”. (Benbasat et al. [1]). The role of the researchers was purely the role of observers who were interested in investigating how the IT governance practices were applied by practitioners and how the experience and knowledge of practitioners could help to improve their proposed IT governance framework.

In case studies, qualitative data collection is often used (Eisenhardt [8], Yin [34]). In this case research, data was gathered by conducting several face-to-face in-depth interviews with IT and business representatives: the CIO, project managers of the IT governance project, a member of the Board of Directors who is also member of the Executive Committee, the director of ‘organisation’ (a staff function within KBC which facilitates the optimisation of the organisational processes) and an IT auditor. All interviews were completed in the period of May 2003 to May 2004 and took place at the offices of KBC. The interviews were tape-recorded so that the conversations could easily be rebuilt

after the meetings. Data from other sources such as internal reports and presentations of the CIO for the Board and his Executive Management were used to develop and complete the understanding of the case company, its processes, its technology, its IT organisation and its use of IT governance structures, processes and relational mechanisms. To ensure validity, the draft case report was reviewed by the CIO before being issued as final version.

4. IT governance case study

4.1. Case company introduction

KBC is a major Belgian financial services organisation that was founded in 1998 after the merger of Kredietbank, Cera Bank and ABB Insurance. These former companies had already a history before the merger of more than 100 years. KBC as a merged company now is the third largest banking and insurance organisation in its home market of Belgium. Comparing market capitalization of other banks in Europe, KBC is ranked number 12 in the Euroland Bank Ranking (Dow Jones Euro Stoxx Banks constituents as of 31 Jan 2004). The company has focused its international expansion on growth countries in Central Europe (Czech Republic, Hungary, Poland, Slovenia). By the end of 2003, KBC achieved a consolidated net profit of 1,119 million euro on a gross operating income of 6,498 million euro. In the same year, KBC employed 49,725 FTE professionals worldwide, of which 2,403 (internal and external) in the central IT department. Total IT budget for 2003 was forecasted at 430 million euro.

The decision-making structures of KBC are organised in function of five core activity domains of the business as shown in Figure 3. *Retail and private bancassurance* encompasses the activities of the bank branches, agents and brokers, as well as those conducted via electronic channels, that cater for private persons, the self-employed and local businesses (retail bancassurance) and for high-net-worth individuals (private bancassurance). *Corporate services* contain all the banking and assurance activities towards companies. *Asset management* is the business of managing the assets of private persons and institutional investors, as well as the assets of investment funds that are sold primarily via the retail network. *Market activities* refer to activities of the bank's dealing rooms in Belgium and abroad, the market activities of KBC Securities, and all the activities engaged in KBC Financial Products, KBC Clearing and KBC Peel Hunt. KBC's businesses on its second home market are grouped under the separate area of activity referred to as *Central Europe*. This encompasses all retail banking and insurance services, corporate services, asset management and market activities in the Czech Republic, Slovakia, Hungary, Poland and Slovenia. These activity domains are supported by shared back-office entities, such as the logistic back-office for payments and securities, and supporting entities, such as bookkeeping and IT. Each of the activity domains has its own management committee. The supporting entities are regarded as being a separate organisation that will charge-back costs in a non-profit manner. That is why collaboration contracts needs to be established between the activity domains and the supporting entities.

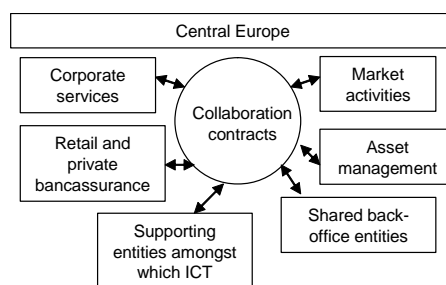


Figure 3. Activity domains of KBC

4.2. Why IT governance at KBC?

To be able to attract new clients and to retain existing clients in the competitive financial market, the business units of KBC are continuously looking for ways to increase the internal and external process efficiency. To be able to meet these business requirements, a flexible IT department is needed offering high-quality services. But as one of the IT governance project managers stated: *“Previous years, the management of IT was organised around major projects such as Y2K and the euro conversion. While working on these projects, however, an enormous backlog grew of other projects to be accomplished. And the questions rose: How to tackle new requests of the business when the current major projects are completed?, What if an enormous amount of new projects is initiated?, How to give priorities?”*

