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ABSTRACT

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Abstract

Opportunities to audit and monitor automatically and more frequently have been given much attention by the academic world. Organizations that have applied continuous monitoring and auditing have improved their overall organizational performance. However, research into the adoption of CA and CM has mostly been conducted in the private sector. The feasibility of implementing CM and CA in governmental organizations and the potential benefit in the public sector are still unclear. Therefore, this research aims to contribute to the literature by specifically examining adoption of CM and CA in the public sector. The study determines whether continuous monitoring and auditing methodology could be applied in municipalities in order to improve reliability of data, efficiency of processes, risk management, contract monitoring and control over financial transactions. A multiple case study approach is used as research design. Desk research, reviewing documents, exploratory interviews, semi-structured interviews and focus group sessions were held with respresentatives of six municipalities, common arrangements and a medium-sized accounting firm. In total 35 interviews and two workshops were executed. The results of the research are that continuous monitoring can in fact be applied, and that there is a need for continuous monitoring in the public domain. In addition, the results show that continuous monitoring is feasibile from a technological, social, legal and economic perspective. The extent to which continuous monitoring could be applied depends to a large extend on the internal conditions of the municipalities.

Key words	Continuous monitoring, continuous auditing, continuous assurance, principal agency theory, information asymmetry, three lines of defence model, business process management, E-government and public administration, change management, case study.
Further Information	This thesis was product of combined internship and research work as requirement to obtain the title of the IMMIT master program, 9th Cohort.

CONTINUOUS MONITORING IN MUNICIPALITIES

"TRUST IS GOOD, BUT CONTROL IS BETTER" - VLADIMIR LENIN

Master Thesis
International Master in Management of Information Technology - IMMIT

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The originality of this thesis has been checked in accordance with the University of Turku quality assurance system using the Turnitin OriginalityCheck service.

1 TABLE OF CONTENTS

2 LIST OF FIGURES

3 LIST OF TABLES

4 PREFACE

This master thesis investigates the potential use of continuous monitoring in the context of municipalities in the Netherlands, which have recently taken on new responsibilities from the central government concerning the social domain (i.e. care and social support). This thesis is written as a graduation project for the International Master of Management and IT (IMMIT) at the University of Tilburg, University of Turku and the Aix-Marseille-Graduate School of Management. The research is conducted in the context of the IT Advisory department of Baker Tilly Berk, which have many municipalities as clients.

The reason for me to choose the topic of continuous monitoring in munipality domain was the following. When searching for a nice topic for my master thesis, I came across several news articles that stated that municipalities had difficulties to successfully manage and control the social domain. This triggered me to investigate whether technological IT developments could help municipalities getting more grip on the social domain. Research about the effect of technological developments is mostly done in the large profit organization. That is why I was interested to examine what the effect of developments such as continuous monitoring technology would be on the smallest level of the government the municipality level.

First, I want to thank Baker Tilly Berk for giving me the opportunity to do my internship there and to write my master thesis. I want to thank Martin van Ernst, Rachel de Kort for providing me the contacts of the interview respondents and that they went with me to all first meetings with the municipalities. In addition, they were always present when I had a focus group session or workshop session with the respondents of the municipalities. Thank you both, for the support and the valuable feedback that you both gave to me.

Second, I want to thank Joris Hulstijn my supervisor from the University of Tilburg, who guided me through the research process and made always time for a meeting to talk about the research. Thank you, for all the time that you have made and the valuable feedback that you gave to me. I could not wish for a better supervisor.

Third, I want to thank Sylvia van Kleunen and Jonathan Houtman, who both work for the common arrangement youth aid rijnmond (GR-JR). They provided me the opportunity to spend time at the GR-JR to understand the business environment of this research. I felt very welcome at the GR-JR and had sometimes the feeling that I was partly doing there my internship. In addition, Sylvia planned many interviews for me with the people, who work for the GR-JR and the participating municipalities of the GR-JR. Thanks to Sylvia; I could interview so many people.

5 INTRODUCTION

Continuous monitoring and continuous auditing is becoming increasingly useful in organisations. The purpose of this chapter is to define continuous monitoring and continuous auditing and sets the stage for further exploration of the topic. Consequently, the introduction presents various sections including a description of the research setting, an outline of the study problem, the problem statement, research questions and scope.

5.1 Research Setting

The research is conducted in the context of the IT Advisory department of Baker Tilly Berk Netherlands. This department does both IT auditing and IT consulting projects and also helps organizations with their necessary strategic IT decisions. Besides that, the department helps companies to manage risks regarding availability, integrity, and confidentiality of data within IT systems (Baker Tilly Berk, 2017).

5.1.1 Baker Tilly Berk

Baker Tilly Berk is a business that consists of accountants, tax advisors, and consultants. In the Netherlands, around 740 employees work for Baker Tilly Berk spread out over 17 offices. Furthermore, the Dutch division is a member of Baker Tilly Berk International, which is a network of independent accounting and tax advisory offices based in 147 countries. Members of the Baker Tilly Berk network work in close collaboration with each other and share their knowledge to serve their clients. Their customers range from SMEs and large companies to non-profit companies and companies operating in the public sectors. Their primary focus, however, lies in the public sector, the healthcare industry and the larger SME companies including family businesses (Baker Tilly Berk, 2017). The services that Baker Tilly Berk offers are accountancy, audits, tax advisory, VAT advice and compliance, corporate finance, employment advisory, interim professionals and IT advisory.

Employees of Baker Tilly Berk understand that the world in which they operate as accountant or consultant changes continuously. Also, the field in which their clients operate changes radically. For this reason, the employees of Baker Tilly Berk try to give their customers and relationships more than just the products and services for which they are hired. They strive to be innovative and share their knowledge. Among others, with the help of interns they try to catch up with the new things that are going on in the world in which they operate as a company (Baker Tilly Berk, 2017).

5.2 Problem indication

Continuous monitoring and auditing are the cornerstones of internal audit. Most audit executives within organizations are well aware of these programs of auditing and, even more so, their benefits (Deloitte, 2017). The above-mentioned programs have become ideal for mitigating financial risks, regulatory activities, and agreement costs. There is some confusion surrounding the terms continuous monitoring (CM) and continuous auditing (CA). Although the programs are used together, they are two distinct programs.

Continuous monitoring is the program that enables organizations or businesses to continually review business processes regarding their adherence to and deviation from their expected degree of performance and effectiveness (AICPA, 2012). On the other hand, continuous auditing is the program that facilitates internal audit personnel to gather data from processes consistently, and it supports all auditing activities (Deloitte, 2017).

Studies have focused on automation of CM and CA, which has been facilitated by technology advancement (Rezaee, Sharbatoghlie, Elam, & McMickle, 2002; Vasarhelyi, Alles, & Kogan, 2004; Alles, Brennan, Kogan, & Vasarhelyi, 2006; Chan & Vasarhelyi, 2011; Vasarhelyi, Alles, Kuenkaikaew, & Littley, 2012).

Additionally, continuous monitoring and auditing have mostly been employed in the private sectors. The effectiveness of CM and CA has not been shown in other domains such as local government and municipalities. Therefore, this thesis will investigate the effectiveness of continuous monitoring and continuous auditing in local governments.

In particular, the thesis addresses the potential use of CM and CA in the context of municipalities in the Netherlands, which have recently taken on new responsibilities from the national government concerning the social domain (i.e. care and social support). These new responsibilities come with many financial and operational risks. Nevertheless, municipalities have to report about performance and about the legitimacy of how the budgets are spent. That triggers a need for additional assurance.

5.3 Overview

There has been a lot of interest in the academic world concerning online auditing, continuous monitoring, continuous auditing, continuous reporting, continuous risk monitoring and continuous assurance. The first articles on online auditing/ audit automation date back to the early 1980s (Koch 1981; Vasarhelyi, M. 1983; Vasarhelyi, M. A. 1984; Vasarhelyi, M. A. 1985). In a recent literature review, Chiu et al. (2014) examine 118 articles in the period of 1983 until 2011 related to online auditing and the literature stream on continuous audit. One of the conclusions in this review is that technological

developments like transaction-driven systems, the Internet and electronic data interchange (EDI) influenced the accounting domain.

Opportunities to audit and monitor automatically and more frequently have been given much attention by the academic world (Brown, Wong, & Baldwin, 2007; Chiu, Liu, & Vasarhely, 2014). Chiu, Liu and Vasarhely (2014) report that organizations and businesses that have been subjected to continuous monitoring and auditing have improved their overall organizational performance.

The concept of auditing more frequently is not new and already exists for three decades (Groomer & Murthy, 1989; Vasarhelyi & Halper, 1991). However, it was not until the 2000s that its methodology, elements and the scope of CM/ CA began to expand into various streams, such as demand factors, enabling technologies, theory and guidance, applications and impacts (Brown, Wong & Baldwin, 2007).

0ne of the reasons for this could be an increase in awareness of the concept and benefits of continuous auditing after the release of the 1999 CICA and AICPA research report on continuous auditing (Chiu et al., 2014). Another reason could be the need of U.S. leading public companies to comply with the strict regulations, such as the Sarbanes-Oxley Act (404), which was introduced after scandals, which happened at Enron and WorldCom (Vasarhelyi, 2009). These stricter regulations for internal control in the U.S. could suggest why most of the CA research 68% has been conducted in the US (Chiu et al., 2014). The introduction of the Sarbanes-Oxley-Act emphasized the importance of internal control; continuous monitoring could help the compliance with the stricter regulation. Vendors invented software packages that could assist companies in the stricter rules for internal control. Additionally, large accounting firms such as KPMG, PWC, Deloitte, and EY published several white papers, surveys and presentation sheets about continuous monitoring and continuous auditing (e.g. KPMG, white paper 2012, PwC 2014, and Deloitte, 2010).

Continuous monitoring falls under the responsibility of the management and is part of the internal control, while continuous auditing falls under the liability of auditors, who can be either internal (part of the focal firm, although relatively independent) or external (part of an audit firm). Continuous auditing is the frequent or continuous collection of audit evidence from information technology systems, transactions and processes, and comparing those streams of evidence to some set of criteria or norms. Continuous monitoring is a feedback mechanism to the management, which incidates whether or not transactions are processed correctly and whether or not the defined controls are working as defined beforehand. From a technological perspective, continuous auditing and continuous monitoring are a highly automated process that compare transactions with prescribed criteria and detect and report abnormalities (KPMG, 2012).

Most of the research on continuous auditing and continuous monitoring is theoretical, focusing on the concepts, explaining what it is or how it could be beneficial, provi-

ding frameworks of levels of progress or focusing on the technical aspects (Brown et al. 2007, Chiu et al. 2014). However, there is limited research on CA and CM in practice, except for some pilots and case studies (e.g. Alles et al., 2006; Alles et al., 2008; Hardy & Laslett, 2014; Singh et al. 2013). Moreover, there is limited understanding of how to adopt CA and CM effectively and how to leverage it (Weins et al., 2016). Despite the limited scientific research on the implementation of CA and CM, it appears that companies are increasingly aware of the benefits of CA and CM, and that companies are willing to invest in it (KPMG, 2012, Ramamoorti et al. 2011). However, research into CA and CM has mostly been conducted in the private sector.

The willingness of governmental organizations to implement CA and CM, and the potential benefit in the public sector is still unclear. What is the knowledge of governmental institutions or non-profit organizations regarding CA and CM? Are they aware of the benefits of CA and CM and are they willing to invest in it? Is the applicability of these programs economically and technologically feasible? Are the governmental institutions aware of the possibilities that CA and CM can bring to their audit and internal control? Is it reasonable to investigate the applicability of CM and CA in another sector than for-profit organizations?

5.4 Literature background

According to Shadid (2016)[1], both private and public sectors are progressively striving to increase their added value to their stakeholders by taking timely interventions. In case of public institutions, adding value means improving service to citizens. Continuous monitoring and auditing are two programs that many institutions and organization have implemented in order to improve accountability and organisational performance. Traditional auditing is time-consuming, which can result in late and irrelevant audit results (Shadid, 2016). The ultimate goal of continuous auditing is to support monitoring and the core controls of the organization.

From an update by Anao.gov.au (2012) it becomes clear that managers in public sectors have a very critical operating environment that requires continuous auditing. The purpose of auditing in the public domain is to ensure transparency, integrity and accountability of the personnel and departments, which are the core values of proper go-

[1]white paper belonging to the Audit Operations, Natural Resources of Canada

vernance of the public sector. Following the nature and complexity of the public sector, the functions of internal audit vary considerably (Anao.gov.au, 2012)[2].

A study by Liu (2012) suggested the need to have an auditing system in the governmental domain to prevent corruption and, more so, to maintain financial and economic order. The Australian National Audit Office stressed the need for governmental auditing in general to ensure accountability and transparency in order to better deter corruption.

Additionally, a study on a Finnish case has highlighted some of the challenges of auditing in municipalities. Johnsen et al. (2014) found that the quality of information and evaluation reports were rather insufficient. Problems were found such as problems in goal setting as well as lack of reporting standards, which made the use of information very complicated. The study observed that in some small municipalities, for example, only two-page long financial reports were produced. While referring to this substandard reporting, Kallio et al. (2000) commented that lack of measurable objectives hindered effective work of auditing committees. Johnsen et al. (2014) proposed the use of automated controls in municipalities to deal with such issues of opaqueness in public organisations.

From the literature review above, continuous monitoring and auditing programs are an ongoing advancement that is expected to be useful in future. The application of these programs has been found to be successful in the private sector and this success could be transferred to the public domain. The motivation for application of these continuous monitoring and auditing programs may differ between the private and public sector. However, the overarching theme of implementing such a program is to increase accountability and performance in any organisation.

Governments are custodians of public resources and affairs. Therefore, there is a need to foster accountability and transparency at all levels of the government. Studies advocate the implementation of auditing procedures in the local government to protect the interest of the public (Anao.gov.au, 2012; Shadid, 2016; Liu, 2012). The reason for applying these programs in the private sector was to enhance proper governance and maximizing profit margins (KPMG, 2012; Ramamoorti et al. 2011).

In the public domain, the programs will be used to improve service to citizens, ensure equitable distribution of resources, mitigate corruption and, the most essential, to protect the public interest. The traditional methods of monitoring and auditing have been found to cause delays and, thus, give information in inefficient manner. An automated system is well equiped to mitigate such problems faced by the traditional methods of auditing.

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[2]The Australian National Audit Office is an Australian government department that is concerned with the audit of Australia's public sector.

5.5 Application domain: decentralization of the social domain

One of the main developments in the Dutch public sector is the decentralization of tasks in the social domain from the national government to local governments in 2015. The thought of the central government was that municipalities could arrange the special needed care of citizens more efficiently at the local level. At the local level we find fewer economies of scale, but more local knowledge (Rijksoverheid, 2017).

The social domain consists of the social support act (WMO), the participation act (Participatiewet) and the youth law (Jeugdwet), which involve tasks concerning child welfare, employment, and long term care for the sick and elderly (Rijksoverheid, 2017). Dutch municipalities are not only responsible for more tasks, they are also required to provide these services on a lower budget.

5.5.1 Relevance of the Study to Municipalities

Since decentralisation has given municipalities new tasks, they have to find out how they can get efficient internal control of these domains. Additionally, every citizen is entitled to get the services from the local government, but municipalities only get a fixed budget from central government to arrange the needed care (Rijksoverheid, 2017).

Some municipalities are struggling with monitoring the expenditures of the social domain and are struggling to be ‘in control' of the budget. Also, local municipalities have more problems with finding an accountant compared with companies in the private sector, since the social domain is quite complicated to verify, which increases the time and costs of an audit (FD, 2017, accountant.nl, 2015). The implementation of a continuous monitoring and auditing program is expected to reduce or even eliminate this chaos significantly.

5.5.2 Relevance of the Study to Accountants

The major changes in care in 2015 led to an administrative chaos at municipalities and healthcare providers, making it difficult for auditors to determine whether the care was issued and paid for according to the new rules (FD, 2017, accountant.nl, 2015). Big accounting companies like Deloitte and EY are less willing to audit the municipalities (gemeente.nu, 2017; accountant.nl, 2017).

This is a big problem for municipalities, since it is mandatory for them to have an external accountant to check their financial statements (Gemeentewet, title 3, article 213). Especially small and medium sized municipalities will have difficulties finding an ac-

countant (accountant.nl, 2017). 20% of the municipalities are afraid not to find an external accountant (accountant.nl, 2017). Smaller sized accounting companies such as Baker Tilly Berk and BDO now control many municipalities. However, they may also not have the capacity to audit and monitor all the municipalities (FD, 2017).

The implementation of continuous monitoring and auditing could help municipalities to be more 'in control' of their finances in a more efficient and effective manner. Besides, it could help municipalities to gain more insights and enhance things like equitable distribution of resources in the social domain. It is also a big opportunity for accountants who could align themselves to help local authorities to monitor and audit their internal processes.

5.5.3 Relevance of the Study to Intermediary

To perform the increasing number of tasks, municipalities have joint forces by collaborating within an organization founded by them. Such an organization is called the gemeenschappelijke regeling (GR) in Dutch, which means common arrangement. The law on common arrangements states that two or more municipalities can form a common agreement to perform one or more particular task(s) of those municipalities (Wet gemeenschappelijke regelingen, article 1).

Since municipalities often work in common arrangements, it is an important part that will be investigated in this research. In this study a common arrangement acts as an intermediary between the municipality and the care providers. The existence of the intermediary is fully dependent on the participating municipalities. The municipalities have to be satisfied with the work of the intermediary.

Continuous monitoring could help the common arrangement to work according to the policy of the municipalities and to improve their decision making, sothat money intentended for care could be spend in the most beneficial manner.

In addition, by using continuous monitoring the tasks of the common arrangement become more transparent, since participating municipalities could follow the tasks of the common arrangement through access of the continuous monitoring dashboard.

5.6 Monitoring "continuously" in municipality domain

As a result of the decentralization of the social domain in the Netherlands, the communication between municipalities and care providers has increased significantly. These parties communicate with each other through standard message traffic in a national

chain of digital infrastructure in the Netherlands, so that they can exchange information safely and fast (VNG, 2017).

The purpose of this standard is to ensure that municipalities and their chain partners digitally speak the same language and that information in this domain can be exchanged safely (VNG, 2017). The standard message traffic promotes speed of communication, helps to prevent mistakes and saves execution costs. There are standard codes for communication with institutions that provide care for youth (iJW) and care of elderly and people with a disability (iWMO). The standard message traffic works through XML language.

Since municipalities are already used to communicate continuously with care providers through the standard message traffic, it could make sense that continuous monitoring could also be applied in the social domain of municipalities.

5.7 Problem statement

Continuous monitoring and auditing existed many decades ago, but there are still gaps in our knowledge about real implementations. While large organisations are currently implementing CA and CM, governmental organisations still lag behind.

The reason why this is happening is that the private sector is aware of the benefits of these programs for the internal control of their businesses. Also, companies in the private sector have implemented these programs to mitigate risks and to predict market fluctuations, among other things. In addition, it can provide their internal and external auditors with more insights.

Furthermore, much of the research is conducted in the U.S. and less so in Netherlands. Moreover, not so much research has been conducted in the non-profit sector, such as local governments and municipalities.

There is a knowledge gap concerning the effectiveness and feasibility of continuous monitoring and auditing in the local government and municipalities, while implementation of CM and CA in the local governments is a likely solution to improve transparency, accountability, and governance.

Main research question: How can continuous monitoring and auditing methodology be applied in the social domain of municipalities to improve accountability, governance and transparency?

Research questions

1. What are continuous monitoring and auditing methods and what is the difference with traditional methods?
2. What are the benefits of adopting continuous monitoring and auditing methods as well as the barriers encountered when adopting them?
3. Is it feasible to implement continuous monitoring and auditing in the municipality domain?
4. What is the impact of introducing continuous monitoring and auditing to the municipalities on accountants/auditors?

5.8 Scope

This section illustrates the extent of the present research. This study investigates continuous monitoring in a specific application domain, namely the social domain execution of the Social Support Act (WMO), participation Act and youth law (VNG, 2017). This research will not investigate the Social Support Act (WMO) and the participation act, but only the care of youth. The reason for this is the fact that municipalities are under the impression that youth care is harder to monitor and to control and their scope makes it possible to reduce the effort in the research, while still being relevant.

The transition and transformation of youth aid brings many new challenges municipalities have to figure out how to best perform these new tasks. Because the tasks are new for municipalities, little is known about how risks could be monitored in a suitable manner, how resources could be best utilized and how to evaluate the correctness of care provided to a person and whether this care is issued according to the rules.

In addition, youth aid is a politically sensitive domain. Incidents regarding youth help are a topic that quickly can show up in the media and can soon affect the reputation of the municipality or the partnership between municipalities. An example of this is an article that recently occurred, which mentions the fact that aid workers of a municipality failed to assign the right care to a young child, which showed up in media (Nji.nl, 2017).

Therefore, it would be interesting to investigate how continuous monitoring and auditing could help to reduce some risks and gain more insights so that resources could be deployed where they are most needed. Also, financial transactions that include a mistake could be detected more easily and faster, which can result in lower administrative costs for the municipality and therefore more money could be used for care.

This is essential since the municipalities only get a fixed budget from central government and need to use the money in a best possible way to ensure good quality of

care to the right people. Therefore, it is important to think carefully about how the risks can be controlled, and that money that is intended for youth care is well utilized.

As described above, the youth care is a challenging and complex domain, but continuous monitoring and auditing could probably help municipalities to get more control and knowledge on the youth domain. Therefore, this is an interesting field to investigate more in depth. The other components of the social domain are also interesting to examine, but unfortunately, because of time limitations, a choice needs to be made.

5.9 Explanation of the Quote

The quote "trust is good, but control is better" is a quote attributed to the Russian leader Vladimir Lenin. Although the quote originates from a different context and sounds strange to be used in this research, it will be argued why this quote fits.

Participation in a chain requires trust between the various actors. According to Bharosa et al. (2011) there are two kinds of trust, namely organized trust and emergent trust. On the one hand, organized trust is evident in formal pricing agreements, contracts, rules and procedures. On the other hand, emergent trust is the type of trust created through association between actors. Emergent trust is behavioural in nature since it depends on the observed integrity of the other partners in the chain. Both of these forms of trust are important when working with other parties and, therefore, trust between various actors is good.

As noted earlier, municipalities work with many partners. Most municipalities are working together in the form of an organization that is founded by them (common arrangement), as mentioned earlier, to represent the municipalities and to perform some tasks in the social domain on behalf of the municipalities. Since the municipalities assign certain tasks to this cooperation, they have less control over the tasks being performed.

In addition, municipalities are responsible for purchasing the care from care providers. It is good to trust the care providers that they will deliver good quality of care to the citizens, but a municipality also has to uphold a certain policy. In fact, municipalities are responsible for the whole social domain and for the goals set by the central government that need to be achieved through the decentralization of the social domain.

Therefore, it is good to have trust in other parties, because, otherwise, it would be impossible to perform all those tasks that a municipality has. However, there is also the need to control and monitor the flow of information among all the partners that a municipality is working with.

The reason for this is stability and working toward the goals set. You need to monitor and verify performance in order to know where you stand and what needs improvement (Das & Teng, 1998; Möllering, 2005). That is why trust is good, but control is better.

5.10 Research design and research method

This study aims to describe whether a continuous monitoring tool could be implemented in the municipality domain and whether it could indeed aid the municipalities in getting more control over the information/transaction streams in the social domain, specifically the youth care domain.

Generally, IT systems are implemented in an organization with the objective to improve the performance of that organization, with regard to efficiency and effectiveness. Several factors could influence whether that goal could be accomplished, such as the specific characteristics of the organization, the people, the already existing information systems, working systems, and so on (Hevner et al., 2004).

The design science approach combines aspects of behavioral science and engineering. Behavioral science focuses on organizational and behavioral aspects concerning the development, implementation, and use of information systems, while the design science tries to solve a problem in an innovative way by creating an artifact (Hevner et al., 2004). Design science is relevant in IS research, since research findings should be applicable (Hevner et al., 2004). Design science is an outcome-based IT research methodology, which offers specific guidelines for evaluation within research projects. It requires the creation of an innovative, purposeful artifact for a special problem domain (Wieringa& Daneva, 2015).

A design science approach makes sense, when an artifact is being developed. In this case the artifact will consist of guidelines for a continuous monitoring tool in the municipality social domain. An artifact should be relevant for an organizational problem (Hevner et al. 2004).

The organizational problem in this sense is that municipalities have problems monitoring the expenditures in the social domain successfully and, therefore, accountants have difficulties verifying whether care was issued and paid for according to the rules.

Furthermore, the artifact must be innovative, or solve an existing problem in a better way (Hevner et al. 2004). According to my best knowledge, continuous monitoring and continuous auditing is not being applied in municipalities in the Netherlands yet, nor has it been used to monitor and control the social domain. Only one document was found stating the idea that continuous monitoring/ auditing could be applied in the municipality of The Hague (Den Haag, 2014). However, it was not mentioned whether it

was used to get a better grip on the social domain. Therefore, it is a unique idea to solve an existing problem.

The model of the research setting of Hevner et al. (2004) consists of two main parts, namely the environment and the knowledge base. The environment part consists of the people, organization and technology of the environment of the system that is being studied (relevance), while the knowledge base provides theories, frameworks, instruments and methods to build the study on (rigor).

