The Right Governance Framework for Managing an Offshore IT Outsourcing Relationship

The Shell Case

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Master thesis Floor de Jong



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UNRESTRICTED 3/102

Management Summary

Since some years many organisations 'offshore' their IT application support. Even though cost savings and benefits seem sky high, many organisations that have been outsourcing for a while, find that they loose management control over their service provision. A year ago, also Shell Global Functions IT Business Application Management (GF IT BAM or simply BAM) concluded that even though it had been saving costs, it did not profit maximally from its relationship with its offshore partner. As one of the main reasons turned out to be the lack of management control, Shell started to look for the right governance framework for managing an offshore IT outsourcing relationship.

Main recommendations

This research provides exactly that; an IT governance framework based on literature and theory, as well as a recommended situation tailored to the current situation at Shell GF IT BAM. On the basis of that recommended situation, we recommend Shell GF IT BAM to take the following four steps:

- 1. *Involve*. Take the lead to improve the IT governance, but align goals with the insourcer, Lines of Business (LoBs) and the Project Delivery & Application Sourcing organisation (PDAS).
- 2. Current situation. Thoroughly get insight in (all the views on) the current situation.
- 3. Desired situation. Consider the recommended situation and design a desired situation. Take into account that the recommended situation is designed within a certain scope. If needed, redefine the scope and assess how that impacts the recommended situation. In order to fully optimize application management also internal processes that link to these joint processes should be defined.
- 4. *Implement*. Develop the desired roles, processes, responsibilities and indicators in close cooperation with the insourcer, the LoBs and PDAS. It would be wise to also involve the businesses.

These four steps are based on an analysis of the gaps between the current BAM situation and the IT governance framework proposed by literature and practice. An IT governance model consists of four different elements that companies should put in place in order to be in control: (1) organisational roles, (2) joint processes between in- and outsourcer, (3) responsibilities that link roles to processes and (4) control indicators that indicate whether or not the organisation actually is in control. The IT governance framework defined in this research prescribes the first three elements for the tactical level of an offshore IT outsourcing relation in a body shop (or staff augmentation) configuration. Control Indicators are not looked into due limited resources.

Gaps current and recommended situation

The main gaps between this framework and BAM's current situation are as follows:

- Roles: The Information manager is currently split across the LoB and BAM, and that there are no Finance manager and Innovation manager. In the recommended situation there is one BAM Information manager, and the Finance manager and Innovation manager are formally defined.
- Joint processes: The current processes are not formally described, there is no joint Innovation Management on a tactical level and Financial Management currently is an internal process within BAM. In the recommended situation both these processes are joint processes and all processes are formally described.

UNRESTRICTED 5/102

- Responsibilities: The biggest gaps can be found in the allocation of the responsibilities. On a high level there are four differences: (1) the Information manager has fewer responsibilities than in the framework, (2) the Purchaser instead of the Information manager is accountable for Engagement Management, (3) the Account manager has more accountabilities than the framework proposes and (4) there are fewer roles involved in Risk Management, and no role is accountable. The main recommendation is to make BAM accountable for everything concerning application management, so also for the relationship with the insourcer necessary to do that. Furthermore it is also important to make a clearer distinction between the Delivery supervisor and Service manager in the communication with the insourcer, and to clearly make the distinction between internal processes and responsibilities and joint processes and responsibilities.

Benefits of the recommended situation Confidential

Further research

There are six main areas in which further research would significantly contribute to this framework and the recommendations:

- Maturity and capability models: They give insight in the dynamics of the framework and make it more concrete.
- More cases: The validity of this framework as well as the recommendations would increase when applied to more cases. Best practices will come to light.
- Scope change: It would be valuable to see how a scope change influences the framework. Especially a change from body shop to Managed Services would add value to the applicability of the model.
- Insourcer's vision: This research is conducted from an outsourcer's site. The insourcer was involved, but conducting a case study from the insourcer's site would improve the framework.
- Relationship with business: The relationship with the outsourcer's business will most likely influence the relationship with the insourcer.
- Control Indicators (CIs): They are described on a high level only. Defining possible CI-hierarchies would improve the value and usability of the framework.

UNRESTRICTED 6/102

Table of contents

PRE	EFACE	11
<u>PA</u>]	RT I INTRODUCTION	13
1	ORGANISATION	14
1.1	ROYAL DUTCH SHELL PLC	14
1.2	GLOBAL FUNCTIONS IT	15
2	RESEARCH APPROACH	17
2.1	Terminology	17
2.2	STRUCTURE	17
2.3	QUESTIONS	18
2.4	Scope	18
2.5	RESEARCH METHODOLOGY	19
2.6	IMPACT AND RELEVANCE	20
3	PROBLEM DESCRIPTION	21
3.1	INITIAL REASON FOR THIS RESEARCH	21
3.2	Stakeholder analysis	21
3.3	RISKS DESCRIBED IN LITERATURE	22
3.4	COMBINATION OF STAKEHOLDERS AND LITERATURE	23
3.5	CONCLUSION - ANSWERS TO RESEARCH QUESTION 1	23
<u>PA</u>]	RT II THEORETICAL BACKGROUND	25
4	IT outsourcing	26
4.1	DEFINITION OF OUTSOURCING IN GENERAL	
4.2	WHAT TO OUTSOURCE	26
4.3	WHERE TO OUTSOURCE	28
4.4	WHO TO OUTSOURCE TO	29
4.5	HOW TO OUTSOURCE	30
4.6	LIFE CYCLE OF AN OUTSOURCING RELATION	31
5	IT GOVERNANCE META MODEL	33
5.1	DEFINITION OF IT GOVERNANCE	33
5.2	ELEMENTS OF AN IT GOVERNANCE FRAMEWORK	34
5.3	HIERARCHICAL LEVELS	37
<u>PA</u>]	RT III GOVERNANCE FRAMEWORK	39
6	GOVERNANCE ELEMENTS FROM LITERATURE	40
6.1	Organisational structures	
6.2	JOINT PROCESS FIELDS	
6.3	RESPONSIBILITIES	

6.4	CONTROL INDICATORS – THE IT GOVERNANCE BALANCED SCORECARD	47
7	GOVERNANCE ELEMENTS FROM PRACTICE	50
7.1	INTERVIEW RATIONALE	50
7.2	General feedback	50
7.3	ORGANISATIONAL STRUCTURES	50
7.4	JOINT PROCESS FIELDS	56
7.5	Responsibilities	60
7.6	ALTERNATIVE CHOICES	61
8	THE IT GOVERNANCE FRAMEWORK	63
8.1	COMBINING ALL RESPONSIBILITIES	63
PA]	RT IV PRACTICE	69
9	CURRENT SITUATION	71
9.1	Roles	71
9.2	JOINT PROCESSES	71
9.3	RESPONSIBILITIES	71
9.4	CONCLUSION OF THIS CHAPTER	71
10	RECOMMENDED SITUATION	72
11	VALIDATION OF THE IT GOVERNANCE FRAMEWORK	73
11.1	How to validate	73
11.2	2 EVALUATION OF THE RESEARCH PROCESS	73
11.3	EXTERNAL VALIDITY	76
11.4	CONCLUSION	77
12	RECOMMENDATIONS	78
12.1	FOR SHELL GLOBAL FUNCTIONS IT BAM	78
12.2	POR THE IT GOVERNANCE FRAMEWORK	78
13	Conclusions	80
13.1	Answers to the research questions	80
13.2	2 Limitations	83
13.3	FURTHER RESEARCH	84
REI	FERENCES	86
PA]	RT V APPENDICES	89
Apr	PENDIX A DEFINITIONS AND ABBREVIATIONS	90
APF	PENDIX B INTERVIEWS FOR PROBLEM DESCRIPTION	
B.1	INTERVIEW GOALS	
B.2	INTERVIEW METHODOLOGY	
B.3	INTERVIEW APPROACH	
B.4	Interview questions	
B.5	-	

B.6	FINDINGS	94
Appi	ENDIX C INTERVIEWS WITH EXPERTS FROM PRACTICE	95
C.1	INTERVIEW GOALS	95
C.2	INTERVIEW METHODOLOGY	95
C.3	INTERVIEW APPROACH	96
C.4	INTERVIEW QUESTIONS	96
C.5	DETAILS OF INTERVIEWEES	96
Appi	ENDIX D THE SHELL CASE: WORKSHOP	98
D.1	WORKSHOP GOALS	98
	WORKSHOP METHODOLOGY	
D.3	WORKSHOP APPROACH	99
D.4	DETAILS OF ATTENDEES	101
D.5	FINDINGS	102
D 6	OTHER DISCUSSIONS	102

Preface

Nine moths ago I started this graduation research at Shell International Human Resources IT. My objective was to successfully perform a graduation research with both practical and theoretical relevance, and with the result in front of me I believe I have succeeded. In those nine months I have survived 1 organisation transformation, approximately 15 drinks, 30 lunches and 2 trips from the Shell Student Society, I have arranged approximately 23 Lunch & Learns for the team, attended around 30 team meetings, made several new good friends and last but not least have successfully managed my four very critical supervisors.

Of course, apart from these quantifiable benefits, most of all I have learned a lot about IT offshore outsourcing and IT governance. Looking back on the last nine months I think that there are quite some comparisons between graduating, and exploring and producing oil these days. Just like oil, knowledge is hidden somewhere in places that you have to discover and explore, and depending on the Enhanced Knowledge Recovery methods that you have invested in, you can recover more and more of that knowledge. Like oil, the most useful and valuable knowledge is also the hardest and resource-intensive to produce, although unlike oil it is fortunately not expected that we will run out of knowledge soon. Sometimes it is worth the effort to invest in expensive (sub-sea) drilling techniques in order to be able to continuously access the knowledge during the rest of the project. The scale and the budget may be somewhat smaller, but in fact I have fulfilled my own knowledge-drilling project, and have refined it as well.

Obviously, this project would not have been as successful as it has been without certain people that supported, challenged and pushed me along the way. First of all I would like to thank Feiko, my supervisor from Shell, for all the discussions and fun we have had. Before I joined Shell I met few people that can be as stubborn and eager for discussions as I can, but I must admit I have found my equal in Feiko (unfortunately for me, he has more experience in it). Second, René has been a wonderful mentor. I would like to thank him for his advice when I was in doubt, his insights in the wonderful world of Shell, and the moments he was there to just lend me an ear. Third, I would like to thank Pascal, my Information Systems supervisor from university. Pascal has given me the most clear, structured and straightforward feedback, and was always prepared to help me figure out how to action it. Fourth, Jos, being my Industrial Engineering supervisor, has helped me thinking outside the box, re-assessing the boundaries of my research and keeping in mind previous and future chapters when I was covered in mud writing my current deliverables. Jos, thank you for that. Fifth, I would like to thank all people that helped me to overcome hurdles instead of muddling through by listening to my explanations, asking questions for clarification, and sparring to get my thoughts aligned. Finally, last but not least, I would like to specially thank all the people that made me feel welcome, comfortable and valuable during my project. This is by far the largest group and I would like to mention (in no particular order) my team, the Shell Student Society, Bart, other colleagues and of course my mother who helped me go shopping. Many thanks to you all, as I could not have enjoyed and succeeded as much as I did without you.

This leaves me with nothing more to say than that I hope you will enjoy reading and will be able to maximally profit from the contents of this thesis. If you have any questions or comments please do not hesitate to contact me, I will be happy to help you if I can.

Best regards, Floor

UNRESTRICTED 11/102

Part I INTRODUCTION

This part describes the context of the research in order to introduce the reader in the complex world of Shell. It explores the organisation, the research approach for the rest of the research and in the end the problem statement.

Contents of Part I

1	ORGANISATION	14
1.1	ROYAL DUTCH SHELL PLC	14
1.2	GLOBAL FUNCTIONS IT	15
2	RESEARCH APPROACH	17
2.1	TERMINOLOGY	17
2.2		
2.3	QUESTIONS	18
2.4	SCOPE	18
2.5	RESEARCH METHODOLOGY	19
2.6	IMPACT AND RELEVANCE	20
3	PROBLEM DESCRIPTION	21
3.1	INITIAL REASON FOR THIS RESEARCH	21
3.2	STAKEHOLDER ANALYSIS	21
3.3	RISKS DESCRIBED IN LITERATURE	22
3.4		
3.5	CONCLUSION - ANSWERS TO RESEARCH QUESTION 1	23

UNRESTRICTED 13/102

1 Organisation

This chapter explains the organisational context of this research to enable readers to put the scope of the research into perspective. First, we give a high-level overview of Royal Dutch Shell plc and its activities. The second paragraph describes where the scope of our research on Global Functions IT Business Application Management fits into that bigger picture.

1.1 Royal Dutch Shell plc

Shell is a global group of energy and petrochemical companies. The company is active in more than 110 countries and territories and employs 104,000 people worldwide. According to the corporate website, Shell's business strategy is 'more upstream and profitable downstream'. "Upstream, we search for and recover more oil and gas. Downstream, we refine and deliver products to our customers in a profitable and sustainable way" (Shell.com 2008).

The foundations of Royal Dutch Shell plc lay in London, where Marcus Samuel opened a little shop in 1833 selling seashells. In 1892 his son started to export lamp oil to the Far East and thereby founded Shell Transport. After a merger with Royal Dutch in 1907, nowadays Royal Dutch Shell is the third largest corporation in the world with \$318,845 million revenues and \$25,442 million profits (Figure 1).

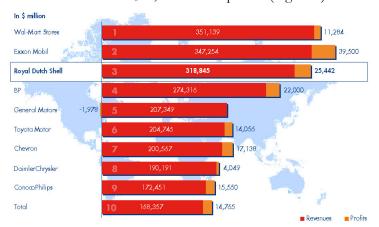


Figure 1 - The world's largest corporations (Fortune Global 500 2007)

1.1.1 Businesses, Functions and IT

Royal Dutch Shell plc is build up from five different businesses and ten different functions. Because these functions and businesses overlap each other in all sorts of combinations, it is not possible to depict this in one comprehensive figure. The Businesses are:

- Downstream
- Exploration and Production
- Gas and Power
- Shell Trading
- Shell Global Solutions

And the Functions are the following:

- Corporate Affairs
- Human Resources
- Shell Real Estate

UNRESTRICTED 14/102

- Finance
- Information Technology
- Legal
- Strategy and Business Development

So, IT is one of the Functions. IT itself consists of three delivery towers: Deliver to the Business, Improve the Function, and Support of the Function. Global Functions IT is one of the parts of the first tower and has the responsibility to take care of all IT for the Functions as described above.

1.2 Global Functions IT

The organisation of Global Functions IT (GFIT) consists of roughly four layers, as depicted in Figure 2.

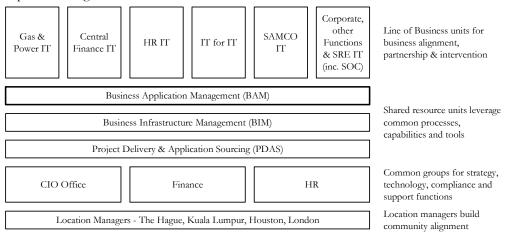


Figure 2 – The position of BAM in the Global Functions IT organisation

The first layer is the combination of the Line of Business (LoB) units, who are the link towards the Functions and are responsible for business alignment, partnership & intervention. The second layer consists of the shared resource units: Business Application Management (BAM), Business Infrastructure Management (BIM) and Project Delivery & Application Sourcing (PDAS). They provide the LoBs with common processes, capabilities and tools. The common functions that support the GFIT organisation, e.g. the HR manager who recruits employees, form the third layer. The fourth and last layer includes all location managers who build common alignment within one location.

This research focuses on Global Functions IT Business Application Management (GFIT BAM). BAM is responsible for the applications of the LoBs, including support, transition to support and service delivery. Business Infrastructure Management (BIM) is responsible for all infrastructure, including the infrastructure for the applications, but BAM has the final responsibility to deliver the services to the LoBs. Project Delivery & Application Sourcing (PDAS) is responsible for all projects, including BAM projects but also for the LoBs and BIM.

Within BAM, we focus on the non-SAP support, which is (mainly) outsourced to an offshore insourcer. There currently are around 70 applications, varying in size. BAM is using 'body shopping' or 'staff augmentation' to hire people at the insourcer, which means that the insourcer reserved a specific number of FTE's per BAM team, specified per technology group of applications. A technology group is a group of applications that are based on the same technology (e.g. Visual Basic, .Net, etc.).

UNRESTRICTED 15/102

BAM's customers for support are the businesses (the Functions themselves, represented by the LoBs), that provide the complaints and wishes on which the relation with the insourcer is based. The end-users are Shell employees within these businesses that use the applications. This is depicted in Figure 3.

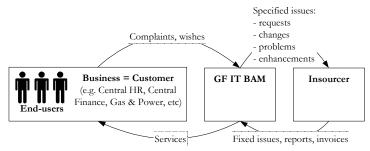


Figure 3 - Relations of BAM Support

UNRESTRICTED 16/102

2 Research approach

2.1 Terminology

The research focuses on what in Dutch is called 'regie' or 'besturing' of the relationship between the insourcer and Shell GFIT BAM. The translation of this is 'governance', but governance is a broader term than 'regie' or 'besturing'. The definition of governance as we use it is derived from the IT Governance Institute (2004): IT governance consists of "... organizational structures and processes that ensure that the organization's IT sustains and extends the organization's strategies and objectives". We see the governance of the relationship between the insourcer and Shell as a part of IT governance, thus a part of the organisational structures and processes mentioned above. This research makes a distinction between organisational structures and processes, which together form the governance of the relationship.

Other definitions and abbreviations can be found in Appendix A.

2.2 Structure

Figure 4 shows the structure of the outcomes needed in order to reach the goal, according to the technique as described by Verschuren and Doorewaard (Verschuren et al. 1999). The corresponding chapters in this thesis are shown in the corners of the blocks. The grey dotted line reflects the difference between the theoretic part of the research and the practical part considering the Shell GFIT BAM case. The formulation can be found below.

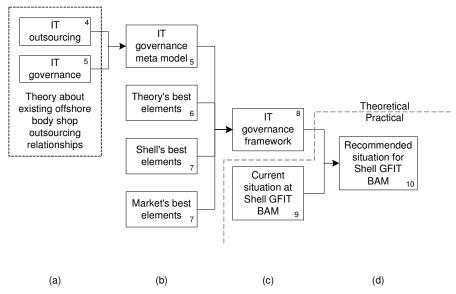


Figure 4 - Research structure

Figure 4 shows that (a) a literature exploration about IT outsourcing and IT governance in existing offshore body shop outsourcing relationships will enable us to define our IT governance meta model. (b) The combination of this meta model with elements from theory, the market and within Shell will enable us to define an IT governance framework. (c) Application of this framework on the current situation of Shell will lead to (d) the recommended situation in which Shell's governance will be improved.

UNRESTRICTED 17/102

¹ This thesis uses the term 'Shell' for the Shell department where the research has been conducted; Global Functions IT BAM. It uses 'Royal Dutch Shell' in case the entire organisation is concerned.

2.3 Questions

2.3.1 Goal

To draw up recommendations for Shell Global Functions IT BAM on the basis of an IT governance framework, in order to enable Shell Global Functions IT BAM to improve the governance of the service provision relationship with the insourcer.

2.3.2 Questions

Main question:

According to which framework can Shell GFIT BAM improve the governance of the service provision relationship with the insourcer?

Sub questions:

- 1. What is the problem that Shell faces?
 - a. What problems do stakeholders encounter?
 - b. Which risks does literature describe?
- 2. What is IT outsourcing?
- 3. What is IT governance?
 - a. What does an IT governance framework consist of?
- 4. What is the generic IT governance framework for an offshore outsourcing body shop relationship on tactical level?
 - a. What are the elements described in literature?
 - b. What are the elements described in the market?
 - c. What are the elements used in the rest of Shell IT (non-Global Functions)?
- 5. What is the recommended IT governance situation for Shell Global Functions IT BAM?
 - a. What is the current situation of Shell GFIT BAM?
 - b. What are the gaps between the generic framework and the current situation?
 - c. What are the benefits of the recommended situation?
- 6. What is the validity of the IT governance framework?
- 7. What are concrete recommendations for Shell GFIT BAM to improve?
- 8. What can be concluded from this research?

2.4 Scope

To keep the research itself controllable, we will stick to the following scope:

- We will consider the IT offshore body shop outsourcing relation of Shell Global Functions IT BAM with one of their insourcers (so e.g. not with a combination of insourcers in a multi vendor relation).
- This means that only an *existing* relationship is in scope, which is in its management phase. Other phases being identification of needs, selection of suppliers, transition and evaluation of the outsourcing relation are out of scope (see paragraph 4.6).
- We will focus on problems and stakeholders of Shell GFIT BAM,
- As long as they have to do with the outsourcing of IT support of non-SAP applications.
- We will focus on a tactical level (see paragraph 5.3).

We will explicitly not (this list is not exhaustive):

- Consider Managed Services (MS) as long as it is not related to the scope (e.g. defining criteria when to start a MS relationship).
- Discuss and solve concepts on an operational level.

UNRESTRICTED 18/102

- Write an implementation plan based on the recommendations. This is depicted in Figure 5, which is an addition to Figure 4.
- Implement any recommendations done in the thesis.