Moreover, the business units of KBC were becoming more aware of what the IT market in general had to offer, which resulted sometimes in the belief that IT services should be best delivered by a third party. The IT governance project manager continues: *“IT becomes bigger and bigger, which is reflected in the outline of IT costs for the business. From that, the feeling emerges within the business that there is not much synergy and control achieved within IT. The business requests more and more projects that the IT department cannot immediately respond to and as a result business starts looking for third parties. This way of working can be beneficial in the short-term, but it endangers the coherence and synergies of IT systems on the long-term.”*

Finally, one of the drivers for the merger in 1998 between Kredietbank, Cera Bank and ABB Assurance was achieving economies of scale in the IT department. According to the member of the Board of Directors: *“When the merger was officially completed, one of the first missions for the IT department was to set up a model that would enable the achievement of economies of scale, the set up of a solid IT architecture and the alignment between business and IT”.*

This context of high business expectations and the awareness that IT is needed to respond to it, together with the need to achieve economies of scale within IT after the merger, prompted the IT governance project in 2000. The IT governance project started at a moment that a lot of other important KBC projects were initiated, as the Board of Director’s member points out: *“An important challenge was that this project was executed in parallel with other major projects such as the fusion of all other KBC departments and the introduction of the euro. In a way, we were changing tires and axes of the car, while riding”.*

4.3. Implementing the IT governance framework

It was the Executive Committee which initiated the project in 2000 by asking the CIO to develop a business-IT governance model. After this request, the CIO developed an 'IT charter' (see infra) clarifying how IT and the business should collaborate in the future. This first proposal from IT created some resistance in the business as they felt that a model was being imposed to them by IT which inhibited flexibility. The former chairman of the Executive Committee therefore requested an audit to evaluate the model. This audit was however never performed, as very quickly, the model was fine-tuned and the department 'organisation' got involved to assist in implementing the processes behind the IT charter and to act as gatekeeper in certain decisions points (see infra).

From the start on, the goal of the IT governance project was clearly defined: *"set up a governance model for business-IT for the KBC Group for the coming 4-5 years, in a way that the model is resistant to and anticipates on organisational changes."* It was believed that this governance model would result in: 1. high flexibility for the organisation, 2. effective allocation of the IT resources and 3. economies of scale and specialisation through centralisation of IT knowledge.

The goals of the IT governance project were widely communicated and explained. An internal KBC magazine explaining the project stated: *"The business units need to learn to manage IT in a well-thought out manner. They need to make choices and accept the consequences of these choices. The IT department from its side needs to create an environment which enables to business to make these well-considered decisions. IT needs to create an insight into the needs of the business, and needs to establish clear agreements and engagements. IT has to define what it can deliver, by when and at which price, in a way that the internal customer knows what his return is for the money spent."*

In order to achieve the goals described above, KBC established structures, processes and relational mechanisms, which are described in the following sections. In the very beginning, a project manager was assigned to install the basic processes and structures. Later on, a committee composed of the general directors of the business units, the CIO and the director of 'organisation' regularly initiated improvement projects, and also now, the model is still growing. For example, in 2004, the IT audit department finalised an IT governance audit, which they initiated themselves, and resulted in some improvement recommendations which were under review at the time that this paper was finalised (spring 2004).

4.3.1. Structures. Effective IT governance is of course determined by the way the IT function is organised and where the IT decision-making authority is located within the organisation. Figure 4 shows how the IT department is structured and its relation to higher reporting levels and other business departments.

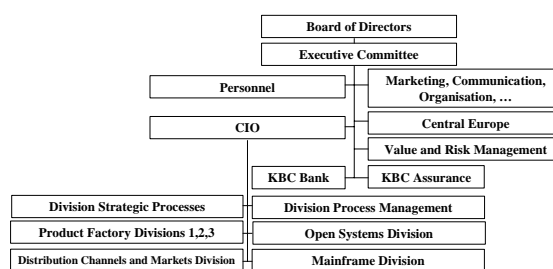


Figure 4. IT organisation structure

The IT department is headed by the CIO, who reports directly to the Executive Committee. In this way, the CIO has the same direct reporting line to the Executive Committee as the general directors of the business lines of KBC Bank and KBC Assurance (for example general director corporate services) and staff functions (for example marketing, 'organisation'). The CIO manages a number of IT divisions. The division *Strategic Processes* is responsible for management reporting, charge back models, education, communication, knowledge management, etc. The division *Process Management* is responsible for the management of IT projects with an impact over several IT divisions, such as Y2K and the euro conversion. This division also provides advice on architecture, design, testing, tools, etc. There are three product factory divisions, each one responsible for the development in one or more lines of business (for example, product factory 3 in the assurance domain). Finally, there is a division responsible for distribution channels and markets (e.g. bank cards and cash dispensers, B2B-B2C e-commerce) and two divisions, grouped per technology domain (open systems and mainframe) responsible for maintenance and development of the technical infrastructure (databases, networks, operation systems, etc.).