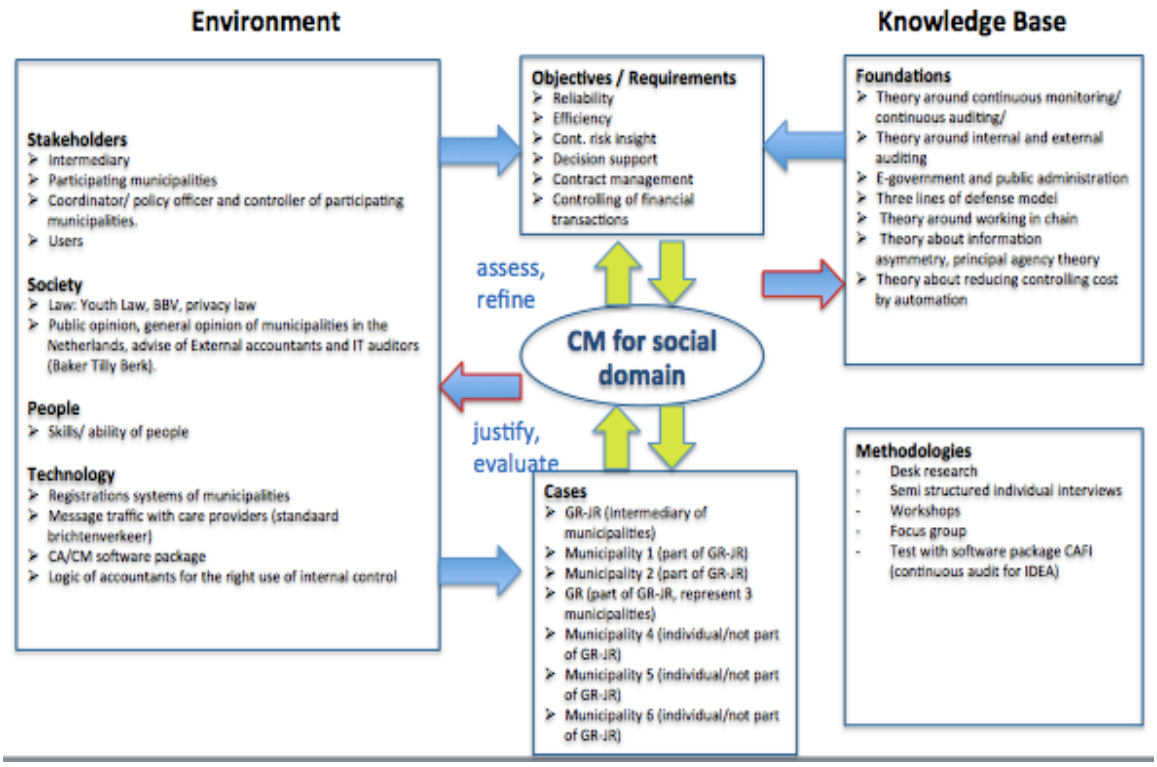

Figure 1 Structure of research environment, based on Model 1 of Hevner, but adjusted for this research by the author

The model displayed in figure 1 shows that this research will consist of an extensive desk research. Literature is consulted to get insight into the theories, which are shown in the model under the term foundations. The literature delivers a first impression of the research domain. Furthermore, to better understand the business environment time will be spend by the author at the common arrangement for youth aid Rijnmond (GR-JR, Gemeenschappelijke regeling jeugdhulp Rijnmond). This governmental institution represents 15 municipalities that purchase the expensive forms of youth aid together.

The arrows with the red outline indicate the practical contribution of the research (guidelines offer relevant advice to municipalities and public accountants) and the scientific relevance (guidelines advance state-of-the-art in auditing, specifically CA and CM in e-government). Data is collected using semi-structured interviews, brainstorm

sessions and, subsequently, evaluated with workshops. Thus, this study has a qualitative approach. More about the research methodology can be read in chapter 4.

5.11 Stakeholders

In the present study there are 3 stakeholders (the municipalities, the common arrangements (intermediary) and Baker Tilly Berk (accountant).

The practical need to the present study is to investigate the feasibility of continuous monitoring and auditing programs in the local government sectors to help municipalities control the social domain. The practical relevance of the intermediary is to show their added value to municipalities and to improve their tasks by getting more insights.

The relevance for Baker Tilly Berk is that they serve many municipalities, and as a company they want to offer their clients the best service. This makes them curious about whether continuous monitoring could help indeed municipalities. Furthermore, Baker Tilly Berk is using data analyses software called Caseware for IDEA. Recently, Caseware brought new software on the market called continuous audit for IDEA (CAFI). Baker Tilly Berk wants to investigate in what way their clients could use this software package to help them being more in control.

5.12 Caseware analytics

CaseWare is an industry leader in providing technology solutions for finance and accounting, governance, risk and audit professionals founded in 1988. CaseWare has over 400,000 users in 130 countries and 16 languages, delivering value across industries and continents (casewareanalytics.com). They provide products for data analytics (for auditors, accountants and other finance professionals), continuous monitoring, risk & controls assessments and business process improvement (for finance and business operations). They cover a wide continuum of industries including education, government, healthcare, manufacturing and banking & finance.

CAFI for IDEA is a continuous monitoring solution that enables organizations to monitor transactions across multiple businesses and systems by detecting breakdowns in internal controls early so the organization can stay ahead of risks and avoid costly damages. This software solution can deliver alerts to business stakeholders throughout the organization when a deviation is detected. The business will then benefit from a sustainable feedback mechanism to improve both controls and the associated business processes.

Additionally, the platform collects critical information on the root cause of a failure, so that the failure can be easily analysed. CaseWare monitoring system uses an architectural design that is used outside the ERP layer of the organization, and is not build in the system of the organization itself (casewareanalytics.com, 2017).

Therefore, CAFI for IDEA is selected as the specific tool whose adoption will be investigated in this research.

5.13 Thesis Outline

This chapter has explained the research problem, research objectives, approach, scope, relevance and some background information about the research topic. Chapter 2 provides the theoretical background regarding CA/CM, while chapter 3 provides information about the social domain of municipalities. Subsequently, chapter 4 extensively describes the research methodology. In chapter 5 the results of the interviews and focus groups are presented and analysed according to the research objectives and questions. Finally, in chapter 6 the conclusion, recommendations and possibility for future research will be outlined.

The outline of this research is schematically represented as follows:

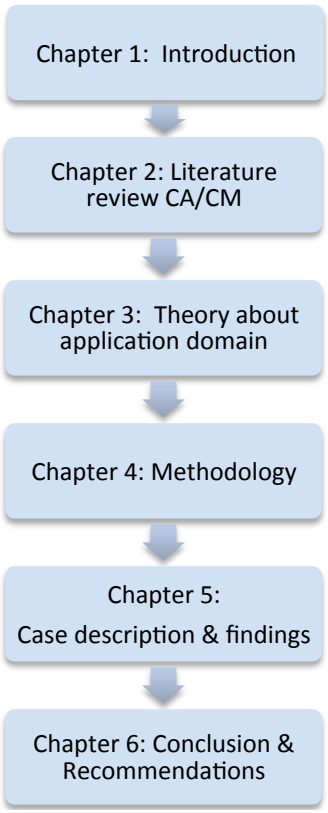

Figure 2 Thesis Outline

6 CHAPTER 2: LITERATURE REVIEW CM/CA

This chapter includes a literature analysis concerning continuous monitoring and continuous auditing. The chapter begins with a definition of these two programs and how they are related. Then, the traditional methods of monitoring and auditing are discussed by comparing them with the new models of monitoring and auditing.

Additionally, the chapter discusses the benefits of these programs, application of CM on other parties, barriers to adopting these systems and how to change from manual to automatic controlling. The chapter also illustrates the internal and external auditing and how the external auditors can rely on information from internal auditors.

This study rests on theories related to assurance, continuous auditing and trust. A brief overview of these categories is provided followed by a detailed description of assurance, trust, and a clarification of the auditing environment within the context of this research.

6.1 Continuous Assurance

The International Auditing and Assurance Standards Board (IAASB) defines assurance as "an engagement in which a practitioner expresses a conclusion designed to enhance the degree of confidence of the intended users other than the responsible party about the outcome of the evaluation or measurement of a subject matter against criteria" (IAASB, 2005, p.6). This definition implies that an assurance activity is intended to raise the trust of the user regarding the reliability of the engagement. The key words here are trust and reliability. An assurance engagement comprises the practitioner, the intended user and the responsible party.

In the context of the present study, the audit professionals from Baker Tilly Berk Netherlands are the practitioners performing the assurance activity on behalf of the responsible party (Dutch municipalities), for the intended user (the public). An auditor relies on data given by the responsible party to carry out the assurance engagement. The possibility that the data provided might not be 100% accurate implies that attainment of 100% assurance is not possible. Hence the three levels of assurance – absolute, limited and reasonable assurance (Page, 2006).

It is in the best interest of all the stakeholders involved that the current program aspires for reasonable assurance (the highest level of engagement possible). It is on the backdrop of this limitation that continuous monitoring and auditing are called for to increase the accuracy of data collected (Alles, Kogan, & Vasarhelyi, 2004). The outcome of the audit should provide the assurance to the stakeholders that the performance of the program is reliable. Elliot (1995) suggested that an auditor could provide reasonable

assurance (whether financial or non-financial, direct or indirect) to the responsible party if the audit criteria are met.

Vasarhelyi and Harper (1991) introduced the concept of continuous assurance in organizations. Vasarhelyi et al. define continuous assurance as “a progressive shift in audit practices towards the maximum possible degree of audit automation as a way of taking advantage of the technological basis of the modern entity in order to reduce audit costs and increase audit automation” (2004, p.5). Continuous assurance refers to the uninterrupted monitoring of processes that allows for continuous controls and risks monitoring as well as gathering evidence using information technologies (otherwise referred to as computer-assisted audit techniques (CAATs).

Some studies have detailed the benefits of high frequency or continuous auditing as increased reliability and trust (ISACA, 2010; Vasarhelyi, Alles, & Williams 2010). However, they also cited the high costs associated with conducting frequent audits.

6.2 Continuous monitoring and continuous auditing

Continuous monitoring has been described as the process and technology applied in detecting compliance, risks, and controlling issues facing an organization's financial and operational processes (ISACA, 2010; Kyriazoglou, 2012; Chiu et al, 2014).

CM tool (a softwarepackage) is a technology that helps the organization to continuously review the processes and transactions in an organization (Vasarhelyi, Alles, & Kogan, 2004; Kyriazoglou, 2012).

In the technology predefined-controls (defined by the organization) need to be built in, sothat the software can detect anomalies in the transactions and processes of an organization. CM tool (e.g Caseware Cafi) has the feature that it sends an alert to line managers in an organization, as soon as the technology detects a deviation. When a line manager clicks on the deviation, the root cause of the deviation will be shown, which enhances the ability of the management to quickly identify, analyse and solve issues before escalating into bigger problems.

Put into context as an example to illuminate on the importance of continuous monitoring, an organisation that has implemented a control system realises that certain purchases can by-pass the procurement procedures and actually get paid for. The malpractice can continue as long as it is not detected. A continuous monitoring system can detect the problem at an early stage and help the management restore integrity immediately, instead of having to wait for a traditional audit once a year. Most organizations used to practice a quarterly or annual audit on the organization activities, before adopting continuous auditing (Kyriazoglou, 2012, Alles, Kogan, & Vasarhelyi, 2004).

Continuous monitoring and auditing are both automated programs that support an organization in safeguarding organizations against risks, regulatory activities, and agreement costs (Kyriazoglou, 2012).

Continuous monitoring helps the management team to continually review the organization's processes regarding their adherence and nonconformity to the expected levels of performance and effectiveness (Kyriazoglou, 2012). Every organization has predetermined standards that facilitate the organization to achieve its goals and objectives, especially in budgeting. A continuous review makes sure that the processes do not deviate from the path and it assures the chief executives the ability to attain maximum performance.

Alles, Kogan and Vasarhelyi (2002) described continuous auditing as the use of modern IT systems applied to the conventional audit products to perform control and risk assessments. Vasarhelyi et al. (2010) say that the role of continuous auditing is to monitor the functionality of internal controls, verification of data integrity, and dynamic measurement of risk for audit planning. Continuous audit falls under the responsibility of an internal control/audit department of an organization.

Alles et al (2008) surveyed the state of continuous auditing in firms. They reported that the concept is increasingly being put into practice in many organizations. Brown et al (2007) mention the importance of information technology and web-based applications in making monitoring and control of operations through continuous auditing. The call for research regarding continuous audit stems from technical, organizational and cultural changes. Organizations are increasingly coming under pressure to improve their levels of transparency and accountability.

The six-sigma theory and the theory of constraints (both from the field of process improvement) can be used to understand the origin and development of CA and CM on top of primary business processes. The development of a framework for the implementation of CA/ CM programs is preceded by need identification (identification of bottlenecks). The Theory of Constraints is a methodology for identifying bottlenecks that stands in the way of reaching objectives, and then systematically improving that bottleneck until it is no longer a limiting factor (Nave, 2002; Hines, Holweg & Rich, 2004).

6.3 Components of Continuous Auditing

Although both CM and CA are two related programs, each program has its internal parts. CA is composed of three components: continuous control monitoring (CCM), continuous data assurance (CDA), and continuous risk monitoring and assessment (CRMA) (Halpert, 2011).

6.3.1 Continuous data assurance

CDA is responsible for verifying the validity of data gathered in the information system during auditing (Halpert, 2011). This component relies on software to gather data from the IT programs, which is then matched against business rules to give more insights regarding assurance. Additionally, the CDA software is purposely used to monitor things like transactions where a comparison is done between the obtained data and the set benchmarks so as to locate any anomaly in the transaction ("Continuous Audit and Monitoring - PwC Vietnam", 2017).

6.3.2 Continuous controls monitoring

CCM is composed of many procedures that are used to monitor the effectiveness of the internal controls (Halpert, 2011). CCM is dependent on automatic procedures that function with the assumption that both controls and monitoring procedures can be formalized. CCM is dependent on CDA, and therefore none of these programs can work independently. The purpose of CCM is to monitor access control, business or organization processes, and to ensure system configuration (Halpert, 2011).

The purpose of combining these two processes is because they are used to ensure a complete and reliable picture of the audit process. When CCM is used, and no errors are detected, it doesn't mean there are no errors at all. However, when controls are continuosly shown to have been implemented correctly, the validity of the conclusion from the data can be assumed ("Continuous Audit and Monitoring - PwC Vietnam", 2017).

6.3.3 Continuous risk monitoring and assessment (CRMA)

CRMA is a risk measurement tool that is used to initiate audit planning (Halpert, 2011). It is also a real-time process that provides an integrated overview of risks by gathering data across all functional tasks in the business with the goal of assessing risks exposure and to give reliable assurance concerning the organization's assessment. CRMA is the overall reporting tool for auditing ("Continuous Audit and Monitoring - PwC Vietnam", 2017)

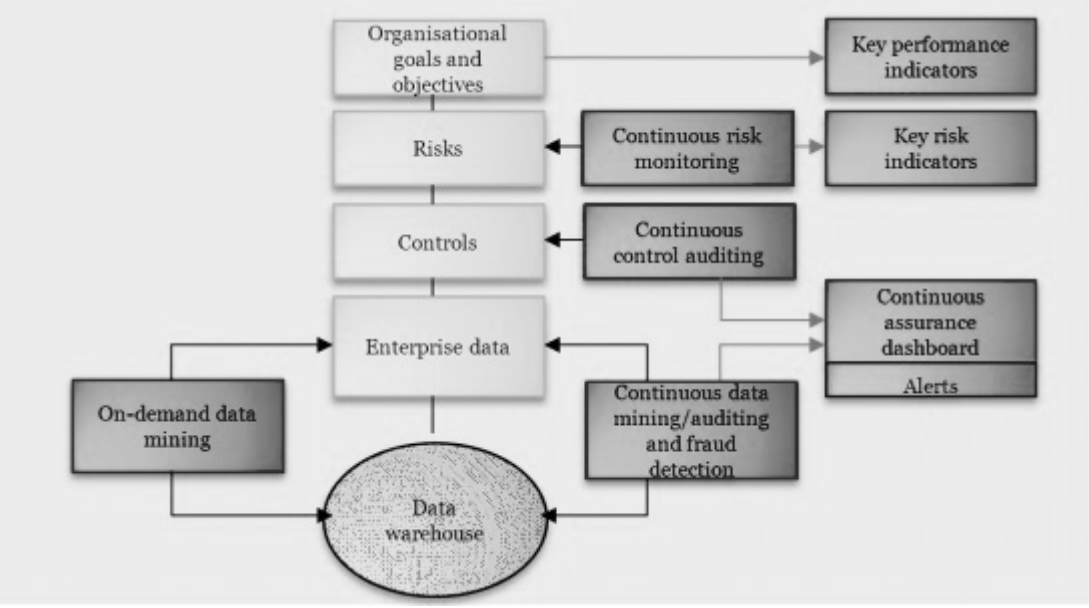

Figure 3 Model adapted from: ("Continuous Audit and Monitoring - PwC Vietnam", 2017).

From Figure 3 it is clear that the components of CA indicate a direct, complementary relationship. As can be seen in the figure above, CRMA is used to monitor the key performance indicators. Other activities supported by the model include control monitoring, transaction and activity monitoring and the investigation of potentially unsuitable activities that might have been noted.

Finally, these components also facilitate continuous reporting of findings to stakeholders ("Continuous Audit and Monitoring - PwC Vietnam", 2017). The common issues that are witnessed through the application of the above mentioned components of CA include: timely detection of transaction errors, any abuse of financial resources and any process that indicate non-compliance. Other issues include quick identification of possible issues that require a risk assessment ("Continuous Audit and Monitoring - PwC Vietnam", 2017).

The advantage of using CM and CA together is the fact that they provide a continuous assurance ("Continuous Audit and Monitoring - PwC Vietnam", 2017). Many organizations have found that continuous control monitoring is a supportive process to continuous auditing. When continuous auditing is used independently, some errors in the business process may be omitted. CM is used by a management team to generate the possible errors in the control processes while continuous auditing comes in to assess the audit activities. Thus, when used together, the programs provide a reliable continuous assurance.

According to Chan and Vasarhelyi (2011) some organizations have realized that it is more effective when both programs are used to complement each other. From the comp-

lementary relationship observed in the components of continuous auditing, a combination of the programs supports continuous assurance.

6.4 Difference traditional auditing and continuous auditing

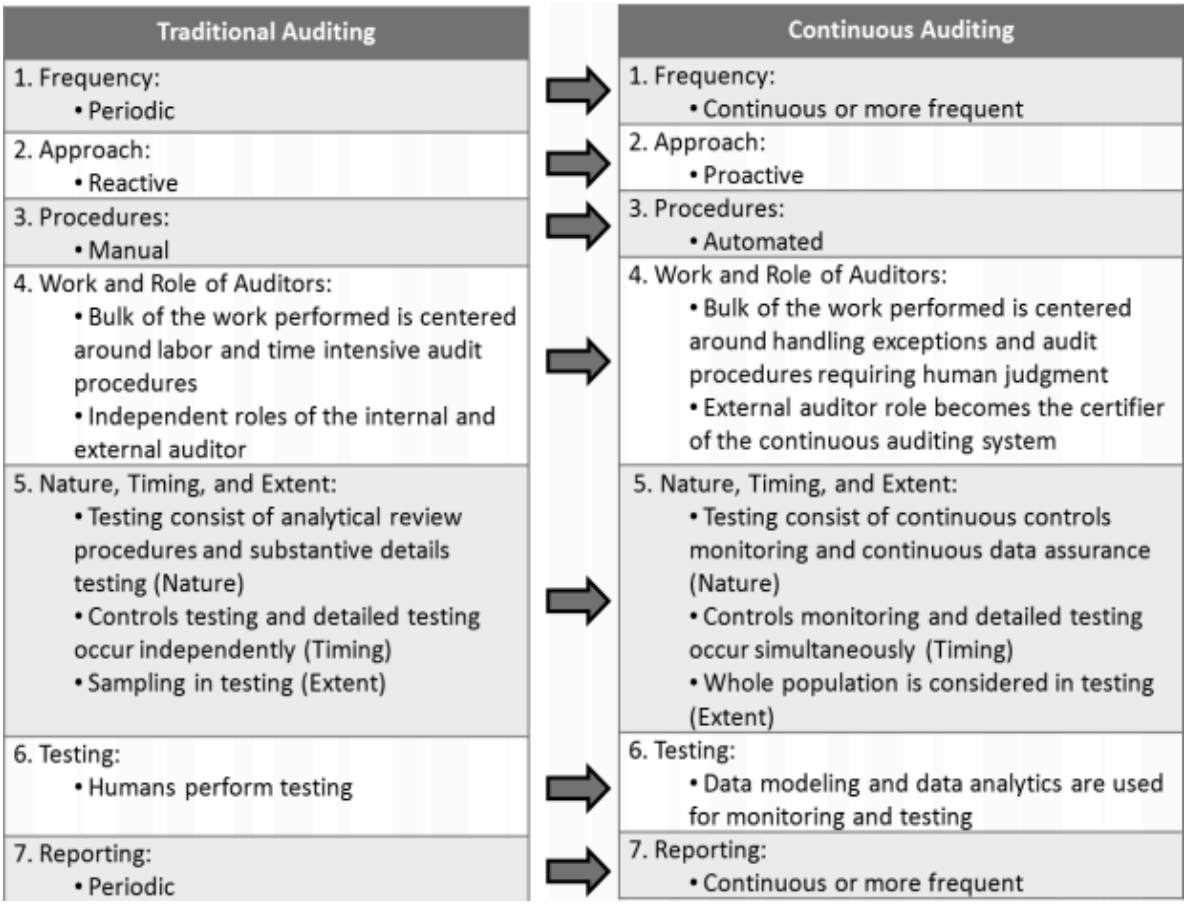

Figure 4 Model adapted from: Chan & vasarhelyi (2011)

A comparison study by Chan & vasarhelyi (2011) on the relationship between real time continuous monitoring and the traditional study shows that every approach has its challenges, although the automated CM and CA have had countable achievements.

According to Chan and Vasarhelyi (2011) the automated CM and CA programs are based on software that is supported by the IT in the organization. The traditional auditing process involved auditors who used to gather data from an organization's processes and, subsequently, carry out an analysis of that data. After that, the results concerning the detected errors were produced.

When comparing the period it takes to complete an auditing process using the traditional methods and the current automated methods a great transition has taken place. Namely, the process has gone from taking place yearly to quarterly to instanteously.

Also, the reliability of the results produced by the audit process in the earlier auditing process is not comparable to the current automation (Park et al, 2014). Many current studies have supported the effectiveness of automated CM and CA process, and they have also criticized the traditional auditing processes concerning their failures and, sometimes, their importance (Chan & Vasarhelyi, 2011).

6.5 Benefits of continuous monitoring and auditing

One of the key benefits of CM and CA implementation is not only having a smooth and effective continuous assurance, but also helping in the prevention of any potential risks. During continuous monitoring, a management team is in a position to detect the anomalies in the functional process that are set to correction before audits, thus ensuring a preventive measure. A strategy of CM and CA that makes it reliable in reducing the risk of financial loss is the early detection of errors from the routine assessment.

The advantage of CM and CA is that errors can be sorted out and resolved, before escalating and becoming a real problem. In the earlier auditing methods, scheduled audits were set in different period, such as quarterly and annual audits. These audits and monitoring were less effective, since they detected errors that had already happened, such as huge financial loss (Kim, 2011).

Another benefit of continuous auditing and monitoring solution is the provision of additional management information that is used in driving efficiencies in the monitoring process (Kyriazoglou, 2012). The availability of continuous monitoring solutions provides many organizations with data that is used to set up and fix other processes in an organization. Another benefit of CM and CA is the detection of anomalies, one can learn from the anomalies and actions could be undertaken to improve the processes in the organization and in this way continuously improve the organization. The learning of anomalies could also help to improve the control of the organization.

Additionally, the control of functional processes regarding the use of continuous monitoring and auditing has heightened the scope of coverage (Masli et al., 2010). In the past decades, these functions relied on sampling methods that were unreliable, since they lacked accuracy and precision. The automated monitoring and auditing have high precision levels, and its operational status provides accurate data that is very reliable in setting new standards. The automated auditing has also achieved 100% coverage of transactions when compared to the sampling methods (Masli et al., 2010).

Continuous monitoring and auditing are targeted for provision of additional assurance concerning high-risk processes (Hunton, Mauldin, & Wheeler, 2008). Highly risky processes have the potential of bringing down a whole organization and, therefore, they require close monitoring. CM and CA programs have allowed flexibility in the

ever-changing regulatory environment. Additionally, CM and CA programs have allowed a sequenced functionality regarding priority. In every organization, there are distinct priorities, which require attention of different magnitude. Rules are applied sufficiently and more frequently on the prioritized processes, thus giving a smooth and reliable assurance process (Hunton et al, 2008). The organization can use CM and CA for assurance on the transaction streams, whenever their stakeholders need it.

By using continuous monitoring, the reduced chances of frauds and losses have increased the chances of high levels of performance (Hunton et al, 2008). In addition, CM and CA improve decision-making when the organization monitors the processes or transaction stream correctly, since then essential insights are gathered efficiently and timely.

According to Martin (2012) the use of continuous monitoring in mitigating risk in the financial processes has six key benefits to an organization. CM controls are easier to operate and, therefore there is less room for errors. Once the complexity of setting controls is achieved, the rest of the operations are easier to carry out. Another benefit is that controls take a shorter time and overhead to operate than when it would be done manually. Additionally, the CM program allows escalation of procedures to facilitate control operations. The set procedures in the CM program will give reliable information regarding the status of the functional operations (Hunton et al, 2008). Another essential benefit of the CM and the CA programs is that the control documentation is archived centrally, thus resulting in a reduced overhead required for audit teams as well as the control operators.

Martin (2012) postulates that in CM, the internal testing and control self-assessment data is centrally archived, thus promoting less overhead communication plans and results to the external auditors. Also CM promotes shorter lines, a continuous monitoring tool sends an alert to the right person that has to take action when an anomaly is detected. The reduced number of overheads in the CM operations promotes precision and reliability of CA programs. Additionally, Martin (2012) depicts that CA makes the internal audit more effictive concerning its focus and, therefore, it has the ability and potential of moving the automated process from compliance to optimization.