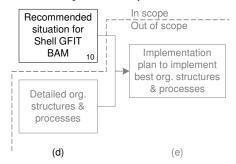


Figure 5 – Writing the implementation plan is out of scope

2.5 Research methodology

Research question	Methodology
1. What is the problem that Shell faces?	
1.a. What problems do stakeholders encounter?	Interviews, stakeholder analysis.
1.b. Which risks does literature describe?	Literature research.
2 What is IT outsourcing?	Literature research.
3 What is IT governance?	Literature research.
3.a What does an IT governance framework consist of?	Literature research; combine in a meta model.
4 What is the generic IT governance framework for an offshore outsourcing body shop relationship on tactical level?	Fill in meta model with elements as specified in 4.a to 4.c.
4.a What are the elements described in literature?	Literature research.
4.b What are the elements described in the market?	Structured interviews with market parties.
4.c What are the elements used in the rest of Shell IT (non-Global Functions)?	Structured interviews with experts within Shell from the Infrastructure Sourcing Programme
5. What is the recommended IT governance situation for Shell Global Functions IT BAM?	
5.a What is the current situation of Shell GFIT BAM?	Examining existing Shell documentation, unstructured interviews and a workshop in which stakeholders map themselves to the generic IT governance framework.
5.b What are the gaps between the generic	Comparison of IT governance
framework and the current situation?	framework and current situation.
5.c What are the benefits of the recommended	Analysis of mitigation of risks
situation?	and problems by the recommended situation.
6 What is the validity of the IT governance	Concluding from applicability

UNRESTRICTED 19/103

framework?	during the workshop as mentioned above.
7 What are concrete recommendations for Shell GFIT BAM to improve?	Summarize answer to question 5, define following steps.
8 What can be concluded from this research?	Summarise main conclusions throughout entire thesis.

2.6 Impact and relevance

Many authors stress the importance of good IT governance in outsourcing relationships. According to King "the offshoring of information systems and services has been one of the most discussed phenomena in IS [(Information Systems)] in recent years; it has significantly influenced the thinking of both academics and practitioners" (King et al. 2008).

This research delivers an IT governance framework that describes how an offshore outsourcing body shop relationship on tactical level should be governed, and applies this framework to Shell GFIT BAM. By doing that, it forms a little piece of the big puzzle of good IT governance, in the first place for outsourcing relationships but also for the broader IT governance perspective.

The following two sub paragraphs describe the impact and relevance of this research within that puzzle from respectively a practical and a theoretical perspective.

2.6.1 Practical impact

From a practical point of view, our research contributes to the advantages of good IT governance in outsourcing relationships. There are three main advantages that follow from each other. First, day-to-day outsourcing relations will be improved because an insourcer's activities can be closely monitored and coordinated (Gopal et al. 2003). Secondly, good governance will improve the chance on success of (offshore) outsourcing; the fate of offshoring strategies is decided by the governance choices (Aron et al. 2005; Kern et al. 2001). Many organisations do not have the proper governance in place, resulting in lost opportunities and higher costs, and this especially holds when the organisation is involved in outsourcing, because of the complex environment. "Through 2008, poor sourcing decisions will diminish the achievable value of services in 80 percent of service deals (0.7 probability)" (Gartner 2005). Thirdly and finally, this research will help organisations to prevent poor management of interfirm relationships, which result in lower market value on the long term (Holcomb et al. 2007).

2.6.2 Theoretical impact

From a theoretical perspective, this research directly gives an important part of the answer to the question 'what practices can be developed to better manage the relationship with offshore vendors?', which is in the top-3 of key offshoring issues of researchers (King et al. 2008). It will give researchers insight in the best practices currently available in the market, as well as an overview of research done on IT governance frameworks for offshore outsourcing relationships so far. Furthermore, the research will also apply the findings to the concrete case of Shell GFIT BAM, which will give valuable information about the value of these best practices and theoretical researches. It thereby enables researchers to improve their theoretical viewpoint by aligning it with practical findings.

UNRESTRICTED 20/103

3 Problem description

This chapter describes the main problem that Shell faces and its context. Defining the exact problem is not so easy, as there are often many views on what the problem is. Therefore we consulted several stakeholders within BAM on both operational and tactical level and compared their experiences with outsourcing risks described in literature. From this research we can conclude that Shell's main problem is that there is not enough management control in at least one of their offshore body shop outsourcing relations.

The structure of this chapter is as follows. First, the initial reason for this research is given in paragraph 3.1. The second paragraph describes our stakeholder research and paragraph 0 roughly explores risks described in literature. The fourth paragraph combines the findings from paragraph 3.2 and 0 and the last concludes the chapter by answering research question 1.

3.1 Initial reason for this research Confidential

3.2 Stakeholder analysis

In literature, a stakeholder is generally defined as a person who experiences the problem, or who is impacted by reducing it (Wieringa 2007-2008a). These people are of interest for this research for two main reasons:

- They know more about the problem than we do because they experience the consequences. Therefore they can give us quick insight in the most important aspects.
- Some stakeholders can directly influence the problem because they have the power to implement the solution or not. By involving these stakeholders the probability that this research will have the desired practical impact rises.

Keeping these reasons in mind, two groups of stakeholders are identified. First, on operational level, a BAM non-SAP support team, its contract manager and two affiliates from the insourcer are involved. This BAM team cooperates daily with support employees from the insourcer. It consists of three application specialists, of whom one is an onshore employee from the insourcer, and their support manager. These stakeholders experience the problem and are impacted by reducing it because they might have to change their daily ways of working. The support manager also has some influence on the solution because he has to implement it within the team (so on operational level). Even though the scope of the IT governance framework presented later in this research is the tactical level, it is still valuable to investigate which problems this operational team is experiencing. As said before, they experience the consequences of the main problem, and therefore can give more insight in the underlying causes and the results of this. This chapter describes the main problem, and the context wherein this problem occurs is important to understand its complexity.

Second, there are 6 stakeholders involved on the tactical level as well, of which one is an engagement manager of the insourcer and the other are Shell employees from several departments within Shell GFIT BAM. These stakeholders experience the long-term consequences of the problem, are impacted by reducing it and have influence on the solution.

Both groups are interviewed according to two different sets of interview questions as included in Appendix B. This appendix also contains more information about the

UNRESTRICTED 21/102

interview goals, methodology, approach and findings. The findings from these interviews depicted in Appendix B.6 are summarised in the following two subparagraphs.

3.2.1 Operational stakeholders

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3.2.2 Tactical stakeholders

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3.3 Risks described in literature

Almost all researchers that describe outsourcing also mention at least some of the risks of outsourcing, as well as the advantages and disadvantages. Advantages are out of scope for the problem description, but disadvantages can be seen as risks and therefore are of interest for this chapter. We focus on what Beulen (2006) calls 'managing risks' instead of 'contracting risks'. The distinction is that first contracting risks occur before and when an outsourcing relationship is set up. Once there is an established relationship between an outsourcing and an insourcing company, management risks appear (Beulen et al. 2006).

Beulen also discusses a very thorough overview of risks and disadvantages. He divided the risks involved in managing IT outsourcing relationships in 10 different risk categories. Table 1 below shows them, including the concerning aspects that require attention (Beulen et al. 2006).

Table 1 - Partnership management risk categories (Beulen et al. 2006)

Risk category	Aspects requiring attention
Cost control	IT service delivery costs must be controlled.
Management control	The service recipient must clearly define the role of the service provider and manage the details and specifics of their service delivery.
Demand management	Service recipients need service delivery interfaces, both for their company's divisions and the provider.
Priority	The service provider must assign sufficient priority to the recipient's needs.
Confidentiality	No confidential information may be divulged to outsiders or unauthorized persons.
Information requirements definition	Service recipients must be able to define which IT services their providers must supply.
Business knowledge	Service providers must have sufficient knowledge of their client's business to ensure continuity in the delivery of the services needed.
Business dynamics	Service providers and the contracts made with them must never hinder the recipient adapting the delivery requirements as a consequence of business management changes.
Innovation	Service providers must regularly introduce new technologies in order to make possible and stimulate the recipient's innovation processes.
Vendor lock- in	Service recipient must always be able to change providers, and must not become dependent on any one supplier.

Furthermore, he identifies five disadvantages that directly link to these risks. The disadvantages are (1) the increased dependence on suppliers, which is related to the risk

UNRESTRICTED 22/102

category 'vendor lock-in' mentioned above, (2) a loss of knowledge and know-how, which is linked to 'business knowledge', (3) higher costs that is linked to 'cost control', (4) confidentiality risks that has clear overlap with 'confidentiality' and finally (5) difficulty in selecting the right service provider, which is a contracting risk instead of a managing risk.

Cross-checking this framework with risks that other authors define learn that Beulen's framework covers all risks. According to Yang "the most prominent risks in outsourcing are information security concerns and loss of management control" (Yang et al. 2007), which belong to respectively the second and the fifth category Beulen mentions. King states that firms have higher risks in general when they have a higher dependence on the offshore vendor, which lands in the category 'vendor lock-in' (King et al. 2008).

Also Aron (2005) mentions that vendor lock-in is likely to happen, because "as outsourcing contracts mature, the power in relationships shifts from the buyers to the sellers", which means that "they cannot bring those processes back into the organization on short notice". This is what Aron calls a structural risk, because it appears on the long term. Another structural risk is that "rivals may steal their intellectual property and proprietary processes if they transfer processes offshore, especially to emerging markets", part of Beulen's risk category 'confidentiality'. As opposed to structural risks Aron identifies operational risks that are more critical in the initial stages of offshoring and outsourcing. One of the reasons for operational risks is the lack of effective, complete metrics because then the outsourcer has no idea of how the insourcer executed the work compared to how they did it themselves. This risk belongs to the category 'management control'. The second reason for operational risks is that knowledge and tasks are not codified or codifiable. This means that "service providers won't be able to execute business processes as well as their employees perform them in-house" and that there has to be room for a learning curve of the insourcer's employees. This falls under Beulen's category 'business knowledge'. Structural risks are caused by the extent to which you can measure the process quality (as with operational risks) and the ability to monitor work (Aron et al. 2005).

Finally, also Lacity has done a lot of research on offshore outsourcing. She agrees with Aron and Beulen and states that "in the offshore outsourcing market, knowledge transfer has been one of the biggest impediments to success", which falls in the category 'business knowledge'. Furthermore, she also mentions high turnover as a risk, whereby interesting work is the key to prevent it (Lacity et al. 2008). Also Mirani (2007) recognises the problem of turnover, stating that rival vendors recruit staff away with 15-20% higher salaries, causing staff attrition rates to be as high as 45% (Mirani 2007). We see high turnover as one of the main reasons for the risks in the 'business knowledge' category, but it also influences several other categories. High turnover is not a risk that directly influences the relationship between in- and outsourcer and therefore is not within scope.

3.4 Combination of stakeholders and literature Confidential

3.5 Conclusion - Answers to research question 1

3.5.1 Q1.a: What problems do stakeholders encounter? Confidential

UNRESTRICTED 23/102

3.5.2 Q1.b: Which risks does literature describe?

Risks in literature can be divided in ten categories: Cost control, Management control, Demand management, Priority, Confidentiality, Information requirements definition, Business knowledge, Business dynamics, Innovation and Vendor lock-in.

3.5.3 Complete Q1: What is the problem that Shell faces?

The main problem of Shell is that there is not enough management control. **CONFIDENTIAL**

UNRESTRICTED 24/102

Part II THEORETICAL BACKGROUND

This section establishes the theoretical background and framework for the rest of the research. By first exploring the concepts of IT outsourcing and IT governance, the conclusion of this part will embody an IT governance meta model.

Contents of Part II

4	IT OUTSOURCING	26
4.1	DEFINITION OF OUTSOURCING IN GENERAL	26
4.2	WHAT TO OUTSOURCE	26
4.3	Where to outsource	28
4.4	Who to outsource to	29
4.5	HOW TO OUTSOURCE	30
4.6	LIFE CYCLE OF AN OUTSOURCING RELATION	31
5	IT GOVERNANCE META MODEL	33
5.1	DEFINITION OF IT GOVERNANCE	33
5.2	ELEMENTS OF AN IT GOVERNANCE FRAMEWORK	34
5.3	HIERARCHICAL LEVELS	37

UNRESTRICTED 25/102

4 IT outsourcing

As stated before, outsourcing in all different type of forms has been researched extensively for some decades (Holcomb et al. 2007; Kedia et al. 2007; King et al. 2008; Yang et al. 2007). The purpose of this chapter is not to summarise all those findings and theories, because that would be an immense exercise. In this chapter we try to give an overview of what outsourcing means and what different types of outsourcing places, partners and ways exist.

First, a general definition of IT outsourcing that will be used throughout the thesis is given in 4.1. Paragraph 4.2 discusses different assets that can be outsourced within IT outsourcing, but also briefly addresses non-IT assets. Where to outsource is discussed in 4.3 and how to outsource in 4.4. Paragraph 4.4 discusses not only how to outsource, but also mentions the two possible pricing models related to them. Paragraph 4.5 addresses three different types of service providers, which concludes the overview of IT outsourcing in general. The last paragraph, 4.6, concludes this chapter with a description of the outsourcing life cycle.

4.1 Definition of outsourcing in general

Literally, outsourcing is an abbreviation for 'outside resource using' (Yang et al. 2007). According to Merriam-Webster 'to outsource' is: "to procure (as some goods or services needed by a business or organization) under contract with an outside supplier" (Merriam-Webster 2008).

Researchers use many different definitions and terms for outsourcing. Beulen focuses on strategic sourcing, which he defines as "the way in which organizations obtain products and services in exchange for returns while considering the long-term impact on the context, intensity and scope of their internal and external relationships" (Beulen et al. 2006). Holcomb says the following with respect to strategic outsourcing: "We rely on both transaction-based and resource-based logics to explain the emergence of one such arrangement strategic outsourcing in which firms rely on intermediate markets to provide specialized capabilities that supplement existing capabilities used in production." Kedia uses the term International Outsourcing of Services (IOS), which "refers to handing over of service functions (that were done in-house) by firms to providers (i.e., vendors) located in a (or several) foreign country(ies) where the former does not have ownership, authority or direct control" (Kedia et al. 2007).

In this research we will focus on IT outsourcing specifically, which definition is given below. We see outsourcing in general as Merriam-Webster's definition because it is short and comprehensible.

4.2 What to outsource

In theory, outsourcing does not necessarily involve IT. Following the definition from Merriam-Webster every good or service that is procured under contract by an outside supplier is outsourced. The same theory can be found in the literature, where authors make a distinction between IT outsourcing (sometimes referred to as ITO), business process outsourcing (BPO) and sometimes knowledge process outsourcing (KPO).

This distinction is not only made on the basis of the nature of the assets that are outsourced, but also historically grown. Since the eighties, (onshore) IT outsourcing is popular, while BPO increased since the late nineties and the beginning of 21st century. Currently, the KPO market is small, but "industry analysts expect a huge growth in this sector over the next five years" (Lacity et al. 2008). Some authors therefore claim that "BPO is an advanced type of IT outsourcing" (Yang et al. 2007), while Lacity (2008) distinguishes ITO and BPO as different things. In this research we concur with Lacity.

UNRESTRICTED 26/102

4.2.1 IT outsourcing

Yang describes two definitions of the comparable² term IS (Information Systems) outsourcing: "One of the most adopted definitions of IS outsourcing is the following: "the significant contribution by external vendors in physical and/or human resources associated with entire or specific components of the IT infrastructure in the user organization" (Loh et al. 1992). On the other hand, De Looff (1997) defined IS outsourcing as "the commissioning of some parts or all of the information system activities of an organization, or transferring the associated human and other IS resources to one or more external supplier" (de Looff 1997)" (Yang et al. 2007). One of the differences is that the first focuses on IT infrastructure specifically, while De Looff focuses on the information system activities in general. Finally, Cohen (2005) focuses more on business and IT services: "IS outsourcing is the disciplined provisioning and blending of business and IS services from the optimal set of internal and external providers in the pursuit of business goals" (Cohen et al. 2005).

We base our definition on a combination of our general definition of outsourcing as described above and Cohen's definition. The reason for using Cohen is that Shell's relationship described in the previous chapter also focuses on provision of (support) services, which are clearly linked to the business goals. Furthermore, as opposed to BPO and KPO, the focus on IS (IT) services is important for this research. Therefore we make that more concrete and define IT outsourcing as:

The procurement of IT services under contract from the optimal set of internal and external providers in the pursuit of business goals.

IT services

IT services can be found in two different areas; 'application outsourcing' and 'infrastructure management'. Application outsourcing concerns activities to enhance functionality by developing new or adapting existing applications, activities to link applications to each other or to infrastructure, and activities to support existing and rollout new applications. Infrastructure management includes preventive and remedial services to keep the computing and communications hardware up and running and optimal (Beulen et al. 2005). IT services fall in either the area of application outsourcing or infrastructure management, although they are often called differently. This research focuses on application outsourcing.

4.2.2 Business process outsourcing

As the term says, BPO is the outsourcing of a complete business process. Although in theory BPO does not necessarily have something to do with IT, often these processes are IT-intensive. According to Yang, BPO is "the delegation of one or more IT-intensive business processes to an external provider that in turn owns, administers and manages the selected process based on a defined and measurable performance criteria. It can also be simply defined as devising a contract with an external organization to take primary responsibility for providing a business process" (Yang et al. 2007). The biggest difference with IT outsourcing is that the insourcer is responsible for the entire end-to-end process and therefore controls all issues related to business processes, human resources, and technology (Beulen et al. 2006; Lacity et al. 2008; Yang et al. 2007). Because BPO is out of scope we will not further investigate this.

UNRESTRICTED 27/102

² Some researchers use the term 'TT outsourcing', where researchers also use 'TS outsourcing'. None of the authors describes a clear difference between the two and e.g. King (2008) and Beulen (2005) mention them in one sentence as "TS/TT outsourcing", making no difference as well. We use a definition of 'TS outsourcing' for 'TT outsourcing' so in this research both terms are interchangeable. For clarity purposes we will only use 'TT outsourcing' because it is similar to 'TT governance'.

4.2.3 Knowledge process outsourcing

According to Lacity (2008): "KPO is the outsourcing of business, market, and/or industry research". This kind of outsourcing requires even more business knowledge than BPO and more analytical skills for the insourcer, as services are involved such as design of surveys, collection of new data, analysis of data, and the writing of reports (Lacity et al. 2008). Only very few insourcers offer these services, but the Everest Group and Evalueserve predict a rapid growth (Evalueserve 2007; Everest Group 2007). These tasks are core close for the outsourcer, which means that his core business is dependent on the outcomes, so the relationship between outsourcer and insourcer will have to be stable and mature.

4.3 Where to outsource

There is a strong connection between the location (where to outsource) and the partner (who to outsource to), which is discussed in the following paragraph. However, the location is independent from the services that are outsourced as described in the previous paragraph. This means that ITO, BPO and KPO can be outsourced to all locations described below.

In general there are three areas to which services can be outsourced: in the same country (onshore), in the same region or continent (nearshore), or in another continent (offshore). However, we distinguish a fourth location: the Internet (online). Of course, many insourcers offer services from a combination of locations. This research focuses on offshore outsourcing.

4.3.1 Onshore

Historically most insourcers were located onshore, in the same country and with the same culture as their customers. This makes it easier to have face-to-face contact and build a physical, personal relationship. The main disadvantage is that costs of local resources are usually higher.

A special kind of outsourcing that is in between onshore and nearshore outsourcing is rural sourcing. In that case outsourcers source to remote areas, where resources are usually cheaper and the culture is similar. This is especially interesting is larger countries as the United States, where price differences between 'business areas' and rural areas are significant.

4.3.2 Nearshore

Lacity defines nearshoring (nearshore outsourcing) as "outsourcing work to a supplier located in an adjacent country". Advantages are lower resource costs than with onshoring, and closer by (e.g. less travel costs) than with offshoring. The cultural differences between out- and insourcers are also less than with offshore outsourcing. Examples of nearshore locations are the Czech Republic, Poland, and Hungary for West-European companies and Canada for the US (Lacity et al. 2008).

4.3.3 Offshore

Offshore outsourcing (or shortly offshoring) has become 'hot' since the beginning of the 21st century. Nevertheless, already in the nineties companies were offshoring their IT services, but since the year 2000 offshoring is booming. The essence of offshore outsourcing is that the insourcer is located in a different country than the outsourcer, typically a developing, low wage country, where the insourcer usually does not have ownership, authority or direct control (Beulen et al. 2005; Gopal et al. 2003; Stack et al.

UNRESTRICTED 28/102

2005). The most obvious advantages are that resources are cheaper and there are more resources than in developed countries. Disadvantages are amongst others that travelling expenses and cultural differences are significant, which challenges good communication. Examples of offshore locations are India, China and the Philippines.

4.3.4 Online

Already in the early nineties, online outsourcing in the form of Application Service Providers (ASP) has been popular for the business. Although many thought that ASP died with the dot.com bust, at this moment the concept is rising again because of three main advantages: it is online, so anytime & anywhere, it is cheaper than the usual proprietary suites and thirdly it is possible to offer customized services, even if the products are standardized (Lacity et al. 2008). A disadvantage of typical ASP is that the products are standardized so they cannot be changed to a company's needs. Nevertheless, small niche players do offer customizing, but in that case cost savings are less because economies of costs do not apply.

Another way of outsourcing via the Internet is freelance outsourcing. "With freelance outsourcing, individuals offer their talents globally, primarily through freelance Internet sites" (Lacity et al. 2008). Often these individuals come from low wage countries so on a low scale the same cost savings can be achieved. Of course freelance outsourcing is not an option for large partnerships concerning high volume outsourcing.

4.4 Who to outsource to

As mentioned before, the type of outsourcing partner has a strong connection with the location to which an organisation will outsource. Each location has its own local insourcers and there are always some global players that offer blended locations outsourcing. Because offshore outsourcing is the only location in scope, we will focus on that.

