

Best Practices in IT governance and alignment

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IT governance is high on the agenda, but many organizations are struggling to make it a reality into day-to-day operations. The research reported upon in this chapter provides new insights into IT governance implementations and its impact on business/IT alignment, and offers hands-on material for practitioners to address the IT governance challenge.

1. Introduction

In many organisations, information technology (IT) has become crucial in the support, sustainability and growth of the business. This pervasive use of technology has created a critical dependency on IT that calls for a specific focus on IT governance. IT governance consists of the leadership and organisational structures and processes that ensure that the organisation's IT sustains and extends the organisation's strategy and objectives.

Today, IT governance is high on the agenda in 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 as a sustainable solution is the next challenging step. Once a specific IT governance model is chosen and implemented, it should, as indicated in the above definition, enable that IT sustains and extends the business goals, or in other words, enable that IT is aligned to the business needs. The IT governance implementation challenge and the subsequent impact on business/IT alignment constitute the core domain of this chapter.

The results reported in the chapter are based on in-depth research executed at the Information Technology Alignment and Governance (ITAG) Research Institute of the University of Antwerp Management School (UAMS). This paper only reports on some key findings of the research. For more information, contact the researchers at the email addresses provided at the end.

2. Research questions and methodology

The general research was: How are organisations implementing IT governance to achieve a better alignment between the business and IT? For reasons of validity, the research was primarily executed in the Belgian financial services sector, but it is felt that most conclusions are applicable to other information-intensive sectors worldwide as well. The general research question was translated into two detailed research questions:

- **RQ1: how are organisations implementing IT governance?**

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 is the next challenging step. IT governance can be deployed using a mixture of various structures, processes and relational mechanisms. IT governance structures include structural (formal) devices and mechanisms for connecting and enabling horizontal, or liaison, contacts between business and IT management (decision-making) function (e.g. steering

committees). IT governance processes refer to formalisation and institutionalisation of strategic IT decision making or IT monitoring procedures (e.g. IT balanced scorecard). The relational mechanisms finally are about the active participation of, and collaborative relationship among, corporate executives, IT management, and business management (e.g. training). Relational mechanisms are crucial in the IT governance framework and paramount for attaining and sustaining business/IT alignment, even when the appropriate structures and processes are in place.

- **RQ 2: what is the relationship between IT governance and business/IT alignment?**

As discussed above, the goal of IT governance is achieving a better alignment between the business and IT. The ultimate question therefore is whether the implemented processes, structures and relational mechanisms enable the achievement of business/IT alignment. It is important to recognise that each of the applied processes, structures and relational mechanisms serve specific or multiple goals in the complex alignment challenge. However, dividing the IT governance framework 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 (processes, structures and relational mechanisms) that deliver a powerful whole.

The research strategy was based on a triangulation of multiple research methods: literature research, pilot case research, delphi method research, benchmark research and extreme case research. The research started with analysing literature research and describing six pilot case studies: KBC, Vanbreda, Sidmar-Arcelor, CM, AGF and Huntsman. Next, an expert panel composed of 22 consultants (delphi research), senior IT and senior business professionals, who were asked to provide their input regarding the "perceived effectiveness (0=not effective, 5=very effective) and the "perceived ease of implementation" (0=not easy, 5=very easy) of a predefined set of IT governance practices. The respondents were also asked to provide the top 10 most important IT governance practices, which are in their opinion crucial elements or a minimum baseline of an optimal IT governance mix. The following research step was aimed at exploring the relationship between IT governance implementations and business/IT alignment. This phase started with creating a business/IT alignment benchmark for the Belgian financial services sector based on a sample of 10 Belgian financial services organisations. From the results of this benchmark, four extreme case organisations were selected (2 high performers and 2 low performers in terms of business/IT alignment), in which a workshop was organised (extreme case research) to measure the maturity of the IT

governance practices applied based on a generic maturity scale from 0 (non-existent) to five (optimised). The data collected allowed for detailed cross-case analysis, looking for causes that could explain why some organisations achieved a higher business/IT alignment score compared to other organisations.

3. Findings of the research

From the pilot case studies, **different drivers for adopting IT governance** were identified. An important one was certainly the need to comply with Sarbanes-Oxley requirements, which impacts heavily on the control environment in IT. Other important drivers for IT governance were the push to achieve economies of scales after mergers and acquisitions and budget pressure, resulting in a smaller budget for new projects. Challenge of course is then to optimally assign the remaining budget to projects and activities that are delivering value to the business. Finally, some pilot case companies mentioned that the IT governance project was more an effort of formalizing and structuring existing mechanisms already applied.