6.6 Barriers to adopting continuous monitoring and auditing

Apart from the potential benefits of adopting CM and CA programs, there exist barriers within many organizations and businesses (Rikhardsson & Dull, 2016). The most common barrier is a misunderstanding of the CM and CA techniques (Deloitte.com, 2017). Due to complexity in technology and, particularly, IT, adopting automated continuous monitoring and auditing has been a great challenge for many firms.

Another barrier is the issue of implementation. When the new method lacks support in the organization, this will make the implementation process a cumbersome job. Additionally, internal barriers in the organization are another contributing barrier in adopting continuous monitoring and auditing. Other barriers exist due to impact on the business or the organization (Deloitte.com, 2017). CM and CA programs impact the internal audit, including other functions of the enterprise or the organization. One of the most affected areas includes the cost implementation and head counts. The cost of implementing one program in the organization including, services like maintenance and security, make the enterprises to incur extra costs of the auditing and monitoring the process.

Other areas that are impacted by the implementation of CM and CA include audit plans and the quality of audits (Deloitte.com, 2017). When looking at the planning of audit, it is highly influenced by the automated CM and CA. The impact of CA and CM on the IT system of the organization is another consideration regarding the barriers to adopting CM and CA (Deloitte.com, 2017).

Another barrier is the priority of implementation (Rikhardsson & Dull, 2016). In the management framework, various processes are given priorities more than the rest. Like in the prioritizing of controls used in the audit activities, they should be implemented using factors such as risk levels, the significance of the audit evidence and the simplicity of implementations. The significance of audit activity is also a contributing barrier in the implementation process whereby some audit and monitoring activities have more weight as compared to others.

Concerning the ease of implementation, not all controls carry the same weight concerning their complexity. Ensuring full integration of the controls with the IT system of the enterprise is a very complex stage that causes a barrier to implementation (Rikhardsson & Dull, 2016).

Additionally, preparation of the internal audit team for developing and adopting continuous monitoring and auditing is another active barrier (Hunton et al, 2008). These programs are implemented to facilitate effective and reliable audit processes and, therefore, they require a lot of preparation.

The type of IT system in the company or an organization is another barrier faced on implementation. Some of the IT systems may not support the automated monitoring and auditing controls, thus making it difficult to implement the controls.

The culture of the organization also contributes to the implementation and adoption of the CM and CA controls (Swanson, 2010). In an organization that is frequently implementing and updating the IT system, implementing and adopting the automated monitoring and auditing systems has a better chance of success. Realistic expectations also contribute to barriers of implementation in the sense that large organizations have large and complex systems that affect the implementation processes as well as the adoption of

these programs. Similarly, small organizations will not require complex programs for their system.

The majority of organizations have started by implementing the CM and CA in phases and from one section to the other to facilitate proper compliance and competencies by their audit managers as well as to enable sustainability (Swanson, 2010).

Table 1 Summary of benefits and barriers to CM and CA Adoption

Benefits	***Barriers***
Enhances effectiveness of internal controls Provides critical evidence Improves reliability of data Increases operating effectiveness Early detection of errors Organizational learning from the anomalies Additional management information/frequent reports 100% coverage of transactions Improves decision making when the right things are monitored Documentation is archived centrally Controlling and monitoring takes less time (automatically) Less overhead costs (less communication needed) Information can be seen in a dashboard which lead to a shared understanding of the situation among stakeholders	Misunderstanding of continuous monitoring and continuous auditing and implementation issues Perceived impact on the enterprise related to costs, head count, audit plans, workload, etc. Lack of willingness to develop and adopt by people in the organization No support by top management Inappropriate experience and success regarding IT-based systems, and functions in which they have been deployed will affect CM and CA decisions and initiatives. The need for time and commitment to realise the benefits of CM/CA impacts its implementation.

6.7 Levels of progress towards continuous monitoring and auditing

Vasarhelyi et al (2004) determines four levels of audit objectives:

- Level 1: Verification of the minor elements of transactions that involves movement of information and money at the data level.
- Level 2: Compliance verification; Assurance of appropriate use of the measurement rules applied in transaction processing for instance (GAAP).
- Level 3: Verification of Adequacy of estimates and their assumptions including consistency of high levels of measurements.
- Level 4: Auditing and interrogating high-level judgments and realities concerning the organization.

EXHIBIT 1
Levels and Characteristics of Analytic Monitoring

	Level 1 Transactional Verification	Level 2 Compliance Verification	Level 3 Estimate Verification	Level 4 Judgment Verification
Procedures	Rule/waterfall review of data	Formalization of standard relationship with XML derivative	Upstream/down-stream verification	
	Process interruption	Continuity equations	Continuity equations	Continuity equations
	Value chain transaction tracking	Structural knowledge	Value chain relationships	Expert systems
Degree of automation	High	Mixed	Mixed	Low
New paradigms procs., techns.	Continuous reconciliations	Continuity equations	Continuity equations	Continuity equations
	Invisible tracking/ transparent markers		Extensive use of exogenous data	Use of exogenous data
	Automatic confirmations			
	Rule-based trans. evaluation			
		Time-series/cross-sectional analysis	Time-series/cross-sectional analysis	Time-series/cross-sectional analysis

Figure 5 Model adapted from: Vasarhelyi et al (2004)

Level one, as described in Figure 5 above, is used to detect transaction irregularities that incorporate traditional methods of auditing. In level two, there is automation of the CA process to verify on compliance with the application of rules. In the 3rd level (Estimate Verification), formal models of IT are used which include incorporation of data in both ERP and CA systems. Analytical review procedures are also used which are based on both internal and external parameters. In the fourth level, (Judgment Assurance), sophisticated ERP systems are applied for high-level judgment and making decisions. In this level, the modern CA has fully automated the system (Vasarhelyi, Alles and Kogan, 2004).

Another level of progress model is the one by KPMG (2017), which has an extra fifth level, as illustrated in Figure 6 below.

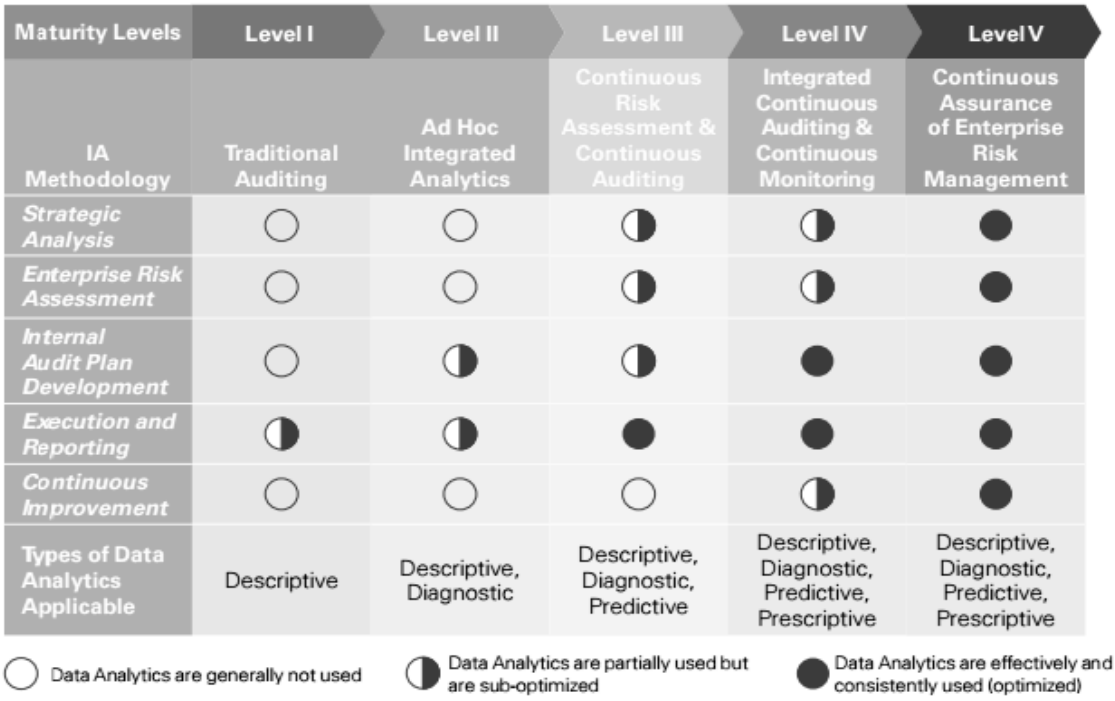

Figure 6 Model adapted from kpmg.com (2017).

In the audit maturity model (KPMG, 2017) the first level (Traditional auditing) involves traditional auditing. In level one, the organization operates under the basic data analytics such as Excel sheets, spread sheets and MS access. In this level, the only available services in the auditing process are just descriptive in nature and the methodology used includes execution and reporting (KPMG, 2017).

The second level is Ad Hoc integrated Analytics, which is an advanced audit approach. In level II, the audit system is usually descriptive and diagnostic. In level II, the data analytics are partially employed, but also sub-optimized. In the second level, the management team is involved in internal audit planning and development as well as execution and reporting (KPMG, 2017).

The third level (continuous risk assessment and continuous auditing) incorporates services, such as strategic analysis and risk assessment. In level III, an additional aspect of the auditing process is included, which involves prediction on top of descriptive and diagnostic analytics. The fourth level is integrated continuous auditing and continuous monitoring (KPMG, 2017). In level IV, the analytics applied in the auditing process include descriptive, diagnostic, predictive and prescriptive. In level IV, some of the internal auditing methodologies are partially applied in the auditing process and, therefore, not fully implemented. The auditing methodologies that are partially used in level IV include continuous improvement, risk assessment and strategic analysis (KPMG, 2017).

The fifth level is continuous assurance of enterprise risk management, which is the fully implemented level of audit methodology. In level V, the enterprise is in a position

to use all the internal auditing methodologies (KPMG, 2017). A fully implemented auditing program stands at maturity level V. In the fifth phase of audit maturity, the organizations can align their goals and objectives with risk management approaches, prioritizing the goals and objectives in a continuous progress and they can create a dynamic plan that is used in responding to any changes in the business.

6.8 Internal versus external audit

An internal audit involves close monitoring within the business or the organization as well as evaluation of how risks are being managed, governing the business and ensuring proper working of the internal processes (Cohen & Public Company Accounting Oversight Board, 2013). The scope and nature of audits vary significantly within different domains, but the core priority is to ensure that internal issues affecting the business are taken care of. External audits, on the other hand, are autonomous investigations of any business or organization process that is conducted following statutory concerns, such as law requirements. Audits in the public sector are done for the interest of the public; while in private sectors audits are carried out to ensure that there is performance maximization within an organization (Vasarhelyi et, 2012).

Internal auditors have a key role in providing an unbiased and objective view to organizations (Warren & Smith, 2006). In the provision of unbiased, objective views of the organization, the internal auditors provide independent assurance concerning effective operations in organization’s risk management measures, governance and internal control processes.

External auditors have the responsibility of validating the company’s financial information. After evaluating the organization's status, the external auditors provide reasonable assurance concerning the financial status regarding their compliance with the accounting framework. External auditors also perform a risk assessment of the organization by examining the electronic accounting data system by evaluating the data for irregularities and comparing the data with that of other organizations (Vasarhelyi et al, 2012).

When the organization makes use of continuous audit the internal auditors could rely on that for a more reliable view of the organizations. Through the application of continuous audit, the internal auditors stay updated and they can use the information for early corrections of any detected errors in the audit process. Many internal auditors have a positive perception regarding continuous monitoring because it makes it easier for them to acquire reliable and timely information concerning the company’s financial status, risks, and the available predictions (Vasarhelyi et al, 2012). From all parties in

the organization it is most logical that CA fall under the Internal audit department of the organization.

According to Cohn (2011), in most occasions the work of external auditors relies on the work of internal auditors. When external auditors carry out the audit themselves, it becomes complex for them to make decisions that are influenced by some factors found within the internal environment of the organization. In high-risk areas, external auditors are forced to rely on internal auditors for decisions and future predictions.

The roles of both internal and external auditor should not change regarding the implementation of continuous monitoring and auditing processes (Cohn, 2011).

6.9 The three lines of defence model

Concerning the future of auditing, the CM and CA programs need to support both internal and external auditing. The data analytics methodologies provide insights for management teams and other stakeholders of the organization, as well as giving them the opportunity of making reliable decisions for the organization. According to Stevens (2016) a three-line model of risk governance need to be adopted in risk management.

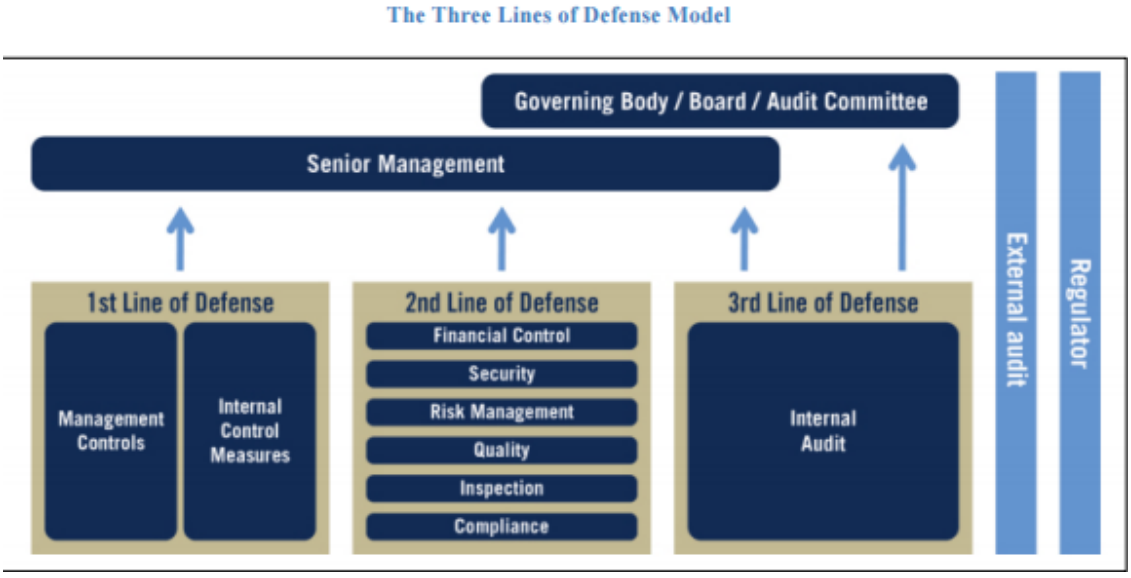

Figure 7 Model adapted from: Stevens (2016).

The three lines of defense shown in Figure 7 involve the following. The first line of defense is where the management team complies with risk management processes and implementation of risk management process. The second line of defense involves the establishment of policies and process for ensuring risk management and overseeing the key areas that are likely to face risks. The third line of defense is the last defense measu-

re, whereby the internal audit department is involved (Stevens, 2016). The three line of defense model is adaptable for use in many organizations for future benefit and auditing.

6.10 Business Process Management

The accounting side of CM and CA would probably be not enough for this study that is why also the side of business process management will be briefly mentioned in this research. The reason for this is that CM and CA not only need to improve the internal controls of the municipalities towards the youth domain, but also needs to facilitate and improve the processes of the youth domain. With the processes in the youth domain is meant the payment proces to care providers, contract monitoring and procurement. The aim is to improve and facilitate the processes by using CM.

As the business and organizational environment change, organizations need to learn to adapt to those changes. Hines, Holweg and Rich (2004) vividly explain the importance of organizations localizing the lean concept. Lean thinking refers to an approach for elimination of waste in every aspect of the organization's operations. Within the context of this study, lean thinking is appropriate for municipalities and other public organizations. The concept emphasizes an organization's understanding of the value customers see in products and services, the value stream (the entire flow of product/service production from start to finish), continuous flow to minimize wastage, act upon customer's needs and setting the targets for perfection. But even as organizations work towards gaining more with less, through lean thinking, they are advised to focus on solving process and business problems that may affect their performance.

Six sigma is believed to be a rigid and structured investigation methodology that helps to understand process elements more completely (Nave, 2002). It provides the framework for defining, measuring, analyzing, improving, and controlling processes. Effective implementation of controls in organizations also depends on how constraints are managed.

The theory of constraints provides a structured explanation of how to manage constraints thorough. It involves identifying, exploiting and subordinating processes, as well as elevating constraints and repeating the cycle. An summary of the theories of Six Sigma, Lean Thinking and Theory of Constraints can be found in Figure 8.

Improvement Programs			
Program	**Six Sigma**	**Lean Thinking**	**Theory of Constraints**
Theory	Reduce Variation	Remove Waste	Manage Constraints
Application Guidelines	1. Define 2. Measure 3. Analyze 4. Improve 5. Control	1. Identify Value 2. Identify Value Stream 3. Flow 4. Pull 5. Perfection	1. Identify Constraint 2. Exploit Constraint 3. Subordinate Processes 4. Elevate Constraint 5. Repeat cycle
Focus	Problem Focused	More with Less	System Flow

Figure 8 Model Improvement Programs adapted from Nave (2002)

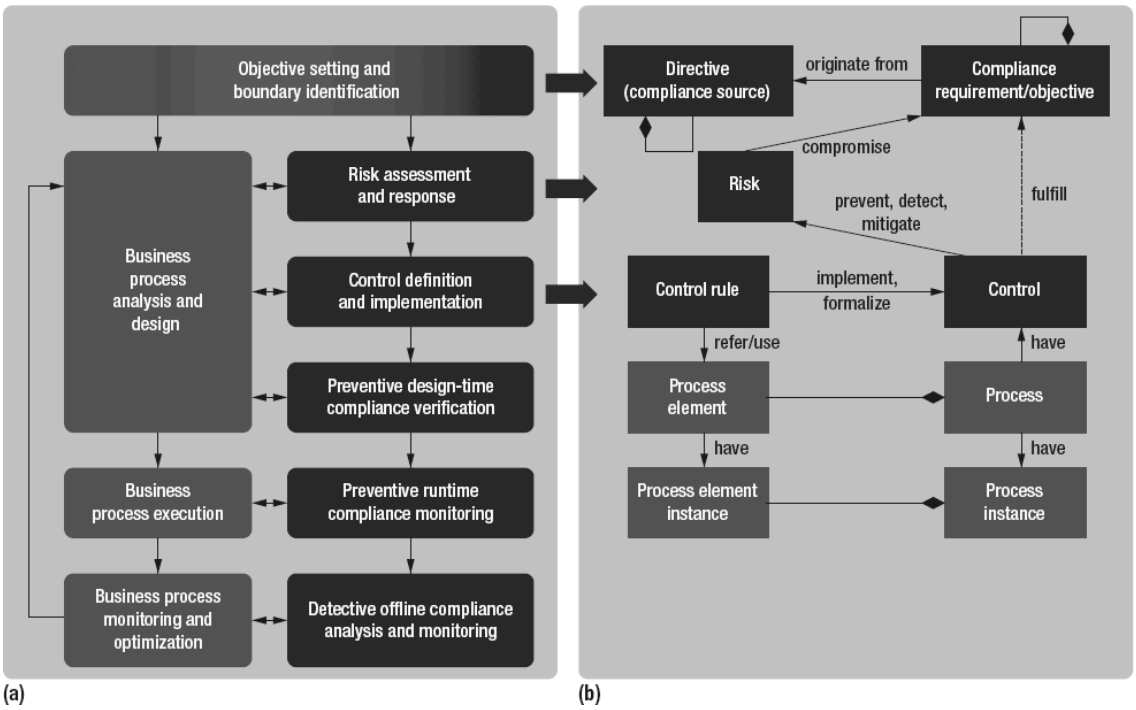

Figure 9 Model BPMC Framework retrieved from Turetken et al. (2012)

Turetken et al. (2012) provided a Business Process Compliance Management (BPCM) Framework that can be used to investigate compliance as follows:

In Figure 9 is shown (a) Operational components of the Business Process Compliance Management Framework incorporating the BPM Lifecycle, (b) Conceptual model for the key elements of the Compliance Repository. The framework of Turetken et al. (2012) incorporates patterns to facilitate a business user-friendly way for defining internal controls for recurring compliance requirements in a graphical notation. In addition, the framework can help to understand important elements that need to be taken into account, when an organization want to use continuous monitoring to improve their organization.

In continuous monitoring predefined business controls need to be build in a CM tool such as Caseware Cafi, as mentioned before. This means that an organization that wants to use CM technology, need to have a clear view of their objectives/ requirements. Than controls can be built in the tool, that fulfils the objectives/ requirements of the organization in a business friendly way. Figure 9 show that risks should be mitigated, detected and prevented by control, in the case of CM the built-in controls. When a risk is detected in an organization, the CM tool alerts the line managers, who can take actions to diminish the risks. Runtime of controls need to be known beforehand, in case of CM it will be at or near real time.

6.11 Summary

CM and CA are two essential programs that facilitate detecting compliance, risk and control issues facing the organization's financial and operational processes. The programs rely on the IT system of an organization for implementation. CM and CA work together, but each program is independent. CA is composed of three components, which include continuous control monitoring (CCM), continuous data Assurance (CDA) and continuous risk monitoring and assessment (CRMA).

One of the key benefits of CM and CA implementation is not only having a smooth and reliable continuous assurance, but also helping in the prevention of any potential risk. Another benefit of continuous auditing and monitoring solution is the provision of additional management information that is used in driving efficiencies in the monitoring process. CM makes the internal audit more efficient concerning its focus, and therefore it has the ability and potential to move the automated process from compliance to optimization.

Apart from the potential benefits of adopting CM and CA programs, there exist barriers within many organizations and businesses. The most common barrier is a misunderstanding of the CM and CA dimensions. Due to complexity in technology and, particularly, IT, adopting of automated monitoring and auditing has been a great challenge for many firms. Another barrier is that the internal audit team first need to be prepared for adopting the continuous auditing, which costs time.

An internal audit involves close monitoring within the business or the organization as well as evaluation of how risks are being managed, governing of the business and ensuring proper working of the internal processes. Internal auditors have the key role in providing an unbiased and objective view of an organization. External auditors have the responsibility of validating the company's financial information.

Concerning the future of auditing, the CM and CA programs when applied support both internal and external auditing. The data analytics methodologies provide insights

for a management team and other stakeholders of an organization, as well as giving them the opportunity of making reliable decisions for the organization. In the software designed for data analysis, some software has been invented which only requires feeding the data and waiting for actionable results. An example of such continuous monitoring software is Caseware Cafi.

7 CHAPTER 3: APPLICATION DOMAIN

7.1 E-government

Garson and Khosrow-Pour define e-Government as "The use of or application of information technologies (such as Internet and intranet systems) to government activities and processes in order to facilitate the flow of information from government to its citizens, from citizens to government and within government" (2008, p.313). E-Government is a fashionable concept for many government organizations around the world. They use information and communication technologies to improve the effectiveness of public sector institutions (Heeks, 2001).

The application of all forms of digital ICTs is used to enhance the interactions between governments and external stakeholders (Yildiz, 2007). But it is not all about communication. In the Netherlands, for example, most of the government business transactions are carried out digitally (Gottschalk, 2009). E-Government covers a wide continuum of activities that can be categorized into three domains (Heeks, 2001):

- E-Administration – involves improving the effectiveness of government processes
- E-Citizens and e-Services – involve connecting the public
- E-Society – involves building external interactions

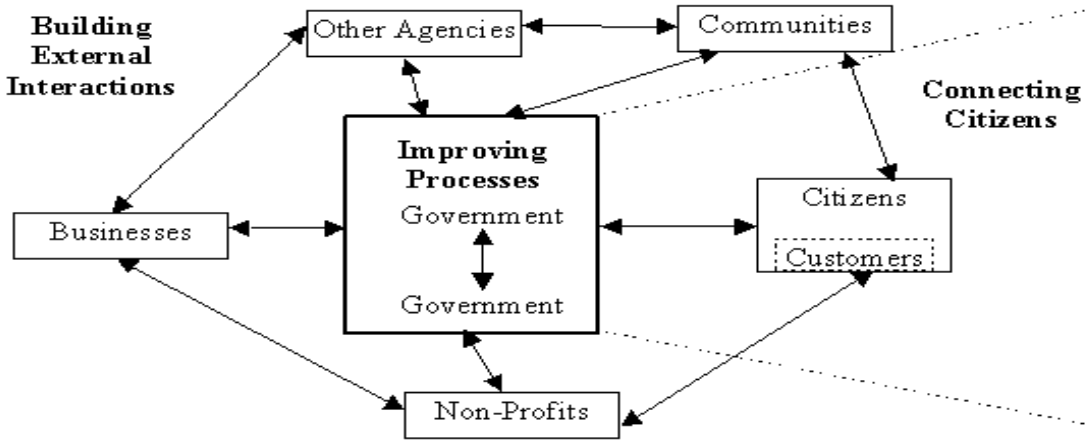

Figure 10 Model focal domains for e-Governance Initiatives –Adapted from Heeks (2001)

In discussing the barriers and benefits in the adoption of e-Government Gilbert, Balestrini and Littleboy (2004) argue that e-government enhances public trust, financial

security, information quality, and saves time and money. The major roles of an e-government program are to reduce government costs, inefficiencies, ineffectiveness and inconvenience (Khayyat, 2010).

According to Figure 10, the first and foremost function of e-government is improving government processes. These processes include government business processes, connecting with the citizens and enhancing external interactions. Regarding improving business processes, e-government initiatives are geared towards improving the internal efficiencies and effectiveness of the public sector. Some of the functions include reducing process costs (reducing both time and financial costs) and managing process performance through better planning, monitoring and controlling of key resources, such as finance and personnel (Heeks, 2001).

In the context of the present study, the e-government program links municipalities to care providers in the social domain. The standard message traffic helps to prevent mistakes and to save execution costs. The reason for this is that there are standard codes developed that municipalities and care providers use to exchange information. Also, there are distinct product codes for the communication with institutions that provide care for youth (iJW) and the care of elderly and people with a disability (iWMO). Therefore, one knows exactly which code is part of the Youth Law (Jeugdwet) and which code is part of the Social Support Act (WMO).