Beulen (2005, 2006) distinguishes three different types of offshore service providers: captive service providers, native service providers and foreign service providers. The subparagraphs below briefly describe these options, but do not discuss advantages or disadvantages. The reason is that that is important to be able to make a decision about who to outsource to, but that is not in scope of this research. We assume that that choice has already been made and is not subject to discussion.

4.4.1 Captive service providers

Captive service centres are sites that companies set up offshore, so companies have ownership, authority and direct control. This is insourcing instead of outsourcing as long as the centre belongs to the company and thus out of scope (Beulen et al. 2005). However, there is a trend that more and more companies sell their captive centres which means that they become an independent insourcer (Lacity et al. 2008). In that case, we will consider them a native or foreign service provider.

There are also companies who seek the assistance and know-how of a foreign service provider to set up their captive centre. This resembles the structure of a foreign service provider, but is different in the sense that the relation is much closer (Beulen et al. 2005). In case the foreign service provider employs the staff, while the company still owns the physical operations, Lacity (2008) speaks about a 'virtual captive centre'.

4.4.2 Native service providers

Native service providers are insourcers that coordinate their activities from a global headquarter in a developed country (nearshore) to their sites in developing countries

UNRESTRICTED 29/102

(offshore), that locally provide services to their customers. Examples are Atos Origin, CAP Gemini, CSC, EDS, IBM and Logica CMG (Beulen et al. 2005).

4.4.3 Foreign service providers

Finally, foreign service providers have their headquarters in developing countries at the same location where the insourcer provides the services (offshore). Their presence in developed countries is usually limited to sales offices. Examples are Cognizant, Tata CS, Wipro, IMR and Xansa (Beulen et al. 2005).

4.5 How to outsource

We found no literature that clearly states what models an organisation can use to outsource. Putting pieces together, there appears to be a whole range on how to outsource; from hiring staff to buying a complete customized service. In the first case a company keeps as much control over the processes as possible while in the latter the insourcer controls the entire processes. Therefore usually relations where the outsourcer is completely dependent on the insourcer require a higher maturity and more trust in the relationship.

The insourcer that we focus on in this research has identified three stages in this range, which they call staff augmentation, cosourcing and managed service. Each of these models is individually described in literature, and will be summarised and linked to each other in the following subparagraphs.

4.5.1 Staff augmentation

At the left of the continuum is staff augmentation, whereby "clients manage and supplement in-house teams with supplier staff" (Lacity et al. 2008). The outsourcer hires a certain number of FTE's from the insourcer, often for a pre-described task, and thereby increases his number of employees in a more flexible way than hiring from the market. The outsourcer keeps total control on its processes, and is still responsible for on and off boarding and other HR issues. Usually staff augmentation contracts have a time & materials pricing model.

4.5.2 Cosourcing

With cosourcing the responsibilities for reaching targets and managing employees is shared amongst out- and insourcer. According to Kaiser (2004) cosourcing is "an outsourcer and client melding their human resources to accomplish the client's work". The relationship is much closer than with staff augmentation because teams, leadership and responsibilities are mixed. In this way the outsourcer can profit from the insourcers competencies, skills and way-of-working. However, this means that the outsourcer will have less control and both parties have to build a long-term relationship, as well as an emphasis on values traditionally associated with partnerships (Kaiser et al. 2004). Cosourcing contracts can be both on the basis of time & materials and fixed price (Kaiser et al. 2004).

4.5.3 Managed Services

Currently, the most extreme way of outsourcing is outsourcing on a basis of managed services (MS). In this scenario outsourcers do not buy capacity anymore, but entire services. The model is a black box, whereby the outsourcer only controls the outputs and does not control the intermediate steps anymore. The insourcer decides on all HR related issues (how many employees are required, what skills they should have, etc.) and is responsible for delivering the entire service against the specified output (Beulen 2008b).

UNRESTRICTED 30/102

With a MS the outsourcer can maximally profit from the capacities of the insourcer, which often has more experience in IT commodities and implements the industry standards (Beulen 2008b). Furthermore business and application repositories remain in one location, which enables better alignment between them (Mirani 2007). Usually MS has a fixed price model.

4.6 Life cycle of an outsourcing relation

Now we described what bare outsourcing comprises it is important to discuss what an outsourcing relation is, because not the concept of outsourcing, but the relationship is the subject of this research. The answer to what an outsourcing relation is can probably best be given by describing the phases such a relation goes through.

Figure 6 shows a combined picture of four different views on life cycles. Similar phases are coloured the same, which resulted in a categorization as depicted in the inner circle.

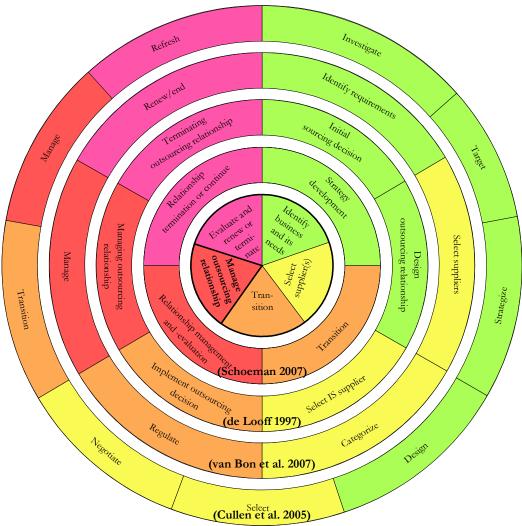


Figure 6 - Combined outsourcing life cycle models (Cullen et al. 2005; de Looff 1997; Schoeman September 2007; van Bon et al. 2007).

The inner circle shows that in general there are five different phases. During the first phase (green), the business of the outsourcer and its needs and wishes are identified. The main questions are whether or not to outsource and if yes, what to outsource. Also the goals of outsourcing should become clear during this phase.

UNRESTRICTED 31/102

The Right Governance Framework for Managing an Offshore IT Outsourcing Relationship The Shell Case

The second phase (yellow) is about selecting the most appropriate suppliers. This includes for example the determination of criteria; sending out requests for proposals (RfPs); negotiations and the final selection. From Figure 6 it becomes clear that Schoeman does not explicitly define this phase. He sees selection as a part of strategy development, but all other authors specifically see this as a different phase.

The third phase (orange) is the actual transition of work to the insourcer. This phase may contain for example pilots to determine the best way to cooperate together.

This research focuses on the fourth phase (red), which is about managing the relation. In Figure 6 this phase has a thicker surrounding line than the others. This is where the daily work happens and therefore lasts until the contract is about to expire.

At that moment it is time to evaluate and renew the contract or terminate it (phase five in purple). If it is renewed that means that phase two (select suppliers) is unnecessary, but it is still possible that the outsourcer starts over again in phase one to evaluate its needs. If the parties determine to terminate the relationship, the outsourcer can decide to start again at phase one to investigate whether it is wise to outsource again.

UNRESTRICTED 32/102

5 IT governance meta model

This chapter introduces the second important concept; IT governance. The purpose of the chapter is to identify what we exactly see as an IT governance framework so that Part III can identify the governance frameworks from literature, the market and Shell worldwide that live up to that definition. Therefore the first paragraph describes the definition of IT governance (5.1) and the second translates that definition into a definition of a governance framework (5.2).

5.1 Definition of IT governance

This research focuses on what in Dutch is called IT 'regie' or 'besturing' of the relationship between the insourcer and Shell GFIT BAM. The translation of 'IT besturing' is 'IT governance', but IT governance is a broader term than that. The exact definition of IT governance as we use it is derived from the IT Governance Institute's definition (2004): IT governance consists of "... organizational structures and processes that ensure that the organization's IT sustains and extends the organization's strategies and objectives".

Rationale

Over times, authors defined IT governance in different ways. Beulen (2006) gives an extensive overview of the most important IT governance definitions, including the definition we chose above. Table 2 shows these definitions.

Table 2 - Definitions of IT governance (Beulen et al. 2006)

Researchers	IT governance definition
(Brown et al. 1994)	IT governance describes the locus of responsibility for IT functions.
(Luftman 1996)	IT governance is the degree to which the authority for making IT decisions is defined and shared among management, and the processes managers in both IT and business organizations apply in setting IT priorities and the allocation of IT resources.
(Sambamurthy et al. 1999)	IT governance refers to the patterns of authority for key IT activities.
(van Grembergen 2002)	IT governance is the organizational capacity 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.
(Weill et al. 2002)	IT governance describes a firm's overall process for sharing decision rights about IT and monitoring the performance of IT investments.
(Schwartz et al. 2003)	IT governance consists of IT-related structures or architectures (and associated authority patterns), implemented to successfully accomplish (IT-imperative) activities in response to an enterprise's environment and strategic imperatives.
(IT Governance Institute 2004)	IT governance is the responsibility of board 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 strategies and objectives.
(Weill et al. 2004)	IT governance is specifying the decision rights and accountability framework to encourage desirable behaviour in using IT.

UNRESTRICTED 33/102

The first authors discussed mainly the locus of IT decision-making (Brown et al. 1994), followed by decision-making processes (Luftman 1996; Sambamurthy et al. 1999). Weill (2002) added the focus on the return on investment, and in the same period van Grembergen (2002) stated that organisations should as well ensure the organisational capacity to formulate the IT strategy. In 2003 Schwartz added the observations that the environment influences the right IT governance structure, and so do the perceptions that the IT organisation and the rest of the company have of one another. Finally, Weill recognized the importance of accountability in 2004 (Beulen et al. 2006).

However, the definition that matches best with our perception is, as described above, the definition of the IT Governance Institute (2004). Several other authors use this definition (e.g. (Gewald et al. 2006; van Grembergen et al. 2005)) and the advantage in the context of this research is that the distinction between organisational structures and processes is concrete enough to relate to the business. Furthermore, the explicit notion of the organisation's strategies and objectives is in line with our definition of IT outsourcing, which was defined as the procurement of IT services under contract from the optimal set of internal and external providers in the pursuit of business goals in subparagraph 4.2.1.

5.2 Elements of an IT governance framework

According to the goal for this research as described in subparagraph 2.3.1, we are looking for 'an IT governance framework'. Based on the definition of a governance model as described below by Gewald (2006) and our definition of IT governance in general as described above, we define a governance framework for managing an offshore outsourcing relationship as follows:

A governance framework of an offshore outsourcing relationship is the structure that describes the joint processes and organisational structures, whereby also CIs and responsibilities are defined.

This is also depicted in Figure 7. The following subparagraphs describe the choices and rationale behind this definition.

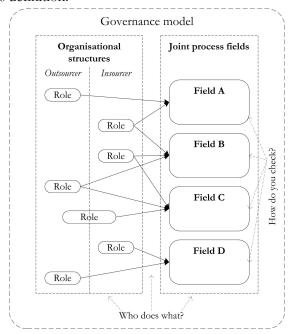


Figure 7 - Meta Governance Model

UNRESTRICTED 34/102

5.2.1 Two main questions

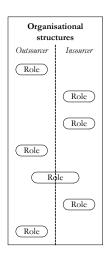
From the problem analysis it has become clear that stakeholders have two main questions: "Who does what?" and "How do you check?". As depicted in Figure 7 these two questions drive the elements of an IT governance framework. These questions are in line with the questions Gewald identified: "the governance model defines "what to do", "how to do it", "who should do it" and "how it should be measured"" (Gewald et al. 2006). Gewald's first three questions are combined in "who does what" and his last is similar to "how do you check".

"Who does what" combines organisational structures, or roles within these structures (who), with joint process fields (what). When roles are linked to process fields it is possible to describe the responsibilities of this combination (does). "How do you check" is answered by defining the right Control Indicators (CIs).

5.2.2 Organisational structures

The first element, the organisational structure, is the 'who' in "who does what". This element comes straight from our definition of IT governance and is also an element of Gewald's governance model. Nevertheless, organisational structures can mean a thousand different things, so what do we actually mean? Gewald states that "the organizational structure comprises roles, functions and the necessary reporting and decision structure in the new organization". He also says that responsibilities between organisational levels and partners are part of the organisational structures. Some responsibilities lay within the outsourcer's or insourcer's organisation and some are joint (Gewald et al. 2006).

With respect to our first main question, we focus on the 'who' within organisational structures. Responsibilities are indeed part of our governance framework, but unlike Gewald, we believe that



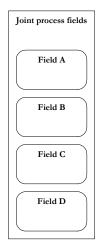
responsibilities are defined by the combination of organisational structures and processes and not within organisational structures only (also see subparagraph 5.2.4).

The 'who' from "who does what" is defined by the roles in an organisation. For proper IT governance it is important that certain roles are fulfilled. Therefore we focus on roles and the "necessary reporting and decision structure" between them.

5.2.3 Joint process fields

The second element of an IT governance framework, the combination of the joint process fields, is also derived from the definition of IT governance and is the 'what' from "who does what". This is also described by Gewald (2006). Gewald (2006) sees processes as a part of a governance model, whereby he specifically looks at *joint* processes. Joint processes are the processes that the in- and outsourcer share, so where roles from both in- and outsourcer are involved. This is also reasonable for this research regarding the focus on the connection between the outsourcing and the insourcing company.

We will not describe all joint processes in detail, as that would not have much sense because organisations have different detailed processes. Nevertheless, on a high level it is possible to describe fields of processes that are related to each other. We are looking for those joint process fields and will describe them on a high level.



UNRESTRICTED 35/102

5.2.4 Responsibilities

The third element in our meta model is the combination of the arrows linking roles and joint process fields. These arrows together describe the responsibilities of the organisation as a whole and is the 'does' from "who does what".

A common way to define the responsibilities on a high level is to define a RASC-chart, or one of it variants. A RASC chart is a matrix with roles on a vertical axe and the joint process fields on a horizontal axe. The chart defines per intersection if the role is responsible (R), has to approve or accept (A, also called accountable), supports the person in the R role (S), or is a consultant for the other roles (C) for the concerning process field. Only one role approves or accepts (A), but more roles can be responsible (R), supportive (S) or consultant (C). It is possible to have a combination of responsibilities for one intersection and the combination A/R is not uncommon. There is a certain kind of hierarchy in the responsibilities, in the order A, R and S, where C should be consulted but stays outside this hierarchy.

A common alternative is RACI, were the I stands for a role that should be informed. We have followed Beulen (2006) in adapting the RASC chart because we believe that it is common sense that stakeholders should be informed, and the S is relevant to agree on who executes the processes in the end.

5.2.5 Control Indicators

As said before, by defining Control Indicators (CIs) it is possible to answer the second main question "how do you check". CIs do not *measure* but *indicate* something. In short, we define a Control Indicator as an indicator that says whether or not an organisation is 'in control'. CIs are linked to each other in a hierarchy, and together answer the question "are we in control?".

The most important CIs on the lowest level, so CIs that can be answered without asking any other questions, are also called Key Performance Indicators (KPIs). The most important CIs on the second level (after the main question) are also called Critical Success Factors (CSFs). While CIs are dedicated indicators for this research's topic, CSFs and KPIs are also used for other main questions than "are we in control". To make our definition more clear, a simplified example of an indicator hierarchy for the main question "am I happy?" is depicted in Figure 8.



Figure 8 – Example of an indicator hierarchy

There are two types of CIs; efficiency and effectiveness CIs. The examples above are effectiveness indicators because they indicates the *outcome* of a process of, for example, heating your body. They indicate a *status* and have a fixed norm (e.g. 37°C is healthy). A related efficiency example would be the question "do I use as little energy as possible?". As we want to reach as little energy as possible, the indicator indicates a *process*. The norm is variable, for example for a woman maximum 2000 kilocalories per day.

Unfortunately, it is impossible to prescribe the entire hierarchy of CIs in a governance framework. The CIs should be defined in close cooperation with the business, should reflect their needs and therefore should be flexible by nature. Therefore this research only describes the concepts of CIs, and does some suggestions for areas in which they should be defined, but will not define explicit Control Indicators.

UNRESTRICTED 36/102

5.3 Hierarchical levels

The meta governance model in Figure 7 can be specified on three hierarchical levels of an organisation; the strategic, tactical and operational level. As we focus in the remainder of this research on the tactical level, it is important to define what the boundaries between these layers are. Therefore the following sub paragraphs list guidelines that we use to determine whether a role or process is on tactical level or not.

5.3.1 Strategic level

On a strategic level, the stakeholders define the strategy of an organisation. Think of its mission, vision and main business principles. They set the direction in which the organisation will go, and focus on a long term. In IT this means 3 to 5 years, and sometimes even more. The strategic level touches upon the core and identity of the organisation.

5.3.2 Tactical level

The tactical level defines the framework wherein the strategy will be executed, giving the defined direction to the organisation. Tactical roles translate the strategy in executable actions and divide the resources over the organisation. The tactical level focuses on middle term (in IT around 1 to 3 years).

5.3.3 Operational level

The operational level implements the strategy and makes the organisation move in the desired direction. They use the resources allocated to them and focus on short term (in IT approximately 1 year or less).

UNRESTRICTED 37/102

Part III GOVERNANCE FRAMEWORK

This section fills the elements of the defined IT governance meta model based on three sources; literature, the market and Shell worldwide. It ends with a combination of all these elements in one framework. With that framework the academic part of this research is concluded, enabling the next part to dive into practice.

Contents of Part III

6	GOVERNANCE ELEMENTS FROM LITERATURE	40
6.1	ORGANISATIONAL STRUCTURES	40
6.2	JOINT PROCESS FIELDS	43
6.3	RESPONSIBILITIES	46
6.4	CONTROL INDICATORS – THE IT GOVERNANCE BALANCED SCORECARD	47
7	GOVERNANCE ELEMENTS FROM PRACTICE	50
7.1	INTERVIEW RATIONALE	50
7.2	GENERAL FEEDBACK	50
7.3	ORGANISATIONAL STRUCTURES	50
7.4	JOINT PROCESS FIELDS	56
7.5	RESPONSIBILITIES	60
7.6	ALTERNATIVE CHOICES	61
8	THE IT GOVERNANCE FRAMEWORK	63
8.1	COMBINING ALL RESPONSIBILITIES	63

UNRESTRICTED 39/102

6 Governance elements from literature

The goal of this chapter is to identify elements in the literature in order to fill in the meta IT governance model.

6.1 Organisational structures

The 12 roles that we identified in the literature are depicted in Figure 9. As explained in subparagraph 5.2.2, within the organisational structures we focus on the roles that should be implemented in the organisation to ensure that the joint process fields can be carried out properly and the governance is taken care of. Therefore only interfacing roles (roles that work together with the other party) are of interest for this research. Beulen (2006) identified most of these roles, so we used his research as the basis for this paragraph, just as we did with Gewald (2006) for joint process fields. In most cases other authors support his vision.

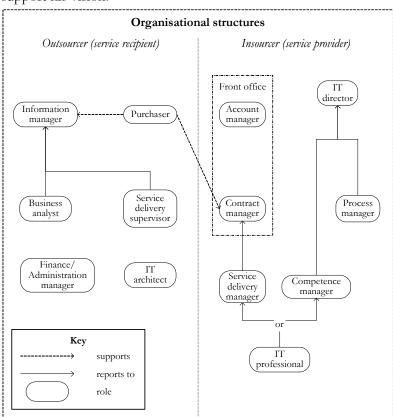


Figure 9 - Interfacing roles from theory

The figure clearly shows that there are two different parts within the organisational structures; the outsourcer and the insourcer. In literature these are also called the service recipient and service provider or supplier respectively (Beulen et al. 2006). We do not use these terms because often the service recipient is also an internal service provider and in this case, at Shell GFIT BAM, we are primarily interested in the relation between the two companies. Therefore we need to make a distinction based on organisational instead of functional boundaries. Another term for the outsourcer that can be found in literature is 'the retained organisation', which is applicable in this case (Gewald et al. 2006). However, for the sake of clarity we consequently use the term outsourcer throughout this entire thesis.

UNRESTRICTED 40/102

The following two subparagraphs discuss the roles at the outsourcer and the insourcer respectively.

6.1.1 Outsourcer

The overall role of the outsourcer is to receive and check the service provided by the insourcer. The outsourcer's department that takes this role can be, and often is, a service provider within the outsourcer's entire organisation. The roles described below are the roles within the outsourcer's organisation on the interface with the insourcer, regardless of the relation to other roles within the outsourcer's organisation.

6.1.1.1 Information manager

Beulen defines this role as follows: "Information managers are responsible for the IT services and the implementation of their company's IS [(Information Systems)] and IT strategies. They serve as contact persons for the company's divisions who must define their information needs. In large companies there may be several Information managers, each with responsibility for part of the company. Information managers report to the Chief information officer (CIO)" (Beulen et al. 2006).

There are no other authors who mention this kind of role, but because it clearly maps to some of the joint processes (as we will show in paragraph 6.2) we consider it necessary.

6.1.1.2 Service delivery supervisor

Beulen defines this role as follows: "Service delivery supervisors manage external IT providers and, if applicable, the internal IT department. They report to their Information manager" (Beulen et al. 2006). From the RASC chart that Beulen sketches further in his book it becomes clear that the Service delivery supervisor also manages the contracts and makes sure they are aligned with the business's requirements.

Gewald describes two roles within the retained (i.e. the outsourcer's) organisation that together form a similar role as the service delivery supervisor; the contract manager and the service level manager. The contract manager maps to the Service delivery supervisor with respect to the contract responsibilities, as he "ensures that the service provider [i.e. the insourcer] delivers according to the contract". The service level manager is more concerned with the content part of the Service delivery supervisor's responsibilities as he is "responsible for the quality of the services delivered in accordance with the SLAs" (Gewald et al. 2006).