The Board of Directors, the top-level in Figure 4, was composed of 23 members in 2003. This group is constituted of eight managing directors forming together the Executive Committee, eleven representatives of the principle shareholders and four independent directors. In order to permit the Board to fulfil its supervisory task, the Executive Committee reports to it each month on the trend of results and on the progress of major events and projects. Each member of the Executive Committee is responsible for supervising the activities of a number of business units and/or supporting entities such as IT. They meet once a week and address IT issues on a regular basis in terms of decisions on IT budgets and decisions on investment projects (see *infra*). The CIO, although not part of the Executive Committee, reports directly to one of its members and is frequently invited to the Executive Committee meetings. In this way, a close link between business and IT at a high level in the organisation is established. However, in the beginning of this paper we argued that IT governance is the prime responsibility of the Board of Directors, and that IT therefore should also be addressed regularly in the Board meetings. A supportive mechanism to obtain this is establishing an IT strategy committee of which the role is defined by ITGI [13] as follows: "an IT strategy committee has to consider how the Board should become involved in IT governance, how to integrate the Board's role in IT and business strategy, and the extent to which the committee has an ongoing role in IT governance". KBC established such a committee composed of three Board members (who are also member of the Executive Committee), the CIO and directors of the Strategic Processes and Process Management IT divisions. This committee focuses on establishing and reviewing the IT strategy, but does not enable

a more thorough and ongoing involvement of the Board in IT governance. KBC’s Board works at a very high, strategic level and they are consequently not the ‘steering power’ for IT or IT governance. Nevertheless, it could be argued that the Board is maybe not involved as a whole, but still via its members of the Executive Committee who also have a seat in the Board, and via its IT strategy committee.

KBC also established a number of other committees which enable the involvement of as well business and IT in the preparation of new projects, in the development of projects and the maintenance of systems. There is one IT/business steering committee (IBSC) per activity domain (Figure 3) that can set up one or more Domain Consultative Body’s (DCB) for specific functional business domains such as credit loans or securities. These two committees play an important role in the preparation and decisions of new investment projects (large development projects with a major architectural impact, for example implementation of SAP) and continuity projects (development projects mostly driven by evolutions in the market or legislation, for example implementation of specific reporting due to legal requirements) (see Figure 5).

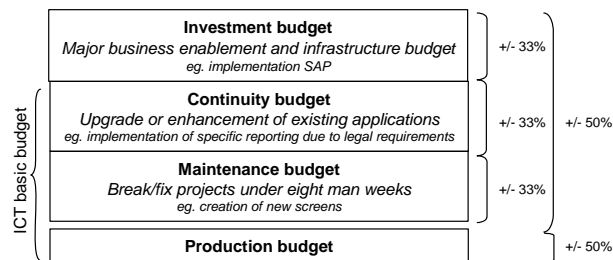


Figure 5. IT budget composition

The Program Management Steering Group (PMSG) is responsible for the project management of investment projects and clusters of continuity projects as soon as they are approved. When a newly developed system finally goes into operation, the Management Operational Systems Committee (MOSC) decides on maintenance projects (small projects under eight man weeks, for example the enhancement of a specific screen) within the strategy and budget approved by the IBSC.

Committee	Business representatives	IT representatives
IT business steering committee (IBSC)	member of Executive Committee; members of management committee of corresponding activity domain; 'organisation'	members of product factory, open systems and mainframe division
Domain consultative body (DCB)	director of involved domain; business architect; process manager	IT architect; business analyst
Program Man. Steer. Group (PMSG)	sponsor of the project; involved business director(s)	involved IT director(s); program manager
Man. Operational Systems Committee (MOSC)	director of involved domain; process manager; application manager	business analyst; system manager

Figure 6. Committees representing business - IT

The roles and responsibilities of these committees are described in more detail in section 4.3.2 on processes. In each committee, business and IT people are represented as shown in Figure 6, which enables alignment throughout the different stages of an IT project. Some of the roles mentioned in Figure 6 (IT architect, business architect and analyst, process manager, system manager and application manager) are explained in detail in section 4.3.3.