The standard message traffic works through XML language and, by working with standard product codes, care providers and municipalities understand each other (VNG, 2017). According to Heeks (2001), e-government can be categorized into three domains. The exchange of information between municipalities is a good example of the domain of E-administration, which helps to improve the effectiveness of a government processes. Municipalities use the standard message traffic to communicate with care providers, in order to know which of their citizens get care of which care provider and, also, what the duration of care is. Furthermore, the municipalities know exactly how much they have to pay the care providers for the care they provide to their citizens, since the invoice information is shared through the standard message traffic as well (i-sociaaldomein, 2017). Therefore, the standard message traffic is a good example of how e-government is being used in the Netherlands to reduce processing costs (time and financial cost) and to reduce errors in communication.

Besides that, an e-Government program is expected to help the government to make strategic connections between various arms of government, agencies, and various government levels (Gilbert et al, 2004).

One of the critical roles played by e-government is connecting the public. Citizens are the cornerstones of any government and, thus, there should be an effective relationship between the government and its citizens. As stakeholders in their government, citizens are entitled to services and transparency. However, as voters who legitimize the

government, the e-government offers broader functions than offering efficient and effective services (Gil-Garcia, Chengalur-Smith and Duchessi, 2007). To begin with, e-government is essential for communication between the government and citizens. For example, the government communicates the public sector activities relating to accountability.

This makes those in the public service more accountable to the citizens. But communication is two-way. As the government talks to the citizens through e-government, it must also listen to them through the same system. Listening to citizens is important to the government because it allows public participation or democratization of processes, which leads to public sector decisions and actions. Finally, concerning the connection with the public, e-government improves services delivered to the public at high quality, convenience and low cost (Gil-Garcia, Chengalur-Smith and Duchessi, 2007).

Last but not least, e-government plays a crucial role in building external interactions. These interactions involve building relationships between government institutions, non-profit organizations and the private sector (Heeks, 2001).

These initiatives incorporate the process improvements mentioned earlier, including improvement of government processes that reduce process costs (reducing both time and financial costs) and managing process performance through better planning, monitoring and controlling of key resources, such as finance and personnel. It improves the interaction between government and business through digitization of regulation, procurement and services to the private sector and non-governmental organizations. It involves partnership building to enhance social and economic empowerment as a partner and as a facilitator (Heeks, 2001; Gilbert et al, 2004; Bharosa, 2015).

7.2 Governance in Municipalities in the Netherlands

In the Netherlands the government is subdivided into the central government, provinces and municipalities, each with their own tasks and roles. Only the central governement has the authority to change those tasks and roles of the provinces and municipalities, by law, whenever it thinks this is necessary. There are 388 municipalities in the Netherlands (rijksoverheid, 2017).

A municipality performs all tasks that are of immediate importance to its residents and is, therefore, the closest governmental institution to the citizens. A municipality carries out national policies as well as its own policies. On many matters, a municipality can decide independently (Gemeentewet title 2, article 108). In addition, the municipality also carries out many national laws on behalf of the central government (rijksoverheid, 2017).

In the Netherlands every municipality has a city council, a committee of a mayor and aldermen, and a mayor (Gemeentewet, title 2, article 6) who are together responsible for the functioning of the municipality.

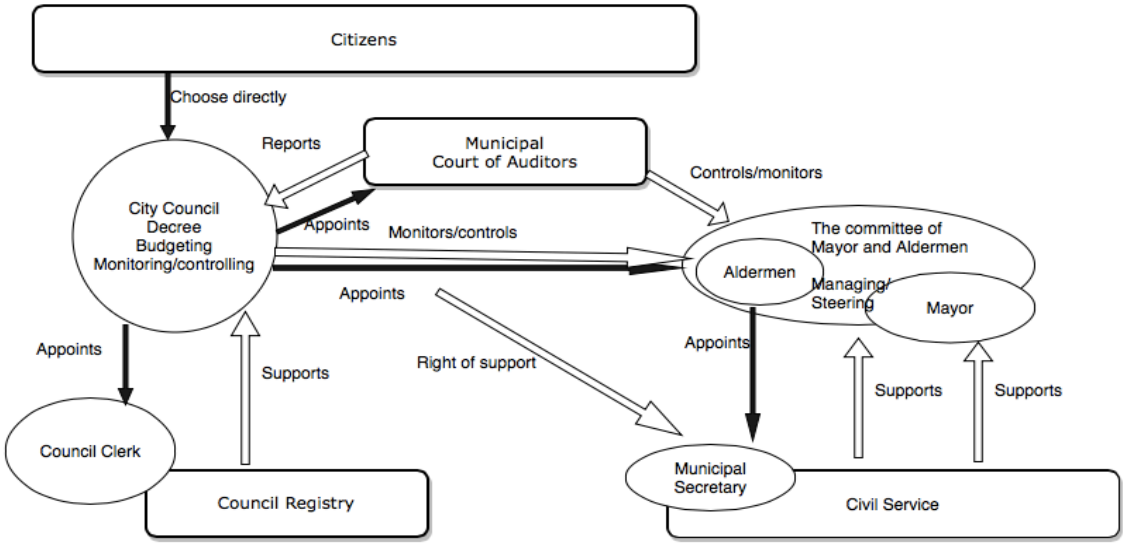

Figure 11 Model made by the author based on the regulation written in the law (Gemeentewet)

The city council is the highest organ of the municipality and is chosen every four years by the citizens. The main tasks of the council are establishing the main policies, monitoring the implementation of the main policies and to represent the citizens of the municipality (Gemeentewet title 2, article 7). Moreover, the city council sets the yearly budget for all tasks and activities of the municipality, as well as the financial resources that it expects to make available (Gemeentewet, title 4 article 189). Also, by regulation the city council sets the principles for the financial policy, as well as the financial management and establishment of the financial organization. This Regulation is there to ensure that the requirements of legitimacy, accountability and control are met (Gemeentewet title 4, article 212). The number of members of the city council is dependent on the size of the municipality and can range from nine members to 45 (Gemeentewet title 2, article 8). The mayor is the chair of the city council (Gemeentewet title 2, article 9) and the council clerk supports the city council (Gemeentewet title 2, article 107).

Together, the mayor and the aldermen form the committee of mayor and aldermen (college B&W, Gemeentewet title 2, article 34). This committee is responsible for the daily management of the municipality and is the first responsible authority for the finances of the municipality. The committee sends information to the city council concerning their meetings and activities (Gemeentewet title 2, article 52). The meetings of the committee are public, with the intent to involve the citizens of the municipality. The

city council controls the committee. The committee (College B&W) is held accountable for the policy/ management they have conducted over the year under presentation of the annual report and annual account by the city council (Gemeentewet title 4, article 197). In addition, the committee carries out periodic research into the effectiveness of its management and reports the results of the research to the city council (Gemeentewet title 4, article 213a). Furthermore, each alderman is responsible for one policy domain and can be held accountable. The city council can hire or dismiss aldermen.

The municipal secretary is in charge of the civil servants and forms the connection between the committee of mayor and aldermen (college B&W) and the civil servants (Gemeentewet title 2, article 103). The municipal secretary is responsible for the proper functioning of the organization of the civil servants and is present at the meetings of the committee of mayor and aldermen (college B&W). The organization of the civil servants (ambtelijk apparaat) is divided into departments, for example, welfare, social affairs and environment.

The city council can appoint a court of auditors (Gemeentewet title 2, article 81a). Larger municipalities in the Netherlands, like Amsterdam, Rotterdam, Utrecht and The Hague, also have a court of auditors (rekenkamer), which is an independent supervisor. The members of the court of auditors are checking whether the daily management of the municipality (college B&W) are working according the rules of the law (legitimacy), are working efficiently and effectively according to the policy and wishes of the citizens. The court of auditors reinforces the position and functioning of the city council with its investigation of the daily management and reports their findings to the city council (Gemeentewet title 2, article 81j).

7.3 Accountability of Municalities

In the Netherlands, municipalities are responsible for their own financial management, but all their financial activities are linked to certain laws and rules (Rijksoverheid, 2017). Some expenses are even compulsory for the municipality to make. For example, the expenses imposed by or under the law on the municipality (Gemeentewet title 4, article 193).

Business reporting refers to the practice where financial and non-financial information are disclosed about performance for auditing (Williams, Scifleet & Hardy, 2006). Governments are required to disclose such information for the purposes of enhancing governance, enforcement practices and to be accountable to their citizens. Municipalities in the Netherlands need to be transparent about their financial data (BBV, article 3). Not only so that it is clear to everyone how the money of the municipalities has been spent or is going to be spend, but also so that municipalities can be compared. Munici-

palities are, therefore, required to set up reports about their business/policy. In the Netherlands, for example, it is possible for citizens to follow the municipality on the website waarstaatjegemeente.nl. Here the citizens can see how their municipality performs according to other municipalities, both in a financial and non-financial manner (waarstaatjegemeente.nl).

Municipalities have rules that they need to follow for the preparation of financial reports, such as for their budget, multi-annual estimate (meerjarenraming), the annual report and the annual account (BBV, article 2). The requirements of the financial reports are stated in the decision regarding budget and accountability (Besluit begroting en verantwoording (BBV)). For example, the budget needs to consist of at least the financial budget and the policy budget. Then, the policy budget needs to consist of at least the program plan. The financial budget needs to consist of at least a statement of income and expenses, a statement of the financial position and an attachment with the estimate of the benefits and expenses per domain (BBV, article 7).

The fixed format of the accountability and budget documents enhances transparency and makes it easier to understand for the educated people in that field. In addition, municipalities have to let their annual account be checked by an external accountant (Gemeentewet title 4, article 213).

7.4 Tasks of Municipalities in the Netherlands

The tasks of a municipality are the following (Rijksoverheid, 2017):

- Keep track of who lives in the municipality. This happens in the Basic Registration of Persons (BRP).
- Issue official document like passports
- Give benefits to the citizens in their municipality who cannot provide for themselves.
- Is responsible for the housing of schools and grants money to students who need extra guidance.
- Make destination plans
- Make agreements with housing corporations.
- Responsible for constructing and maintaining streets, roads and cycle paths in the municipality.
- Fulfill the law of environmental conservation (Wet milieubeheer).
- Give subsidies to a pool or library in the municipality
- Ensure that business areas are well accessible
- Responsible of the social domain

As can be seen in the list above, municipalities have many tasks. Since 2015 the municipalities have more tasks, which were new for the municipalities (degemeente, 2017). These new tasks are also referred to as the social domain. The term 'social domain' encompasses all the efforts a municipality carries out concerning work, care and youth, based on the following laws: WMO, the Participation law (Participatiewet) and the Youth law (Jeugdwet).

In the broad sense, "social domain" also covers all related tasks. These include: maintenance of compulsory education, early school leaving, appropriate education, student transport, regular and special assistance, debt relief and (youth) health care (stimulansz, 2017).

7.5 Decentralization Social Domain

The central government decentralized the social domain to the municipalities since the first of January 2015. There were several reasons for the central government to decentralize. The first reason is that, after the financial crisis, the Netherlands fell into a weak economic climate. The second reason was that the Netherlands was a care society, but the costs of care were increasing fast. The third reason was that the central government wanted to organize the care of citizens easier and better. Therefore, the central goverment needed to think about how to organize things smarter, so that the economization of care could be kept to a minimal and the quality of service to the citizens would increase (stimulansz.com, 2017). Decentralization to the most visible level of the government was seen as the best solution. It is namely simpler and more efficient to handle care and aid locally in the municipality (shorter lines).

The central government supports the municipalities by giving them freedom and autonomy to arrange the tasks of the social domain in the way municipalities want. The municipalities only need to adjust to national standards, how they fill in their duties is completely their choice. In practice this means that the policy in the Dutch municipalities is not uniform. Each municipality can have their own policy and can make their own choices regarding the way in which to organize their tasks in the social domain (Rijksoverheid, 2017). This independence gives them the power to make customized offers to help people and to adjust to the local needs of their municipality (stimulansz.com, 2017). The shorter lines with citizens bring more opportunities for customized care and diminish bureaucracy. Moreover, municipalities can invest in prevention of problems. The overall need for social support may decrease if problems are diagnosed and addressed in an early stage. Since municipalities are the closest to citizens, they can signal things earlier than the provinces or central governement.

However, the three decentralizations within the social domain were new for the municipalities and, therefore, challeging. Municipalities needed to get a completely new view of the social services and support for their residents. In addition, work processes needed to be redesigned and new partnerships needed to be created.

In fact, the decentralization in the social domain caused a transformation for the municipalities, healthcare organizations and the people whom need care. This is the case, because the aim of the decentralization in the Netherlands was to shift from a welfcare society to a participating society in which people participate according to their capacity, with support for people in their own environment. That requires another way of thinking and acting (simulansz.com, 2017).

Municipalities now focus on checking what their citizens are able to do with their own strength or help of their environment, instead of focusing on what they cannot. People that really need care and support and who are unable to do it with their own strength or help of the environment will get support from the municipality. This means that municipalities also need to organize care and support for the citizens who need it. Providing care and support needs to be tailored according the capacity and needs of the citizens, which means that there are no standard packages.

Municipalities need to perform the tasks of the social domain within a fixed budget that they receive each year from the central governement (gemeentefonds) (Rijksoverheid, 2017). The responsibility of the budget means also controlling the costs. This requires a harmonisation of the organizational structure of the municipality.

One example of this is that municipalities need to work according to the principle of one family, one coordinator and one plan. An integral approach to multi-problem families leads to lower costs because of synergy, since families can make use of multiple services at the same time. When there is one coordinator, those services can be better coordinated. In addition, an integral approach also helps to serve the families better, since those families will only have one contact point instead of multiple and, therefore, the contact person has more knowledge about the family and can serve them better (Rijksoverheid, 2017).

Finally, the three decentralizations at the same time are not without reason. The municipalities can benefit from synergy, since the group of people can partly correspond over the decentralization domains (stimulansz.com, 2017). Therefore, the goal of the decentralization of the social domain is not only the transition, which means the transfer of responsibilities to the municipalities, but also transformation of the way of working.

As can be reasoned, the decentralization of the social domain is challenging for the municipalities: new tasks, new partnerships and transformations (cultural change). In addition, the municipalities need to do more tasks with less money (divosa.nl, 2017).

7.6 Youth Law

From January first, 2015, the municipalities are responsible for the total offer of Youth Care and Support. This means that municipalities must realize an appropriate offer of support and care for all young people within their municipality. The tasks and duties of the municipalities are written in the Youth Law (Jeugdwet). The services of the municipalities now range from universal and preventive support to specialised care of children and young adults until the age of 18 and, in some occasions, 23 (Jeugdwet chapter 1, article 1.1). Before 2015 there was a different situation. The universal and preventive services were already the responsibility of the local municipalities and the youth care system was under the responsibility of the provinces.

There were several reasons why the youth care was decentralized to the municipalities. Firstly, the money that was being spent on specialised services was proportionally more than the money spent on universal and preventive support. There is the expectation that municipalities, since they are closer to citizens, can decrease the use of more complex (and expensive) forms of youth assistance by detecting problems earlier and through investing in prevention and ambulatory/outpatient care (care that can be given without placement in an institution). Also, the idea was that when municipalities play a bigger role in youth assistance, that the quality of youth assistance will improve through tailor made work. The municipality is closer to the child than the provinces, and can, therefore, provide better care. Secondly, the youthcare system was fragmented because of five different funding parties and the many different kinds of services. Therefore, no general overview was available and transparency was lacking which made it difficult to innovate. Thirdly, in general it took much time for children, young people and their families to receive the support and care they needed, because of the different types of services of each party and because of the fact that clients were often referred to other organizations, since one organization could often not provide all the services needed. However, referring to other organizations cost time for the client because of admission procedures. Fourthly, the costs of specialised care were increasing fast, because, before the decentralization, the demand of this type of care increased by approximately 10% every year. This increase was most likely the result of the high fragmentation of services and the fact that people where referred to specialist services too soon.

The aim of the decentralization was to solve the problems outlined above. With the transition of all taks and duties to the municipalities the goal was to transform the youthcare system. The focus is on integrating and reshaping all these services in order to promote youth-friendly environments (Jeugdwet chapter 2, article 2.1). In addition, the aim is to focus more on the family and network of the child. So, the focus lies not only on the problems of the child, but also the family of the child is being included into the bigger picture (Jeugdwet chapter 2, article 2.1). Furthermore, the focus lies on how

to activate, restore and strengthen the own capacities of the children, young people and their families (Jeugdwet chapter 2, article 2.1). When more support is needed, the focus lies on what could be solved with the local aid possibilities of the municipality. Only when it becomes clear that the child really needs professional help will he or she be referred to specialized care providers.

In a nutshell, the transformation of youth support and care is focused on the bigger role of the family and social networks, and there is a larger focus on prevention of care (Jeugdwet, chapter 2, article 2.1), professionalizing of care as well as support and a better coordination and integration of all the youth services. Together, this should lead to more coherent, effective, transparent and less expensive services for children, young people and their families.

The Youth Law states that municipalities are responsible of their youth policy and the city council should periodically establish a plan that directs the decisions to be taken by the council and the committee of mayor and aldermen on prevention of youth problems and child support, the implementation of child protection measures and youth reclassification (Jeugdwet chapter 2, article 2.2). The committee of mayor and aldermen is responsible for a sufficient quality and quantity of the supply for youth support and care. Furthermore, youth support should be offered in a low-threshold and recognizable manner and adolescents should receive free and anonymous advice on the questions raised by them regarding upbringing, psychological problems and disorders (Jeugdwet chapter 2, article 2.6).

Youthcare should be accessible to children and young people after referral by a neighbourhoud team of the municipality or a referral from the general practitioner (Jeugdwet chapter 2, article 2.6). In the youth law the minimal requirements of the tasks and responsibilities of municipalities are outlined. How municipalities want to fill in their policy is fully their own choice. They are free to determine what form the youth support should take and what type of youth services are provided. This gives them the option to assist people on a personalised/individual basis and organise the best possible Youth Services for their specific environment.

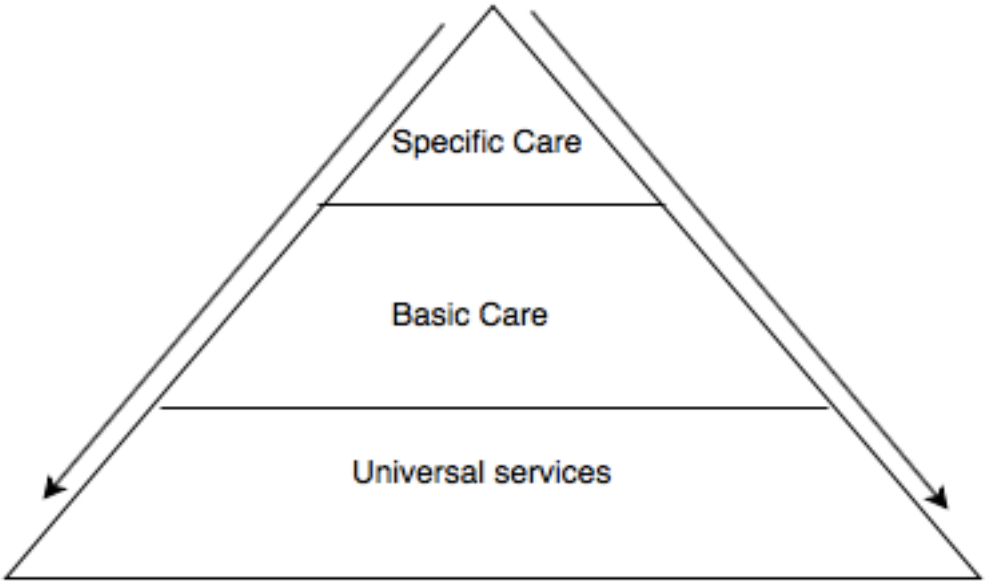

Figure 12 Model youth care pyramide made by the author

As can be seen in Figure 12, the Dutch youth care and support system can be divided in three main themes: universal services, basic care (also called first-line care) and specialised care (also called second-line care).

Universal services refer to, for example, youth work and schools. These services aim to facilitate the normal development of children and to prevent small problems of children and families turning into severe problems. Basic care refers to, for instance, general social work, child health care and parenting support. Specialised care refers to, for example, the youth care services, youth mental health care services and child protection services.

The goals of municipalities are to detect problems at an early stage and to intervene at an early stage so that small problems can be adequately solved. They are, therefore, investing in universal services and basic care and hope that the percentage of people that need specific specialised care can be kept to a minimum.

7.7 Common Arrangement

Municipalities have lot of tasks and responsibilities. Since it is difficult to perform all those tasks themselves, they work with other partners, who are, often times, other municipalities. After the decentralization of the social domain from the central government and the provinces to the municipality level, the scale of services decreased. Therefore, the collaboration between municipalities increased, in order to increase scale and so that

tasks could be performed cheaper. In addition, cooperation between municipalities offers the opportunity to share knowledge, to jointly develop and to learn from each other.

When two or more municipalities want to work together, they can form a common arrangement, which performs tasks on behalf of the municipalities (Wet gemeenschappelijke regeling, article 1). For example, in the execution of youth care, municipalities often work together in the form of a common arrangement. They work together with other municipalities to purchase the more expensive and specialized forms of youthcare. They do this in order to increase scale and, therefor, to be able to purchase care from care providers cheaper because of larger economies of scale. Another reason is that is makes it easier to deal with fluctuations in demand of expensive care and to share the risks of fluctuation together.

The Joint Regulation Act (Wet gemeenschappelijke regeling) states several forms of common arrangements (Wet gemeenschappelijke regeling, article 1, 8). The first possibility is that the municipalities create a common body with a general board, a dialy board and a chairman (Openbaar lichaam). This is the form of the common arrangement youth aid Rijnmond (GR-JR), which is an important case study of the present research. The second possibility is that the municipalities create a common arrangement without public body, but to let the tasks be carried out by a centrum municipality (centrum gemeente) instead. The third possibility is to create an arrangement, whereby no organizational relationship is being established but only certain agreements are made (regeling zonder meer). This form is the case in region Brabant West. The municipalities in this region have an intermediary called the Care Information & Purchasing Team (ZI²T), which carries out the contract management, purchase and monitoring of the system on behalf of the nine municipalities. One of these municipalities is also a case of this study and will be described in chapter five in more detail. The fourth possibility is to create a joint body in a lighter form of cooperation with a limited legal personality. This joint body only has a dialy board and not a general board. In this form of common arrangement a stronger form of governance is required. The fifth possibility is the form of a business organization, which is a new light form of cooperation in the Joint Regulations Act (Wgr). The business organization can only be set up under committees of mayor and aldermen and this cooperation is limited to the execution or business of the legal responsibilities of that college (bedrijfsvoering).

The five forms of common arrangements differ from each other in whether or not they have a legal personality. The public body and the business organization both have a legal personality. The other forms do not. The difference between a public body and business organization is that the business organization has one board, while the public body has two, namely the general management and the dialy management. The most common legal form is the public body, which has the most power compared with the other forms.

To enlarge the possibilities of the common arrangement, they can institute a public body, which is a legal person (Wet gemeenschappelijke regeling, article 8). The governance in such a public body is as follows: it consists of a general board, a daily board and a chairman. The general board is at the head of the public body, while the chairman is both the chairman of the general board as well as of the daily board (Wet Gemeenschappelijke regeling, article 12). The daily board of the public body consists of the chairman and two or more other members, assigned by and from the general board. In addition, those assigned members cannot all be from the same municipality (Wet gemeenschapelijke regeling, article 14). The daily board and each of its members individually are accountable to the general board and need to give the General Board information about the performance of its tasks (Wet gemeenschapelijke regeling, article 1)

The general management of the public body determines the budget in the year preceding for which it serves. The daily board of the public body sends the budget within two weeks after it is set, but in any event before the first of August of the year preceding the budget to the Deputies, the daily board of the provinces (Gedeputeerde staten). In addition, the general board of the public body sets the annual account in the year following the year in which it relates.

In short, according to the finances of the common arrangement, one can read that they need to have a budget and an annual account (Wet gemeenschapelijke regeling, article 34). The common arrangement needs to show a yearly annual budget and accountability documents according to the rules of BBV (Besluit begroting en verantwoording).

The accountability of the members of the daily board and general board of the common arrangement to the city councils of the participating municipalities is arranged in the specific arrangement of that common arrangement. This can be different for each common arrangement (Wet gemeenschappelijk regeling, article 16).

7.8 Working in a chain

Bharosa describes the role of chains as linking “together actors and activities that serve one or more goals, depending on the type of chain.” (2015, p.40) An actor in the chain can be a public agency or private organization performing certain activities in the chain. In a reporting chain, there is at least a requesting party and an information provider. The requesting party can be a government agency – which must receive the information from the reporting party - based on legislation. There are also intermediaries in the chain whose services range from managing the entire continuum of activities to only supporting a process.

Bharosa (2015) argues that roles, decisions, and costs are clear-cut and influential to the distribution of power and future developments within the chain. Efficiency, increased quality, sustainability and safety embody the key drivers for both individual and collective motives for participation in the chain. When the collective and individual motives of actors within a chain come into conflict, they can complicate chain coordination and expose the dependencies between actors (De Bruijn & Ten Heuvelhof, 2008). Besides, power can be concentrated in one powerful actor or it can be more evenly distributed between other actors in the chain. Bharosa (2015) cautions that dispersed power can be a recipe for chaos in chain coordination.

Therefore, authority is required in a chain to avoid coordination problems that may arise. In the context of the present study, a chain exists between the municalities, care providers, citizens and intermediaries (common arrangements) for specialized care. In addition, a chain exists between municipalities, care providers and citizens (for basic care).

As can be seen in Figure 13 the municipaliy or intermediary is purchasing care from the care providers, while the care providers provide care to the citizens of the municipality.