6.1.1.3 Purchaser

Beulen defines this role as follows: "Purchasers support their Information managers and the service provider's contract manager in selecting and managing external IT providers and, if applicable, managing the internal IT department. They represent both the IS function's interests and those of the company's divisions. They do not report to any official within the IS function" (Beulen et al. 2006).

Having a mainly supportive role, the purchaser is probably not the most important role. Furthermore we found no other authors that identified this role. Nevertheless, the purchaser is involved in many of the tactical processes (as will be explained in paragraph 6.2) so we will include it.

6.1.1.4 Business analyst

Beulen defines this role as follows: "Business analysts implement the IS and IT strategies. They serve as contact persons for the company's divisions who must define their information needs. In large companies there are several business analysts, each with

UNRESTRICTED 41/102

responsibility for part of the company. They report to their respective Information managers" (Beulen et al. 2006).

As business analysts form the link to the business, this role corresponds with what Gewald (2006) calls the Business Unit Manager.

6.1.1.5 Finance/Administration manager

The one but last role at the outsourcer's side is the Finance and/or Administration manager. Gewald mentions this role as one of the roles at the retained organisation, but Beulen does not. According to Gewald "financial and administrative functions are necessary to validate the service provider invoices ensuring adherence to the contract and the agreed prices as well as inter-company invoicing to the business units" (Gewald et al. 2006).

6.1.1.6 IT architect

Finally, also the IT architect is not mentioned by Beulen (2006), but is mentioned by Gewald (2006). According to Gewald "this role ensures that the technical ability stays within the retained organization in order to maintain and to control architectural design. The architect has to ensure that the IT architecture reflects the business requirements" (Gewald et al. 2006). As the process field 'TT-Architecture and Innovation Management' is in scope, the IT architect clearly fits in our governance framework.

6.1.2 Insourcer

The insourcer is mainly concerned with providing the agreed services. Nevertheless, as their customer's needs often change over time, they should be flexible in adapting their agreements as well. So their goal may not be to deliver the *agreed* services, but to deliver the *needed* services.

In order to do so, the insourcer needs to fill in the following roles (Beulen et al. 2006). Unfortunately, we have found no other authors in the field of IT governance and outsourcing that mention the insourcer's roles.

6.1.2.1 IT director

Beulen defines this role as follows: "IT directors carry final responsibility for the delivery of IT services as well as for the continuity of service delivery by external and, if applicable, internal IT providers. They are the IS function's strategic-level contact persons. If the IT services are outsourced, this role is played by the supplier's general manager" (Beulen et al. 2006).

6.1.2.2 Account manager

Beulen defines this role as follows: "Account managers maintain relationships with the IS function (and the managers of the recipient company's divisions). Their contacts partly focus on widening the scope and increasing the scale of their contracts. They are held accountable for the scale of the services delivered and for customer satisfaction. Account managers serve as tactical-level contact persons for the IS function; together with the contract managers they are the provider's front office" (Beulen et al. 2006).

6.1.2.3 Contract manager

Beulen defines this role as follows: "Contract managers are responsible for delivering the IT services contracted and for reporting and invoicing. For these aspects contract managers serve as contact persons for the IS function; together with the account managers they are the provider's front office" (Beulen et al. 2006).

UNRESTRICTED 42/102

6.1.2.4 Service delivery manager

Beulen defines this role as follows: "Service delivery managers (SDMs) manage the IT professionals who deliver the IT services. They report to the contract managers" (Beulen et al. 2006).

6.1.2.5 Process manager

Beulen defines this role as follows: "Process managers set up and maintain the processes and certification of the IT services delivered. This responsibility does not pertain to any specific contract but to the IT services delivered for all the supplier's contracts. Process managers report to their IT director" (Beulen et al. 2006).

6.1.2.6 Competence manager

Beulen defines this role as follows: "Competence managers investigate the potential of new technologies. This responsibility does not pertain to any specific contract but to the IT services delivered for all the supplier's contracts. The intention is to ascertain delivery continuity. Competence managers report to their IT director" (Beulen et al. 2006).

6.1.2.7 IT professional

Beulen defines this role as follows: "IT professionals deliver the IT services and investigate the potential of new technologies. They report to either the service delivery manager or to the competence manager" (Beulen et al. 2006).

6.2 Joint process fields

The eight joint process fields that are discussed in literature are depicted in Figure 10. These process fields live up to the strict scope; they are joint processes for an offshore body shop outsourcing relation on a tactical level. The basis for all processes except Performance Management comes from Gewald (2006). Nevertheless, other authors support almost all processes.

As obviously displayed in Figure 10 there are two different kinds of processes; horizontal and vertical processes. Vertical processes exist on multiple levels, while the horizontal processes only take place on tactical level (Gewald et al. 2006).

The theoretical foundation and description of all eight process fields are described in the subparagraphs below, followed by a ninth subparagraph that discusses alternative views of the cited authors and why we did not choose to incorporate these views.

6.2.1 Contract Management

The goal of Contract Management is to facilitate contracts throughout all phases of the outsourcing lifecycle. This includes for example the set-up of a contract, but also the maintenance; adjusting the contract when business needs have changed. Also evaluation of the contract is part of contract management.

Other authors than Gewald that prescribe Contract Management as an important governance process field are Beulen (2006) and Van Bon (2007). Beulen states that 'contract facilitation' is one of the tactical processes concerning the governance of offshore outsourcing relationships and Van Bon states that "the services, service scope and contract reviews in comparison with original business requirements" should be monitored closely within the process supplier management in order to minimize risks (Beulen et al. 2006; van Bon et al. 2007).

UNRESTRICTED 43/102

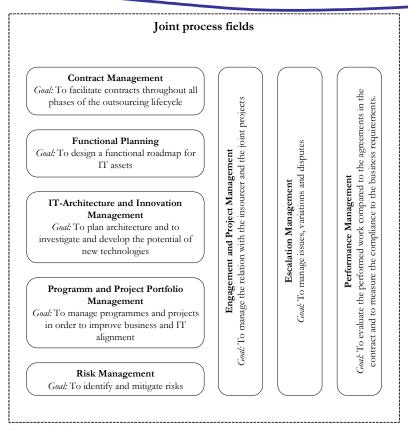


Figure 10 - Joint process fields from theory

6.2.2 Functional Planning

Only Gewald (2006) mentions Functional Planning and he does not explain what the goal of the process field is. Nevertheless, we think that Functional Planning is a valuable process field within scope and define the goal as to design a functional roadmap for IT assets. For Shell GFIT BAM those IT assets are applications.

6.2.3 IT-Architecture and Innovation Management

Gewald (2006) mentions IT-Architecture and Innovation Management as one process field. Nevertheless, Beulen (2006) states that 'architecture planning' is a strategic instead of a tactic process and 'investigating and developing the potential of new technologies' is tactical. We have chosen to adhere to the point of view that most authors have, as both topics are strongly intertwined, and consider IT-Architecture and Innovation Management as one tactical process field.

The goal of this process field is to plan architecture and to investigate and develop the potential of new technologies.

6.2.4 Programme and Project Portfolio Management

Gewald is also the only author that mentions Programme and Project Portfolio Management (in this context). We define the goal as to manage programmes and projects in order to improve business and IT alignment and consider that as a process that adds value to the framework.

UNRESTRICTED 44/102

6.2.5 Risk Management

The goal of Risk Management is to identify and mitigate risks. A part of Risk Management is to plan contingencies (Cullen et al. 2005). Also the IT Governance Institute considers Risk Management as one of the five most important process fields (IT Governance Institute 2004).

6.2.6 Engagement Management

Engagement and Project Management is one of the three vertical processes of Gewald (2006), because it takes place on all levels of the organisation. Other authors mention 'vendor development' (Beulen et al. 2006) and 'invest in the relation' (Cullen et al. 2005). The term 'project' in Engagement and Project Management means something different from the same term in Programme and Project Portfolio Management as mentioned above. Insourcers sometimes use the term 'project' to refer to a contract with one of their outsourcers, which is the meaning in this context. We find it confusing to have two processes that address two different meanings of projects, so we renamed Engagement and Project Management to Engagement Management. The goal of this joint process is to manage the relation with the insourcer.

6.2.7 Escalation Management

The goal of Escalation Management is well described by Cullen (2005) and is to manage issues, variations and disputes. Gewald also considers this process field as a vertical field that overlaps all organisational levels. In fact Escalation Management is vertical in its very nature, because issues, variations and disputes are escalated up the hierarchical tree. Only the most severe issues will reach the strategic level.

6.2.8 Performance Management

Gewald does not mention Performance Management, the last process. Gewald already says in his paper that his processes are only examples of joint processes. Almost all other authors do address Performance Management as a distinct process field and therefore we have added it (Beulen et al. 2006; Cullen et al. 2005; de Looff 1997; van Bon et al. 2007). The goal of Performance Management is to evaluate the performed work compared to the agreements in the contract and to measure the compliance to the business requirements. Reporting is one of the main activities within this process field and as this, but also other activities overlap all organisational levels, Performance Management is a vertical process field.

6.2.9 Other process fields from cited authors

Of course, the authors cited above also mention other processes than the ones mapped to our framework. Nevertheless, these processes were not relevant as they were not within scope. This subparagraph shortly lists the reasons why these process fields were not incorporated exactly.

The first activity of De Looff, 'Maintain internal capacity' is not a joint process. On the contrary, both 'Measure compliance to requirements' and 'Enforce compliance' are relevant. As we do not see fit with one of Gewald's processes, both can be linked to a 'new' relevant process field; Performance Management (de Looff 1997).

Van Bon says that the performance of suppliers should be monitored, which is done by Performance Management. Secondly, he states that the services, service scope and contract reviews in comparison with original business requirements should be monitored. We consider this as part of Contract Management as it is all related to the insourcer-outsourcer contract and its linkage with the business (van Bon et al. 2007).

UNRESTRICTED 45/102

Finally, Cullen mentions nine activities that form the Building Block 'Manage' from the lifecycle mentioned earlier. We consider the first, 'Invest in the relationship (plan, assess and improve)', part of Engagement and Project Management. The second is 'Meaningful reporting and analyses', which we see as a general value that is important for each and every process field. It is therefore not included in Figure 10. The same holds for the third and fourth processes; 'Regular communication and meetings' and 'Diligent documentation and administration'. Activity five is 'Manage risks and plan contingencies' and part of Gewald's Risk Management. We see the sixth activity, 'Manage issues, variations and disputes', as part of the vertical Escalation Management process field. For the seventh activity, 'Effect continuous improvement and streamlining', the same holds as for the second to fourth activities; it is a general activity that should be implemented throughout all process fields. Finally, the eight and ninth both are part of Performance Management as they are 'Evaluate and audit supplier (controls, performance, compliance)' and 'Evaluate organization both as a customer and contract manager' (Cullen et al. 2005).

6.3 Responsibilities

When combining the organisational structures with the joint process fields, it is possible to describe responsibilities by defining a RASC chart (see subparagraph 5.2.4). The findings from literature are shown in the RASC chart in Table 3.

Table 3 - RASC chart based on literature findings

		Rol	es											
		Outso	urcer					Insour	cer					
Process Fields		Information manager	Service delivery supervisor	Purchaser	Business analyst	Finance/Administration manager	IT architect	IT director	Account manager	Contract manager	Service delivery manager	Process manager	Competence manager	IT professional
	Contract management	Α	R	S		R*				С	С			
Horizontal	Programme and project portfolio management	A/R*	S*		S*	C*	C*			S*			C*	S*
rizo	IT-architecture and innovation management	S	S		S		R*			С	С		A/R	S
Но	Functional planning		A*		R*	C*	C*							R*
	Risk management		A/R*		S*		S*				R*	C*		
la:	Engagement and project management		A/R	S				S	S					
Vertical	Escalation management	C*		A/R*				C*						
>	Performance management		A/R	S						S	S			

Some of the responsibilities are taken over from Beulen (2006). The responsibilities that we have identified as a result of the combination of the process fields and the roles are marked with an asterisk. Although Beulen states that these responsibilities are the exact ones that should be in place, we understand that the world is not that black and white and it mainly depends on the organisation. Nevertheless, this RASC chart is a good starting point to compare an organisation with or to set up a new structure of roles and process fields.

In general, the following conclusions can be drawn from the RASC chart:

- The Service delivery supervisor has a lot of A- and R-responsibilities, and in involved in almost all process fields. The reason is that he is the main player on a

UNRESTRICTED 46/102

- tactical level, with the most direct link to the operational level. He often is responsible because he can directly influence the players on the operational level (the insourcers mainly).
- The Business analyst and IT architect are involved in the same process fields. This makes sense because they are more or less each other's counterparts, as the Business analyst is specialized in the business side and the IT architect in the technical side.
- The insourcer has few accept/approve (A) and responsible (R) roles. On an operational level they will have much more A- and R-responsibilities (Beulen et al. 2006) and on strategic level they will have no A- and R-responsibilities.
- Three of the eight process fields have a shared R-responsibility between the outsourcer and the insourcer, being Functional Planning, IT-Architecture and Innovation Management, and Risk Management. The insourcer has to accept or approve for IT-Architecture and Innovation Management, because especially innovation management is a 'technology push' process field. Of course the outsourcer cannot outsource all responsibility, mainly not for their IT-Architecture, so therefore the IT architect is also R-responsible.

6.4 Control Indicators – the IT governance Balanced Scorecard

Although most authors mention the need for good metrics, there is a gap in specifying concrete (examples of) CIs in the literature about IT governance for IT outsourcing, and more specifically for the area that lies in the scope of this research. Gewald for example mentions that metrics should be addressed but does not describe them later (Gewald et al. 2006).

However, there is much research done on the Balanced Scorecard (BSC); a performance measurement and management system introduced by Harvard University professors Robert Kaplan and David Norton. "The fundamental premise of the BSC approach, [...] is that the evaluation of a firm should not be restricted to a traditional financial evaluation, but should be supplemented with measures concerning customer satisfaction, internal processes, and learning and growth" (van Grembergen et al. 2005). From this corporate BSC an IT specific BSC was derived, and from the IT BSC in its turn Van Grembergen developed a BSC specifically for IT governance (van Grembergen et al. 2005). Although this framework does not list possible CIs it defines the direction and the way in which CIs should be defined and therefore is briefly discussed below.

The four financial, customer, internal processes and learning and growth perspectives from the original BSC have been translated into similar perspectives that are better applicable to IT governance. They are respectively corporate contribution, stakeholders, operational excellence and future orientation and their short descriptions and causal relations can be found in Figure 11.

UNRESTRICTED 47/102

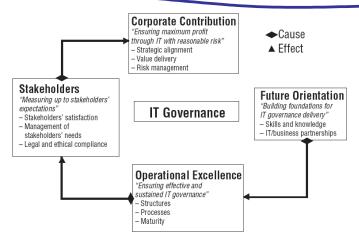


Figure 11 - The IT governance balanced scorecard and their cause-and-effect relationships (van Grembergen et al. 2005)

To be able to use the BSC to improve the IT governance, each perspective should be described on three layers: mission, objectives and measures. Furthermore, "to leverage the scorecard as a management instrument, it should be enhanced with cause-and-effect relationships among measures. These relationships are articulated by two types of measures: outcome measures and performance drivers. A well-developed scorecard should contain a good mix of these two metrics. Outcome measures without performance drivers do not communicate how they are to be achieved. Performance drivers without outcome measures may lead to significant investment without a measurement indicating whether the chosen strategy is effective" (van Grembergen et al. 2005). This clearly links the balanced scorecard to our explanation of efficiency (performance) and effectiveness (outcome) CIs in paragraph 5.2.5.

In his paper where he introduces the IT governance BSC, Van Grembergen describes the mission and objectives of all four perspectives in detail. He also proposes high-level measures (or metrics) for each objective. These mission, objectives and measures can be found in Figure 12, Figure 13, Figure 14 and Figure 15 below.

Perspective	Corporate Contribution
Mission	Ensuring maximum profit while mitigating IT-related risks
Objectives	Strategic Alignment • Weighted governance performance • Strategic match of major IT projects • Percentage of development capacity engaged in strategic projects • Percentage of business goals supported by IT goals
	Value Delivery Measures • Business unit performance management • Business value of major IT projects based on ROI, NPV, IRR, PB • Ratio IT costs/total turnover • IT costs charged back to the business
	Risk Management Measures • Number of new implemented IT security initiatives and security breaches • Attainment of disaster recovery plans • Number of IT audits performed and reported shortcomings

Figure 12 - Corporate contribution

Perspective	Stakeholders Orientation							
Mission	Measuring up to stakeholders' expectations							
Objectives	Stakeholder Satisfaction							
	Stakeholders' satisfaction surveys on fixed times Number of complaints of stakeholders							
	Index of availability of systems and applications							
	Management of Stakeholder Needs							
	Measures • Number of meetings with stakeholders							
	Clear communication in place with CEO and board members							
	Index of CEO/board involvement in new and major IT initiatives							
	 Number of major IT projects within SLA 							
	Legal and Ethical Compliance							
	Measures • IT adherence to Sarbanes-Oxley Act							
	 IT adherence to privacy regulations Adherence to IT code of ethics/IT code of conduct 							

Figure 13 - Stakeholders orientation

UNRESTRICTED 48/102

Perspective	Operational Excellence	Perspective	Future Orientation
Mission	Ensuring effective and sustained IT governance	Mission	Ensuring effective and sustained IT governance
Objectives	Structures Measures • Number of meetings of IT strategy committee and IT steering committees • Composition of IT committees • Overall attendance of IT committees • CIO on board or member of executive management Processes Measures • Level of IT strategy planning and business planning	Objectives	Skills and Knowledge Measures • Number and level of cross-functional business/IT training sessions • Number of overall IT governance training sessions • Percentage completed IT governance education per skill type • Number of IT governance presentations for CEO and board members • Level and use of IT governance knowledge
	Number of hours spent on IT/business strategic issues Existence of an IT balanced scorecard and a business balanced scorecard Number of IT processes measured through a scorecard Number of IT processes covered by COBIT Number of IT processes covered by ITIL Maturity levels of IT processes Percentage of IT goals supported by	Figure 15	management system IT/Business Partnership Measures • Percentage of senior managers IT-literate • Percentage of IT managers business-literate • Level of business perception of IT value 5 — Future orientation

Figure 14 – Operational excellence

maturity

Measures • Overall level of the IT governance process

Maturity

Concluding, authors do not give a list of CIs that can be linked to our IT governance framework that easily. The IT governance BSC is nevertheless valuable to define the perspectives or fields in which both effectiveness and outcome CIs should be defined.

UNRESTRICTED 49/102

7 Governance elements from practice

The goal of this chapter is to relate and adjust the theoretical framework as developed in the previous chapter with practice. In order to do so, we interviewed seven experts from practice in six interviews. The rationale behind these interviews is briefly explained in paragraph 7.1. The second paragraph describes outcomes of the interviews that are applicable to both organisational structures and joint processes. The next paragraph describes the improvements we made in the field of organisational structures, and the fourth does the same for the joint process fields. Paragraph 7.5 makes up a new balance for the RASC chart defined in the last chapter and 7.6 discusses the choices we made. The next chapter combines all these findings in one major governance framework and discusses insights in this combination.

As described before in paragraph 6.4, literature does not describe concrete Control Indicators. This is the responsibility of the business. For those two reasons, defining CIs is a complete research subject on its own. We therefore made the choice to focus on the other three elements of the IT governance framework. The theory and areas of CIs described earlier are not made more concrete in the remaining chapters of this research.

7.1 Interview rationale

The interviews we conducted were all structured interviews on the basis of four interview questions and an interview approach and methodology as described in Appendix C. The goals were to:

- Get the interviewee's view on appropriate joint process fields, roles and responsibilities.
- Find out his reasons/ rationale for this view.
- Enable later contact for validation of findings.

The description of the responsibilities has not been discussed during the interviews, but the conclusions we have drawn have been validated with the interviewees. Also our analysis in the following paragraphs has been validated with the interviewees.

The seven interviewees came from both consultant firms as well as from Shell. Hussey, Overbeeke and Brink work for Shell outside GFIT BAM and have experience with a major outsourcing programme in infrastructure. Vriends comes from Getronics Consulting, Beulen from Accenture and Lachniet & Prins work for Logica. They were selected independently from their relation to Shell (or lack thereof). For details about the interviewees please also refer to Appendix C.

7.2 General feedback

In general, we found out that it is hard to determine which roles and processes belong to a tactical level if the strategic and operational level are not specified (Lachniet et al. 2008). The choices we made when we decided that some roles and processes belonged to the tactical level and some did not, are described in the following paragraphs. In the figures this information is added in grey. The reporting and communication lines on strategic and operational level are only added if relevant for the tactical roles.

7.3 Organisational structures

Figure 16 shows the complex overview of the roles defined on basis of the interviews, for experienced readers who are looking for one picture that says it all. The following two paragraphs describe in chunks the roles for respectively the out- and the insourcer,

UNRESTRICTED 50/102

including the reporting lines. Paragraph 7.3.3 discusses the communication lines between all roles. Together these descriptions add up to Figure 16 below.