4.3.2. Processes. Figure 7 illustrates how the above mentioned committees are involved in the initiation, development and maintenance process. The process described below does not cover the management of the production budget (bottom block of Figure 5), as this is still managed as one separate budget for all activity domains. It is the intention to also redistribute this production over the activity domains in the future.

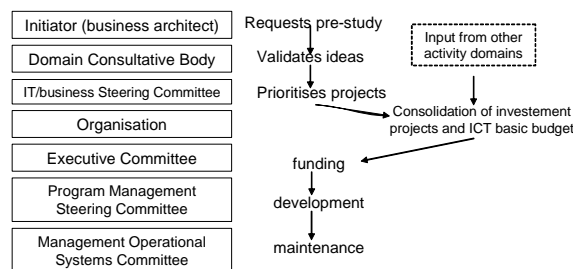


Figure 7. IT project life cycle

New projects are always initiated by the business, for example by a business architect. This is a role assigned to a business representative, who needs to collect and manage business information that is essential for making business cases of IT projects (see *infra*). The business architect can initiate continuity or investment projects by developing a first idea, and these requests go to the DCB who will evaluate the business value of the new ideas based on the results of a pre-study, that includes the business case, planning, sourcing, identification of synergies and risks, and infrastructure review. To obtain sufficient accuracy, 10-20% of the total cost of a development project is dedicated to this pre-study in which business and IT are involved. The business defines targeted goals, benefits, and costs, while IT more focuses on development costs, architecture etc. The pre-study results in a kind of service level agreement, offering a fixed-time/fixed-price development project. For every project, a buffer of 10% of development costs is retained in the total price to pay for any cost overruns.

When the DCB finds the project value-adding, it goes to the IBSC of the corresponding activity domain. Every year, this IBSC prioritises the continuity and investment projects needed for year $x+1$ and sets the needed maintenance budget, all within the overall target budget which is set in advance by the Executive Committee. This target defines one overall budget for both maintenance and continuity projects. The IBSC itself has no investment budget. Funding for investment projects always needs to be requested at the Executive Committee, but the IBSC can decide to co-fund an investment project with a part of its continuity budget. When all the IBSCs defined what they need in year $x+1$, 'organisation' will aggregate the data before sending it to the Executive Committee.

The Executive Committee then approves or amends the IT basic capacity for year $x+1$ per activity domain and will decide which investment projects will receive budget. It was noted by one of the

interviewees that, when the business case is developed, the decision at IBSC or Executive Committee level is mostly based on budget considerations and less on the content of the complete business case. This situation can be frustrating for business and IT people doing a lot of other preparatory work, but on the other hand, by using this process *“barriers are embedded that inhibit – partially - the initiation of irrelevant projects, create a natural filter and diminishes the possibility of people asking directly to the Executive Committee for specific funding without a thorough preparation”*. It could be argued that the model is rather heavy which possibly endangers the ability of the organisation to quickly jump on new opportunities. However, the Board of Director’s member challenges this argument: *“There will always be people who experience the model as being too complex and over-bureaucratic. But we now at least have a model which clearly shows how projects are initiated and decided upon. It is obvious that the business people prefer a very quick time-to-market, but they have to take the impact on the back office into account. If we take unprepared decisions, the danger exists of creating a mess in the back-office, and the cost of cleaning up this mess is much higher then doing a well-considered pre-study in advance.”*

The Executive Committee prioritises between the investment projects based on the business case which is complemented with an ‘information economics’ assessment. In essence, information economics is a scoring technique resulting in a weighted total score based on the scores for the ROI and some qualitative criteria (Parker [19]). The generic information economics method as developed by Benson and Parker is adapted to the own needs of KBC, retaining 10 criteria that are relevant (Figure 8). Besides the financial criterion of return on investment, non-financial criteria such as ‘alignment with strategy’ are covered. For each criterion, a number of questions is developed. The questions for ‘competitive advantage and need’ for example are: “Does the program deliver competitive advantage?” and “Is the program a necessity to remain competitive?”. The criterion gets a red colour if the average of the underlying questions is lower then 2.4, yellow if the average is between 2.4 and 3.8 and green if the average is above 3.8. There is no overall average calculated over all criteria, so in this way, a kind of traffic light report is generated for each investment project. This scoring is performed by the initiator of the investment project, mostly the business architect. To obtain an objective measurement and a consistent scoring, representatives of ‘organisation’ always challenge and overview the scores when they consolidate all investment projects prior to going to the Executive Committee.