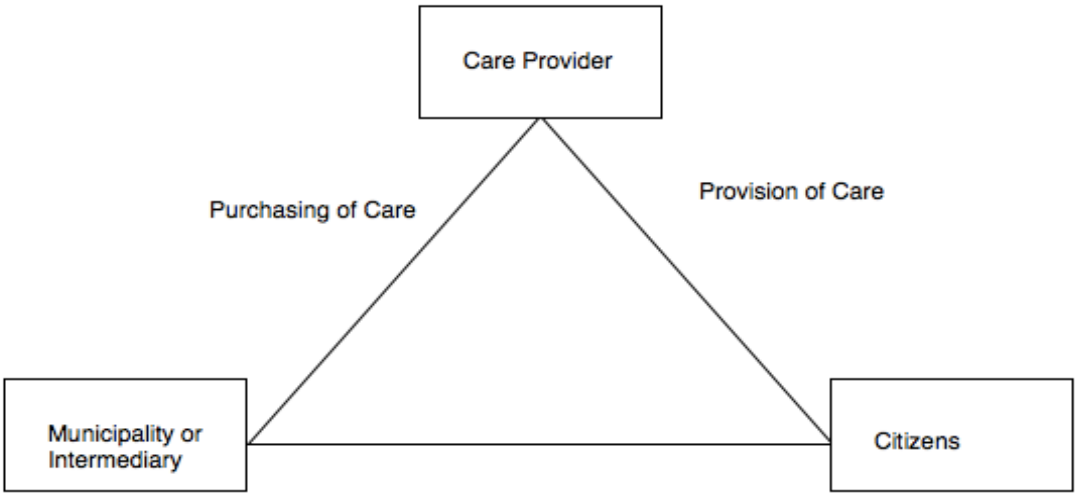

Figure 13 Model relations between municipality, care providers and citizens made by author

7.9 Information chain

The actors within an organization often share information for a variety of reasons; one of those reasons is business reporting (Markus & Bui, 2012). Value is attached to an information chain primarily for improving the process and quality of information to be delivered to the requesting party (Meijer, 2009). Such information can be used for risk assessment, decision-making and policy-making. The exchange of information between the provider and the requesting party is of extreme importance (Duivenboden, Veldhuizen & Twist, 2000).

Consequently, over the past few decades, information processing has been computerized within organizations. These information processes gave rise to the ICT systems we witness today. The application of ICT is present in a wide array of processes like bookkeeping, monitoring, and auditing. Bharosa (2015) argues that the human element is usually the weakest link in information processing systems. An example of a human weakness includes improper computation, which leads to risk of errors and delays in making approvals.

The Electronic Data Interchange was developed to reduce the effects of human disadvantages in the information chain (Hansen and Hill, 1989). The elements of the Electronic Data Interchange include electronic transfer of data between organizations and computerized retrieval and transfer of information without human intervention. The emergence of the Internet led to greater human-to-system (H2S) chain integration.

In the context of the present study, information is also exchanged between partners. Municipalites and care providers communicate with each other through standard message traffic, which will be elaborated on in section 7.11. In addition, municipalities communicate with citizens and their information is stored in the client administration of the municipality. Care providers communicate with municipalities or with their intermediaries about what kind of services they have provide and the invoicing of these services. Municipalities can choose to purchase from care providers themselves and to communicate with them or to hire an intermediary, who is responsible for purchasing and budgeting. The information that is stored in sytems is stored in the client administration of the municipalities, the information of care providers is stored in their systems and the communication between careproviders and municipalities continuously go through standard message traffic. This is graphically represented in Figure 14.

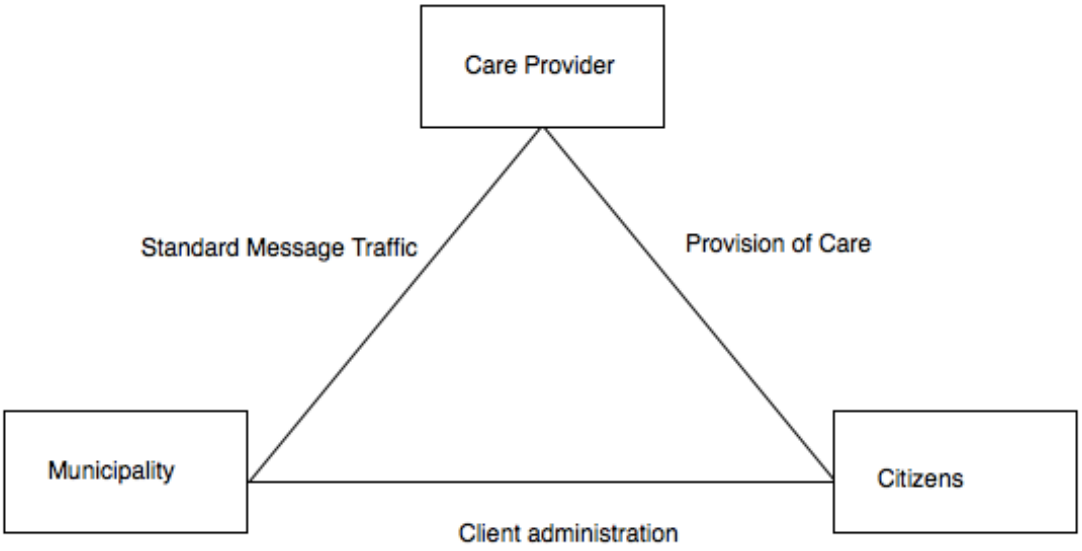

Figure 14 Model information stored in systems made by author

7.10 The process of Youth Care

The proces for youth care/support start as follows. A client or his or her authority applies for child support, after that the application of the client will be investigated. Depending on this assessment, it is determined whether the client has access to child support. Acces to youth support can be given through four different parties:

- A general practitioner, a youth doctor or a medical specialist can refer a client directly to a youth care provider.
- A judge, the child protection board or the public prosecutor can decide that a client needs support.
- A certified institution can determine youth support in consultation with the municipality.
- The municipality itself, neighbourhood team or a social district team hired by the municipality can asses the support or care that the client needs and give acces to youth assistance.

When another party than the municipality determines access to youth assistance, the assistance/care will be directly accessible. This means that there is no need for a review by the municipality. The youth help provider can start delivering immediately. The youth help provider only needs to inform the municipality of the (planned) start of the delivery. The municipality will store this information in the form of a decision (beschikking). This information contains what care or support the client needs and the period of that care. Subsequently, the municipality sends to a care provider with whom the

municipality has a contract an official assignment for the provision of youth assistance (Toeleiding).

The provider starts delivering the youth assistance to the client. After completion of a period or after completion of the care, the provider will invoice the support provided to the municipality (Financing). The process flow is shown also graphically in Figure 15.

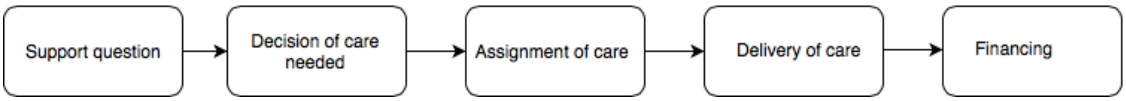

Figure 15 Model youthcare/support process

7.11 Standard Message Traffic

The Care Institute Netherlands (Nederlands zorg instituut) developed, together with municipalities and healthcare providers, the standard message traffic (VNG, 2017). This standard is established to ensure that municipalities and its chain partners digitally speak the same language and that information in this domain can be exchanged safely (VNG, 2017).

Muncipalities and care providers communicate with each other by using the standard message traffic. There are standard codes developed for the communication with institutions that provide care for youth (iJW) so that the systems of municipalities can communicate with the systems of care providers (modellen.istaandaarden.nl/berichten).

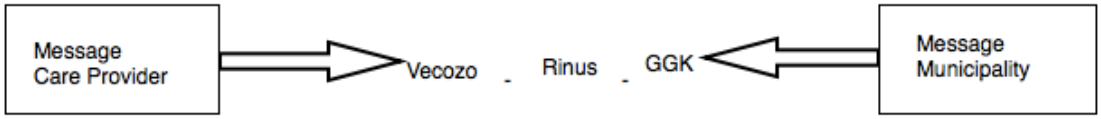

Figure 16 Model message traffic applications made by author

The message traffic between care providers and municipalities runs between the applications Vecozo, Rinus and GGK (modellen.istaandaarden.nl/berichten). Vecozo is the application for the care providers. GGK is the application for the municipality. Rinus is the network, the data highway between the two applications. This is graphically presented in Figure 16.

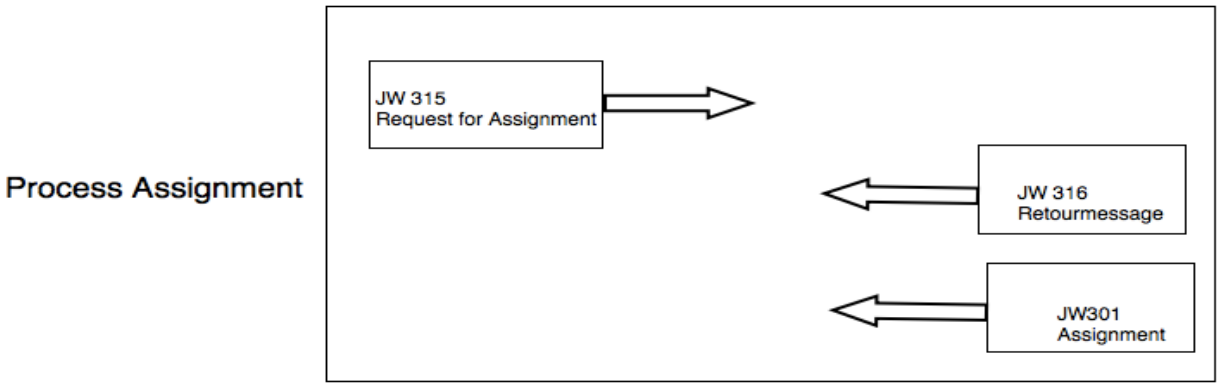

Figure 17 Model process assignment message traffic codes made by the author

As can be seen in Figure 17 when a care provider has offered a client via a channel other than the municipality, it requests an assignment (JW 315) from the municipality so that they can invoice the munipality for the care they provide to its citizen. The municipality will send a retourmessage back to the careprovider that they received the request (JW 315). Then the municipality will check wheter the client is indeed from their municipality and will give the care provider permission to start the care/support (JW301).

When the district team of a municipality addresses a client through the regular client process, an allocation message (JW301) will be sent to the care provider based on the order of support. The care provider sends a retourmessage (JW302) back to the municipality. The graphical representation is presented in Figure 18.

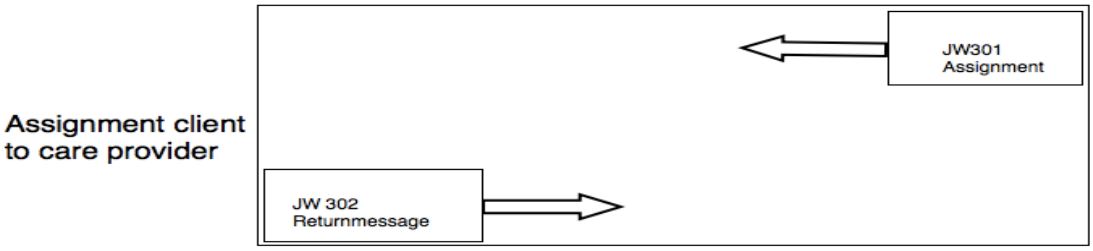

Figure 18 Model assignment client message traffic codes made by the author

When the care provider starts with the support of the cliënt, he sends a message (JW305) to the municipality. The municipality will send a return message when he receives the message of the care provider (JW306). This is shown in Figure 19.

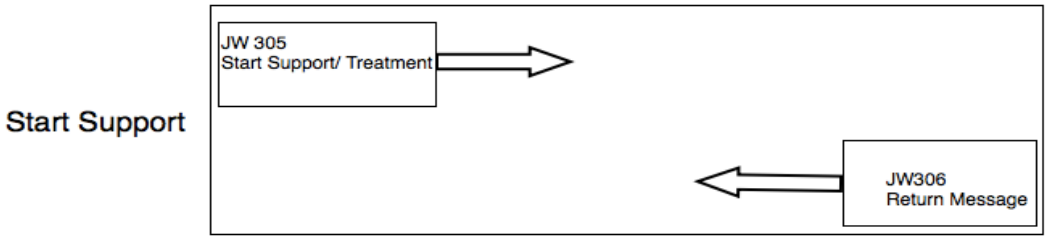

Figure 19 Model start support message traffic codes made by the author

When the care provider ends with the support of the cliënt, he sends a message (JW 307) to the municipality. The municipality will send a return message back (JW306) as soon as the message of the careprovider is received. This is graphically represented in Figure 20.

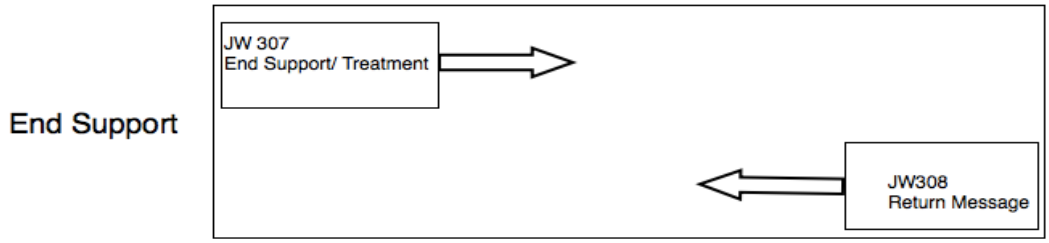

Figure 20 Model end support message traffic codes made by the author

The care providers periodically send an invoice to the municipality with the costs they want to reimburse (JW303). The municipality checks the invoicing and returns the costs to be reimbursed in a return report, which also includes the rejected invoices. The messages being sent between each other are shown in Figure 21.

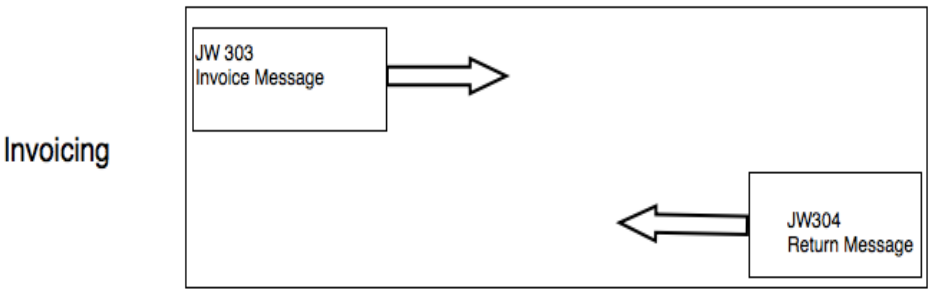

Figure 21 Model invoicing message traffic codes made by the author

7.12 Data Quality Requirements

Data quality refers to the 'fitness' of data to be used to perform a given function. Various activities are carried out to determine the quality of data (semantic and syntactic quality requirements). Whereas the semantic quality requirements focus on the quality of the content extracted from a data model, syntactic quality requirements focus on the correct technical application of the syntax used.

Lee et al. (2002) provide a comprehensive set of quality requirements and indicators, such as accessibility, appropriate amount, believability, completeness, conciseness, consistency, ease of operation, freedom and error just to mention a few. Table 2 below provides a summary of the data quality requirements.

Table 2 Data Quality requirements retrieved from Lee et al. (2002)

Accessibility	This information is easily accessible.
Appropriate amount	This information is of sufficient volume for our needs.
Believability	This information is trustworthy.
Completeness	This information is sufficiently complete for our needs.
Consistent representation	This information is consistently presented in the same format.
Ease of operation	This information is easy to manipulate to meet our needs.
Freedom from Error	This information is accurate.
Interpretability	It is easy to interpret what this information means.
Objectivity	This information is based on facts.
Relevancy	This information is useful to our work.
Security	This information is protected against unauthorized access.
Timeliness	This information is sufficiently up-to-date for our work.
Understandability	The meaning of this information is easy to understand.

In the context of the present study the quality of data needs to be good in order to use it for continuous monitoring. The data should, among others, be accurate, complete, reliable and easily accessible. In order to conduct policy insights into the real data is needed, so that organizations can improve their business processes when needed.

7.13 Control automation

In continuous monitoring, organization control data automatically in a continuous manner. A study by Christiaanse and Hulstijn (2012) links control automation to enhanced business compliance and assurance. They claim that control automation can help organisations to reduce the cost of control. They argue that organizations exist in a highly contractual environment whereby buying and selling is controlled by contracts.

Consequently, businesses need to prove to other organisations that they comply with external regulations, laws and other imperatives by providing verifiable evidence of their control systems (Turetken et al., 2012). However, controls are costly – the costs can be brought down significantly through control automation, especially when the stream of data is large.

7.14 Principal agency theory

The simplest explanation of the principal agency theory is based on the boss (principal) – worker (agent) model. Within organisational structures, the Principal could be the shareholder of the company and the Agent the Chief Executive Officer (Ballwieser et al., 2012). The Principal may also have many Agents such as the top management and line managers. He hires an agent to perform duties on his behalf. In the relationship between the principal and agent there is the inherent challenge of information asymmetry and risk aversion (Mitchell & Meacheam, 2011). The principal often has the tendency to regard to the agent's actions as not aligned with the principal's requirements (Ballwieser et al., 2012). This may lead to asymmetric information related to adverse selection and to moral hazard (Gailmard, 2012).

The Principal agency model is useful for determining the relationship between the principal and agent that can lead to optimal satisfaction for both parties. Literature suggests that controlling/monitoring can solve problems arising from the moral hazard and asymmetric information (Beaver, 1989). The moral hazard problem arises when the agent posesses superior information that he could potentially use for selfish interests at the expense of the principal (Mitchell & Meacheam, 2011; Ballwieser et al., 2012). Continuous monitoring/auditing can decrease the problem by putting the agent on a 'short leash' (being constantly monitored and controlled).

With respect to governance, Christiaanse and Hulstijn (2012) use the Principal – Agent theory to argue that delegation of roles raises challenges for the principal regarding private information. When the agent is left to his own devices without controls, he can be adversarial to the principal in various ways. Automated controls are touted as some of the additional control measures that an organisation can put in place to avoid such scenarios.

Within the context of the present study, principal agency problems are present as well. The common arrangements as mentioned previously have the role of agents and the municipalities have the role of the principal. The municipalities pay the common arrangements to perform certain tasks for them, but in doing so they have less control over the processes of the youth care compared with a situation in which they would perform those tasks themselves. Therefore, the municipalities would like to be in close con-

tact with the common arrangement and see how they perform their tasks. Especially, since municipalities are responsible on an end-to-end basis for the youth care provided. Besides, youth care is a politically sensitive domain. Therefore, it is important to monitor the processes of youth care very well and to make the common arrangement accountable as well as to monitor their tasks continuously.

In addition to this, there exist principal agency problems between care providers and municipality/intermediaries. In this scenario, the municipality or intermediary is the principal, the care providers are the agents. The municipalities need to assure that the citizen receives the care needed in their annual accountant, but how can the municipality know for sure that the care provider really provided the support the client needed. When the municipality or intermediary would monitor the care providers more often, the principal agency problems could decrease. The municipality can monitor and compare care providers continuously. Furthermore, they can check wheter the care providers adhere to the contract.

To conclude, continuous monitoring and controlling automatically can decrease the principal agency problems and, therefore, improve the governance.

7.15 Knowlegde, ability and motivation

When continuous monitoring in the chain of municipalities and common arrangement is be implemented, this means a change for the current chain. For change to occur in a chain the comman agreement and the participating municipalities need to have knowledge of the internal conditions and the impacts the proposed changes will have to them. Once the organization is convinced about the competence and instruments necessary to implement the change, it will find the most cost-effective achievement of the targets. Therefore, the aspect of knowledge, possession of the right skills and resources, and the motivation for change are important in instituting change in organizations (Bharosa, 2015).

7.16 Change Management

Bharosa (2015) suggested two types of change management (direct and indirect). According to direct change management, the change agent and other chain actors have knowledge of the current situation and a predetermined outcome. In addition, the key assumption is that the change agent has the authority to institute the change. Regarding indirect change management, the situations cannot be assumed to be known beforehand. Moreover, the change agent does not have the authority to initiate change. In other

words, the problems are only determined along the way, which happens often times through collaborative research (Koffijberg, 2005).

The high level of interdependence between actors in a chain requires cooperation and support from each other in order to achieve the desired outcome of the change (Wit, Rademakers & Brouwer, 2000). Change will be very difficult to be realized if the chain actors are not cooperative or not willing to support the change initiatives. Bharosa acknowledges the difficulty of managing change in reporting chains with regard to dealing "with inertia and resistance to change " (2015, p.58). Since it is uncertain that each individual actor will benefit from the change, resistance from some of the actors is expected. The actors' commitment to the change process may also be strategic – in alignment with their individual organization's goals. If the change may result in high potential benefits, the level of ambition of individual actors will increase for a change process.

The reverse is also true. A drawback of high ambition is a significantly higher risk of failure associated with involving more actors along with the executive interest (Boehm, 2002). A low level of ambition involves goals that are easier to attain. Perceived less potential benefits discourage executives to be as enthusiastic for the change process. In spite of this downside, however, there is considerably more certainty that the intended goals will be reached.

To conclude from this section, it is important to take into account the interdependence of the actors in a chain and to make a weighting towards the level of ambition.

7.17 Findings and conclusion

In this chapter the governance and accountability of both the municipality and the common arrangement is explained. It is important to understand how the tasks and roles in the municipality and common arrangement are divided and to whom each party is accountable. Also this explanation shows us that, in the Netherlands, transparency regarding the way of working of municipalities and common arrangement is important.

In addition, the responsibilities of municipalities in the social domain and the effect of decentralization on municipalities were thoroughly examined. In this chapter, the reader learned, among other things, that municipalities often work together to increase economies of scale. After all, biggest disadvantage of the decentralization is the loss of economies of scale. Another reason is to mitigate risks when there are fluctuations in the demand of care. In addition, the tasks of the social domain are challenging, so municipalities prefer to collaborate together and to share knowledge among each other.

In this chapter the different types of youth care were explained. This is important for understanding the cases described in chapter five, wherein the tasks of municipalities and common arrangement are explained. In the specific case of youth aid, the municipal

landscape looks as follows: municipalities organize tasks in the local/basic care by themselves most of the time, while, municipalities work together in the region on specific/ specialized forms of care. Then the question rises of when a common arrangement is responsible of specialist care in the region of the municipalities, does this mean that they are responsible for all the processes of the youth care? Therefore, this chapter expained the processes in the provision of youth care. In chapter five, the differences between common arrangements and municipalities towards the processes of youth care will be explained.

Moreover, the reasons of the decentralization to the municipalities and the objectives aimed for were described in this chapter. In the cases described in chapter five, the perception of municipalities and the way in which they think they realized the goals and transformations aimed for will be explained. When these goals and transformations have not been realized, the way in which continuous monitoring could help them with their policy and tasks will be explained.

Furthermore, the reader learned that municipalities work in a chain with care providers, that they communicate through the standard message traffic and share information among each other. From the information on the web it seems that the standard message traffic is a very beneficial way of communicating, this form of communication can reduce administration costs, improve the right administration in the systems of municipalities and care providers and improve the invoicing process. The messages are being sent between each other continuously. In chapter five, the vision and way of working toward the standard message traffic will be discussed as well the data quality of these messages and whether it could be used for continuous monitoring.

Moreover, chapter three showed us that principal agency problems exist between municipalities, comman arrangement and care providers. This theory shows us that information asymmetry exist between different parties. In the case descriptions outlined in chapter five it will become clear how these problems also relate to the present study and how they could be decreased when using continuous monitoring.

Finallly, this chapter has shown that when a change is about to happen, knowledge, ability and motivation are key for a successful achievement of the desired outcome of the change. The change reffered to in the present study is the change that municipalities want to undergo to improve their control in the social domain. In chapter five the theory learned about continuous monitoring and auditing and all the information learned in this chapter will be applied to the cases of the present study.

8 CHAPTER 4: RESEARCH METHODOLOGY

It is important to evaluate the theoretical and empirical evidence that define the various aspects of the topic under study. The information-seeking process is structured in a systematic way to confirm the validity of a given research aim. The need for information directs researchers' objectives. The information-seeking process is structured in a systematic way to confirm the validity of a given research aim. There is a difference between research methodology and research methods. Methods are activities carried out to generate data for analysis, like the use of focus groups, interviews, and questionnaires. Research methodology depends on one's attitude towards and comprehension of the most suitable approach to answering research questions (Greener, 2008; Mendy & Campus, 2016).

The present study will assess whether continuous monitoring and auditing methodology could be applied in the municipality domain in order to improve accountability, and whether implementation of CA/CM program will improve governance in the municipality domain. The methodology section will mainly elaborate on the research approach, research method, sampling technique, data collection technique and analysis techniques, as well as assumptions that were involved in this research.

The study will investigate, analyze and find the impact of implementation of CA/CM program on governance through various methods (Hussey & Hussey, 1997). The main sections of this chapter include the research philosophy, methods of reasoning, study design and methods of collecting data. A brief explanation is given for each research paradigm used together with the reasons for selecting the paradigms in the present project.

8.1 Research Philosophy

According to Hirschheim (1992), knowledge of basic assumptions plays an important role in research studies. Various types of research paradigms for qualitative research, such as positivism, interpretive, and critical theory exist. In addition, Orlikowski and Baroudi (1991) mention the positivist, interpretive and critical paradigms. These philosophies are different from each other but they often overlap in social research. This makes it very difficult to point out the exact philosophy that has been applied to a specific research.

For the present study though, the phenomenological epistemology is favored instead of others because it leads to the collection of qualitative data (this study is a qualitative study), the type of data collected is subjective (the researcher is involved in the data collection, and data is obtained from interviews with experts), in a natural setting invol-

ving the investigation of governance in municipalities. Any possibility of low reliability will be corrected through the use of a variety of research methods and approaches (interview protocol; verified findings afterwards; workshops to evaluate the main findings).