Outsourcer (service recipient) Insourcer (service provider) Strategic **Tactical** Information Account manager Business regs Reqs & approval / Updates Finance manager Contract Purchaser Front office SLAs analyst / Reports Business reqs Process manager Business regs Methodologies (business pull) Steady state (ways to work) Perfor-Day-to-day business Delivery manager Delivery Service €mance1 supervisor manager status People with right skills Innovation New technologies Competence Take into (technology push) steady state Operational

Organisational structures

Figure 16 - Complex overview of all roles, reporting lines and communication from practice

7.3.1 Outsourcer

The roles at the outsourcer's side and the reporting lines between them are depicted in Figure 17. Just as in other figures, the grey areas are out of scope, but necessary to properly explain what is within scope. Therefore the first of the coming subparagraphs explains what is depicted in the grey areas and why those roles are (moved to) out of scope.

7.3.1.1 Out of scope

The grey role at the left, being the business, is as defined in our scoping statement, out of scope. Nevertheless during our interviews we found out that adding the business to the picture makes clearer that with 'the outsourcer' we mean the internal IT department (or retained organisation) (Beulen 2008a; Brink 2008; Hussey 2008; Lachniet et al. 2008; Overbeeke 2008; Vriends 2008).

UNRESTRICTED 51/102

On a strategic level three roles are depicted. Of course these are not complete, only the roles that were explicitly discussed during our interviews or necessary to explain other roles are included. First, there is the CIO. His counterpart is the IT director of the insourcer, which was a reason to move the latter to a strategic level (see paragraph 7.3.2.1). On a tactical level the Information manager, Finance manager and Purchaser report to him (Hussey 2008). Secondly, we moved the IT architect to a strategic level as the related process, IT Architecture Management, has also moved to a strategic level (see 7.4.1.2). The last role that we depicted on strategic level is the Portfolio manager. He is the functional counterpart of the IT Architect, who focuses more on technology, and designs and aligns the services with the functional landscape.

On a tactical level there also is a grey role; that of the Project unit. Even though projects are out of scope, several interviewees mentioned that this unit is still important as the Project unit actually implements the decisions taken on a higher level. This includes both projects to implement innovations as the adjustment of the steady state and therefore has overlap with both these areas.

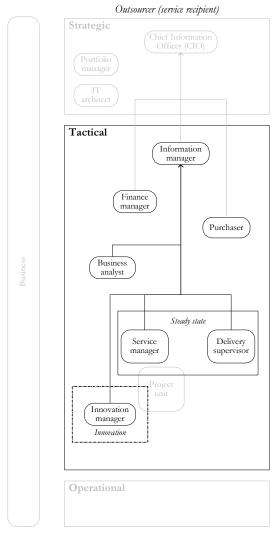


Figure 17 - Roles at the outsourcer

7.3.1.2 Information manager

On the role of Information manager was little discussion. On the tactical level Information managers have the most accountabilities and responsibilities as they are responsible for the IT services and the implementation of their company's IS and IT strategies (Beulen et al. 2006). They report to the CIO.

7.3.1.3 Purchaser

Another name used for the Purchaser is the Contracting & Procurement role (Brink 2008; Hussey 2008; Overbeeke 2008). They can report to the CIO or to an official outside the IS function, as was suggested by (Beulen et al. 2006). In the manage phase of the life cycle, they are responsible for everything that concerns the contractual part of agreements and contracts.

7.3.1.4 Business analyst

The Business analyst is the linking pin to the business and helps them to transform their wishes into requirements. Interviewees agreed with the theoretical view on Business analysts. The Business analyst reports to the Information manager, but he is consulted throughout the outsourcer's organisation for his expertise and knowledge about the business.

UNRESTRICTED 52/102

7.3.1.5 Finance manager

The Finance/Administration manager is renamed to Finance manager because this role did not have specific administration tasks with respect to the joint processes we defined. Interviewees agreed on the importance of this role with respect to its financial responsibilities. The Finance manager reports to the CIO.

7.3.1.6 Steady state; Service manager and Delivery supervisor

The former role 'Service delivery supervisor' actually consists of two other roles; the Service manager and the Delivery supervisor (Brink 2008; Overbeeke 2008; Vriends 2008). They are responsible for two different axes within the IT organisation; the service for the business and the functionality or applications delivered by the insourcer. The service delivered by a Service manager is a combination of functionalities delivered by different Delivery supervisors, and the functionalities (the applications) that a Delivery supervisor delivers is input to several services of several Service managers. This is depicted in Figure 18 and implies that the Service manager focuses on the business and the Delivery supervisor on the insourcer.

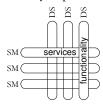


Figure 18 - Service managers vs. Delivery managers

How many Service managers and Delivery supervisors an organisation has depends for example on the size of the organisation, the amount and complexity required services and the size and complexity of the outsourced functionality. Both the Service manager and the Delivery supervisor report to the Information manager, where the two lines of functionality and services are combined. Apart from that they both give input to the Portfolio

manager, who has to align the services and functional landscape.

There is a clear relation between the Service manager and Delivery supervisor and the description of the Service delivery supervisor from Beulen (2006). As discussed before, Beulen states that "Service delivery supervisors manage external IT providers and, if applicable, the internal IT department", but it also becomes clear that the Service delivery supervisor also manages the contracts and makes sure they are aligned with the business's requirements (Beulen et al. 2006). Here we see actually two roles within the description of a Service delivery supervisor; the Delivery supervisor who manages the external IT providers and the internal IT department, and the Service manager who makes sure that the delivered services are aligned with the business's requirements. As we described earlier, also Gewald defines a Service level manager, who is "responsible for the quality of the services delivered in accordance with the SLAs" (Gewald et al. 2006).

7.3.1.7 Innovation; Innovation manager

With the repositioning of the IT architect to a strategic level, there remains a gap on tactical level with respect to Innovation Management (Vriends 2008). The Innovation manager is responsible for the exploration and implementation of innovations on both business as technology areas as long as they remain within the strategy as formulated on strategic level by amongst others the IT architect and Portfolio manager. He reports to the Information manager and has a functional line towards the IT architect and Portfolio manager.

UNRESTRICTED 53/102

7.3.2 Insourcer

The roles at the insourcer and their reporting lines are depicted in Figure 19. Also for this picture holds that the grey areas are out of scope. The following paragraphs explain the roles defined at the insourcer's side.

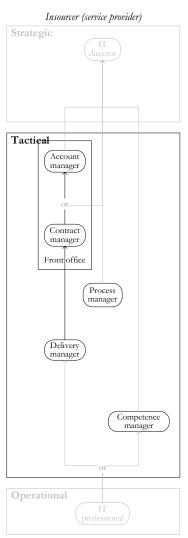


Figure 19 - Roles at the insourcer

7.3.2.1 Out of scope

The IT director has moved out of scope to the strategic level. As he is the highest in hierarchy at the insourcer he is the counterpart of the CIO (Hussey 2008). Of course this also depends on the importance of the insourcer to the outsourcer; if the insourcer is not very important the IT director will be the counterpart of the Information manager and thus on tactical level in the relationship.

The other change at the insourcer is that the IT professional is no longer on a tactical, but on an operational level. The reason is that he is the professional who in the end delivers the products as described in the contract (Beulen 2008a; Brink 2008; Hussey 2008; Lachniet et al. 2008; Overbeeke 2008; Vriends 2008). Even though he may have a supportive role to the tactical level, his responsibilities remain on an operational level.

7.3.2.2 Account manager

The interviewees mostly agreed with the definition of Account manager as we specified it before. Hussey mentioned that his work may to a certain extent be strategic as the Account manager is responsible for fulfilling all the outsourcer's needs (Hussey 2008). Nevertheless, as his main counterpart is the Information manager, he remains on a tactical level, as Beulen also explicitly stated (Beulen et al. 2006). He reports to the IT director.

7.3.2.3 Contract manager

The interviewees agreed on the role of the Contract manager as we specified it before. He is "responsible for delivering the IT services contracted and for reporting and invoicing" (Beulen et al. 2006). He reports to either the Account manager or the IT director (Beulen 2008a).

7.3.2.4 Delivery manager

As the scope of this research is a body shop relation, we renamed the Service delivery manager to Delivery manager. The Delivery manager is purely responsible for delivering the products as specified in the contract and therefore manages one or more IT professionals. In a body shop relation it is unimportant to the insourcer how these products map to services, as this is the responsibility of the outsourcer (the Service

UNRESTRICTED 54/102

manager and Delivery supervisor) (Brink 2008; Hussey 2008; Overbeeke 2008; Vriends 2008). The Delivery manager reports to the Contract manager.

7.3.2.5 Process manager

The insourcer's Process manager makes sure that IT professionals use the right methodologies and processes, such as for example ITIL, the ISO standards or specific tools for testing (Hussey 2008). In that way they ensure certification, which does, as Beulen (2006) mentioned, not pertain to any specific contract but to all the supplier's contracts. They report to the IT director.

7.3.2.6 Competence manager

The interviewees indicated that the Competence manager is responsible for delivering the right people with the right skills to the Delivery manager (Hussey 2008; Overbeeke 2008). Furthermore, they agree with our definition that the Competence manager investigates the potential of new technologies (Vriends 2008). These two responsibilities fit together because training the right people with the right skills highly depends on the skills in technologies that outsourcers ask for. Competence managers also report to their IT director (Beulen et al. 2006).

7.3.3 Communication

The communication lines between roles and out- and insourcer are depicted in Figure 20 below. This figure focuses only on tactical level and neglects communication already implied by the reporting lines.

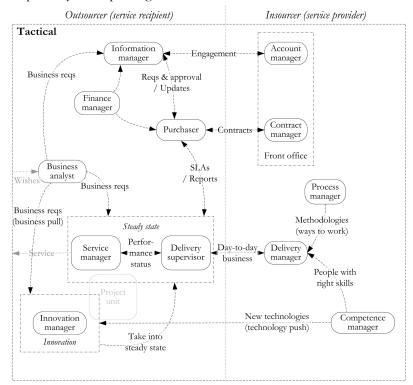


Figure 20 - Communication between roles

Most of the internal communication within the outsourcer or the insourcer is already described above. What this figure clearly shows is that on a tactical level, there are four different levels on which out- and insourcer communicate together. First, there is interaction with respect to engagement on the highest level. The Account manager and

UNRESTRICTED 55/102

Information manager focus on relational aspects and evaluate issues concerning the engagement (Beulen 2008a; Hussey 2008; Overbeeke 2008).

Secondly, the Purchaser and Contract manager discuss contractual matters, including the negotiation in the setup phase of the relation (Hussey 2008; Overbeeke 2008; Vriends 2008). During the manage phase the Steady State roles (Service manager and Delivery supervisor) have more contact with the Contract Manager than the Purchaser has. The reason is that the Service manager and Delivery supervisor are using the contract on an ongoing basis, although the contract owner will still be the Purchaser. Therefore the Purchaser gets involved if there are contract issues that require changes to the actual contract (Beulen 2008a; Hussey 2008).

Beulen states that the relation between the Steady state and the Contract manager is stronger than between the Purchaser and the Contract manager (Beulen 2008a). During the Manage phase, which is the scope of this research, this might be true. The Purchaser is of most importance during the set up.

Nevertheless, for the Service manager and the Delivery supervisor the third interaction is most important, which is the relation with the Delivery manager and concerns the daily business (Beulen 2008a; Hussey 2008; Overbeeke 2008; Vriends 2008). Only when contractual issues occur, these may be discussed with the Contract manager, the Steady state roles and if necessary the Purchaser.

The fourth important interaction on tactical level concerns new technologies (Vriends 2008). Both the Competence manager and the Innovation manager are responsible for innovation within their own organisation so they have to align which technologies are emerging and where it is wise to invest in.

7.4 Joint process fields

With respect to the joint process fields there are some important changes to the theoretical framework. Figure 21 shows the joint process fields we based on theory and the interviews. The following paragraphs describe each of these process fields.

7.4.1 Out of scope

Several joint process fields that we considered in scope earlier have been moved out of scope now due to insights from interviewees.

7.4.1.1 IT Portfolio Management, formerly known as Functional Planning

Several interviewees indicated that they saw Functional Planning as a strategic process (Hussey 2008; Vriends 2008). Functional Planning is comparable to the more common term Application Portfolio Planning, as a functional roadmap should also be a part of an application landscape (Vriends 2008). Furthermore, Shell's Common Process Model does not specify Functional Planning but does specify Portfolio Management & Standards as a process on strategic level (Shell IT Delivery Model 2008). This process is comparable to what we mean with Functional Planning (Brink 2008). In short, Functional Planning has several characteristics of processes at a strategic level as defined in paragraph 5.3; it designs the functional roadmap, which is setting the direction. Defining the desired functionalities is also intertwined with the core and identity of the organisation, which is a strategic characteristic.

For all these reasons we decided to move Functional Planning to a strategic level and rename it to IT Portfolio Management. IT Portfolio Management in this context does not only include Application Portfolio Management, but also Service Portfolio Management. The goal is to design and align services and functionality. Concretely that means

UNRESTRICTED 56/102

that this process has as output the strategy for the service catalogue ('which services do we want to deliver and how?') and the application landscape ('which functionalities/applications do we want to deliver and how?'). The process is focused on the business and translates business needs into the IT strategy.

Joint Processes

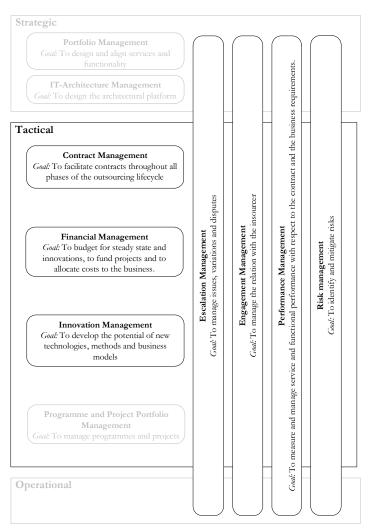


Figure 21 - Joint processes from practice

7.4.1.2 IT-Architecture Management

As we briefly mentioned in the theoretical description of the joint processes, IT-Architecture and Innovation Management is split by some authors in two different processes (Beulen et al. 2006). On the basis of our interviews we also made this decision. The reason is that IT-Architecture Management is a strategic process (Brink 2008; Hussey 2008; Lachniet et al. 2008; Vriends 2008), and Innovation Management is not. IT-Architecture Management has as goal to design the architectural platform and is therefore mainly technology focused, in contrary to IT Portfolio Management (Beulen 2008a). As we will describe later, Innovation Management has a different focus and a different goal.

UNRESTRICTED 57/102

7.4.1.3 Programme and Project Portfolio Management

Most of our interviewees agreed on the importance and focus of Programme and Project Portfolio Management (Beulen 2008a; Brink 2008; Hussey 2008; Lachniet et al. 2008; Vriends 2008). However, projects are out of scope, so the process is greyed out.

7.4.2 Contract Management

Contract Management has the same position as in the theoretical framework (Brink 2008; Hussey 2008; Vriends 2008). The process's goal is to facilitate contracts throughout all phases of the outsourcing lifecycle and has a slightly administrative character (Beulen 2008a). The financial maintenance of the contract, such as paying penalties or bonuses, is part of Financial Management (see 7.4.3), but the maintenance of the agreements is part of Contract Management as the agreements are described in the contract.

Lachniet & Prins also suggested another process, being Sourcing Procurement (Lachniet et al. 2008). This process has the goal to direct new sourcing procurement and evaluate the existing contract portfolio on a regular basis. We consider the first sub goal, directing new sourcing relations, as out of scope as it is not a part of the Manage phase of the life cycle. The second sub goal, evaluate the existing contract portfolio, is part of Contract Management. On the basis of the business needs and the outcomes of Performance Management this process also evaluates if the contracts are still valid. Small adjustments are made within Contract Management. If major changes should be made to keep the contract fit for purpose, the last phase of the life cycle (evaluate and renew or terminate) will start.

7.4.3 Financial Management

Three interviewees added Financial Management to the framework (Brink 2008; Lachniet et al. 2008; Vriends 2008). The goal of Financial Management is to budget for steady state and innovations, to fund projects and to allocate costs to the business, and is mainly unrelated to the contract (Shell Information Technology 2008; Vriends 2008). It includes supply and demand forecasting, as budgets are based on those forecasts (Vriends 2008). Also reporting to the strategic processes that decide whether to invest or disinvest is a part of Financial Management (Shell Information Technology 2008).

7.4.4 Innovation Management

The goal of Innovation Management is to develop the potential of new technologies, methods and business models. As this is fundamentally different from IT-Architecture Management, the two are split from each other. Although Shell's Common Process Model places Innovation Management also on a strategic level, we decided to stick with the theory on this topic as both Beulen and Gewald state that Innovation is tactical (Beulen et al. 2006; Gewald et al. 2006; Shell IT Delivery Model 2008). Also the related responsible roles are on a tactical level.

Innovation Management focuses on two kind of innovations:

- Technical innovations; innovation of IT related methods and techniques such as SOA, ESB etc.
- Business innovations; e.g. new business models such as offshoring or e-business.

Furthermore, Innovation Management has two main tasks:

- Translating the IT strategies in concrete plans that can be implemented on operational level (business pull),
- Providing innovative developments and opportunities on the market / insourcer to Functional Planning and IT-Architecture Management (technology push).

UNRESTRICTED 58/102

7.4.5 Escalation Management

Four interviewees agreed upon the focus and place of Escalation Management (Brink 2008; Hussey 2008; Lachniet et al. 2008; Vriends 2008). Nevertheless, both Overbeeke and Beulen mentioned the relation to Incident Management (an operational process). Where Overbeeke saw Escalation Management as a part of Incident Management, Beulen stated that it is closely related, as Incident Management is the delivery process and Escalation Management is the relational process (Beulen 2008a; Overbeeke 2008).

To our opinion Escalation Management comes in two flavours; horizontal escalations and vertical escalations. Horizontal escalations are escalations on the same level for e.g. additional knowledge or advise from a related team or colleague. Vertical escalations run up the hierarchy and may concern disputes, but also for example the need for extra resources. Vertical escalations may run parallel to incidents as Beulen (2008a) suggests, but Escalation Management comprises of more than incidents, such as general performance issues or contractual issues.

7.4.6 Engagement Management

Three of our interviewees indicated that Engagement Management is not a process but should be a general norm or value, build in in roles and functions (Beulen 2008a; Hussey 2008; Vriends 2008). However, the Common Process Model explicitly describes a similar process; Supplier Relationship Management (Brink 2008; Shell IT Delivery Model 2008). Furthermore both Vriends and Beulen specified specific KPIs for this process, which implies that certain activities should take place to measure them and influence them if they are not satisfactory. Therefore Engagement Management has the same focus and place as in the theoretical framework.

7.4.7 Performance Management

All interviewees confirm the importance of Performance Management. Some see it as a part of Contract Management (Beulen 2008a; Lachniet et al. 2008), but others do not agree (Brink 2008; Vriends 2008). Where Contract Management focuses on the contracts and is more administrative, Performance Management focuses on services and functionality and measures its performance. Performance Management also compares this to both the contracts and the business requirements, and triggers Contract Management if they are not aligned anymore and the contract should be revisited. Performance Management has much to do with the day-to-day business and has the goal to measure and manage service and functional performance with respect to the contract and the business requirements.

7.4.8 Risk Management

According to some interviewees, Risk Management is not a tactical process, but a vertical process with responsibilities on every level (Beulen 2008a; Hussey 2008; Vriends 2008). Risks in for example supply and demand forecasting should be aligned with the supplier to be able to mitigate them. Risk Management is a broad process, which includes:

- Capacity & availability management (Shell IT Delivery Model 2008; Vriends 2008)
- Information security, or privacy & compliancy (Hussey 2008; Lachniet et al. 2008)
- Continuity management (Shell IT Delivery Model 2008)

UNRESTRICTED 59/102

7.5 Responsibilities

Having the roles and the processes redefined, the RASC-chart is completely redefined. While the Service delivery supervisor was the role with most responsibilities, the Information manager is currently taking over that role, as the Service delivery supervisor is split in a Service manager and a Delivery supervisor. This also gives a higher value to the Information manager, who used to be important from a hierarchical perspective instead of a value perspective.

Table 4 shows the accountable, responsible, supportive, and consulting roles, which are explained below the chart in Table 5.

Table 4 - RASC chart from practice

	Outsourcer						Insourcer							
	Process Fields	Role	Information manager	r Purchaser	Finance manager	L Business analyst	Service manager	Delivery supervisor	Innovation manager	r Account manager	- Contract manager	. Delivery manager	Process manager	- Competence manager
_			а	b	С	d	е	f	g	h	i	j	k	
nta	Contract Management	1		A/R	S		S	S			R	S		
Horizontal	Financial Management	2			A/R		S	S				S		
9H	Innovation Management	3	Α			С	S	S	R			S		С
	Escalation Management	4	Α				R	R		R	R	R		
ical														
E.	Engagement Management	5	Α							R				
Vertical	Engagement Management Performance Management	5 6	A A	С		С	R	R	С	R		R	S	S

Table 5 - Description of responsibilities

I able 5 -	Description of responsibilities
Cell	Explanation
1b	On a tactical level, the Purchaser is both accountable and responsible for Contract Management. Organisation wide, the accountability of the Purchaser's contracts may lay on a strategic level.
1c, e, f	The Finance manager, Service manager and Delivery supervisor support the Purchaser in Contract Management. The Finance manager will support the Purchaser in his financial negotiations. As described before, the Service manager and Delivery supervisor will trigger the Purchaser if contracts should be revisited. They are managing the contract on a daily basis, but the ownership of the contract remains with the Purchaser.
1i, j	From an insourcer's perspective, the Contract manager is responsible for Contract Management. He is supported by the Delivery manager for input from performance perspective.
2c	The Finance manager is both accountable and responsible for Financial Management.
2e, f, j	The Service manager, Delivery supervisor and Delivery manager support the Finance manager by providing budget proposals and performance information.
3a, g	The Information manager is accountable for Innovation Management, but delegates the actual investigation and implementations to the Innovation manager.
3d, 1	The Information manager consults the Business analyst to get the business requirements and innovation needs (business pull) and the Competence manager for technical innovations (technology push).
3e, f, j	The Service manager and Delivery supervisor support the Innovation manager by taking innovation into the steady state and advising him how to align innovations with the steady state. The Delivery manager will in the end implement the innovations at the insourcer.
4a, e, f	As the highest in the outsourcer's hierarchy, the Information manager is on a tactical level accountable for Escalation Management. The roles with operational roles reporting to them are responsible, being the Service manager and Delivery supervisor.