3.1 How are organisations implementing IT governance?

The case and delphi research revealed that organisations can leverage a wide range of structures, processes and relational mechanisms in order to implement IT governance to support business/IT alignment. The research reveals **a list of 33 IT governance practices at the level of strategic and executive/senior business and IT management**. It should be noted that this list can not be exhaustive and the practices at operational level are discarded in this research. These practices are shown in the first two columns of Figure 1, with Sx being the structures, Px being the processes and Rx being the relational mechanisms.

Figure 1: Validated list of IT governance structures, processes and relational mechanisms

		Effectiveness (from 0-5)	Ease of implementation (from 0-5)
S1	IT strategy committee at level of board of directors	3,67	3,40
S2	IT expertise at level of board of directors	3,14	2,18
S3	(IT) audit committee at level of board of directors	3,22	3,40
S4	CIO on executive committee	4,38	3,56
S5	CIO (Chief Information Officer) reporting to CEO (Chief Executive Officer) and/or COO (Chief Operational Officer)	4,50	4,21
S6	IT steering committee (IT investment evaluation / prioritisation at executive / senior management level)	4,69	3,35
S7	IT governance function / officer	2,93	3,11
S8	Security / compliance / risk officer	3,28	4,06
S9	IT project steering committee	4,03	4,01
S10	IT security steering committee	2,82	3,61
S11	Architecture steering committee	3,04	3,14
S12	Integration of governance/alignment tasks in roles&responsibilities	3,18	2,63
P1	Strategic information systems planning	3,82	2,82
P2	IT performance measurement (e.g. IT balanced scorecard)	3,97	2,76
P3	Portfolio management (incl. business cases, information economics, ROI, payback)	4,13	2,67
P4	Charge back arrangements – total cost of ownership (e.g. activity based costing)	3,28	2,40
P5	Service level agreements	3,47	3,13
P6	IT governance framework COBIT	3,36	2,42
P7	IT governance assurance and self-assessment	2,79	2,54
P8	Project governance / management methodologies	4,10	2,94
P9	IT budget control and reporting	4,13	4,00
P10	Benefits management and reporting	2,85	2,36
P11	COSO / ERM	2,39	2,04
R1	Job-rotation	2,35	2,36
R2	Co-location	2,79	3,01
R3	Cross-training	2,76	2,82
R4	Knowledge management (on IT governance)	3,24	2,68
R5	Business/IT account management	3,79	3,36
R6	Executive / senior management giving the good example	3,88	2,81
R7	Informal meetings between business and IT executive/senior management	3,79	3,88
R8	IT leadership	3,89	2,82
R9	Corporate internal communication addressing IT on a regular basis	3,43	3,69
R10	IT governance awareness campaigns	2,83	3,14

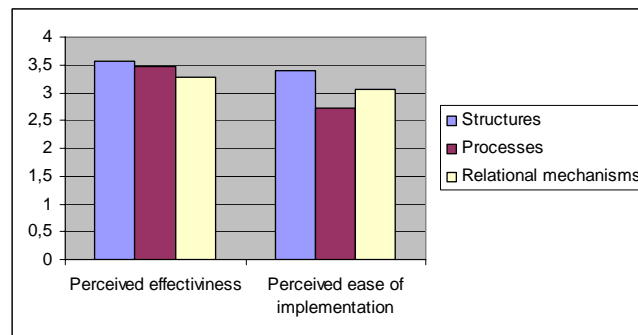
The research demonstrated that, according to the expert group, some of the addressed practices are more effective or easy to implement compared to others (see columns at the right in Figure 3). The **five practices being perceived as to most effective for the Belgian financial services sector** are “IT steering committees”, “CIO reporting to the CEO/COO”, “CIO on executive committee”, “IT budget control and reporting” and “portfolio management”. All these practices were also identified as being relatively easy to implement. The least effective practices are “IT governance assurance and self-assessment”, “job-rotation” and “COSO/ERM”.