The choice between qualitative and quantitative research approaches for this study is based on the suitability of the individual approach towards answering the research questions. The focus of qualitative analysis is on the social constructs of happenings in the real world. It looks at the existing relationships that researchers have with the topic to be studied and, in the process, discusses the situational constraints (Denzin & Lincoln, 2000). A qualitative researcher tries to find out what creates the social experience and the subsequent name given to it. The emphasis is on measurement and identifying the causal relationships that research variables have rather than the process itself. Social and behavior scientists view qualitative research as a method of exploring a research problem. The design can be naturalistic, emergent and purposeful (Denzin & Lincoln, 2000).

The qualitative research approach is appropriate for addressing the question regarding effects of implementing CA/CM program on governance municipalities. Its importance is particularly evident as a contextual approach, whereby information is collected in real life situations which allows for gathering as many views and opinions as possible. The qualitative research approach will be helpful in generating a deeper understanding regarding the feasibility of implementing a CA/ CM program and its related impacts on governance municipalities. The qualitative research approach will also provide a clear picture of the actual issues surrounding the monitoring and auditing in municipalities. The research will enable the gathering of views from relevant people within the public service sector (municipality workers) to fully explore their opinions on the effects of new CM/ CA programs on governance municipalities.

8.2 Research Design

The current research is a qualitative case study design (a case is selected to highlight the impacts of CM/ CA programs on governance). A case study approach generates an in-depth understanding of a complex issue in its natural context (Yin, 2009). According to Yin, "The all-encompassing feature of a case study is its intense focus on a single phenomenon within its real-life context" (1999, p 1211). “Case studies are research situations where the number of variables of interest far outstrips the number of data points" (Yin, 1994, p.13). Radwan (2008) further points out that a case study is advisable when the phenomenon is difficult to isolate from the environment, and when the number of units to be investigated is small in relation to the number of factors to be investigated.

The collection of primary data will be done through semi-structured interviews, whereby a questionnaire with open-ended questions (see the appendix) will be used, which allow the investigator to get more understanding of a particular phenomenon and gives flexibility in the type of questions asked and/or clarification questions asked.

Therefore, semi-structured questionnaires will be applied to collect the views of a select number of respondents. Furthermore, a focus group will be used to dig deeper into the subject matter. A focus group is a group of diverse people assembled together somewhere to participate in a guided discussion. The researcher wishes to utilize such focus groups consisting of various stakeholders in municipality affairs. It is important to validate the findings gathered through interviews and focus group. One way of such validation is through holding workshops. Workshops will provide the investigator with personal perspectives regarding the implementation of CA/ CM programs in municipalities.

Qualitative research is often criticized for lack of rigor (Noble & Smith, 2005). However, the present research intends to take care of issues of validity, rigor, generalizability, by means of, triangulation. The personal biases that may influence the research will be accounted for and acknowledged (Golafshani, 2003). Evidence of the decision-making process and interpretation of data will be conducted through careful record keeping.

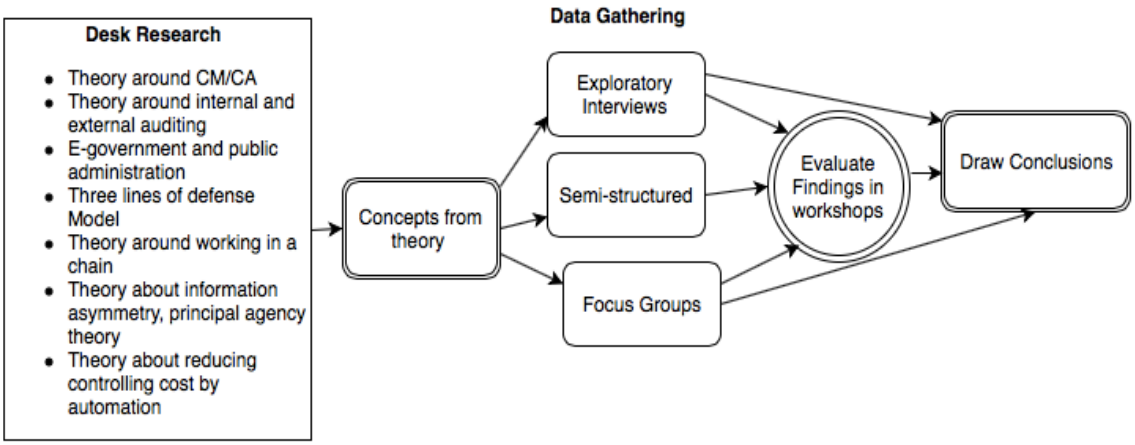

Figure 22 Research model made by author

As can be seen in Figure 22, the research method of the present study consists of an extensive desk research of the literature regarding continuous monitoring and auditing, and the application domain (the decentralization of social domain to municipalities). This extensive desk research is important in order to understand the complex application domain as well as to understand how continuous monitoring could help municipalities to be more in control.

Therefore, it was important to understand how municipalities work, how their governance is, what tasks they have in the social domain and, specifically, youth care and support. In addition, it is important to know which partners work in the chain of youth care and how they communicate. The literature provides concepts in terms of which the domain can be described and analysed.

Furthermore, as is shown in model 21 the author collected data in three ways:

- Number one is helding exploratory interviews with respondents from GR-JR to understand their vision of the problems in the youth domain. In addition, exploratory interviews were held with respondents of Bakker Tilly Berk to understand the accounting perspective on the problems of the social domain.
- Number two is by helding semi structured interviews with a variety of respondents at the GR-JR, and three independent municipalities (not part of GR-JR). The author selected respondents with different functions with the purpose of getting a full overview of perspectives from all kind of stakeholders. The aim was not to focus on solely the accounting perspective, but also on the business perspective. The interviewlist can be found in the appendix.
- Number three is by helding focus group sessions with a combination of respondents of the participating municipilalites of the GR-JR as wel as respondents from the GR-JR, as well as a respondent from Baker Tilly Berk. The purpose of the focusgroup was to function as a brainstorm session, sothat the author could observe the knowledge of the respondents on CM and CA as well as their ideas of how it could be implemented to help the chain of getting more control in the social domain. In addition, the goal was to understand how the participating municipalities views working in a chain with the common arrangement and what these municipalities would like to improve in terms of accountability of the common arrangement and transparency.

After this process of data gathering, the results are analyzed according to the theory learned in chapter two regarding continuous monitoring and chapter three regarding the application domain. Finally, the results are presented in workshop sessions to evaluate what the perception is of the 15 participating municipalities of the GR-JR about how continuous monitoring could help them being more in control of the youth domain, and to improve transparency, governance and accountability. The final step of this research is to draw conclusions based on the theory, the interviews, focus groups and workshop sessions.

9 CHAPTER 5: CASE STUDIES

9.1 Case Common Arrangement Youth Aid/intermediary

9.1.1 General Case Description

15 municipalities in the region Rijnmond founded a so-called Common Arrangement Youth Aid in 2014, abbreviated as GR-JR (Gemeentelijke regeling - jeugdzorg Rijnmond). The municipalities are all located in the region Rijnmond. They are geographically bound to each other and cover a large part of the province South Holland.

This common arrangement is responsible for purchasing specialized forms of youth care, since the decentralization of Youth Aid to the municipalities on the first of januari 2015. The 15 participating municipalities together contribute a total amount of approximately 200 million euro yearly. This is a large amount of money and, therefore, the GR-JR has an important responsibility to take good care of the money and to monitor how it is being spent.

9.1.2 The role of the GR-JR and the Participating Municipalities

The role of the GR-JR in youth aid is the following. They are responsible of the specialist youth care, which can be divided into three segments, namely: Youth GGZ, Youth with Disabilities and Youth & Upbringing.

The tasks of the GR-JR are the following:

- The procurement of care which are related to the above mentioned three segments
- Contract monitoring of the care providers
- Payments to care providers
- Performing of their policy, that is based on the collective needs of the participating municipalities
- Informing the participating municipalities of the results of the GR-JR
- Administration related to what the GR-JR paid for care (their realization).

The GR-JR is not responsible for the other processes in the specialised youth care. In the following subsections of this chapter, each of their tasks and responsibilities is explained as well as their desired vision of how it could be done more effectively, accurately and efficiently. Furthermore, in each of the subsections the role that continuous

monitoring could have in improving the processes and control will be explained, as well as their vision towards it. Finally, benefits or inhibitors that are expected will be discussed.

The municipalities participating in the GR-JR want to stay as independent as possible, so that they can perform their own policy.

Individual municipalities are, themselves, responsible for the access to care through their own local neighbourhood team, and to check whether the citizen applying for care is indeed living in their municipality (woonplaatsbeginsel). When a care provider is needed, the municipality refers the client to a care provider.

9.1.3 Contribution of the participating municipalities

In the GR-JR, the participating municipalites agreed to contribute to the GR-JR, according to their own actual use of care. However in region West Brabant West the nine municipalities work with each other according to the solidarity principle, which means that a municipality with excess of budget will pay for a municipality with a shortage.

In the GR-JR the municipalities have agreed that the contribution per municipality is determined by the average real use of care in the previous three years. In addition, the vlaktax method is being used, which means that when a municipality uses more care than budgeted in a specific year, the municipality doesn't have to pay more during that specific year. However, the excess use will be counted and based on the real use of the previous years.

According to this principle, the municipality pays a bit more for the next year. By using this method the contribution of each of the municipalities is based on a fair method. Monitoring how much actual care each municipality used is important for the GR-JR, since they have to calculate what each municipality needs to contribute for the next year.

9.1.4 Information exchange

In the contract with the care providers, the GR-JR made the agreement that each careprovider need to send each quarter their production information. The GR-JR receives an Excel file with the production figures from the care providers at client, level per municipality, per segment. The production information is first checked by the contractmanagers of the segment at the GR-JR. They check whether the production information is alligned with their expectations of how much production a careprovider produce during a quarter period.

The specific information of that Excel file consists of the following:

- The client indicated with BSN number (not for segment youth GGZ),
- The municipality that the client belongs,
- Product codes of care,
- Amount of time (in minutes)
- The start date of the treatment,
- The end date of the treatment (when available)
- Total costs of the treatment

The Excel file of the care providers are cumulatitive, which means that in the first Excel file the information is stored of the first three months, in the second Excel file information is stored of the first six months including the information of the first three months, the third Excel file consists of the information of the first nine months and the last file is the production of the care provider for the whole year. The care providers need to let their production be checked by an external accountant. When the care provider has an approved account statement the GR-JR can formally trust on the data of the care provider.

The production information is sent to the financial control of the GR-JR, after the contract managers of the segments checked on content of the information.

The financial controller of the GR-JR merge then the Excel files of all care providers together. Subsequently, the information is subdivided per municipality and per segment. The financial controller/ Interviewee GR-11 says that the total production information of all careproviders per municipality level is then divided by the budget per municipality to know the budget execution at municipality level. In addition, the total production information per segment at the municipality level is divided by the budget per segment to know the budget execution per segment per municipality level. This information is then communicated back to the municipalities, whom receive information from other municipalities as well, so that they see where they stand compared to others. The information that is communicated to the municipalities, can be seen as a progress report, the municipality gets insights in whether they are spending more than their budget or less than their budget or whether the use/demand of care is more or less related to their budget. Furthermore, each municipality receives detailed information at the client level for more insights for example into the amount of clients, the average costs per client and the sort of careproducts that citizens of their municipality make use of. The detailed information is at BSN level and therefore only shared with the munipality that the citizens belong too.

The information in the Excel files is important for the GR-JR, since they have the responsibility of budget management and monitoring. The GR-JR must also ensure that expenses remain within the budget and that significant change or threatening viola-

tions are reported immediately to their general board. The general board is the highest organ of the common arrangement, as explained in chapter three. The general board decides which actions need to be taken and informs the participating municipalities that more budget is needed. This request needs to go to the city councils of the municipalities, which is the highest organ of the municipality.

As can be concluded from this section insight in the budget exectution is important for both the GR-JR and the municipalities.

9.1.4.1 Current situation (A)

Currently, the municipalities get to know whether they are having an excess of care quite late, mostly at the end of the year. This also means that they know whether they have to pay more for the next year at the end of the year. The reason for this is that the common arrangement is dependent on the information that careproviders deliver them.

This is not the ideal situation because of several reasons. First, one needs to wait three months each time, in order for all care providers to have sent their information. Sometimes this takes time and sometimes not all care providers are sending it. However, in general 95 % of the care providers send their information. Then, when the information is received, it needs to be organized/ analysed by the GR-JR and only after that a meeting can be organized to discuss the information with the participating municipalities. This means that one is often already halfway of the next quarter when the information is being shared with the municipalities. Therefore, information is often already quite outdated. Time is passing before insights can be given to municipalities on their real use of care at that moment.

Second, the information is only based on the retrievel of the system of the care providers. This does not mean that the care provider has already sent an invoice. Some care providers are so large that they have enough liquidity to do their invoices just once a year. This means that the common arrangement sometimes does not know what the use of the budget per municipality exactly is.

The third reason is that Excel might not be the ideal tool for the job, since there is a lot of information that needs to be analysed. According to interviewee GR-11 “for some segments this can be as high as 18000 rules for each quarter”, which means that a mistake could easily be made. That means that the source data changes too. The manual work can make the data less reliable.

9.1.4.2 Desired situation (B)

The participating municipalities of the GR-JR told that they want to know their budget execution more frequently during the year. Actually, as stated in the workshop with the policy officers of the participating municipalities ‘’they would like to follow their budget execution whenever they want or need it’’.

Some municipalities in the GR-JR are using more care than their current budget. The demand of care in their municipality is higher than their budget. According to interviewee GR-1 are especially the medium-sized municipalities having problems with staying in their budget. This could mean that medium-sized municipalities have difficulties realizing the transformation goals of the decentralization. Interviewee GR-1 says that ‘’large municipalities are so big that they have large (enough) budget in order to manage the fluctuations in demand”. This could mean that the larger municipalities have more recources to invest in the transformation goals of the decentralization and are, therefore, staying within their budget of the second-line care they have planned. Interviewee GR-1 says that “small municipalities in general are also not using more second-line care than planned”. According to the interviewee GR-1 “the reason could be that they are small and they have therefore more control/ insights into their citizens that need and use care”.

The medium sized municipalities of the GR-JR have more problems to stay in budget. According to interviewee GR-1 “it seems they are too big to control and to monitor the youth aid process in their municipality”. Reason could be that there are not enough insights to take action and not enough recources to invest optimally in the transformation goals of decentralization. They are stuck in the middle.

From both workshops with the participating municipalities the author of this research observed that especially the municipalities that have more demand of care than their budget provides would like to know more frequently how they are doing compared with their budget of the second-line care. According to interviewee GR-2 “those municipalities would also like to have deeper insights in the reason why they are using more demand than planned”. Is it because there were more clients in their municipality and, therefore, the volume was higher? Or is it because the average money being spent on the client is higher than expected? Interviewee GR-2 says, “currently the only thing communicated to the municipalities is that they have an excess of care, with no underlying reasoning”. According to interviewee GR-2 “the municipalities want to know as soon as possible when they are over budget, so that they can take it into account and prepare themselves for next year”. Interviewee GR-2 say that “municipalities need to explain to their own city council that more money will be needed for next year” that is why municipalities need to now as soon as possible that they are over budget, since they have to inform the city council on time.

When talking with the participating municipalities and the people of the GR-JR in interviews, the author of this research heard that the interviewees would like to see in their ideal situation, that the realization of care is visible per municipality and that, as soon as the budget of the municipality is reached, there will come a signal/alert to both the municipality and the GR-JR. Interviewee GR-2 says that " the ideal situation would be when one only need to click on a button and see the actual realization of care for the GR-JR in general and for their own municipality in particular". In the workshop with policy officers of the participating municipalites several individuals mentioned the same desired situation as stated by interviewee GR-2.

Interviewee GR-2 mentioned "communicating information through a shared dashboard with real time information about the budget execution and more in depth insights per municipality level could help municipalities to take pro active action". Interviewee GR-1 says at the GR-JR they have information about more things then only the payment, for example they have information about the duration of care and the care codes. According to interviewee GR-1, 'it would be good when the information could be analysed in order to help municipalities in more insights of second-line care'.

According to interviewee GR-2" a shared dashboard could help municipalities to take proactieve actions". For example, when it is clear that the money spend on clients is higher in a particular municipality compared with other municipalities, the municipalities with a higher average amount on client can ask for clarification in their own social district team. Using this communication line, they can have a better understanding of the money that is spent on care. Of course, the goal would not be to diminish the care of citizens, but to make them understand what the financial consequences of higher indications than strictly needed means to the municipality. Interviewee GR-M1-14 said "it would be ideal when municipalities can help each other". For example, when one municipality has less cost, on average, than other municipalities, because of less higher indications, the social district team of that municipality could share knowledge with a social district team of another municipality". This kind of insights and information would be very beneficial.

In the end, the youth professional of the social district team will still be independent to decide what care is needed. But it is important for the policy and the transformation goals of decentralization, that care is provided to citizens in the most effecitive and efficient way possible. Therefore, communication with each other with deeper insights could be very beneficial to reach certain goals and to improve the way of working and processes when needed. In the end, municipalities have a budget and need to try to stay within this budget.

At the GR-JR they also realize that only working with Excel is not the ideal situation. Interviewee GR-11 would prefer to have a database where the information of the care providers and the municipalities is uploaded automatically. According to the intervie-

wee GR-11 ”this would mean that information doesn’t have to be merged manually and it would be safer, too, compared with sending information files by mail.” The reason why it would be difficult to do this, according to the interviewee, is that “all the participating municipalities have a different client registration system and data is stored in a different format”. The interviewee GR-11 says that for the GR-JR the most important condition of such a database would be that the data in the database need to fulfill quality requirements in terms of reliability, completeness and accuracy.

9.1.5 Continuous monitoring

After holding the interviews in the GR-JR and with a selection of the participating municipalities along with a final workshop with all the policy officers the realization came that, for them, knowing continuously (frequently) how much of their budget is already being used is important. In the interviews the question was asked whether they know what continuous monitoring is. Most of them hadn’t heared about the concept before, except for one person who is a financial controller of one of the municipalities (Interviewee GR-M3-21). Eventhough they hadn’t heared about the term before, the next question asked to them: what is the first thing that comes in your mind when thinking about the term? They were all very close to what the meaning is; they said things like measuring things constantly and getting more insights into the way of working of an organization. After a brainstorm session about what it could be the author of this research explained that continuous monitoring is a feedback mechanism to the management that monitors and checks whether or not transactions are processed correctly and whether they fall under a certain benchmarks, and that otherwise a deviation is shown.

Then a discussion was inititiated about how this concept could help municipalities in getting earlier insights into their realization and how it could help them with being better in control of the youth care domain. The question that arose was what the benefits could be of continuous monitoring? After many interviews the author merged the information together and came to a solution. This was then discussed/ evaluated with the same people to check whether it could work in their opinion and what benefits they expected could be realized in that optimal situation. One of the participating municipalities mentioned that they were using standard message traffic and that it is useful for analyzing information. Interviewee GR-GR-22 said that, in their municipality, the standard message traffic works well. Furthermore, interviewee GR-1 says that from 2018 onwards, care providers only get paid by invoice. This means that monitoring invoice information (the 303 code of the standard message traffic) can give a good view of the usage of care. This means that the 303 codes are monitored per municipality level and that, as soon as the budget norm of the municipality would be reached, a signal is sent to

that specific municipality and the common arrangement. This could provide the municipalities with continuous information of their budget execution.

If we would reason from an ultimate situation, which means that the monitoring tool will work in the way that we expect, then it would match with the following benefits that are being found in the literature. First, the program would mention a 100% coverage of the transactions. In situation A the GR-JR relied only on the quarterly information of the care provider, time was being spent analysing the information and before the municipality really received information it was already outdated. Now, one could have the certainity that all transactions (the 303 messages of the standard message traffic) are monitored and that, as soon as the budget is reached, both the municipality and the GR-JR receive an alert. Also, the reliability of data will be improved, since the 303 message of the standard message traffic is being checked by the municipality as well. Therefore, this information is accurate, since both sides have confirmed the invoice and one doesn't have to rely only on the information of the care provider anymore. Interviewees GR-1, GR-2, GR-11 all states that data quality is very important for the GR-JR and when continuous monitoring could improve the data quality, it would be a large benefit according to them.

Furthermore, the information would be centrally kept in the monitor. There is no need for lots of documentations anymore for analysing the budget exhaustion, which was done manually in the GR-JR. Furthermore, continuous monitoring the standard traffic could lead to better and more management information, since the municipality can check the tool to see how far they are with their budget exhaustion by asking for a report. Furthermore, less overhead costs would be needed. In situation A, lot of time and money is being spent analysing the budget exhaustion, which will now be done automatically. Also, less verbal communication is needed; information can be found in centrally within the portal. So everyone would be informed when they have the need to, information can be found centrally and therefore the transparency in the common arrangement will be enhanced as well.

9.1.6 Current and old way of organizing Youth Aid in the GR-JR

Before the decentralization, different parties (the provinces, the ministries, the care offices and the health insurers) funded youth aid and care. They payed the care providers predominantly with the method of p times q. P refers to the price of a particular care product, while q refers to the quantity. Many municipalities in the Netherlands including the GR-JR followed this manner of funding, since it was already a great transition for care providers at that time. That is why the GR-JR adopted the already existing fun-

ding method and tried not to pressure the care providers too much. In the year 2015 and 2016 the expenditure and product structure was left unchanged.

For the three segments of the GR-JR this means that for youth GGZ the old DBC system was taken over. DBC is a diagnosis treatment combination, which contains information about the diagnosis and treatment that a patient receives and is payed for according to the amount of minutes that the treatment was needed. For youth with a disability the funding was based on p times q and for youth and upbringing the funding consisted of subsidies.

According to the GR-JR, there are several problems with this system. The first problem is the fact that adopting the old system resulted in a product catalogus of 800 products (the codes of care where very specific). It was difficult to work with so many codes for both the care providers and the municipalities. For the care providers it was difficult because they have to invoice on the specific level of the care codes. For the municipalities it was difficult because they have to check which care codes the client needs and, therefore, which kind of care a specific care provider could offer. Also, the municipalies had to check whether the invoice of the care providers is correct on that specific level. The second reason is that with this system the focus was on production of care, instead of focussing on the transformation goals of the decentralization of youth aid and support (These goals are explained in section 7.6). The current and past system lead to the risk that care providers would invoice more care than the client would need, because the system was focused too much on p times q. This is especially the case in the DBC method because invoicing just a few more minutes was lucrative. Therefore, this old system was not ideal for the GR-JR and decided to change to another system, which will start in 2018.

As can be concluded from this section the GR-JR uses an output method to pay the careproviders, however this could lead to the risk that careproviders could behave opportunistically.

9.1.7 Current Payment Process

The common arrangement is only responsible for the payment of youth care, they are not responsible for checking whether the invoice of the care providers is correct. This means that the individual participating municipalities check the invoice of the care provider, and when the invoice is correct the common arrangement is told that the invoice can be payed.

However, in practice it shows that the payments to the care providers are not always correct. Therefore, the GR-JR wants to build in some controls, so that it is known for sure that the correct invoices are paid to the correct care providers. Since the GR-JR has

the obligation of a correct administration according to the law (Wet gemeenschappelijke regelingen and BBV), and it costs time and money to correct incorrect payments this is an important process.

For the payment process, the GR-JR uses a so-called HB tool, this is an application built in an Excel environment. Each of the participating municipalities has the HB tool. The information is filled in manually by the administration of the municipalities on a regular basis, including the information of the invoice and the amount that should be paid to the care provider(s). This information is the same information as the 303-code/messages of the standard message traffic that the municipality have. As explained in chapter three, in the section about message traffic, this is the code that the care provider sends to the municipality with the information of the invoice and the costs that they want to have reimbursed. The municipality checks this invoice and, when it is correct, the information is filled in within the HB tool. Then, the GR-JR is allowed to pay the invoice to the care provider.

According to interviewee GR-3 “there is only a manual check to see whether there is a signature included of a mandated person of the municipality. This is done using a signature card.” After the check is done, the administration of the GR-JR need to do is to click on a button and the HB tool generates a bank specification so that the invoice can be paid. The incoice is then automatically booked in an application called exact-online, which is an accounting tool that is used for financial administration.

In Figure 23 the current working method of payments of the GR-JR is visualized.

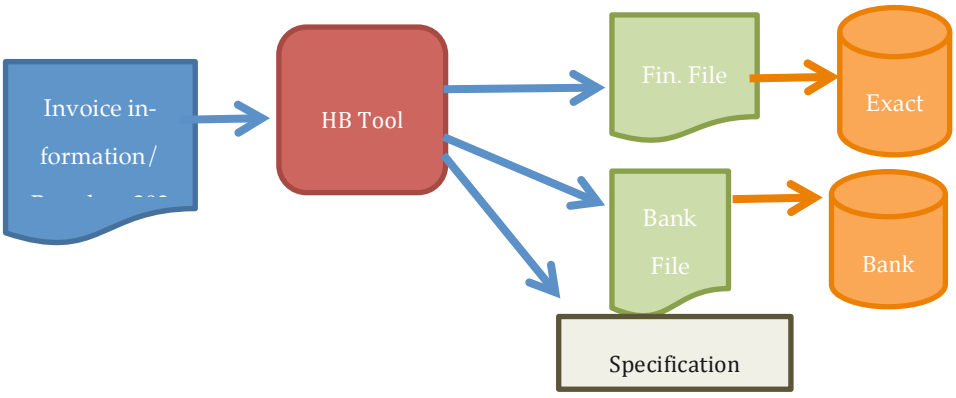

Figure 23 Model made by author

- Blue shape: information of the municipality (303 message of the message traffic)
- Red shape: HB tool developed by the Intermediary, which is installed at each of the municipalities to fill in the invoicing information. Information is then inserted manually in the HB tool.