UNRESTRICTED 60/102

4h, i, j	Within the insourcer the Account manager is responsible that escalations are also managed across boundaries towards the outsourcer, and he delegates that to the roles under his reporting line, the Contract manager and Delivery manager.
5a, h	The Information manager is accountable for the engagement with the insourcer, and the Account manager is responsible, as it is his core role.
6a, e, f, j	The Information manager is accountable for good Performance Management towards the strategic level. He delegates the responsibilities towards the Service manager and Delivery supervisor on the outsourcer's side, and to the Delivery manager on the insourcer's side. They actually manage Performance Management.
6b, d, g	The Purchaser and Business analyst advise the Service manager and Delivery supervisor in Performance Management in the matters of respectively contracts and business requirements. The Innovation manager advises them in upcoming innovations that should be taken into the steady state.
6k, l	The insourcer's Process manager and Competence manager support the Delivery manager in respectively working according to the insourcer's standards, methods and techniques, and making use of the right people with the right skills.
7a, h	The Information manager is accountable and responsible for Risk Management on a tactical level. Part of this responsibility also lays with the Account manager, as he has the responsibility to comply as much as possible with the needs of the outsourcer. He therefore also had to assess risks together with the Information manager
7b, c, d, e, f, g, i, j, k, l	All other roles support the Information manager and Account manager in assessing and mitigating the risks on their own fields, like Financial Management, Innovation Management and Performance Management. They have to report high risks to the Information manager or Account manager.

7.6 Alternative choices

We discussed most of them briefly, but there are three choices that we made which could be different in other contexts. This paragraph discusses the most important of these choices and makes the trade-off.

7.6.1 Service delivery supervisor on tactical and Delivery supervisor on operational level

In the organisational structures it was also possible to keep the Service delivery supervisor as one role on tactical level and explicitly add a Delivery supervisor on an operational level. The Service delivery supervisor would then be a Service manager who also incorporates the delivery responsibilities. The Delivery supervisor would still be the day-to-day contact person for the Delivery manager at the insourcer so he would move to operational level as well.

An argument for this choice is that Delivery can be seen as an operational responsibility and therefore both Delivery supervisor and Delivery manager belong to the operational level. The reason that we decided not to choose for this option is that managing the day-to-day operations and monitoring its performance is a tactical responsibility (Vriends 2008). Furthermore delivery and service management are two different things, as depicted in Figure 18, and on a tactical level there should be two different roles responsible for these two axes.

7.6.2 Functional Planning on a tactical level

It was possible to see Functional Planning as Application Portfolio Management (APM) and define that as a tactical process that gives input into IT Portfolio Management on the strategic level. This would imply that also Service Portfolio Management (SPM) is a tactical process, as APM and SPM together enable IT Portfolio Management. Nevertheless, APM is a very strategic process because it draws up the strategy for the

UNRESTRICTED 61/102

functional environment (Hussey 2008). We did not see the added value of Functional Planning on a tactical level when APM is already on a strategic level.

7.6.3 Financial Management as a part of Contract Management

Beulen (2008a) suggested seeing Financial Management as a part of Contract Management. Nevertheless, we added Financial Management as a distinct process as it also includes budgeting, forecasting and reporting, which has nothing to do with contracts (Vriends 2008).

UNRESTRICTED 62/102

8 The IT governance framework

Now that we've described the organisational structures, joint processes and responsibilities, we have all elements to be able to govern a body shop offshore outsourcing relationship. Our definition of IT governance was the following (based on (IT Governance Institute 2004)):

IT governance consists of "... organizational structures and processes that ensure that the organization's IT sustains and extends the organization's strategies and objectives".

In other words, we can now combine those elements into a governance framework, which is what this chapter will do to conclude Part III.

Basically, Figure 22 shows the combination of organisational structures and joint process fields and thereby forms the bare governance framework according to the definition of IT governance. Nevertheless, the following two figures, Figure 23 and Figure 24, combine this framework with the two main responsibilities we identified; the 'A' and 'R' roles from the RASC chart from practice in Table 4 on page 60. The paragraphs of this chapter discuss striking things in these combinations.

In fact we claim that organisations have to put the roles and processes in place and link them in responsibilities as we described to be able to properly govern IT. Of course this is not the only action required to make sure that IT governance is actually executed, but within the scope of this research the roles, processes and responsibilities as we described are critical enablers. Nevertheless, not every organisation is the same. Therefore we would like to nuance this claim with the note that organisations may have their reasons to change e.g. the responsibilities. However, they should always make a well-considered choice if they want to deviate.

8.1 Combining all responsibilities

Figure 23 shows the mapping of relational processes to their 'A' and 'R' roles. Contract Management (orange), Escalation Management (red) and Engagement Management (yellow) have been defined as relational processes. As Figure 24 depicts the content processes, Financial Management (pink), Innovation Management (purple), Performance Management (blue) and Risk Management (cyan) are displayed there. The choice whether processes are relation or content focused has not been further investigated, but is based on common sense and impact on the complexity of the two figures.

From these pictures and the combination of them, several things attract attention. These will be discussed in the following paragraphs.

8.1.1 Information discrepancy between the Contract manager and the Purchaser

The Contract manager is involved in both Contract Management as well as Escalation Management, where the Purchaser is only involved in the first process. The reason is that the Contract manager also has a responsibility in the hierarchy as the Delivery manager reports to him. The risk in this information discrepancy is that the Contract manager may know more about the delivery organisation than the Purchaser and might exploit that in negotiations. Therefore the communication lines between the Steady state and the Purchaser as well as between the Information manager and the Purchaser are important to mitigate that risk.

UNRESTRICTED 63/102

8.1.2 Business analyst and Process manager not 'A' or 'R' for any process

In neither of the figures, the Business analyst and Process manager are covered by main responsibilities. Looking at the RASC chart, they turn out to be 'C' and/or 'S' roles on a tactical level. This does not mean that they do not have any 'A' or 'R' responsibilities at all, but only that these responsibilities do not concern tactical processes that are shared between the outsourcer and insourcer during the 'manage'-phase. For example, the Business analyst might very well be 'A' or 'R' for a process like Requirements Gathering and the Process manager for a process like Certification Management.

8.1.3 The Information manager has 'A' responsibility for all vertical processes

As the vertical processes run across all levels, the final 'A' responsibility lies somewhere at the highest level in the organisation; the strategic level. When focusing only on a tactical level, like in this research, this means that somebody has to be accountable towards the ultimate 'A' role. As the Information manager is the highest in hierarchy on a tactical level, he is that person. This does not mean however that he is the person that reports to the strategic 'A' role. As other roles are 'R' responsible, they may be the ones reporting to strategic level.

More or less the same holds for the Account manager, who has 'R' responsibility to all but one vertical process. Engagement and Risk Management are end responsibilities of the Information manager and Account manager only. The Account manager is also responsible for Escalation Management as he is the highest in hierarchy at the insourcer³. Performance Management is no responsibility of the Account manager, as the Delivery manager is responsible. His input does not have to be integrated with other performance input, as the Information manager has to do with the input from the Delivery supervisor and the Service manager.

8.1.4 Escalation Management involves five 'R' roles

Escalation Management is a process that enables escalations to follow the right paths to solve them. In the RASC chart in paragraph 7.5 we assumed that this escalation path aligns with the hierarchical relations. Therefore all roles that have another role reporting to them currently have an 'R' responsibility. The role that is accountable on tactical level is as explained in the previous paragraph the Information manager.

UNRESTRICTED 64/102

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³ Be aware that this depends on the choice the insourcer makes whether the Contract manager reports to the Account manager or to a strategic level directly. If the latter is the case, the Contract manager becomes the 'R' for Risk Management and Escalation Management on a tactical level. Engagement Management stays the responsibility of the Account manager, as this is a functional responsibility (inherent to the function of the Account manager), instead of a hierarchical responsibility.

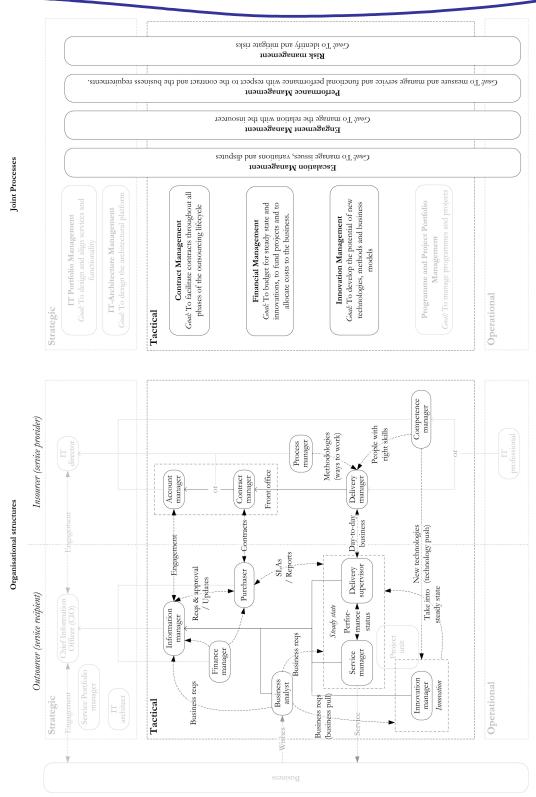


Figure 22 - Framework of roles and processes

UNRESTRICTED 65/102

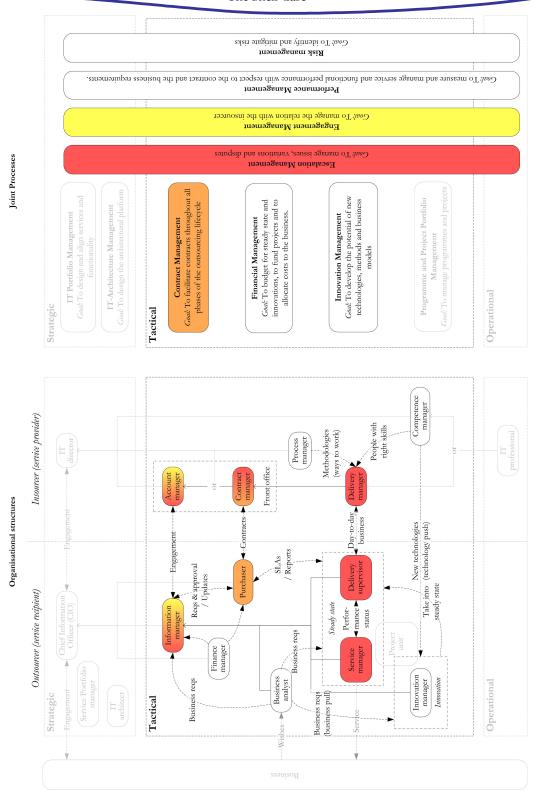


Figure 23 - Relational areas in framework

UNRESTRICTED 66/102

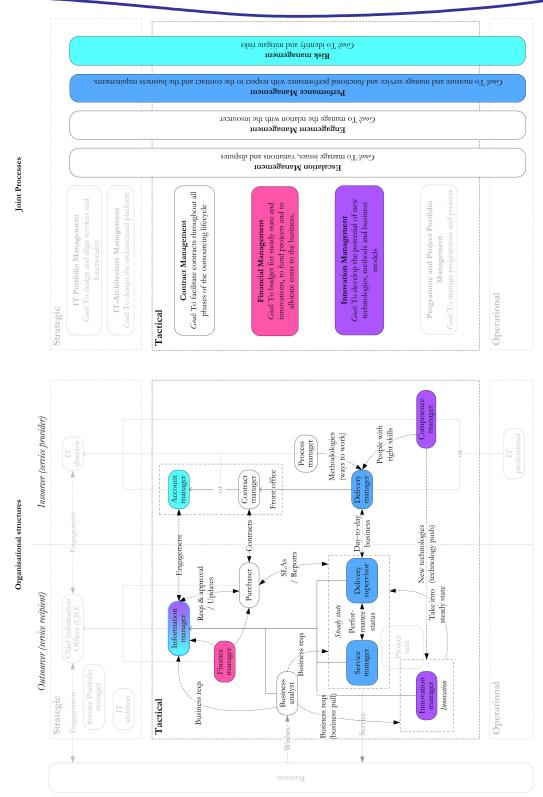


Figure 24 - Content aspects in framework

UNRESTRICTED 67/102

Part IV PRACTICE

With the framework defined in Part III, the practical part of this research is about to begin. This part links our general framework to the practice of Shell Global Functions IT Business Application Management and defines the gaps found there. It furthermore describes the recommended situation BAM should strive for on the basis of that current situation and the IT governance framework. Also the validity of the IT governance framework is shown. Finally, the thesis is ended by concrete recommendations and the conclusion, although in fact the references form the final chapter.

Contents of Part IV

9	CURRENT SITUATION	71
9.1	Roles	71
9.2	JOINT PROCESSES	71
9.3	Responsibilities	71
9.4	CONCLUSION OF THIS CHAPTER	71
10	RECOMMENDED SITUATION	72
10.1	1 Roles	72
10.2	2 JOINT PROCESSES	72
10.3	3 Responsibilities	72
10.4	4 Benefits	72
10.5	5 CONCLUSIONS OF THIS CHAPTER	72
11	VALIDATION OF THE IT GOVERNANCE FRAMEWORK	73
11.1	1 How to validate	73
11.2	2 EVALUATION OF THE RESEARCH PROCESS	73
11.3	3 External validity	76
11.4	4 CONCLUSION	77
12	RECOMMENDATIONS	78
12.1	1 FOR SHELL GLOBAL FUNCTIONS IT BAM	78
12.2	2 FOR THE IT GOVERNANCE FRAMEWORK	78
13	CONCLUSIONS	80
13.1	1 Answers to the research questions	80
13.2	2 Limitations	83
13.3	3 Further research	84
RE	FERENCES	86

The Right Governance Framework for Managing an Offshore IT Outsourcing Relationship
The Shell Case

UNRESTRICTED 70/102

9 Current situation

CONFIDENTIAL

9.1 Roles

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9.1.1 Differences with the framework

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9.2 Joint processes

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9.2.1 Differences with the framework

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9.3 Responsibilities

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9.3.1 Differences with the framework

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9.4 Conclusion of this chapter

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UNRESTRICTED 71/102

10 Recommended situation

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10.1 Roles

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10.2 Joint processes

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10.3 Responsibilities

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10.4 Benefits

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10.4.1 Outsourcing risks

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10.4.2 Workshop issues

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10.5 Conclusions of this chapter

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10.5.1 The framework as a tool

CONFIDENTIAL

UNRESTRICTED 72/102

11 Validation of the IT governance framework

Validating the IT governance framework is important because it is only worth to invest in an implementation if it is very likely that the recommendations will actually solve the problems. Wieringa states that "a solution design is valid if the designed solution is expected to reduce the gap between experiences and desires that it set out to reduce" (Wieringa 2007-2008b).

This chapter discusses the validity of the IT governance framework by evaluating the research process from which this framework is the product. The following paragraph explains how a solution design like the framework can be validated. Paragraph 11.2 then evaluates this research on the basis of seven guidelines, which is also called the internal validity. Third, paragraph 11.4 briefly states what the external validity of this framework is. Finally, the last paragraph (11.4) concludes that this research is internally and for some cases externally valid.

11.1 How to validate

In the IS (Information Systems) field there are two different types of research; designand behavioural-science. This research is an example of a design-science research, which "creates and evaluates IT artefacts intended to solve identified organizational problems" (Hevner et al. 2004). The artefact created in this research is the IT governance framework. Behavioural science investigates "phenomena that occur with respect to the artefact's use (intention to use), perceived usefulness, and impact on individuals and organizations (net benefits) depending on system, service, and information quality" (Hevner et al. 2004). In other words: design-science focuses on the creation and utility of artefacts, where behavioural science focuses on the truth, or validity, of artefacts.

With respect to validating an artefact, behavioural-science is one option. It is the most thorough way, as it answers whether or not the solution is true. It does not only *expect* that the 'designed solution reduces the gap between experiences and desires that it set out to reduce', it *proves* that it does (or does not). This first option evaluates the research *product*.

However there is a second option that does not focus on the artefact itself, but on the creation process where the artefact is a result from. We assume that if the research process is executed in a valid way, we can expect that the artefact is useful and that it 'reduces the gap between experiences and desires that it set out to reduce'. So the second option is to evaluate the research *process*.

As the second validation method requires significantly less resources, and the goal of this research is not truth but utility, we will follow this approach in order to evaluate the validity of the IT governance framework.

11.2 Evaluation of the research process

Hevner (2004) has identified seven clear guidelines for understanding, executing, and evaluating design-science research. As described above, we assume that the extent to which these guidelines are followed in this research process also says something about the validity of this research. The guidelines are shown in Table 6, and the validity per guideline is briefly discussed in sections 11.2.1 to 11.2.7.

Table 6 - Design-science research guidelines (Hevner et al. 2004)

Guideline	Description
0	Design-science research must produce a viable artefact in the form of a construct, a model, a method, or an instantiation.

UNRESTRICTED 73/102

Guideline 2: Problem Relevance	The objective of design-science research is to develop technology-based solutions to important and relevant business problems.
Guideline 3: Design Evaluation	The utility, quality, and efficacy of a design artefact must be rigorously demonstrated via well-executed evaluation methods.
Guideline 4: Research Contributions	Effective design-science research must provide clear and verifiable contributions in the areas of the design artefact, design foundations, and/or design methodologies.
Guideline 5: Research Rigor	Design-science research relies upon the application of rigorous methods in both the construction and evaluation of the design artefact.
Guideline 6: Design as a Search Process	The search for an effective artefact requires utilizing available means to reach desired ends while satisfying laws in the problem environment.
Guideline 7: Communication of Research	Design-science research must be presented effectively both to technology-oriented as well as management-oriented audiences.

11.2.1 Guideline 1: Design as an Artefact

"Design-science research must produce a viable artefact in the form of a construct, a model, a method, or an instantiation" (Hevner et al. 2004).

This research has produced the IT governance framework, so this guideline has been followed.

11.2.2 Guideline 2: Problem Relevance

"The objective of design-science research is to develop technology-based solutions to important and relevant business problems" (Hevner et al. 2004).

As described in chapter 3, the main problem of this research is both important and relevant to the business (Shell GFIT BAM) and theory. Guideline 2 has been followed as well.

11.2.3 Guideline 3: Design Evaluation

"The utility, quality, and efficacy of a design artefact must be rigorously demonstrated via well-executed evaluation methods" (Hevner et al. 2004).

Hevner describes 12 design evaluation methods in five categories, as depicted in Table 7.

Table 7 - Design Evaluation Methods (Hevner et al. 2004)

1. Observational	Case Study: Study artefact in depth in business environment	
	Field Study: Monitor use of artefact in multiple projects	
2. Analytical	Static Analysis: Examine structure of artefact for static qualities (e.g., complexity)	
	Architecture Analysis: Study fit of artefact into technical IS architecture	
	Optimization: Demonstrate inherent optimal properties of artefact or provide optimality bounds on artefact behaviour	
	Dynamic Analysis: Study artefact in use for dynamic qualities (e.g., performance)	

UNRESTRICTED 74/102

3. Experimental	Controlled Experiment: Study artefact in controlled environment for qualities (e.g., usability)	
	Simulation - Execute artefact with artificial data	
4. Testing	Functional (Black Box) Testing: Execute artefact interfaces to discover failures and identify defects	
	Structural (White Box) Testing: Perform coverage testing of some metric (e.g., execution paths) in the artefact implementation	
5. Descriptive	Informed Argument: Use information from the knowledge base (e.g., relevant research) to build a convincing argument for the artefact's utility	
	Scenarios: Construct detailed scenarios around the artefact to demonstrate its utility	

In this research we performed a Case Study at Shell GFIT BAM to evaluate the IT governance framework. Nevertheless, we did not evaluate an implemented version of the framework, but assessed it via a Controlled Experiment in the workshop. In the workshop we focused on usability of the framework, and as described in paragraph 0 we were able to conclude that it is usable and adds value. This might also be considered a form of Informed Argument, where the knowledge base is the data as collected in the workshop plus the problem description in chapter 3, The result of this Informed Argument is the table with benefits in paragraph 0.

Concluding, three different design evaluation methods have been used. Although it is still necessary to further investigate the framework via these methods (see paragraph 13.3), preferably in a behavioural-science research, we believe that we have followed guideline 3 as well.

11.2.4 Guideline 4: Research Contributions

"Effective design-science research must provide clear and verifiable contributions in the areas of the design artefact, design foundations, and/or design methodologies" (Hevner et al. 2004).

Hevner identifies three different possibilities to follow this guideline. Either the contribution comes from the Design Artefact, the Foundations or the Methodologies. In this case, the main contribution of the research is the Design Artefact itself, namely the IT governance model. As we have proven in the workshop and described in chapter 0 it is 'implementable' and demonstrates "a clear contribution to the business environment, solving an important, previously unsolved problem" (Hevner et al. 2004).