Some practices were perceived as fairly effective but not easy to implement. Good examples in this high-effectiveness/low ease of implementation domain are

“benefits management and reporting” and “charge back arrangements”. **Another interesting case here is “COBIT”**. This framework is receiving a lot of attention in literature and in the field, but did not come out very high in this research. However, there are indications that COBIT is a very solid framework to work with. COBIT is a framework which has a higher level of abstraction compared to other, more detailed, practices referred to in this research. The good news for COBIT is that many of these detailed practices are integral part of its framework, certainly the ones that are indicated in this research as being very effective. (such as “IT steering committee, “portfolio management”, etc.)

An interesting finding to pinpoint is that many IT governance definitions stress the prime responsibility of the board of directors in IT governance, while these results reveal that the mechanisms to achieve this (“IT expertise at level of board of directors” and “IT strategy committee”) are rated relatively low in terms of perceived effectiveness. This can possibly be explained by the fact that **making the board of directors more IT literate is not easy to achieve**, which is confirmed by the second to last score in term of ease of implementation of “IT expertise at the level of the board of directors”. The results of this research in any way raise questions on how financial services organisations realise this board involvement in practice.

If averages are calculated for effectiveness and ease of implementation for all the structures, the processes and the relational mechanisms (see Figure 2), it appears that structures and processes are in general perceived as being equally effective. However, it appears that **IT governance structures are perceived as being easier to implement compared to IT governance processes**, although in many cases they are closely related. A good example here is the “IT steering committee”, which is a crucial element to build up a “portfolio management” process, but the steering committee is perceived as much easier to implement compared to the whole “portfolio management” process. Relational mechanisms are also perceived as being easier to implement compared to IT governance processes, probably because some relational mechanisms can have a very informal character (e.g. R7: Informal meetings between business and IT executive/senior management).

Figure 2: Average effectiveness and ease of implementation

The delphi research also brought up a list of IT governance practices, that can be regarded as a **minimum baseline to implement IT governance**. This suggests that, in implementing IT governance within a specific financial services organisation, these minimum baseline mechanisms may play an important role. These practices are “IT steering committees”, “CIO on executive committee”, “IT portfolio management”, “IT budget control and reporting”, “IT strategy committee”, “strategic information systems planning”, “IT leadership”, “CIO reporting to the CEO or COO”, “IT project steering committee” and “project management methodologies”.

It was surprising that only one relational mechanism was reported in this minimum baseline (“IT leadership”), while many authors in literature stress that the relational mechanisms are crucial enablers for IT governance. A possible explanation is that, just as in literature, less detailed knowledge and expertise is available on relational mechanisms which often have a more intangible and informal character. On the other hand, it should be noted that many other relational mechanism, such as “business/IT account management”, “senior management giving the good example” and “informal meeting between business and IT executive/senior management”, attained very positive scores in terms of effectiveness and ease of implementation and should therefore certainly be considered when complementing the minimum baseline.

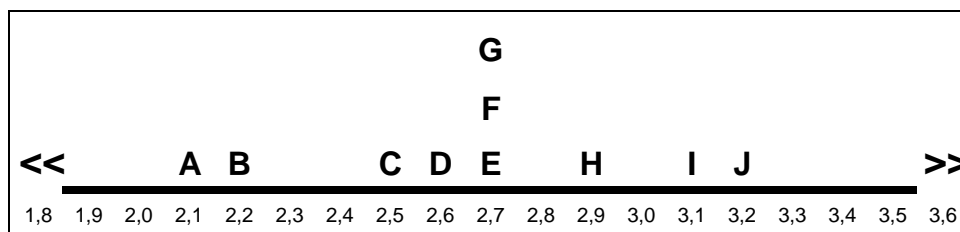
It is also important to point out that the before mentioned minimum baseline should be regarded as a holistic set of practices, contributing as a whole to better better/IT alignment. This insight explains that some of the individual practices, such as the “IT strategy committee”, received individually a lower score for effectiveness. Its value however is constituted in it being part of the minimum baseline, enabling the other practices to operate and be effective.

3.2 What is the impact of IT governance on business/IT alignment?

After measuring alignment in 10 Belgian financial services organisations, it appears that the **overall business/IT alignment maturity is 2,69 on a scale of 5 in the Belgian financial services sector** (Figure 3).