- Green shape: Digital files
- Brown shape: Paper file to check the signature
- Orange shape: applications of the Intermediary

The fact that Excel is used for analyses increases the risks of incorrect entries, because there are a lot of manual operations at the GR-JR in their working procedures. When there is risk of incorrect entries there is also the risk of incorrect payments, because of wrong information. For example, as explained in chapter three, some forms of youth aid are the responsibility of municipalities and need to be paid locally, but the specialised forms are the responsibility of the intermediary. According to interviewee GR-3 "it happened that invoices that had to be paid locally in a municipality came into the administration of the common arrangement, which resulted in the common arrangement paying for the care while it had to be paid locally by the municipality itself." This mistake was discovered and solved at the common arrangement. However, it costs time and money (administration costs) to solve a mistake. According to interviewee GR-1, "it is also not a nice situation when a municipality hears, afterwards, that because of a mistake they have to pay money back. This is especially the case when it is a small municipality and when it is a large amount of money for them, which they did not anticipate before. These kind of mistakes are not desirable to happen and should be avoided.

Since information is filled in manually, there is also a higher risk that credit master data is changed. According to interviewee GR-3 "some checks are done with a sample to see whether the information is correct." However, it is "too much work to check all transactions manually again." Therefore, there is risk of incorect payments.

Interviewee GR-3 says "to prevent this risk a feature in the HB-Tool is build, which gives all entries in the HB tool a key". Subsequently, "when information is changed in the HB tool, the key will change too which means that information is modified."

However, there is still "the risk that entries filled in the HB tool can still include a mistake, that is not something the key can solve. "

The GR-JR wants to go to a situation with more automatic connections instead of manual entries.

9.1.8 Deployment of continuous monitoring tool to improve the Payment Process

The GR-JR would like to dimisch the risks of incorrect payments, incorrect input in the HB tool and no change of credit master data. Sothat the data quality improves and with that also the financial information of the GR-JR. In addition, automatic control is expected to save the time to check the invoices and will decrease the administrative costs. Since continuous monitoring can show the incorrect invoice immediately before it is

payed to to the careprovider, which is expected to save administration costs, since less mistakes would need to be corrected.

The CM tool could check the manual input of the municipalities in the HB tool and check this according to the 303 codes of the standard message traffic (XML). To see whether there are no manual mistakes in the input and the data could be trust. The pre-requisite for this is that all the participating municipalities give acces to their standard-message traffic, so that the 303 codes could be read.

According to, Interviewee GR-GR-22 and interviewee ET-27 informatition can easily be retrieved from the standard message traffic from their system, so from technical perspective this is very feasible. When the municipalities give direct acces to their standard message traffic, it would even be possible that the municipalities not have to fill in the HB tool, which would save them a lot of time; instead the messages could be filled in automatically in the HB tool. According to the interviews and the two workshops given, there is no problem with the willingness to give acces to the standard message traffic. So the willingness as described by Bahorosa (2015) is present.

When the data is in the HB tool it could be checked with the output of the HB tool (bank file). All the data in the HB tool are the invoices that need to be payed, so it can be checked with the Bank files whether they are really payed and no invoice is forgotten. In addition the data (the 303 codes) in the HB tool when legitimate, which means also checked on signature of a mandated person of the municipality could be checked with the transactions in Exact Online, an accounting system that the GR-JR use for their administration. All the invoices need to be booked in Exact Online. In this way, it can be assured that the data filled in the HB tool, is the same as the data out (bank files and Exact online). Also the manual input of the 303 codes would not be needed anymore, but can be done manually, which led to more accurate data and also less inaccurate payments.

In short the following checks can be made in the continuous monitoring tool to prevent inaccurate payment:

The 303 codes can be read on which product codes are underlying the invoice. Then the check can be done if it are the care codes that need to be paid by the GR-JR or not. GR-JR is solely responsible for specialized youth care. The GR-JR has a product catalalogus of all the care products they are responsible for. This productcodes can be matched with the codes in the 303 message of the standard message traffic, when it does not match it should be shown as a deviation. The people working at the administration of the GR-JR could then check whether it should indeed not be paid by the GR-JR and sends it back to the municipality that the invoice came from. The following checks could be build in:

- The check whether the 303 code (XML) correspond with the invoice amount in the HB tool and what is paid by the GR-JR (this data can be be seen in the bank file) and then check what is ultimately booked in Exact Online.
- Control of credit master data, checks whether the bank account number is correct and payed to the right care provider. The HB tool automatically generates the bank account details of the care provider. They have a list at the GR-JR with the bankdetails of each of the careproviders. In the invoice there is a code of the careprovider, this could be checked according to the bankdetails of the care provider and ultimately this could be checked with the bank files. When all this data, match one to one, when knows that the credit master data is not changed and that the invoice is payed to the correct care provider.
- Also they made the agreement that a care provider will be payed in one month as soon as they received the permission of the municipality as stated by interviewee GR-3. Therefore, continuous monitoring can help them to get more grip on that by checking wheter there is no more than one month between the time that the 303 comes into the HB tool as when it is actually payed (the date in the bankfile).

The expected benefits of the deployment of continuous monitoring for the payment process by the GR-JR are that it will improve the reliability of data, because less risk of inaccurate payments. In addition, the check that only the correct payments will be booked in Exact Online, will improve the reliability of their financial information. In addition, incorrect invoices or incorrect banknumbers will be shown immediately, which would reduce the incorrect payments. The deviations in masterdata or incorrect invoices or amounts will be shown immediately; therefore the continuous monitoring tool provides critical evidence, on which the financial administration department of the GR-JR can immediately take actions when needed. In the current situation the GR-JR often discovered a mistake a year later when the transactions were controlled in a sample by the internal audit department or the external department. Now, transactions would be controlled continuously, which would lead to an early detection of errors. Also in the currect situations only sample of data is being checked, by using the continuous monitoring tool a 100% coverage of data would be a large benefit according to the controllers of the GR-JR, now only the transactions are controlled in sample, because of the large amount.

Therefore, the GR-JR have no clear view of how high the risk of incorrect payments really is, 100% coverage would give the GR-JR more trust in their data.

9.1.9 Contract Monitoring

In the common arrangement the account managers are responsible for the contract and compliance with the contracts. At GR-JR there exists a general contract (raamcontract) with the general requirements that the care provider needs to have. In the law youth aid these requirements are also described. The providers need to have a SKJ registration, which is a registration that care providers of youth need to have. This registration is only checked when a contract is concluded. The contract with care providers has duration of some years. The new contract of 2018 will be two years with the option of extension of one year. In addition, in the segment youth GGZ, the care providers need to have BIG registrated staff. Also, there is a requirement that staff has a VOG, which means that they are staff with a clean report in terms of criminal offenses. These registrations are important, since it show that the personnel of the care providers can safely help the clients.

Furthermore, there is another contract called a budgetletter. In the budget letter they specify unique things for each care providers. According to interviewee-G4 and interviewee-G5 it says whether the care provider will have a budget ceiling, which means that careproviders cannot invoice when there capacity is reached. The budget letter indicates what the maximum budget is of the care provider and how many clients are expected to be taken care of for that budget. Interviewee-G5" maximum budget per careprovider are used to get control on the expenditures of care."

The contract managers aren't checking every detail of the contracts. At the time of concluding new contracts with careproviders, the certicifactions they need are checked. So this means that this check only happens once, not every year. Yet, the contract managers always have the possibility to check certain things when they receive signals from quality inspections that things are not working correctly.

Furthermore, the contract managers are not checking in detail whether the care providers invoiced according to the prices in the contract. According to the contract managers they check each quarter is the production information of the care providers if there is nothing strange like two indications per clients in the file. Then a meeting is held every quarter with the care provider to talk about the information the careproviders have provided. This is a meeting in which the figures are discussed as well as the transformation goals of decentralization. For example, the actions the care provider is taking to provide more help to clients at home instead of in the institution are discussed.

For account managers, numbers are very important because in the conversation with healthcare providers they can ask about the story behind the numbers, the figures are the starting point so that there can be a discussion about ways to improve. Therefore, numbers are the basis of the conversation.

The check that the figures of the care providers are correct is only done by the external accountant of the care provider. When the care provider doesn't have an approved annual statement, the account manager talks with the care provider what the reason is for that. When a good explanation is given it is oke. When the contract managers are not convinced they can do a materiality check at the careprovider to check the organization and their way of working.

The accountmanagers in the common arrangement wish for continuous automatic controls. At this moment, the analyses are done manually, which takes time and can also result in some mistakes, which are not discovered in time, for example, a situation of two indications/ arrangements per client. Also, some providers have a budget ceiling.

Thus, the accountmanagers (Interviewee GR-4, Interviewee GR-5) wish to monitor the transactions of the provider continuously according to this ceiling. Interviewee GR-4 says "a care provider should not be near 90% of the budget when only half a year has passed". Now it is difficult to take pro-active actions to prevent this situation. Information is only delivered each three quarters. It is likely that the first three months a care provider used 30% of the budget and that the care provider is already on 80% in the next three months. At that point in time according to interviewee GR-4 "it is already quite late to talk with the care providers." When the care production of carepoviders could be monitored continuously, when can see that prodution of care is increasing fast and can take actions on time.

Also, when one could get additional insight it would help for a more pro-active approach of the contract managers. For example, when you can see that a certain care provider is very populair in the neighbourhoud teams, then the contractmanagers of the GR-JR can speak to the neighbourhoud team and ask what the reason is. When it is because the provider delivers good service or quality of care, this can be taken into account for a new contract or contract extension.

9.1.10 Annual account

In section 7.7 it is explained that the common arrangement needs to show an annual budget and accountability documents according to the rules of BBV (Besluit begroting en verantwoording). So what is the way of working in the GR-JR to ensure that their data and administration is correct and can be trusted? As learned in section 9.1.4 that they only rely on data of care providers. The GR-JR works in the following way. As rule, the care providers need to show an approved statement of an annual account each year. When there are no large deviations the care provider gets an approved annual account, which they can show to the GR-JR. The care providers are using a standard account protocol of I-social domain for this with certain rules. One of these rules is that, in

the sample all of the municipalities that the care providers offer their services to must be included in their sample. However, the GR-JR says that for a small municipality it can be the case that only two transactions are being checked by the external auditor of the care provider. Therefore, you cannot always get full guarantee that the information is 100% correct.

In addition, for the annual account of the GR-JR, the GR-JR needs to have the annual account from each participating municipality. Based on the information of the annual account of the municipalities and careproviders, the GR-JR could get some certainity that the information they have in their administration is correct. Unfortunately, last year the GR-JR received an annual report without judgment, since they received some approved annual accounts too late and others were not approved. Therefor, the external auditor could provide insufficient assurance of the figures in the administration of the GR-JR.

Thus, the GR-JR would like to have more direct access to data themselves and the ability to check the financial data stream. According to AC-30 the financial stream of invoices is checked according to specification like the legitimacy, whether the invoice consists of correct information and payed to the right care provider. When using a continuous monitoring tool that analyses the financial transactions by continuously monitoring the 303 codes of the standard message traffic could reduce their dependency on the timely approved annual account of each party.

9.1.11 Internal audit department

To achieve a sufficiently manageable organization, the GR-JR uses the services of the financial audit department of the largest municipality in their region. On the basis of a defined work plan, the financial audit department of that municipality performs audit work on behalf of the GR-JR. The audit work is carried out to establish the legitimacy and fidelity of the actions within the various processes of the intermediary. For example, the processes of procurement/ purchases of care of the GR-JR are checked by them, as well as the payment process and the process of subsidy of the segment (youth and upbringing). According to the three lines model, the internal audit department can check for the actions of the business (the GR-JR) when making use of a CM framework.

9.1.12 Quality and use of Standard message traffic

This year the GR-JR wanted to have more certainity on the data that they have in their administratation based on the information of care providers. Especially, since the GR-

JR had an annual account without judgment the year before. Therefor, this was the first year that the information of the care providers was matched according to the information that the municipalities have in their system. Interviewee GR-M1-15 said that information was asked from the municipalities about the client in their system. According to interviewee GR-3, the GR-JR has the task to check whether the combination of client, care provider and municipality in their own admistration matches with the information at the level of care providers and the municipality level.

Interviewee GR-M1-15, says that normally it should match one by one that the clients belonging to a certain municipality in the system of the care provider match to the information of the client in the system of the municipality. This information should come back in the administration of the intermediary.

This year the GR-JR checked it and discovered that some information was not matching. According to the analysis conducted by Interviewee GR-M1-15 the GR-JR saw a few things were happening. First, care poviders were not alwas sending a message back to the municipalities that the treatment of the client is finished through the standard message traffic, therefore, the municipalities still had the client in their system as care that is pending. Second, as explained in section 3.6 the client can also come from a different route than through the social district team of the municipality. For example, this can be done through the general practitioner. When the care provider doesn't send a message through the standard message traffic (code JW315), the municipality does not know that the person from their municipality is in treatment with the careprovider.

At the GR-JR interviewee GR-1 mentioned that they first worked with advancements and that some care providers with a high liquidity only send their production few times per year, which was then processed in the administration of the GR-JR. From the start of januari 2018 the GR-JR are only going to work at invoice basis, which means that the care provider needs to follow the steps in the standard message traffic and send the message that they started the treatment of the client. Otherwise, the care providers are not going to be paid.

From the interviews at the municipalities and at the GR-JR. The conclusion is that the standard message traffic is only useful when the care providers and municipalities follow the procedures. Since the years 2015 and 2016 were a transition year, not the systems of all the care providers and municipalities were ready to make and receive the correct messages. In addition, when working with advancements, there was less incentive for the care provider to follow all procedures. They would get paid anyway. Now the GR-JR decided to work on invoice basis for almost all care from the year 2018. And they expect that from next year on the quality of the standard messages will be good.

9.1.13 Output versus Outcome

On the first of januari 2018 the GR-JR will use the result-based approach, instead of the current effort systematic where care providers were paid according to the amount of time spend with the client. By using the result-based approach the care poviders will be monitored according to the following outcome indicators goal realization: waiting times that the clients have at the care provider, customer satisfaction and drop-outs. What is meant with goal realization is the level in which the care provider can realize the goals that were set by the youth professional in the support plan of the client. With drop-out the amount of clients stopping the treatment delivered by the care provider before the treatment was ended is meant. Another point to check for the GR-JR are the waiting times at a care provider, since these can be very long

There will be a shift from monitoring on output to monitoring on outcome in the GR-JR. This means that the focus doesn't lay on the time spent on care, but on the quality offered to the clients. This was one goal of the decentralizations that the central government was aiming for, namely improving the quality of care to the citizens.

The outcome indicators are invented by Dutch youth institute (Nederlandse Jeugd instituut) and the Association of Dutch Municipalities (VNG) in order to harmonize the way in which performance of municipalites are measured. This is done so that care providers could be compared and that municipalities, providers and clients learn more about the impact and quality of child support (Yperen et al., 2015). According to interviewee GR-7, also other municipalities in the Netherlands make the shift from just measuring on output (p times q) to a way of measuring more on quality as well.

This is a trend in the youth aid in the Netherlands. Interviewee GR-7 says that for example, the region West Brabant West and also the largest municipality in the Netherlands, Amsterdam, are using the result-based approach and are measuring on the outcome indicators.

9.1.14 New way of working of the GR-JR and municipalities

The new way of working, which will be put into action from 2018 and onwords, is as follows. The GR-JR will not be working according to the three segements Youth GGZ anymore, Youth with Disabilities and Youth &Upbringing; instead they will work according to six lots A till F, which consist of the perspective on the client. Lot A stands for: Just grow up outside the family, which is the case when the youth only needs replacement upbringing. The perspective of the client is stability. Lot B stands for: Return home, which consists of treatment and support with replacement upbringing. Lot C stands for: lasting support, which means support for social and personal functioning

(mainly self-reliance). The perspective of the client is that maximum care is needed, including long stay and medication. Lot D stands for: support, assistance or treatment during the day. The perspective is aimed at maintaining or enhancing skills and recovery or reducing the problems of the client. Lot E stands for: treatment and support at home. The perspective is recovery, reduction and stabilization of the problems. Lot F stands for crisis support.

The client (a child or young person below 18) that needs help asks for support in the social district team of the municipality to whom he or she belongs. The young professional makes an assessment of the perspective of the client (lot A till F) and the extent and gravity of the problem that the client has that hinder his or her development. Then, the young professional puts together, in collaboration with the client, a support plan which describes the necessary help of the child and the family and the results that they think can realistically be achieved. The estimate of the problem is then translated into a budget intended for the care provider. An arrangement/budget per client consists of a collection of result areas, optionally supplemented with relevant support elements, provided with steps referring to the intensity of the required assistance and the duration of treatment needed. Interviewee GR-7 says ‘’this means that the arrangement is customized to the needs of the client and that the arrangement and, therefore, the budget will differ between clients.’’

Interviewee GR-7 says, “The care provider will get a total fixed amount of money per client to perform the care of the client and to realize the set goals written in the support plan.” The total budget amount will be divided in weeks and the provider can invoice the weekly amounts of the past weeks, every four weeks until the period of the arrangement is over.

The advantage of this way of working according to interviewee GR-7 is that the care provider can determine how they will solve the problems of the clients and achieve the results written in the support plan of the client. In other words, the youth professional is responsible for the ‘what’ and the care provider for the ‘how’. This means that a care provider has the freedom to do what is required within the package and is not bound to use specific care products. Professionals gain more space in the way they provide assistance. In addition the support plan will be sent to only one care provider, who will take the full responsibility of coordinating the care that the client needs.

In the old situation when one was working with care products, it was possible that a child was sometimes referred to two or three different care providers and no one took the lead in helping the child in an integrated way. This was both not effective and not efficient. By giving the responsibility to only one care provider, the child can get an integrated customized solution. Furthermore, the connection between the care provider and the responsible youth professional of the social district team of the municipality improves. The professional can, when needed, consultate the care provider, since there

is only one contact point. Also, the youth professional can check during the treatment of the client how the care provider offers help to the client and wheter the care contributes to the set goals. This improves the transparency as well. According to interviewee GR-7 says that “from the GR-JR’s point of view, it will be easier to monitor the care provider, since the provider is responsible for all the care from front to back and can, therefore, be hold responsible for the results. “

The conviction is that setting this step to a new method based on results and arrangements is needed to help achieve the transformation goals, with the ultimate goal of helping the youth in Rijnmond more effectively and efficiently. This is a major step for the care provider, since this asks for a new way of working. Also, for the participating municipalities it will be a challenge, since the social district team needs to determine what the problem of the client is and what goals need to be realized, while in the past they only needed to refer the client with certain product codes and no goals were set. Interviewee GR-1 says that “this system is totally new, it is important to monitor it continuously to see the effects of the system and to see wether everything is going into the right direction. When some problems might arise, these should be detected earlier and fixed it immediately in a pro-active manner. “

In 2018, the GR-JR will only monitor the financial transactions and examine how the system of arrangement is working. The outcome indicators explained in section 9.1.13 are also checked, but the care providers will not be held responsible on these indicators yet. Interviewee GR-2 says that “In the future, from 2020 onwards, the GR-JR would like to monitor the care providers on the combination of financial and qualitative indicators.”

Interviewee GR-7 explains that in the arrangement method the youth professional of the social district team estimates the duration of the care. When, for example, the duration of the treatment is estimated to take six months by the youth professional and the care provider can reach the set goals in five months, the provider will still receive the total budget that is set for the arrangement. But only when the goals are met and when the client and care provider together decide to finish the treatment will this be this the case. This situation will lead to a win-win situation for both the care provider and the client. The care provider will receive the budget of the client in less time, and can, therefore, help another client. This stimulates the care provider to focus on quality and help the client as fast and good as they can.

For the clients the benefit will be that they will be helped faster and can go home earlier. So the arrangement method stimulates the care provider to provide a more effective and efficient way of work. On the other hand, Interviewee GR-7 and GR-8 says that ‘’each system is prone to perverse incentives.’’ That is why it is important to monitor the new system carefully and to look both at the transaction level and to monitor the quality outcome indicators. For example, the contractmanagers of the GR-JR needs to

get a signal when most of the care providers finish the care earlier than the duration indicated in the arrangement, because then the estimations are not good and actions would need to be taken to improve the knowledge of youth professionals so that the duration can be estimated more correctly. Another example of a signal that a care provider needs to know is that only one care providers is finishing a large percentage of their clients before time. If this happens, when goals set are realized and the care provider also scores well on customer satisfaction, then this will be good. The GR-JR knows that the care providers offer good quality of work and can decide to extend the contract with this care provider or even to reward the care provider financially. But when a care provider, for example, finishes care before the arrangement ends, and does not score well on the outcome indicators, then the contract management of the GR-JR can take action by speaking with the careprovider.

Therefore, close monitoring of the system by continuously checking the transaction stream of care would be very beneficial to detect deviations from the normal way of working and to make sure that the GR-JR can take action when needed. In this way processes and policy can be continuously improved. That is the ultimate goal of the GR-JR, to improve step by step until the transformation goals of the youth aid are realized.

9.1.15 The strategy of GR-JR

In the GR-JR the years 2015 and 2016 were focused on the transition of care. From the year 2018 they want to start with the transformation goals of the decentralization of youth aid (read more about transformation objectives in section 7.6). The participating municipalities of the GR-JR will work hard to focus on a good connection between the local acess and the specialist care. In addition, they will work according to the new result based approach as described in section 9.1.5 and they will be working with arrangements per client as described in section 9.1.14. The policy of the GR-JR is to monitor the care providers with the new way of working and to check whether the care providers work according to the agreements made.

In the future they want to pay care providers not only on financial indicators, but also on quality indicators. The ideal situation would be a mix. The GR-JR will check from time to time, together with the participating municipalities, in what sense the goals of the transformation are achieved and how the method is working.

9.1.16 Communication of GR-JR with the participating municipalities

Currently there are a lot of meetings in the common arrangement. First of all, the general board of the common arrangements have around six meetings per year, the daily boards of the municipality also have also six meeting per year. Then there are six major official consultations with one policy officer and one controller per municipality. There are six meeting with the core group where one representative of the controller and one representative of the policy officer per municipality are present. Then there are, each quarter, subregionals meeting, a subregion consists of about three municipalities.

In these meetings, the realization/production of the care providers is discussed. Interviewee GR-2 told that the common arrangement wants to be transparent toward the municipalities regarding the way they work. In fact, they work on behalf of them. Interviewee GR-2 says "real insights and actual data are lacking at the moment". That is why there also needs to be discussion about policy and a manner to get more in control. The wish for the future is that, in meetings everyone is already informed with real data and that there will only be talked about real important matters, trends or deviations that data show. The goal is to continuously improve and work according to the goals of the transformation of youth aid and the goals of the common arrangement. To share knowledge with each other and to help each other too.

Interviewee GR-2 said " it would be optimal when there would be a common dashboard of the results/ figures of the GR-JR in general and that each of the municipality could log in to its own environment in the platform and excess the information that is relevant for the municipality. At least for the financial transaction with regard to how the progress of the use of care per municipality is compared with their budget. The most ideal situation would be that transactions are processed continuously and that each municipality could check its own progress with a report of deviations and, when needed, actions to be taken. Then the transparency in the chain would increase even more. This would also save time in meetings, perhaps even less meetings can be organizized, because information would be central and everyone can acces it.

9.2 Case Municipality 4 (individual/not part of GR-JR)

9.2.1 General Case Description

This case is about a medium sized municipality called Etten-Leur in the south of the Netherlands, specifically in the province of North Brabant. The municipality is part of a common arrangement called Jeugdhulp West Brabant West, and purchases second-line

care products together with eight other municipalities. The reasons for purchasing together in a common arrangement are the same reasons as explained in section 7.7. The common arrangement makes use of a Care Information & Purchasing Team (ZI²T), which carries out the contract management with the care providers, the procurement and monitoring of the system on behalf of the nine municipalities.

The common arrangement is not responsible for the payment of the care providers; each of the nine municipalities does the payment. The common arrangement does not have any information on the client level, only overall information that they need for their purchasing policy and contract management. This choice is made deliberately according to interviewee ET-28, since the privacy of the citizens is valued a lot in this region.

9.2.2 Current way of working Youth Support and Care

In the region, West Brabant West an arrangement model is used. As explained in section 9.1.12, Region Rijnmond wants to start with the arrangement method from the year 2018 onwards as well, although their arrangement model works in a different way than the one of region West Brabant West. In region West Brabant West, a fixed arrangement model is used, in which nine client profiles and four intensities exist. The combination of a client profile and intensity determines the height of the rate of an arrangement. In total, there are 36 possible combinations.

According to region West-Brabant West the arrangement model is more privacy oriented than their old system, which worked with DBC's and was based on output. This is the case, because in the old system product codes were used to indicate care. The problem with this is that it is possible to deduce the care a client received from the product codes. Now, with the arrangement method only information about the client profile and the intensity level of the client is available, but not the specific care the client received. Only the youth professional of the client of the municipality knows what kind of care the client will get from the care provider.

Analysis done by municipality level Etten-Leur for policy reasons are done on the client level, but only with the following information:

- To what client profile a client belongs
- What the intensity of the problem is
- What the price of the arrangement is
- Whether the client was referred through a youth professional, a general practitioner or another route.

This kind of information is important to be analyzed for policy reasons. In addition, information on the client level is needed to check whether the invoice of the care provider is correct. But in depth knowledge of the exact situation problem of the client is not needed neither for policy nor for payments.

The youth professionals of the Muncipality in Etten-leur make use of the services of an external partner called Spring, which is an organization which employs high educated youth professional. All nine municipalities in the region make use of the services of this external partner.

The municipality in Etten-Leur has four social district teams and the youth professionals of the organization Spring are part of these teams.