Therefore we believe that we have followed this guideline as well.

11.2.5 Guideline 5: Research Rigor

"Design-science research relies upon the application of rigorous methods in both the construction and evaluation of the design artefact" (Hevner et al. 2004).

Hevner states that "rigor is derived from the effective use of the knowledge base—theoretical foundations and research methodologies. Success is predicated on the researcher's skilled selection of appropriate techniques to develop or construct a theory or artefact and the selection of appropriate means to justify the theory or evaluate the artefact" (Hevner et al. 2004).

The knowledge base is effectively used in the sense that literature has been explored and used as long as it was appropriate, and in a broader sense also the practical knowledge

UNRESTRICTED 75/102

base has been used by interviewing experts from practice. We do not claim that *all* literature and certainly not that *all* views in practice have been examined, but it has been to the extent that it was efficient.

Therefore we believe that also guideline 5 has been followed.

11.2.6 Guideline 6: Design as a Search Process

"The search for an effective artefact requires utilizing available means to reach desired ends while satisfying laws in the problem environment" (Hevner et al. 2004).

This guideline is about the cycle of improvements that an artefact goes through. Because researches have a certain scope, an artefact may not directly solve a problem in practice. Nevertheless, it may be a starting point for future improvements and thus be the beginning of an artefact that in the end will solve complex (satisfying 'laws in the problem environment') practical problems ('desired ends'). This guideline explains the necessity of heuristics (i.e. experiments or trial-and-error) to find a good instead of optimal solution.

In a broad context we improved the model of Gewald and Helbig (2006) as well as the role descriptions of for example Beulen (2006) by combining them and evaluating this through expert interviews and a workshop. This is a heuristic approach, which does not give an optimal solution, but a good (useable) solution. Therefore we believe that also guideline 6 has been followed.

11.2.7 Guideline 7: Communication of Research

"Design-science research must be presented effectively both to technology-oriented as well as management-oriented audiences" (Hevner et al. 2004).

This guideline emphases the importance of clear communication for the artefact to be truly valuable. Both a technology-oriented as a management-oriented audience should be served. "Technology-oriented audiences need sufficient detail to enable the described artefact to be [...] implemented" and "Management-oriented audiences need sufficient detail to determine if the organizational resources should be committed to constructing [...] and using the artefact" (Hevner et al. 2004).

In this case the technology-oriented audience consists of the people that fulfil the roles in the framework, as they have to actually implement it by changing their ways of working. They have been involved in the workshop as well in several other discussions (see appendix 0), where the workshop itself turned out to be an effective communication technique (paragraph 0). Furthermore, also the role, process and responsibility descriptions in this thesis communicate this information in more detail.

The management-oriented audience Is the Leadership Team of BAM, because they have to decide whether to implement the framework or not. Partly they are also technology-oriented audience, and partly not. The communication to them is mainly through this thesis, in particular the Management Summary and the Conclusion (chapter 13).

Finally, we also believe that guideline 10 has been followed.

11.3External validity

The validity on the basis of the guidelines concerns the internal validity of the framework; we believe that the framework solves our problem statement. On the basis of our findings we can also say something about the external validity, which discusses if the framework will also solve other problems. As the IT governance framework is a generic framework, we believe that this is the case.

UNRESTRICTED 76/102

First, it is extendable to other in- and outsourcers in the same situation. Most likely it is extendable to other organisations regardless of their size, as the roles and processes described in the framework are very generic and necessary for every outsourcing relation. Smaller organisations may have persons fulfilling two roles (e.g. combine Service manager and Delivery supervisor) and less thoroughly defined processes, but they will still need the roles to execute activities in our process fields.

Second, the research is extendable to other situations that have been out of scope in this research. The framework enables organisations to structure their roles, processes and responsibilities and define what they want to outsource. For example, if companies want to move from a body shop model to a Managed Services model, our IT governance framework will most likely still be applicable with some changes:

- The boundaries between in- and outsourcer in the roles will shift towards the outsourcer, depending on how much a company wants to outsource. For example, the Delivery supervisor and Delivery manager can be combined and the Service manager then has to deal with Delivery supervisors at the insourcer instead of the outsourcer. This means that the outsourcer will not deal with applications anymore, but only with services.
- The responsibilities in the RASC chart will shift towards the insourcer. The outsourcer has all accountabilities in a body shop context, but in an MS situation the insourcer will be more and more accountable in for example Risk Management, Engagement Management and Innovation Management.

Nevertheless, the exact changes to adapt the framework to other organisations and situations are subject to further research (see paragraph 13.3).

11.4 Conclusion

Concluding, all seven guidelines described above have been followed in this research. Therefore we are allowed to assume that the product of this research, the IT governance framework, is internally valid and thus will "reduce the gap between experiences and desires that it set out to reduce" (Wieringa 2007-2008b). As the framework also solves problems of other organisations and in other situations, it is also externally valid.

Nevertheless, this validity does not concern the *truth*, but the *utility* of the research. Additional evaluation methods for example as defined in Table 7, and/or a behavioural-science research are necessary to determine the truth of the framework.

UNRESTRICTED 77/102

12 Recommendations

This chapter briefly describes our main recommendations on the basis of the previous chapters. Especially chapter 0 already incorporated detailed recommendations to Shell GFIT BAM, but this chapter makes them more concrete in paragraph 12.1. The second paragraph offers some recommendations for the IT governance framework.

12.1 For Shell Global Functions IT BAM

In chapter 0 we described what we see as the best situation for GFIT BAM, on the basis of the current situation and the IT governance framework. The following recommendations focus on how to approach the implementation of this recommended situation.

We identified four steps that will enable BAM to improve its management control. Key is that BAM should not do this alone, so actually this exercise should be driven or, at least, supported from a Global Functions IT level.

- 1. *Involve*. Take the lead to improve the IT governance, but align goals with all involved parties. Without the commitment and resources from the insourcer(s), LoBs and PDAS it will be impossible to implement a shared vision.
- 2. *Current situation*. Thoroughly get insight in all the views of the current situation across all former functions. In the workshop most stakeholders came from the former HR IT function. Also take the other parties into account.
- 3. Desired situation. Consider the recommended situation as described in chapter 0 and design a desired situation. Involve people that will be impacted through workshops and presentations and incorporate their views. This also includes stakeholders from the insourcer(s), LoBs and PDAS. Take into account that the recommended situation is designed within a certain scope. If needed, redefine the scope and assess how that impacts the recommended situation. When for example the goal is to move to Managed Service, some of places of the roles and the responsibilities in the recommended RASC chart have to be redefined. Another example is that this research focuses on joint processes. However, in order to fully optimize application management also internal processes that link to these joint processes should be defined. Nevertheless the recommended situation is a good starting point and it is always very important to redefine it together with all involved parties.
- 4. *Implement.* Develop the desired roles, processes, responsibilities and indicators in close cooperation with the insourcer, the LoBs and PDAS. It would be wise to, to a lesser extent, also involve the businesses.

A quick win for BAM is to investigate BAM's views on the current situation. This makes BAM employees aware of the complexity of outsourcing and the division of responsibilities within GFIT. This awareness would better integrate BAM employees, who recently have come from different functions, and give them an idea of their role in BAM. The leadership team of BAM would also get an overview of existing visions on the current situation and can, if needed, directly act on them. Furthermore the different views on the current situation form a starting point for the definition of the desired situation.

12.2 For the IT governance framework

In the workshop we presented the IT governance framework as if it is the one and only framework, with nothing to improve on it. Most likely, this is not true. The reason that

UNRESTRICTED 78/102

we did not add a chapter with an improved framework is that one workshop is not enough ground to redefine the framework. As will be discussed later, further research to further validate the framework should be done to improve the framework.

However, the bullets below describe what improvements to the framework can be made on the basis of the Shell case. As said these bullets should be confirmed by other cases in order to not devalue the framework.

- Roles: Within the outsourcer it is possible to have roles in different organisations. That influences the responsibilities of the roles, because accountability for the complete service provision and relationship should remain within one organisation. The Information manager will therefore most likely be in that organisation.
- *Joint processes:* The usefulness of the framework would improve if the joint processes would have a more detailed description. Currently these processes are not defined yet within Shell. Nevertheless, putting too much detail in the processes would make the framework less generic.
- Responsibilities: Some of the responsibilities in the recommended RASC chart are different from what the framework proposes. By comparing this with other recommended RASC charts for different case studies it will be possible to improve the RASC chart in the framework. There were no framework responsibilities that should definitely be changed as a result from the Shell case.
- *Control Indicators:* Control Indicators (CIs) were not taken into account in the last chapters of this research. A recommendation for the IT governance framework is to examine which CIs can be defined for the other elements and link them clearly to the framework.

UNRESTRICTED 79/102

13 Conclusions

In the previous chapters this research introduced an IT governance framework on the basis of literature and interviews with experts, and applied it to show how Shell Global Functions IT BAM can improve its management control over its outsourced service provision (paragraph 13.1). It thereby reached the goal of this research:

To draw up recommendations for Shell Global Functions IT BAM on the basis of an IT governance framework, in order to enable Shell Global Functions IT BAM to improve the governance of the service provision relationship with the insourcer.

Because of the concrete recommendations, and their value-add to BAM, this research has shown the usefulness of the IT governance framework. Nevertheless, this research itself has some limitations (paragraph 13.2) and therefore further research has been identified to improve the model (paragraph 13.3).

13.1 Answers to the research questions

The research questions as described in chapter 2 form the structure of this research. The first set of research questions (1 to 3) explores the context of the research; what is the problem, what is outsourcing and what is governance? With the context and all definitions clear, the second set of questions only comprises question 4 and asks for the generic IT governance framework. This is the theoretical part of the research, based on literature and interviews with experts. This framework is then put into practice in the last set of questions (5 to 8). As an answer to question 5, the framework is applied to BAM, which also says something about the validity of the framework (question 6). The final recommendations are the answer to question 7 and question 8 asks for the final conclusion.

Each of these questions is briefly answered in the following three paragraphs. The questions are grouped per set, which also maps to the Parts of this thesis. Part I and Part II are combined.

13.1.1 Introduction and Theoretical background

This paragraph addresses the relevant research questions for Part I (Introduction) and Part II (Theoretical background). Hence, this paragraph answers research questions 1, 2 and 3.

- 1. What is the problem that Shell faces?
 - a. What problems do stakeholders encounter?
 - b. Which risks does literature describe?

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2. What is IT outsourcing?

Question 2 is addressed in chapter 4. BAM is outsourcing its IT offshore to foreign service providers on the basis of staff augmentation (or in other words: in a body shop configuration). Still, this is only one of the many possible combinations of what, where, who and how to outsource (to). Each outsourcing relation follows a life cycle which comprises of five phases; (1) identify business and its needs, (2) select supplier(s), (3) transition, (4) manage outsourcing relationship and (5) evaluate and renew or terminate. The fourth phase, 'manage', is the scope of this research.

- 3. What is IT governance?
 - a. What does an IT governance framework consist of?

UNRESTRICTED 80/102

Chapter 5 describes IT governance and designs a meta IT governance model. Literature study shows that IT governance is a term with many different definitions. On the basis of the definition of the IT Governance Institute this research states that an IT governance framework should comprise of four elements: organisational structures, processes, responsibilities and control indicators. Together these elements answer the two governance questions 'who does what?' and 'how do you check?'. In an outsourcing relation these four elements describe the interface between in- and outsourcer. The meta model therefore consists of (1) roles in both organisations working together; (2) joint processes that are jointly executed by both organisations; (3) responsibilities that describe which roles are involved in which of these processes; and (4) control indicators that indicate both efficiency and effectiveness of the processes. The elements on a tactical level are filled in by the next part.

13.1.2 Governance framework

The third part of this thesis is about the Governance framework. It addresses research question 4.

- 4. What is the generic IT governance framework for an offshore outsourcing body shop relationship on tactical level?
 - a. What are the elements described in literature?
 - b. What are the elements described in the market?
 - c. What are the elements used in the rest of Shell IT (non-Global Functions)?

This research question is answered throughout three chapters: 6, 7 and 8. Chapter 6 answers sub question 4a by describing the theoretical framework. Sub questions 4b and 4c are jointly answered in chapter 7. Chapter 8 then concludes this part by combining these findings in one framework.

As chapter 8 describes, the IT governance framework is the meta model filled with elements from literature and interviews with experts. It is a generic framework that applies to all relationships concerning offshore IT outsourcing to foreign service providers on the basis of staff augmentation, independent from e.g. the size of an organisation or the amount of work that is outsourced. The framework addresses the four elements from the meta model:

First, control is improved by implementing clear roles that communicate on four different levels: engagement, contracts, day-to-day business and innovations. Within the outsourcer's steady state there is a division between the Service manager who focuses on the business and the Delivery supervisor who focuses on the insourcer. Innovation has a different focus and different concerns than the steady state and should therefore be split from those roles.

Second, seven joint processes enable both organisations to manage their shared contracts, finances, innovations, escalations, engagement, performance and risks. Having *joint* processes might currently be uncommon, but it is needed to align in- and outsourcer. It is important to design them together, also in a body shop context.

Third, control is increased by responsibilities that describe which roles have which responsibilities in which processes. It is very important to clearly define responsibilities and align stakeholder's views to avoid different views and different ways of working.

Fourth, Control Indicators (CIs) indicate to what extent the organisations are in control and where they can improve. CIs can be defined from the highest indicator (are we in control?) to very concrete indicators that can be measured directly. These detailed indicators are also called KPIs and highly depend on the organisation.

UNRESTRICTED 81/102

The following part describes how the first three of these elements can help Shell GFIT BAM to gain control over their outsourcing relation.

13.1.3 Practice

The final part of this thesis is called 'Practice' because it applies the framework to Shell GFIT BAM and concludes the thesis. It answers research questions 5, 6, 7 and 8.

- 5. What is the recommended IT governance situation for Shell Global Functions IT BAM?
 - a. What is the current situation of Shell GFIT BAM?
 - b. What are the gaps between the generic framework and the current situation?
 - c. What are the benefits of the recommended situation?

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6. What is the validity of the IT governance framework?

The validity of the IT governance framework is discussed in Chapter 0. The framework is 'internal valid' because the framework solves our problem statement. Especially the benefits as described in paragraph 0 show that the recommended situation enables Shell Global Functions IT BAM to improve the governance of the service provision relationship with the insourcer.

The external validity is discussed in paragraph 11.3. The framework is very generic and therefore applicable to all organisations in an offshore body shop relationship. Most likely it is even extendable to other organisations regardless of their size, as the roles and processes described in the framework are necessary for every outsourcing relation. Finally, with some small changes the framework can be adapted to use in a Managed Service relation. It provides insight in the roles, joint processes and especially responsibilities that shift from the outsourcer to the insourcer when an organisation moves from a body shop relation to a Managed Service relation.

7. What are concrete recommendations for Shell GFIT BAM to improve?

Chapter 12 describes concrete and actionable recommendations for BAM and the IT governance framework. First, BAM is recommended to implement the recommended situation in four phases, where in each phase the insourcer(s), LoBs and PDAS should be involved:

- 5. *Involve.* Take the lead to improve the IT governance, but align goals with the insourcer(s), LoBs and PDAS.
- 6. Current situation. Thoroughly get insight in all the views of the current situation.
- 7. Desired situation. Consider the recommended situation as described in chapter 0 and design a desired situation. Take into account that the recommended situation is designed within a certain scope. If needed, redefine the scope and assess how that impacts the recommended situation. In order to fully optimize application management also internal processes that link to these joint processes should be defined.
- 8. *Implement.* Develop the desired roles, processes, responsibilities and indicators in close cooperation with the insourcer, the LoBs and PDAS. It would be wise to also involve the businesses.

Second, for the IT governance framework the following recommendations have been made:

- *Roles:* Within the outsourcer it is possible to have roles in different organisations, which influences the responsibilities of the roles.

UNRESTRICTED 82/102

- *Joint processes:* The usefulness of the framework would improve if the joint processes would have a more detailed description.
- Responsibilities: RASC charts for different organisations should be analysed in order to define the most generic and applicable chart. There were no framework responsibilities that should definitely be changed as a result from the Shell case.
- Control Indicators: A recommendation for the IT governance framework is to examine which CIs can be defined for the other elements and link them clearly to the framework.

8. What can be concluded from this research?

This research question is answered in the current chapter (13). The main question of this research was:

According to which framework can Shell GFIT BAM improve the governance of the service provision relationship with the insourcer?

Concluding, the IT governance framework as described throughout the thesis and as summarized in the previous paragraphs, does enable Shell Global Functions IT BAM to improve the governance of the service provision relationship. However, it is necessary to make some slight adjustments to that framework to make it fit to BAM's situation. The recommended situation as described in chapter 0 offers this framework.

On a high level, the most important lesson learned about the governance of offshore IT outsourcing relationships in a body shop context is that it is extremely important for an outsourcer to *cooperate*. Many of the risks in outsourcing are mitigated by one or more of the joint processes defined in the IT governance framework. For example, information security and confidentiality is perceived as an issue within BAM and a risk within literature. The reason is that information crosses organisational boundaries and the amount of control by the outsourcer decreases. The joint process Risk Management mitigates this risk, because in- and outsourcer are jointly responsible for security and confidentiality. A RASC chart makes these responsibilities clear and shows that although the outsourcer is accountable, the insourcer is also responsible. This 'softens' the organisational boundaries and enables the outsourcer to have more control when information crosses this line.

Another example is the lack of innovation, one of the main risks described in literature. The joint process Innovation Management makes sure that innovation is in place, and that the insourcer also has certain responsibilities in this process. In this way outsourcers make sure that also the insourcer innovates.

13.2 Limitations

Every research has its limitations, and so has this research. First of all, as Gewald also points out in his paper: "Regardless of how well the structure and the processes of the governance model are defined the success of the whole model depends on elements of people issues and leadership" (Gewald et al. 2006). The soft sides and skills involved in the success of a framework like this are not taken into account throughout the research. Especially when implementing the IT governance framework, practice will show that things do not necessarily work as theory describes. The history of an organisation, personal preferences of the employees and the availability of leadership skills are only some of the 'soft' sides that influence the success of the implementation of the framework. These influences are not taken into account in the design of this framework.

Second, the framework is currently validated with only one case study. The Shell case pointed out some differences with the framework, which can indicate flaws in the

UNRESTRICTED 83/102

framework itself. Nevertheless, this can only be concluded on the basis of more validation research.

Third, there are limitations to the scope of this research. A research into the framework for operational and strategic level could influence the IT governance framework described for the tactical level.

Fourth, during the research the outsourcer has been more involved than the insourcer, simply because the research has been conducted at the outsourcer's site and supervised by two Shell employees. The outsourcer therefore has had more chances to influence the direction, scope and findings of the research. Furthermore there is more literature that describes the outsourcer's situation than the insourcer's. For example there are more role descriptions for the outsourcer than for the insourcer. Because Shell employees have been better reachable and available than the insourcer, the insourcer has been less involved in the workshop than the outsourcer. This has resulted in a description of only the outsourcer's current situation. Therefore the added value of this IT governance framework is clearer for an outsourcer in general and Shell in particular, than the value for an insourcer. Finally, the fact that the insourcer has been involved less, also means that there might be conflicting interests or hurdles on the way that this research does not address. These issues will become clear in the implementation trajectory and should be dealt with at that point of time. The implementation team should be aware of that.

13.3 Further research

Further research can improve the IT governance framework and the other conclusions drawn before. Several other fields of research can be interesting to explore to improve this framework. First of all, further research on maturity models and designing a maturity model suited for the IT governance framework will give insight in the dynamics of the framework. A maturity model can offer clear guidance on priorities and phases in the implementation trajectory. Furthermore also the relation to capability models like e.g. the eSourcing Capability Model from Carnegie Mellon is interesting to investigate. It is interesting to see how this framework influences the capabilities of the insourcer, which will probably also make the value of the framework for the insourcer clearer.

Second, it will be very interesting to validate the IT governance framework on the basis of significantly more cases. Research questions can be questions like: "what is the average RASC chart?" and "which variables have influence on the desired situation?". Variables that might cause the framework to change (or not) are for example: the size of the company, the size of the outsourcing contract, previous experience of both parties with outsourcing, the amount of trust and formalization in the relationship, the base country of out- and insourcer, ... etcetera. By investigating more cases, best practices will come to light.

Third, further research on the impact of a scope change from a body shop configuration to Managed Service will add value to many companies, including Shell. Many outsourcers have started their relationships on the basis of body shopping, but are currently looking into outsourcing the complete management of services. The expectation is that certain roles and responsibilities will move towards the insourcer, but probably it is also necessary to create new roles and/or processes.

Fourth, a thorough investigation on the insourcer's vision, risks and concerns related to the framework will eliminate some of the limitations as described in the previous paragraph. The current situation at the insourcer will become clear, as well as the gaps there that influence the outsourcing relationship. As literature mainly describes outsourcing from an outsourcer's perspective this will also have a positive theoretical impact.

UNRESTRICTED 84/102

Fifth, the impact on the relationship with the business is not taken into account throughout the complete research. Nevertheless it is very important to involve the business in developing the governance structure. Often the business does not trust the IT governance structure when they do not have a say in it (Brink 2008). Therefore it will be interesting to investigate the relation between the outsourcer's IT department(s) and the business who in the end has to pay for the services.

Sixth, the Control Indicators (CIs) are described only on a high level. The IT governance framework as a model, as well as its value for business, will increase if more research is done regarding this subject. Defining a 'menu' of possible or widely used CI hierarchies will give a more complete answer to the second question from the meta model; "how do we check?".