Return on investment	Alignment with strategy	Competitive advantage/need	Necessity (legal, organ.)	Reduces operat. risks
Support management	Project and organis. risks	Support future informat. architecture	Functional uncertainty	Technical uncertainty

Figure 8. Information economics at KBC

For each new agreed investment project or cluster of continuity projects within an activity domain (Figure 3), a Project Management Steering Group (PMSG) is assigned by the IBSC, again composed of business and IT people to ensure alignment throughout the development process (Figure 6). When a newly developed system goes into production, the further management is transferred to the Management Operational Systems Committee (MOSC), also composed of business and IT people

(Figure 6). The goal of the MOSC is to decide on maintenance projects within the strategy and budget approved by the IBSC.

Operational costs such as maintenance and user administration are charged back to the business according to Activity Based Costing (ABC) principles, which provides a methodology to assign direct and indirect costs to real cost drivers (Romano [25]). KBC's management found that for operational costs, the real cost drivers were not enough taken into account and that indirect costs were only assigned using arbitrary criteria. For example, in the previous cost-model, there was a cost object 'workstation', without making any differentiation between PCs or laptops, standard or non-standard. The defined cost also included as well software and hardware. The only steering factors for the business to reduce its workstation costs was therefore reducing the number of workstations. Identifying more clearly the real cost drivers would enable the business to intelligently manage their workstation costs. The ABC implementation project started at the end of 2002 with four major goals: 1. achieve more cost awareness by end-users as well as by the IT department; 2. achieve an optimal allocation of IT costs; 3. set up a mechanism that justifies costs charged back to the business; 4. achieve more market conformity through benchmarking. During the ABC project, all the direct and indirect costs were identified, activities were defined based on ITIL (Information Technology Infrastructure Library) and the consumption of products and services of activities was described. All standard services and products are consolidated in the service catalogue, which creates more cost-transparency for the end-users and enables them to make well-considered decisions.

Another process that can be leveraged for achieving more alignment is the use of the Balanced Scorecard (BSC). In KBC, a detailed scorecard is developed for the complete IT department, containing the traditional perspectives - corporate contribution, user orientation, operational excellence, and future orientation – and a separate one for its IT staff. The latter proves that KBC pays a lot of attention to the development of its own IT staff. The CIO describes the major advantage of this IT BSC as *“a systematic translation of the strategy into critical success factors and metrics, which materialises the strategy”*. As demonstrated in Van Grembergen, Saull and De Haes [32], the IT BSC only becomes a real alignment mechanism when causal relationship between metrics, and if possible between scorecards, are defined. There are however no formal causal relationships defined between metrics, nor are there scorecards defined at lower levels in the IT department (eg. development department) or links developed with a business scorecard. The BSC within KBC is implemented as a measurement tool, but not as a strong alignment or management tool.

0. Non-existent: There is a complete lack of any recognisable IT governance process

1. Initia/adhoc: The organisation has recognised that IT governance issues exist and need to be addressed

2. Repeatable but intuitive: There is awareness of IT governance objectives, and practices are developed and applied by individual managers

3. Defined process: The need to act with respect to IT governance is understood and accepted. Procedures have been standardised, documented and implemented.

4. Managed and measurable: IT governance evolves into an enterprise-wide process and IT governance activities are becoming integrated with the enterprise governance process.

5. Optimised: Enterprise governance and IT governance are strategically linked, leveraging technology and human and financial resources to increase the competitive advantage of the enterprise.