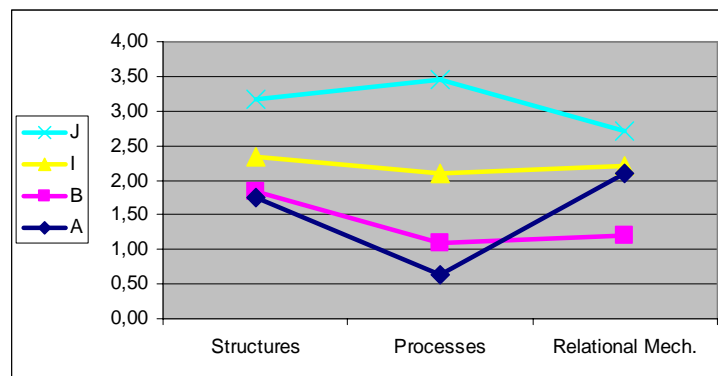
The benchmark contained two organisations with a relatively high business/IT alignment maturity compared to the overall average (high performers, I-J) and two organisations with a relatively low business/IT alignment maturity compared to the benchmark (low performers, A-B). The other six organisations were all situated around the overall average. An interesting consideration here is what the desired target or to-be situation would be for the financial services sector. There is no literature available in this domain, but taken the high-dependency on IT into account, one could argue that at least a maturity level 3 would be required, which implies standardised and documented processes and procedures.

Figure 3: Business/IT alignment maturity benchmark



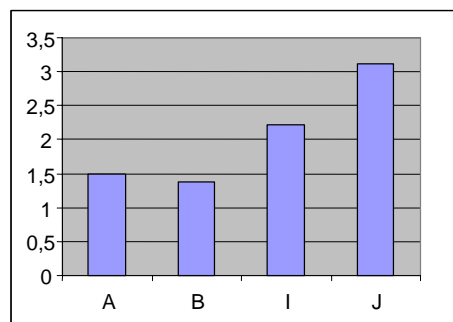
In each of these extreme cases, it was assessed in which maturity (on a scale from 0 – non-existent to 5 - optimised) the organisation was applying each of the 33 IT governance practices discussed earlier. When comparing the averages of maturity of IT governance practices (structures, processes and relational mechanisms) in those extreme cases, it appears that **in general the high performers have more mature IT governance structures and processes**, as shown in Figure 4. This figure also shows that processes on average were less mature compared to structures, indicating that it is more difficult to implement processes compared to structures, which was also discussed in previous section.

Figure 4: Comparing extreme cases (1)



It was also shown that the organisations with low business/alignment maturity did have a lot of practices in place, but the average maturity of these practices was below maturity level 2, as shown in Figure 5. This might indicate that the **impact on business/IT alignment of IT governance practices that have a maturity level lower than 2, is limited.**

Figure 5: Comparing extreme cases (2)



The impact of relational mechanisms on business/IT alignment maturity was not clearly demonstrated in this research. (cf. Figure 4) However, a finding was that the two high performers had started their IT governance implementation many years ago and came to a point where many structures and processes were embedded in day to day practice. At that time, the importance of relational mechanisms becomes less important. **The relational mechanisms are likely very important in the initiating phase of IT governance, in which the two low performers were situated.**

Analysing the high-performers in more detail revealed that they distinguish themselves by a set of IT governance practices that were also proposed in the delphi research as minimum baseline IT governance practices. From this earlier defined set of ten minimum baseline practices, seven appear to be clearly present and mature (above maturity level 2) in the high-performers. This reduced set is called the **key minimum baseline** and

constitutes of the following practices: **“IT steering committee”, “IT project steering committee”, “portfolio management” and “IT budget control and reporting”, “CIO reporting to the CEO/COO”, “project governance/management methodologies” and “IT leadership”.**

An interesting IT governance practice that was not used by any of the organisations, although being promoted by experts and thought leaders as very important, is the “IT strategy committee at the level of the board of directors”. This practice is promoted as a structure to ensure that board gets involved in a structured way in IT governance issues. During the interviews, three out of four organisations stated that board involvement in IT governance is not feasible and probably not required. The representatives of the shareholders are more concerned with the core financial services activities and less worried about (operational) IT issues. Another IT governance practices that was indicated as not being relevant for alignment purpose was “COSO/ERM”. While this was recognised as probably a very good framework for general internal control, the value for governance or impact on alignment did not appear at all.

4. Recommendations for practitioners

There is no real “silver bullet” (the ideal way) for implementing and maintaining effective IT governance within an organisation. 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 is the next challenging step. An important challenge is: how do you get started?