Finally, also for Shell further research is needed before it is possible to use the value add of this framework outside of GFIT BAM. On global (One IT) level the link to the IT Delivery Model should be made clearer. Also the ecosystem that Shell is currently defining for IT has a relation to this research. The ecosystem is about achieving more in close cooperation with recognised IT professionals on the basis of a common language and shared behaviours. The IT governance framework can offer a concrete model of how to implement this shared approach towards IT insourcers.

UNRESTRICTED 85/102

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UNRESTRICTED 87/102

Part V APPENDICES

This last part provides background information for readers who like to know more. The text throughout the thesis refers to the Appendix where you can find your extra knowledge.

Contents of Part V

Appi	ENDIX A	DEFINITIONS AND ABBREVIATIONS	90
Appi	ENDIX B	INTERVIEWS FOR PROBLEM DESCRIPTION	92
B.1		EW GOALS	
B.2	Intervi	EW METHODOLOGY	92
B.3	Intervi	EW APPROACH	93
B.4	Intervi	EW QUESTIONS	93
B.5		OF INTERVIEWEES	
B.6		·S	
APPI	ENDIX C	INTERVIEWS WITH EXPERTS FROM PRACTICE	95
C.1	Intervi	EW GOALS	95
C.2	Intervi	EW METHODOLOGY	95
C.3	Intervi	EW APPROACH	96
C.4	Intervi	EW QUESTIONS	96
C.5	DETAILS	OF INTERVIEWEES	96
Appi	ENDIX D	THE SHELL CASE: WORKSHOP	98
D.1	Worksi	HOP GOALS	98
D.2	Worksi	HOP METHODOLOGY	98
D.3	Worksi	HOP APPROACH	99
D.4	DETAILS	OF ATTENDEES	101
D.5	FINDING	GS	102
D.6	OTHER I	DISCUSSIONS	102

Appendix A Definitions and abbreviations

Term	Explanation
Body shop	See staff augmentation.
Control Indicator	An indicator that says whether or not an organisation is 'in control'. See also paragraph 5.2.5.
Customer	The business. For example Central Human Resources and Central Finance.
End-user	The individual person who is in the end using the application.
Insourcer	A company that executes outsourced work.
IT governance	IT governance consists of " organizational structures and processes that ensure that the organization's IT sustains and extends the organization's strategies and objectives" See also paragraph 5.1.
IT governance framework	A governance framework of an offshore outsourcing relationship is the structure that describes the joint processes and organisational structures, whereby also CIs and responsibilities are defined. See also paragraph 5.2.
IT outsourcing	Also called 'IS (Information Systems) outsourcing'; defined as: the procurement of IT services under contract from the optimal set of internal and external providers in the pursuit of business goals.
Lifecycle	The phases through which an outsourcing relation passes: (1) identify business and its needs, (2) select supplier(s), (3) transition, (4) manage outsourcing relationship and (5) evaluate and renew or terminate. See also paragraph 4.6.
LoB	Line of Business; an organisational part of Shell GFIT, responsible for business alignment, partnership & intervention. See paragraph 1.2.
Managed Services (MS)	An outsourcing relationship in which the insourcer decides on all HR related issues and is responsible for delivering the entire service against the specified output (Beulen 2008b). See also paragraph 4.5.3.
Nearshore	In another country but in the same part of the world.
Nearshoring	Nearshore outsourcing
Offshore	1. In another part of the world. E.g.: offshore outsourcing is outsourcing to another continent, India in the case of the described relationship.
	2. At the insourcer's site (more specific). E.g.: an employee offshore is an employee at the insourcer's site.
Offshoring	Offshore outsourcing
Onshore	 In the same part of the world. E.g.: onshore outsourcing is outsourcing to the same continent. At the outsourcer's site (more specific). E.g.: an employee onshore is an employee (often from the insourcer) at Shell's site.
Onshoring	Onshore outsourcing
Outsource	"to procure (as some goods or services needed by a business or organization) under contract with an outside supplier" (Merriam-Webster 2008).
Outsourcer	A company that outsources work to another company. E.g.: Shell in this research.

UNRESTRICTED 90/102

PDAS	Project Delivery and Application Sourcing; an organisational part of Shell GFIT, responsible for all projects and sourcing of applications. See paragraph 1.2.
Service Center	A tool for creating, tracking and reporting on tickets used by the support teams at Shell GFIT BAM.
Shell GFIT BAM	Shell Global Functions Information Technology Business Application Management.
Staff augmentation	An outsourcing relationship in which "clients manage and supplement inhouse teams with supplier staff" (Lacity et al. 2008). See also paragraph 4.5.1.

UNRESTRICTED 91/102

Appendix B Interviews for problem description

This appendix contains more information about the interviews with both operational and tactical stakeholders and problem owners to define the problem (see chapter 3). By describing the methodology, approach, questions, interviewees and findings, we tend to give insight in the methodological value of the interviews and make them repeatable.

B.1 Interview goals

The goal of the operational interviews was to get insight in:

- Stakeholder's role in the relationship Shell the insourcer
- History of relationship
- Current issues & opportunities

The tactical interviewees were at the moment of the interviews working together in a workgroup. A part of the interview results has been used by this workgroup to get insight in current issues and challenges, which is why some of the goals and questions mention this workgroup. This did not have effect on the results for this research. The goal of the tactical interviews was to get insight in:

- Stakeholder's view on workgroup
- Stakeholder's share and added value in the workgroup
- Stakeholder's personal goals and reasons to join
- Stakeholder's view on their own and BAM's relationship with the insourcer

B.2 Interview methodology

Setup and processing results

As described in chapter 3 we held two different type of interviews; those with operational and with tactical stakeholders. Nevertheless, both interviews had more or less the same setup. In both cases the interviewees did not have to prepare anything and both type of interviews lasted for approximately an hour. Most interviews were face to face, only the stakeholders iPM, iPL, SPM, and SM3 were interviewed via telephone. We recorded the interviews over the phone and took notes at all interviews. The analysis of the interviews as addressed in B.6 has been done mainly on the basis of the notes, and has been validated by getting approval of all interviewees via e-mail and/or a discussion with them afterwards.

The interviews with the employees on operational level took place in the period from the 4th until the 12th of June 2008. The consolidation of its outcomes was discussed during a meeting on the 26th of June with AS1, AS2, iAS1 and iPL. Also a stakeholder from the tactical level (SM2) attended this meeting. The tactical stakeholders were interviewed in the period the 20th of May until the 12th of June 2008. The consolidated outcomes of the interviews were briefly discussed during a conference call on the 19th of June 2008.

Selection of interviewees

The operational interviewees were selected because of their participation in or close linkage to an application support team that closely works with the insourcer on a daily basis. The tactical interviewees were selected because they are or were involved with each other in a workgroup that had the goal to "develop and implement a standard process in GFIT BAM of managing [the most important application insourcers] across all support contracts in GFIT BAM".

UNRESTRICTED 92/102

B.3 Interview approach

Both interview types had the same approach:

- a) Get to know each other
- b) Explain goal of research and interview
- c) Ask questions
- d) Wrap up: explain way forward
 - o Future contact to validate understandings / ask for clarification.

B.4 Interview questions

Operational

- 1. What is your role in the relationship Shell-the insourcer?
 - a. Responsibilities
 - b. Experience (since when)
 - c. Contacts within the insourcer
- 2. What important developments has the relationship gone through in the past? (e.g. issues, challenges, opportunities, facts, ...)
- 3. What do you currently see as the biggest challenges?
 - a. Opportunities
 - b. Issues
- 4. What would your ideal relation with the insourcer look like?

Tactical

- 1. What do you see as the goal of the workgroup?
- 2. What do you see as the core problems (symptoms)?
- 3. What should the workgroup solve and what not?
- 4. What do you see as your added value to the workgroup?
- 5. What is your own goal in the workgroup? Why did you take part in the workgroup? (What is the added value of the workgroup to you?)
- 6. What would your ideal relation with the insourcer (or other important application insourcers) look like? (Personal and GF level.)

B.5 Details of interviewees

In total seven people were interviewed on an operational level:

- Two application specialists (AS1 and AS2)
- The insourcer's application specialist that works onshore (iAS1)
- The support manager (SuppM)
- The offshore project manager (iPM)
- The offshore project leader (iPL)
- The contract manager (CM)

In total 6 people were interviewed on a tactical level:

- The engagement manager from the insourcer for Shell GFIT (iEM).
- A lead service manager for HR (SM1), amongst others also interim responsible for the operational team mentioned above.
- A second service manager (SM2) for IT4IT and others.
- A senior project manager (SPM).
- A delivery manager SAP (DMS) for Finance, who set up the workgroup.
- An interim lead service manager (SM3) for Finance.

UNRESTRICTED 93/102

B.6 Findings
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UNRESTRICTED 94/102

Appendix C Interviews with experts from practice

This appendix contains more information about the six interviews with experts from practice. These interviews were mainly used for the analyses in chapters 7 and 8. By describing the methodology, approach, questions and interviewees, we tend to give insight in the methodological value of the interviews and make them repeatable.

C.1 Interview goals

- Get the interviewee's view on appropriate joint process fields, roles and responsibilities.
- Find out his reasons/ rationale for this view.
- Enable later contact for validation of findings.

C.2 Interview methodology

Setup and processing results

All interviews were scheduled for an hour and did not take significantly longer than that, except for the interview with Hans Vriends that took approximately 1.5 hour.

Interviewees did not receive the framework or any homework beforehand. There were three reasons not to do so:

- We assumed that most interviewees did not have time to look into the materials on beforehand and wanted to have equal interviews to be able to compare them.
- We wanted to see the first reaction of the interviewees when they saw the framework, to see how complex it is and if it is possible to understand it immediately.
- We wanted to make sure that interviewees directly understood the framework correctly, instead of making their own assumptions and reasoning from these.

We recorded all interviews, and made notes as well. All interviews were drew up in notes using these tapes, these notes are the basis of our analysis. All interviewees received the analysis and approved the final version in chapter 7.

The interviews took place between the 30th of September and the 15th of October 2008.

Selection of interviewees

As described, the goal of the interviews was to validate and improve the theoretical framework on basis of practical experiences. Therefore we had three interviews with consultants that have experience in the fields of IT governance and IT outsourcing. These interviewees were selected mainly on the basis of accessibility and experience. Our contact at Logica directed us towards Willem Jan Prins and Ronnie Lachniet because of their experience on these fields. The same happened with our contact at Accenture, who directed us towards Erik Beulen, and the contact at Getronics, who directed us towards Hans Vriends. We contacted Accenture, Getronics and Logica because they have a lot of experience in IT governance and IT outsourcing, regardless of their relations to Shell.

Within Shell we also wanted to capture experiences with IT governance and IT outsourcing. We selected three interviewees from the Infrastructure Sourcing Programme (ISP) because the programme specifically addressed IT governance, plenty of background information was available on the internal web, and it was not linked to GFIT BAM, while still applicable. Another option would have been to interview people from Downstream IT BAM, but we did not have direct contacts in this organisation, while we had a contact

UNRESTRICTED 95/102

in ISP. This contact recommended Marc Hussey, Henk Overbeeke and Oskar Brink on the basis of their experience and their capability to relate this to a theoretical framework.

C.3 Interview approach

- a) Get to know each other
- b) Get information about interviewee's role and experience with governance
- c) Explain goal of research, ...
 - O To draw up recommendations for Shell Global Functions IT BAM on the basis of an IT governance framework, in order to enable Shell Global Functions IT BAM to improve the governance of the service provision relationship with the insourcer.
- d) ... scope...
 - o Existing relation with selected insourcer
 - o Interface between in- and outsourcer (joint)
 - o Tactical level
 - o Offshore
 - o Body shop basis
- e) ... and governance framework on basis of theory
 - Who does what
 - How do you check
- f) Ask for concrete input:
 - o Roles
 - o Joint process fields
 - o KPIs
- g) Wrap up: explain way forward
 - Future contact to validate understandings / ask for clarification / finish interview (if necessary).

C.4 Interview questions

- 1. What is your role and what is your experience with governance?
- 2. What roles would/did you define? And why?
- 3. What joint process fields would/did you define? And why?
- 4. What CIs per process field would/did you define? And why?

C.5 Details of interviewees

The following sections describe the experience of the experts on the field of IT governance and IT outsourcing.

Marc Hussey

Marc Hussey currently is the IT enterprise teams coordinator within Shell's CIO office. He facilitates the four executive teams by setting their agendas, help them make the right decisions in the right areas, help them look ahead to strategic term, and as he knows what other teams are dealing with he aligns their thinking. He is not a voting member.

His experience with governance mainly comes from his role within the Infrastructure Sourcing Programme (ISP), where he had to make sure that the right governance bodies were in place. He also looked at Shell's overall OneIT governance in that role.

UNRESTRICTED 96/102

Henk Overbeeke

Henk Overbeeke has been responsible for all matters concerning Request Management within ISP until the contracts were signed. After that, he has been involved in the organisational design for Request Management and from that role also has helped to develop the Shell-wide IT Delivery Model. He is currently still involved in the ISP project.

Oskar Brink

Oskar Brink has been responsible for defining processes regarding the cooperation with insourcers during the first phase of ISP. During that period he was also involved in the ISP governance model and the organisational design. During the second half of the ISP project, Oskar implemented processes, roles and responsibilities throughout the infrastructure organisation.

Currently Oskar is still involved in the ISP project for employees in the new organisation to help them discover how the organisation works. In the near future he will focus on the alignment of the infrastructure organisation with the application organisation.

Hans Vriends

Hans Vriends is consultant and lecturer for Getronics Consulting. A part of his lectures for Getronics also focuses on governance within outsourcing relations. As a consultant he has helped several customers to structure their outsourcing relationships.

Erik Beulen

Erik Beulen works for Accenture where he has managed a number of contracts in the role of a combination of Account manager and Contract manager. He has also been involved with a couple of preparation tracks, where thinking about governance models is very important.

Furthermore Beulen is professor at the Tilburg University in the Netherlands, where he holds the Accenture Global Sourcing Chair. He has published several articles and books on the topic of (managing offshore) outsourcing, from which several have been used for this thesis.

Ronnie Lachniet & Willem Jan Prins

Ronnie Lachniet is Management Consultant at Logica management consulting. He has experience in setting up sourcing governance for customers (to stay in control of their suppliers). Furthermore he wrote several publications concerning outsourcing and wrote for the quarterly magazine of ITSMF Nederland. As Management Consultant with Logica he is specialized in outsourcing consultancy and sourcing governance practices.

Willem Jan Prins is Marketing & Portfolio Manager at Logica, concerning Outsourcing Services. He also has experience with outsourcing governance as well as application management.

UNRESTRICTED 97/102

Appendix D The Shell Case: Workshop

This appendix describes the goals, methodology, approach, findings and attendees of the workshop. This workshop forms the basis of the analyses in chapters 9, 0 and 0. Furthermore the last paragraph briefly describes other meetings and discussions that contributed to the contents of these chapters.

D.1 Workshop goals

- To validate the governance framework by testing it on the Shell case
- Provide BAM with new insights and concrete points to improve
- Involve stakeholders

Not: to discuss the framework.

D.2 Workshop methodology

Setup and processing results

The workshop took three hours, including 15 minutes coffee break. Before the workshop we explained the framework to all participants individually to make them comfortable with it and enable us to start quickly with the contents during the workshop. They received the programme one week beforehand with a 10-page explanation of the framework and the following homework assignment:

"Send me three 'best practices' and three issues that you see from your current role with respect to the IT governance in your IT outsourcing relation(s). E.g.:

- Best practice: There is one person that manages all my contracts and he/she is reachable for all my questions and issues.
- Issue: My counterpart at the insourcer gets his assignments and information from several persons throughout our organisation. He sometimes knows more than I do and executes work I did not know of, while I am responsible for his actions."

The workshop was lead by one person and assisted by another. The assistant did not have specific knowledge of the framework or research but primarily helped with making photos and notes. We did not record or film the workshop.

After the workshop we analysed the notes, photos and forms that the participants filled in; the 'raw' findings are included in paragraph D.4.

Selection of attendees

We selected the participant on the basis of their involvement during the research and their role in the current organisations. We tried to invite an audience who would cover most roles in our framework. We invited one Lead Service manager, two Service managers, two people in the Delivery supervisor role (of whom one is the manager of the other), one Purchaser, one Account manager, one Business analyst and one Process manager at the outsourcer. Unfortunately the Process manager and one of the Service managers could not make it. Therefore we spoke both of them before the workshop and incorporated their views throughout the relevant chapters (see 0, **CONFIDENTIAL**

Other discussions).

UNRESTRICTED 98/102

D.3 Workshop approach

We split the workshop in two parts, where the part before the break was about the current situation (IST) and after the break about the desired situation (SOLL). During the first part we started with a few slides to welcome everybody and quickly show the framework. In round 2 the participants each had to put stickers with their own colour on the roles and processes they identified themselves with. They also had to put an A, R, S or C on the stickers they put in the processes. During round 3 we plenary discussed these roles and processes and combined them into a RASC chart. The first part took an hour longer than planned, but as the discussion in round 3 was very important to come up with a shared RASC chart we allowed this.

After the break we focused on the input from the homework and the four participants who were left were split in two pairs. They together had to fill in a form where they linked the issues and best practices to the framework and designed their desired situation. In round 5 they quickly presented their views. We cut down discussions during round 5 because the outcomes represented a personal view and because there was little time left. Finally we wrapped up and thanked the participants for attending the workshop.

The programme is shown in Table 8 and the presentation we gave during the workshop is shown in Figure 25.

Table 8 - Workshop programme

#	Start	End	What	Who	How
	14.00	14.30	Setup room	Floor & Jeffrey	
	14.15	14.30	Arrival	All	
1	14.30	14.45	Welcome & introduction to framework	Floor	Plenary presentation
2	14.45	15.15	Match your role, activities & responsibilities	Stakeholders	Stickers on poster
3	15.15	16.00	Combine responsibilities in one RASC chart (IST)	All	Plenary on flip over/ PowerPoint
	16.00	16.15	Break	All	
4	16.15	16.45	Map good points/ issues to IST and framework and come up with Shell solution (SOLL).	Stakeholders	In one or two rounds with two smaller groups, on basis of forms
5	16.45	17.10	Present SOLL	One delegate from groups	Two presentations (10 minutes/ presentation)
6	17.10	17.30	Wrap up & thanks	Floor	Plenary 'speech'

UNRESTRICTED 99/102

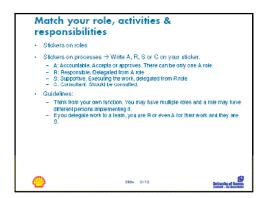
The Right Governance Framework for Managing an Offshore IT Outsourcing Relationship The Shell Case

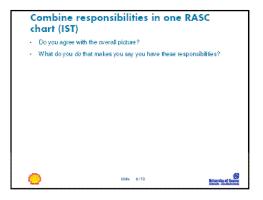


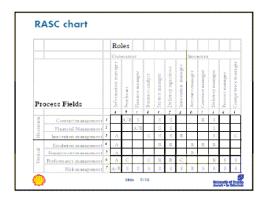


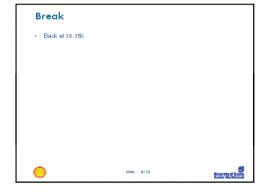












UNRESTRICTED 100/102

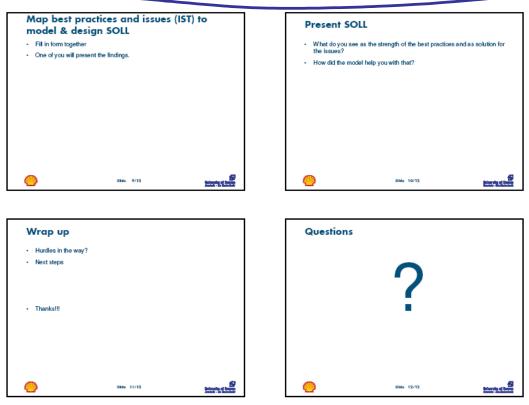


Figure 25 - Presentation during workshop

D.4 Details of attendees

The stakeholders in Table 9 planned to participate. The roles mentioned in the table are their dominant roles. We assume that the workshop participants are representative for people with similar roles. E.g.: we assume that all Business analyst's have a focus on Quality Assurance & alignment of delivery and business requirements.

Table 9 - Participants of the workshop

#	Dominant Role	Function and relation to research	Present?
1	Service manager	 Lead Service Manager HR Involved during research in discussions (especially in the beginning) 	No, did not show up (too busy)
2	Service manager	- Service Manager HR - Mentor	Yes, until break
3	Delivery supervisor	Delivery Manager non-SAPUpdated once every while	No, sick leave
4	Delivery supervisor	- Delivery manager of non-SAP EU team - Supervisor	Yes
5	Account manager	Engagement manager insourcerUpdated once.	Yes
6	Business analyst	Business analyst in the LoBNo relation to research	Yes
7	Purchaser	Project Resources GFIT in PDASUpdated several times.	No, but sent another Purchaser (nr. 8)

UNRESTRICTED 101/102

The Right Governance Framework for Managing an Offshore IT Outsourcing Relationship The Shell Case

8	Purchaser	- 50% On/off boarding team lead and 50%	Yes
		Contract Resourcing in PDAS	
		- No relation; replacing Purchaser (nr. 7) during	
		workshop and reasoning from his perspective.	

D.5 Findings
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D.6 Other discussions Confidential

UNRESTRICTED 102/102