Figure 9. IT governance maturity model

A final process we want to cover is the use of maturity models as an IT governance mechanism. A good example is the IT governance maturity model as developed by the IT Governance Institute [11] of which a summarised version is shown in Figure 9 (the complete version provides a whole paragraph with requirements per level, available at www.itgi.org). Such a model provides a methodology to define the as-is and to-be situation of your IT governance model, analyse the gaps between it and extract improvements projects. The scores of the KBC interviewees ranged from 2 to 4, with the member of the Board of Directors assigning to highest score. The argument for the lowest score was that probably not all involved people in the model completely passed the 'awareness' phase and clearly understand their role. When we consider the basic principles of maturity models - which says that one can only move to a higher maturity level when all requirements of the previous level are fulfilled - we would rather argue that at most level 3 is achieved. This level amongst others requires (which can be read in the complete maturity model) goal and performance indicators to be set for the IT governance process. Although these indicators are important to measure the IT governance success, they are not formally set and tracked at KBC. Examples could be the compliance with the overall procedures, the quality of the business cases, the achieved alignment etc. One of the inhibitors identified for moving to a higher maturity level is the difference between business and IT in their history of working in a project or process environment, which causes frictions and lack of respect and consequently inhibits the growth to more mature processes.

4.3.3. Relational mechanisms. Relational mechanisms are very important. It is possible that an organisation has all IT governance structures and processes in place, but that it doesn't work out because business and IT do not understand each other and/or are not working together. Or it may be that there is little business awareness on the part of IT or little IT appreciation from the business. So, to reach an effective IT governance, a two-way communication and a good participation/collaboration relationship between business and IT people is needed. (Luftman and Brier [15], Luftman [14], Broadbent and Weill [3], Henderson, Venkatraman and Oldach [11], Callahan and Keyes [4], Reich and Benbasat [23]).

One of the important steps KBC took to implement relational mechanisms is the definition of – in their terminology – the IT charter (Figure 10). This IT charter defines mirror roles between business and IT people, and these people need to interact directly. A person can have different roles but some roles are on the other hand divided over several persons. The business architect collects and manages information from the business, essential for making business case of IT projects. He/she is also responsible for managing the business architecture (business functions, processes ...) and for analyzing the gap between 'as-is' and 'to-be' situation of this architecture. The business architect needs to collaborate with the IT architect, who will use all this information to align the IT strategy with business priorities and to analyse where IT can play an enabling role for the business strategy. The IT architect is also responsible for ensuring that IT infrastructure responds to the needs of the business infrastructure and for analyzing the as-is and to-be situation of the IT infrastructure. The process manager oversees the process of handling products and services in a specific line of business. This person collaborates with the business analyst, a person on IT site who knows the business very well,

and who prepares input for pre-studies and need's analysis. The product manager is the developer of new products, and reviews all products and services from a commercial and marketing point of view. The application manager is responsible for the functional management of IT for a product, service or channel, which includes involvement in development projects and testing of systems before final delivery. He/she is typical a lead user, which implies that this can not be a full-time role. The applications manager acts as a contact point for the system manager, responsible for delivered systems.

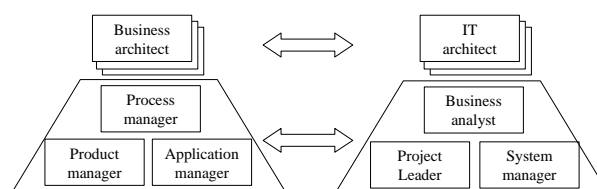


Figure 10. IT charter

While in this IT charter model, IT and business people need to interact directly in the business lines, KBC did also establish account management meetings that establish a bridge between business and IT at the higher level of the different business directions of the Bank and Assurance activities (Figure 4). We already explained that business and IT people are involved in the project initiation and decision making process via different committees such as IBSC and MOSC (Figure 6). The account management meeting only focuses on the relational aspects between business and IT; it is not project driven as for example the IBSC and MOSC, discusses general ideas and needs and the ways specific issues can be handled. Per business direction, these account management meetings are composed of the most involved IT division, the service delivery owner (a function within IT), the general director of the business unit and a business architect.

KBC finally also uses other relational mechanisms from the list in Figure 1. Mechanisms used to manage the 'soft' side of the IT-Business relations are co-location, language use (for example 'partnership' instead of 'à-la-carte relationship'), senior IT management giving the good example of collaborating with the business, job rotation (senior IT people moving to key position in the business), training sessions on business activities, etc. KBC also uses internal magazines to explain the governance model and established a 'business-IT governance' site on their intranet, with explanations of the roles and responsibilities, the committees, templates, etc.