To address the latter question, this research defined a key minimum baseline composed of seven IT governance practices that can be regarded as the necessary framework to implement IT governance. It was demonstrated in this research that high-performing organisations, in terms of business/IT alignment, are leveraging these practices as “necessary” components in their IT governance framework. Each financial services organisation should at least have these IT governance practices in place, regardless of other contingencies. Of course, these “necessary” (key minimum baseline) practices should be supplemented with other practices to build up a set of “necessary and sufficient” IT governance framework. This “necessary and sufficient” IT governance framework will be different for every organisation, depending on size, culture, etc, but it is best to focus on those practices that are perceived as highly effective and relatively easy to implement such as an “IT governance officer/function”, “service level management” and “business/IT account management”.

In this domain of “sufficient” IT governance practices, a lot of relational mechanisms emerge as well such “knowledge management” and “senior management giving the good example”. Indeed, at the initial stages of an IT governance project, a lot of attention should be given to relational mechanisms to ensure commitment of all the involved people in the process. Once the “governance culture” is embedded in the implemented structures and processes, these relational mechanisms require less attention. It is also important to point out that, in order for the IT governance practices to be effective, they should be at least at a maturity level 2.

Special care is required when considering IT governance practices that are effective but more difficult to implement can. An interesting case in this domain is “COBIT”. This framework is receiving a lot of attention in literature and in the field, but did not come out very high in this research. However, indications are there that COBIT is a very solid framework for IT governance. COBIT is a framework which has a higher level of abstraction compared to other, more detailed, practices referred to in this research. Result is that many of the detailed practices referred to in this research are an integral part of COBIT’s framework, certainly the ones that are indicated in this research as being very effective (such as “IT steering committee, “portfolio management”, etc.). A conclusion from this is that COBIT is likely a very good repository to be used by practitioners to derive and select a “necessary and sufficient” set of IT governance practices from.

Out of the case research, it became clear that to get IT governance effectively started in the organisation, it should initially be regarded as a project, with a formal project organisation supporting it. Once the IT governance practices are embedded into day-to-day operations, this project approach is not required anymore, moving the organisation into a sustaining mode. It should however be taken into account that the introduction of a new concept or methodology (such as IT governance) in an organisation often raises resistance. To manage this, it is important to initially put a lot of focus on relational mechanisms and to have a senior sponsor in the organisation action as the IT governance guru. Based on the experiences from the case research and the conclusions coming out of this research, the following high-level ten-step IT governance implementation roadmap is suggested:

1. obtain ownership / sponsorship at senior management / executive level
2. create awareness and involvement for the IT governance initiative by business and IT senior and operational management
3. launch the IT governance project, provide a formal project organisation including project manager

4. assess the as-is situation (what is already in place?)
5. define to-be situation, i.e. what will the ideal IT governance state look like?
6. quickstart the IT governance project with the seven necessary IT governance practices (highly effective, easy to implement)
7. focus on relational mechanisms during initial phases to manage resistance
8. improve the IT governance framework to create a necessary and sufficient IT governance framework
9. shift focus from relational mechanisms to improvement of the structures and processes once the IT governance framework gets embedded into the organisation
10. in parallel, introduce a performance management system (balanced scorecard) to continuously monitor and improve the effectiveness of the IT governance framework

5. Conclusions

As a general conclusion, this research revealed that IT governance is indeed high on the agenda and that organisations with a mature mix of structures, processes and relational mechanisms indeed achieved a higher degree of business / IT alignment maturity compared to other organisations. Some detailed conclusions were drawn regarding IT governance structures, processes and relational mechanisms. It was demonstrated that it is easier to implement IT governance structures compared to IT governance processes. It also appeared that relational mechanisms are very important in the beginning stages of an IT governance implementation project and become less important when the IT governance framework gets embedded into day-to-day operations. This research provides a key minimum baseline of seven IT governance practices that each organisation at least should have and supplement with practices that are highly effective and easy to implement. When an organisation wants to implement these practices, it has to make sure that at least of maturity level of 2 is obtained, to ensure that it positively impacts business/IT alignment.

A recommendation to practitioners resulting from these findings is that the best approach to implement IT governance is to start with setting up these seven key minimum baseline IT governance practices. This core set of practices should be supplemented with other key practices that are highly effective and relatively easy to implement. At the initial stages of such IT governance project, sufficient attention should be given to relational mechanisms to ensure commitment of all the involved people in the process. Once the "governance culture" is embedded in the implemented structures and processes, these relational mechanisms require less attention.

6. Authors' profile

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7. Important literature

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About ITAG

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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