In all these ways, KBC tries to achieve an active participation, collaboration and shared understanding between business and IT people in every stage of the project, from a shared understanding of the objectives to collaborative implementation. Yet, as already mentioned, in the beginning the model was experienced as being imposed by IT, although the initial request came from the business. There was indeed a short communication line between the CIO and the Executive Committee, but perhaps a stronger communication was needed towards the general directors of the business departments stating that this new model was requested by the Executive Committee and for the best interest of as well business and IT. Moreover, the model is quite complex, and everyone needs to understand its role in it, so pro-active training and competence management are very important. The provision of the intranet site is of course very good, but this still remains a pull-

technology, while it could be very worthwhile that people are introduced to the governance model via some training. For example, for the use of information economics in business cases, it is important that everyone understands the same things behind the metrics. This is very hard to achieve via a short explanation on the intranet, and could be better realised via a more extensive training. Moreover, when the people better understand the 'why' of making business cases and information economics assessments, this effort will not be regarded as overhead anymore.

5. Discussion

In section 2.3, we introduced the research question of this paper: how can an organisation pragmatically implement IT governance? This article described one case study in detail from which we now want to extract and discuss some lessons learned that can contribute to the answer of the above research question. It is however clear that we should analyse more case studies before we can extract more general findings.

As mentioned in the beginning, having developed a high-level IT governance model does not imply that governance is actually working in the organisation. Peterson [21], Van Grembergen, De Haes and Guldentops [31] and Weill and Woodham [33] proposed that IT governance can be deployed using a mixture of various structures, processes and relational mechanisms. The case demonstrated that KBC did implement a mix of these practices. KBC tries to involve business and IT in the project initiation, development and maintenance process by setting up committees composed of business and IT people. Investment projects are decided by the Executive Committee using the information economics methodology, measuring financial and non-financial (such as alignment) factors. To enable the business to make well-considered decisions, fixed-time/fixed-price development projects are agreed upon in SLAs and production costs are charged back using ABC. An IT BSC is established as a measurement tool, with a perspective specifically dedicated to IT staff. Finally, a whole set of relational mechanisms is exploited to manage the soft side of IT governance, such as account management roles. Most of the found practices were already mentioned in Figure 1 of this paper. A newly identified one was ABC, which is certainly an important alignment mechanism as it enables the business to fully understand the cost consequences of the taken decisions.

Although we found a balanced mix of structures, processes and relational mechanisms, we did also identify some pathologies. Inconsistent with our IT governance definition, the Board is not thoroughly involved in IT governance and as a consequence, they can not take full responsibility and the leading role in IT governance. Secondly, KBC uses an IT balanced scorecard, but it is used only as a measurement instrument and not leveraged as a real alignment mechanism. Moreover, there are no clear key goal indicators and key performance indicators for the IT/business governance project, to be able to clearly track to process and goal attainment of IT governance. Finally, we saw that the IT governance project was perceived in the beginning as a project imposed by IT which created resistance in the business to adopt the model. A better communication, clarifying that the IT governance project was initiated by the business and for the best interest of as well business and IT, could overcome this relational obstacle.

The optimal mix of structures, processes and relational mechanisms is of course different in every organisation and depends on multiple contingencies (Patel [20], Ribbers et al. [24]). For the case of KBC specifically, we saw that quite a complex model of processes, structures and relational mechanisms was established. This complexity was needed to overcome the complex organisational environment with an IT department working as a separate entity for multiple and diverse business activities. However, we can imagine that in a more 'uncomplicated' environment, this model would be overkill and only parts of it would be needed. Determining all the variables that have an impact on the appropriate IT governance model is probably not feasible. It would be an extremely complex endeavour to identify all factors that influence the choice for one specific process, structure or mechanism. Nevertheless, new case studies can provide more insight in specific contingencies which could be very useful for practitioners in defining the optimal mix.

6. Conclusion

This paper described how organisations can implement IT governance, using a mix of structures, processes and relational mechanisms, and analysed such an implementation in KBC, a major Belgian financial group. With this contribution, this paper wants to provide guidance for practitioners and researchers on how IT governance can be deployed in practice. Further research into new case companies can reveal how other organisations are using these practices and what the determining contingencies are. Ultimate goal is to measure the relationship between the established IT governance framework and the degree of achieved strategic alignment.

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The Information Technology Alignment and Governance (ITAG) Research Institute, was established in within UAMS to host applied research in the domains of IT Governance and business/IT alignment. The research centre is an initiative of Prof. dr. Wim Van Grembergen and dr. Steven De Haes. Both have research and practical experience in the IT Governance and Strategic Alignment domains. Recently, this team was reinforced by senior researcher Hilde Van Brempst.

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