When a citizen of the municipality needs help or has a question, they can contact the social district team. When the citizen is below 18 years old, he or she will be connected to the youth professional. The youth professional will investigate what type of support the client needs and will also visit the client at home in the form of a so-called keukentafelgesprek. Then, the youth professional searches for possibilities to help the client with basic local care. When the client needs more help, the client will be referred to a care provider. The youth professional sets up a plan and also indicates to which client profile the client belongs. Also, the youth professional makes an estimate of the intensity level of the problem. Moreover, the youth professional sets up the goals that need to be achieved by the care provider. Everything is in close consultation with the client. The care provider checks with the client, to see what care the client needs. Both parties sign the support plan and the care provider sends the municipality with an overview of the total cost of the treatment. The youth professional checks whether he agrees with the treatment plan and the costs. Subsequently, when the youth professional agrees with the plan, the care provider starts the treatment.

In Region West Brabant West they make use of main care providers, which means one care provider per client, who is responsible for the overall care of the client from the beginning to the end. The provider may, if necessary, involve other providers, but he himself remains responsible in the end. This approach facilitates communication between youth professionals and care providers.

In most cases the care provider receives 50% of the invoice at the start and 50% when the treatment is finished, when the goals of the clients are met. Therefore, the arrangement model is outcome based. Results are what matters, not the time spent on care.

Interviewee ET-28 says that when the youth professional receives a message from the care provider that the treatment is ended, the youth professional will send a letter to the home of the client. This letter indicates that the treatment is finished, and that, in case the client is not satisfied, they should contact the youth professional within two weeks. When the two weeks are passed and the municipality did not receive a message

from the client, it is assumed that the client is satisfied. Only then the remaining 50% is paid to the care provider.

The municipalities in region West Brabant West work with a guarantee on care of one year. Interviewee ET-28 says that when a client still has problems within the year that the treatment is finished he/she can contact the youth professional and the care provider will help the client again, for free.

As can be concluded from this section, the municipalities in the region West Brabant West are working with the arrangement method, which is based on outcome and quality. They monitor the care providers on the following factors: goal realization, satisfaction and drop out. Drop-out refers to the amount of clients the care provider was not able to help or had to transfer to another provider.

So, the providers are accountable to the municipalities based on the factors mentioned above, and not on time spend on treatment of the client.

9.2.3 The principle of one family, one plan, one coordinator

The aim of the decentralization is to work from an integral approach. One example of this is working according to the principle of one family, one coordinator and one plan (explanation of this principle can be found in section 3.5). In the municipality in Etten-Leur, they work with this principle as follows according to interviewee ET-28, the professionals only work for one discipline, for example, youth professionals for the youth domain and WMO consulates for the WMO domain. There is one contact person per discipline in the family. They do not have one person that coordinates everything in the case of multiple problem families. That is because they value the privacy of citizens a lot. They work with one system, but the consulates of WMO cannot access the files of youth professionals, and vice versa.

However, several professionals of the social district team in the municipality have short lines which each other, which means that when a youth professional visits the client at home and sees that the family also needs support from the WMO domain, the WMO consulate is asked to contact the family. This is how the municipality works with the principle of one family, one plan and one coordinator.

9.2.4 The Data Quality of standard message traffic

The standard message traffic is explained in chapter three. In the whole of the Netherlands they use the same codes for start treatment, end treatment and invoices, but the messages under the codes can be different per region. This depends on which funding

methodology (bekostingsmethodiek) the municipality has chosen. Municipalities in region West Brabant West agreed, for example, to work with an arrangement methodology, which is based on nine client profiles and four intensity levels as mentioned earlier.

The municipalities communicate with the care providers with the use of the standard message traffic. They exchange information about the arrangement and to which client profile the client belongs. Also the intensity of the problem is communicated. In other municipalities, in other regions, they can make use of another funding methodology. For example, the output methodology based on p times q is used. In this case no information is exchanged about the client profiles, but about the product codes that indicate the specific care that the client received.

In section chapter 2 the quality requirements (Lee et al, 2002) of data are described and explained in a table. In the context of this study, the quality of data needs to be good in order to use it for continuous monitoring. The muncipality in Etten-Leur has mentioned that they could not trust on the information of the standard message traffic in the year 2016 completely. All the invoices had to be checked by the staff of the municipality manually.

This had several reasons. First of all, the region West Brabant West started with the arrangement model on the first of January in 2016. In 2015, they made use of output methodology (p times q). Some clients that where having an indication (beschikking) in 2015 continued with the care they needed in 2016. This led to confusion in the invoicing process, because some treatments needed to be paid according to the rules set in the old system and other treatments needed to be paid according to the new system. Therefore, the municipality had to check whether the invoices didn't contain mistakes, because sometimes it was filled in wrong in the standard message traffic by the care provider. This means that, according to the quality requirement of Lee et al (2002), the data was not without errors and could not be trusted.

Furthermore, in the beginning care providers were sending invoices on paper, but then the standards message traffic was introduced in municipality of Etten-leur. Thus, the care providers needed to send their invoice electronically. This situation led to confusion, because sometimes a part was already paid to the care provider according to the paper stream. Subsequently, the second part was invoiced electronically and needed to be paid according to that.

Working with standard message traffic is built in the client administration system of the municipality. There are controls built in the system to make sure an invoice could not exceed the amount of the arrangement. This means that a person from the administration of the municipality can check whether there is room (bestedingsruimte) to pay the invoice of the care provider. However, the system cannot take into account paid amounts that have been paid via the paper stream. So sometimes the person working at

the municipality would think that there is still budget to pay the invoice of the care provider, while it is not true.

This led to confusion about the data in the standard message traffic, since it was not complete (not counting the invoices paid on paper stream). All the invoices needed to be checked manually, to assure that there were no mistakes in the payments to the care providers.

In short, one can say that by using the quality requirements of Lee et al. (2002) the quality of data was insufficient, because the information was incomplete, not free from errors and not relevant. The only good things about the data was that is was secure, because standard message traffic is a safe way of exchanging information and the data can be retrieved easily from the system of the municipality in Etten-Leur.

The municipality expects that, from this year onwards, these problems will be solved, since all regional care providers are using the standard message traffic now and are, therefore, sending invoices electronically. Also, they are working with the arrangement model for over a year now, so people with an indication (beschikking) based on the old methodology do not exist in the system anymore. Therefore, it is expected that the problems with data quality will be solved and that the data will be accurate, complete, and relevant. Also, it is expected that there is an appropriate amount of information (since all invoices will go electronically through the standard message traffic instead of partly going via the paper stream).

9.2.5 Continuous Monitoring

Continuous monitoring would not be possible in the common arrangement of West Brabant West, as could be done in the common arrangement in Rijnmond. The reason for this is that the common arrangement does not have any information on client level. Only highly aggregated information is received from care providers and the nine participating municipalities. In addition, the common arrangement is not responsible for the payments. This decision is made because of privacy reasons. Therefore, there would not be enough information and possibilities to make good use of continuous monitoring in the common arrangement.

However, continuous monitoring could be applied in the municipality of Etten-Leur. In this municipality they not only work with indications (beschikkingen) for second-line care, but also for the first line of care. This is the case because they think that it is important to save all information in their system, so that they analyze it when needed. Currently, all the information can be extracted from the system when needed. As explained in section 9.2.4 the data quality of the standard message traffic in 2016 was insufficient. This is because of the change to another system and the mix of invoices that were either

paid through a paper stream or electronically, which led to the situation that the information in the standard message traffic was incomplete and not free from errors. However, as explained in section 9.2.4, the information is expected to be accurate for the year 2017, since the transitional errors are expected to be out of the system from the current year onwards.

This means that, the standard message traffic will work well and is free from the transitional errors. In addition, the information of both first-line care and second line care that is available in the municipality, will provide the right conditions for continuous monitoring to be applied in Municipality Etten-Leur.

According to interviewee ET-27, would municipality Etten-leur like to monitor the invoice stream, because the invoice stream there includes all rules that need to be met before a care provider is paid. For example, when the intensity level of a problem is acute, it means that the client needs to get help right away. This means that the care provider gets the full amount of the arrangement paid at once, as opposed to other intensity levels in which they have made the agreement to pay first 50% of the arrangement and then after the treatment has ended the remaining part. It would be beneficial for them when a monitoring tool could read the messages of the standard messages traffic and could check, according to the agreements made in the contract, when an invoice should be paid to the care provider. In addition, it would be good to check whether the invoices of the care provider not exceed the total amount of the arrangement that they have both agreed on. The municipality has mentioned they have built in control checks in their client system as well, but sometimes it fails to show incorrect invoices. Therefore, it would be good when, as soon as the municipality receives an invoice message of the care provider, the monitoring tool would read the information and check whether it is in compliance with the contract. This will save a considerable amount of time.

In section 7.13 control automation was explained. A study by Christiaanse and Hulstijn (2012) links control automation to enhanced business compliance and assurance. In this paper it is claimed that control automation can help organizations to reduce the cost of control. The authors argue that organizations exist in a highly contractual environment, whereby buying and selling is controlled by contracts.

This description fits in with the present study as well, since the municipality has contracts with care providers with certain rules that they agreed on. For example, the part of the invoice is paid in the beginning and what part of the invoice at a later time is arranged in a contract. In their own system, the municipality has built in some controls, to check whether invoices met with the criteria of their contract. However, the built in controls were inadequate, which is why manual checks were necessary. Therefore, a second automatic check would save them a lot of time. An instant check of invoices, as soon as they come through the standard message traffic that would be checked, is ideal.

Thus, there is a need for continuous automatic controlling of the invoices and the compliance of the contract with the care providers.

The municipality is accountable to their city council regarding the extend into which the policy goals are met. In order to provide correct information to the city council, they also need to have accurate data about their financial position. Yet, this can only be done when the invoices are paid according to the agreements of the contract. In addition, as explained in section 7.1 about how the municipality functions, the city council is accountable to the citizens. They need to give the assurance about the financial information, so that the citizens of the municipality know what is done with the money that is intended for the youth care of citizens.

Continuous monitoring could also help the municipality to get insight in the extend into which their transformation goals of the decentralization are met. This could be done by monitoring the information flows of the standard message traffic. Since they have information on both the basic care and the second-line care in their system, they could verify in which sense the use of second line care is decreasing in amount terms of amount clients as well as the amount of costs. Furthermore, they can analyze how many clients flow over towards the basic care (as the youth care pyramid displayed in section 7.7 explains). This kind of insights could help them to know whether they are doing well according to their policy or not. Subsequently, actions could be taken to improve the situation.

In short, continuous monitoring is expected to provide the following benefits in municipality Etten-Leur, which are partly the same as found in the literature explained in chapter 2 and in the table where the benefits of the literature are summarized. An expected benefit of municipality Etten-Leur is that continuous monitoring can improve the reliability of data, through the second check of information in the standard message traffic. When an invoice cannot be paid yet, or has a mistake, the continuous monitoring tool can help with the early detection of errors in the invoice. Also, checking the data will cost less time, since it is done automatically. Moreover, more insights in whether policy requirements are met and how far the municipality is according to the transformation goals of the decentralization would be seen easily because of the possibility to request a report in the monitoring tool with the latest information.

9.3 Case Municipality 5 (individual/not part of GR-JR)

9.3.1 General Case Description

This case is about a small municipality called Zaltbommel. In 2015, this municipality purchased youth care products together with nine other municipalities. As explained in section 7.8, a chain consists of actors working together to perform one or more goals (Bharosa, 2015). In this case the chain is municipality Zaltbommel working with the other municipalities in the region to perform the activity of purchasing youth care products together.

According to Bharosa (2015) efficiency, increased quality, sustainability and safety embody the key drivers for both individual and collective motives for participation in the chain. The 10 municipalities, which are all based in the province Gelderland, performed the procurement together, which means that they made uniform agreements with the care providers regarding quality and price. The municipalities made use of the solidarity principle, meaning that risks due to fluctuations in demand are divided amongst each other. The collective motive of the municipalities is to increase efficiency (economies of scale) and safety/ sustainability (decreasing risks).

9.3.2 Conflict of interest in the chain

From the year 2016 onwards, the municipality in Zaltbommel no longer wanted to purchase youth aid regionally. As explained in section 7.8, when the collective and individual motives of actors within a chain come into conflict, they can complicate chain coordination (De Bruijn and Ten Heuvelhof, 2008).

This explanation fits in with the present case as well, because the individual interest/goals of Zaltbommel did not match with the interest/ goals of the other municipalities. The chain came under pressure, because of several reasons.

First of all, the municipality had the feeling that they had an insufficient grip on the regional procurement due to the size of the care to be purchased. In addition, the information about the care purchased was lacking or was received too late, which also contributed to the fact that the regional solidarity came under pressure. In short, there was, according to the municipality, not enough transparency. Second, for Zaltbommel it is very important to put the citizen central and to offer support and care close to the citizens. They had the feeling that the regional purchasing choices did not adequately match the transformation objectives that their municipality had. Third, regional procurement led to distance to care providers, which resulted in fewer possibilities to make

purchase agreements based on the relationship and the quality. The purchase agreements were focused too much on money and volume, something that is not aligned with the objectives of the municipality of Zaltbommel. Fourth, the municipality needed less care in 2015 than the original budget determined by the regional agreement was; therefore the solidarity principle was not beneficial for them.

Because of the above described reasons, Zaltbommel decided not being part of the arrangement anymore from the year 2016 and onwards.

9.3.3 Current local procurement of Youth Support and Care

From the year 2016 the municipality decided to purchase the youth support and care by themselves. This was possible according to interviewee ZA-25 since the municipality worked with one system and had a good insight what volume of care they would need. Their approach was to purchase as much as possible from the local care providers. This was done because the local care providers know the clients the best and can therefore deliver customized care and work from the demand of the client. This resulted in an 80% purchase from the local care providers.

As already explained before, quality of the care and putting the citizen central is key for the municipality. Each care provider needed to distinguish itself with quality. The contract was concluded after a conversation with each care provider in which there mainly was a discussion about the content, namely the joint development in the right direction to achieve the transformation goals of decentralization of youth aid (explained in chapter 7.7). Only the last few minutes were spent to talk about the financial picture.

This form of procurement leads to the result that the municipality and providers jointly took responsibility in the Youth support and care. In many other municipalities and common arrangements in the Netherlands the procurement process is approached more from the financial perspective. Municipality Zaltbommel focused on a strong cooperation with the care providers.

Therefore, they concluded contracts of 5 year in order to enhance mutual trust and to provide the possibility to work together on innovation/ transformation and to reach the goals of decentralization. In addition, to the multi-year contracts it is very important for the municipality that clients can choose the care provider they want. In 2016 they contacted 52 care providers. This approach is uncommon for a small municipality. Therefore, their approach also appeared on the web (binnenlandsbestuur.nl, 2016)

9.3.4 Current way of working Youth Support and Care

The municipality in Zaltbommel wants to organize the care for youth and family clearly and easily recognizable for citizens. The municipality uses the services of Buurtzorg Jong (youth care office), which is an organization with professionals whom have experience with solving problems of youth and their family.

Interviewee ZA-25 says that the team Buurtzorg Jong is self-governing. In addition, Buurtzorg work without managers; in order to keep the overhead costs as low as possible, so that more money can be spent on real care for the citizens. The youth care office (BuurtZorg Jong) makes use of an own administration system.

The municipality in Zaltbommel decided not to have their own social youth district team, but to outsource the task to an external party (Buurtzorg Jong). The reason is that they believe that it is better to let the work done by professionals, who have the knowlegde to help the youth in an effective way. Interviewee ZA-25 says: “we as a municipality do not have the knowledge about the kind of care a citizen needs, therefore, it is better to let the work be done by professionals”. The municipality trusts her partner, Buurtzorg Jong, to do the work for them. This is also what the author from this research observed in the Municipality of Zaltbommel, people are governing the municipality with the mindset of trust and strong relationships. The people within the municipality believe that it is important to have short lines of contact with Buurtzorg Jong.

The municipality gets reports with information about the work done by them and what actions they took to improve quality quarterly. The office youth care is not responsible for the budget and also not for checking where the citizens live. The municipality itself is responsible for the payment process and for checking the invoice, which is done by employees of the municipality. Nevertheless, the teams of office youth care have a good view of the costs.

9.3.5 Desired way of involving clients

Interviewee ZA-25 was interviewed for the present research. The following points from the interview are of interest to the present research. The interviewee mentioned that he would like to involve the clients of the municipality more in monitoring the care providers. The goal is so that the clients themselves give their own judgment regarding the way in which they have experienced the quality of care, the quality of the care provider, the quality of the access of care and, also the level in which they believe that their problems are solved and that their goals are realized.

Furthermore, the interviewee mentioned that the citizens are in the best position to evaluate the quality of care that is given to them, since they are the only one who can

really say whether the policy of the municipality works well in practice. Another point that the interviewee mentioned was that he sees a future in which an application is developed which all clients can download on their smartphone, since smartphones are widespread nowadays. The interviewee suggested that it would be ideal when clients can fill in a small questionnaire consisting of around five questions regarding their view of the youth care and support they received. According to the interviewee, monitoring the effectiveness and quality of youth care in this way is ideal. Furthermore, this way of monitoring is beneficial for monitoring the actual delivery of care, since only the clients who received care will fill in the questionnaire.

With the municipality, the idea already exists to work with such an application this way. Thus, probably in the future this will be the standard way of monitoring. This form of involving clients can be seen as a form of e-citizens and e-services a form of e-government, as explained in section 7.1 (Gottschalk, 2009). Namely, the municipality wants to use an application to facilitate the information flow between the municipality and its citizens, specifically with the clients who receive support and care. The municipality wants to use the information and communication to improve the effectiveness of their tasks in the youth domain. This fits with Heeks (2001), who suggests that information and communication technologies are being used to improve the effectiveness of public sector institutions.

9.3.6 ***Continuous Monitoring***

Interviewee ZA-25 says that in "municipality Zaltbommel they work with one system and have good knowledge about volumes and forms of care". Continuous monitoring would not fit the current needs of the municipality. The feeling exists within the municipality that they do not need rigid monitoring/ controlling transactions. This does not fit with their working method as described in sections 9.3.4 and 9.3.5. They really trust on the work of their partners. Of course, it acknowledged that it is important to keep track on the outcomes of their policy and to have reports with data, which is also necessary for the accountability to their city council. But in the opinion of people within the municipality, they have all the knowledge in their administration system. All insights that are needed can be gained through data analysis, which is currently being done through the use of Excel. Monitoring things continuously and with data workflow is not necessary for them.

The municipality is in control of the social domain and youth support in financial terms. Their expenditure falls within the agreed financial bandwidth, also with the choice made to do the procurement themselves. They do not have the need of financial terms

to get close continuous monitoring on the invoices, for example. The municipality values working on the basis of trust

Monitoring different forms of youth care product is only possible for the care with an indication (beschikking), which is only done for specialized youth care products. But monitoring only this part of care is not very useful, since specialized care is just a small fraction of the total care given. Furthermore, good insight in the volume of this type of care already exists. For municipality Zaltbommel it is more important to invest in prevention of youth problems and basic care. Investments in the development of an application to measure youth care satisfaction is a priority as well, as described in section 9.3.6.

Perhaps in the future there will be the possibility of continuously monitoring the satisfaction data streams so that when, for example, a care provider falls below a certain level of quality the contract manager of municipality would receive an alert. Both the municipality and the care providers believe in the quality of care provided.

Thus, continuous monitoring would be a good method to use, since monitoring satisfaction would help to provide insights in the opinions of citizens. Subsequently, action can be taken by the municipality and care providers based on this continuous feedback. Thus, care providers can increase the quality of their policy based on this feedback.

9.4 Case Municipality 6 (individual/not part of GR-JR)

9.4.1 General Case Description

This case is about a small municipality called Maasdriel. In the year 2015 they purchased Youth Care products together with nine other municipalities (in the region rivierenland). The reason why they purchased together regionally is explained in section 9.3.1. From the year 2016 onwards the collective purchase of care products reduced to eight municipalities, since the municipality Zaltbommel left the chain as explained in section 9.3.2.

9.4.2 Current way of working Youth Support and Care

The municipality Maasdriel is working with two social district teams, one for Maasdriel East and one for Maasdriel West. The social district team does not only have the responsibility of youth support, but also supports elderly people within the municipality. Thus, the municipality has chosen to give the social district team more tasks. The social

district team consists of social workers, youth workers, district nurses, and Wmo consultants. The team has contacts with several professionals and volunteers (organizations) in youth care, education, child care and playgrounds, the district agent, and sports coaches. The team also refers clients to second line care in case this is needed.

Their method of working is similar to the method described in section 7.7 about the transformation of youth aid. The first focus of the team is on the things the client is able to do and the type of support the environment of the client can give. When more help is needed, collective services can be used. When the type of care is still not sufficient, the client is referred to individual support or specialist care respectively. The social district teams are employed by the municipality itself and work with a client registration system to register information of citizens. Besides the regular information of the citizens, the type of support needed is also registered. Since the social district team is part of the municipality, the municipality is able to evaluate the performance of the team very well.

9.4.3 Municipalities working together

The municipalities located in Zaltbommel and Maasdriel have the intent to work more together. Both municipalities also want to merge some of their activities and eventually merge together in order to form one municipality from the year 2020 onwards.

From the start of 2017 the facility department of the municipalities Maasdriel and Zaltbommel will join together in a new business unit. Furthermore, the four domains personnel & Organization, ICT, Finance and Legal Affairs will work together. Two of these domains will be situated in the municipality Maasdriel and two of the domains in municipality Zaltbommel. Both municipalities are small and want to work with each other to have access to more resources, which provides more opportunities for innovations and makes the achievement of certain tasks easier. However, merging together also demands both parties to fit their way of working to each other.

It is questionable whether the policies of both municipalities regarding the decentralization of tasks fit together well enough for them to collaborate. As of this moment, the municipalities are looking for ways to structure this collaboration in the most effective way, to make sure their resources can be bundled well.

Presently, both municipalities have to make decisions regarding the way in which the youth care process will be arranged. As described in chapter 9.3, the municipality in Zaltbommel purchases care independently, without making use of the common arrangement. In addition, an external party is hired as opposed to having a social district team internally. This way of working is different from the way in which the municipality in Maasdriel has organized the process.

Thus, choices have to be made regarding the way in which both municipalities are going to arrange these social domain processes when working together.

9.4.4 Continuous Monitoring

The municipality in Maasdriel has an interest in continuous monitoring. The reason for this interest according to interviewee MA-24 is the fact that the municipality received a discount from the central government for the youth care domain. The municipality needs to work as effectively and efficiently as possible, so that they can provide care to every citizen in the municipality that needs it.

Using continuous monitoring, more insights can be created regarding the data stream. However, despite the interest of the municipality in continuous monitoring, the conditions needed to implement it are not present.

The municipality in Maasdriel is preparing for an inter-municipal cooperation with the municipality in Zaltbommel as mentioned earlier. A final decision has not yet been made, regarding the way in which collaboration with the municipality in Zaltbommel will be organized. In addition, no decision has been made yet regarding the way in which the IT will be organized, or what IT system will be used for the social domain. Thus, some uncertainty exists with regard to these points. In addition, the municipality in Maasdriel is still busy with trying to get a clear picure of their current way of working, the processes they have in the social domain, the risks that exist in these processes. Presently, no clear view of these issues exists.

In short, in the coming years there will be many changes as a result of inter-municipal cooperation. Therefore, this is not the right time for the municipality to decide whether continuous monitoring is the right method for them to implement, nor to decide what types of advantages this method would have for them or whether this method would be economically feasible. Also, due to the changes that are about to happen because of the collaboration, a new system may have to be changed in the coming years.

Despite the inconvenient timing to talk about implementing continuous monitoring, the people within the municipality were still very open to discuss the possible implementation of this method in the future. There was a lot of interest regarding potential benefits of continuous monitoring. Thus, once the internal processes have stabilized, they are interested in looking at it again.

Table 3 Cross-case comparisons between cases

	Case GR-JR	Case Etten-Leur	Case Zaltbommel	Case Maasdriel
Size	Common Arrangement (consists of 15 municipalities)	Medium sized municipality	Small municipality	Small municipality
Location	Region located in Province South-Holland	Region located in province North Brabant	Region located in province Gelderland	Region located in province Gelderland
Choice GR or not	Procurement of specialized care by GR-JR	Procurement of specialized care by Common Arrangement West-Brabant-West	Procurement of specialized care by themselves	Procurement of specialized care done by Common Arrangement Rivierenland
Different basis on monitoring care providers	Currently working output based, from 2018 outcome based	Working outcome based	Trust their partners to provide good care	Output based
Risk Perception	Risk aversive	Risk aversive (double check of invoices)	Risk-neutral	Risk aversive
Budget utilization	Some municipalities utilize more care than budgeted	Within-budget	Within-budget	Discount for youth aid, so in future less budget
The need	The need to close monitor on financial transactions	The need to close monitor on financial transactions (double)	No need to close monitor financial transactions, but would like to monitor client satisfactions levels	The need to close monitor on financial transactions
Knowledge	Defined performance indicators, which need to be monitored.	Defined performance indicators, which need to be monitored.	Defined performance indicators, which need to be monitored.	No defined performance indicators, which need to be monitored.
Feasibility	Could start with continuous monitoring (technical possible and enough support from participating municipalities)	Could start with continuous monitoring (technical possible) enough data at the municipality available also from first line care	Could not start continuous monitoring would first need to develop a client satisfaction application	Could not start continuous monitoring due to many internal uncertainties. They plan an inter-municipal collaboration. Their policy might change.

10 CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

Continuous monitoring could be applied at the governmental domain. Namely, E-government makes this possible; governments are using information technology to improve the effectiveness of the public sector institutions and to enhance their interactions with external stakeholders (Heeks, 2001; Yildiz, 2007).

In the Netherlands most of the government business transaction are carried out digitally. This means that since the government works digitally, there is a flow of information that is captured in systems. This offers the right conditions for continuous monitoring, whereby there needs to be data available that could be monitored automatically, since it is a flow of information it also offers the possibility to monitor it continuously.

There is a need for continuous monitoring at the governmental domain. Governments have the responsibility to utilize the money of citizens effectively and efficiently; in fact they are accountable to citizens. The government needs to work as lean as possible and to continuously try to minimize any wastage, act upon citizens needs and setting the targets for continuously improvements of government processes. They do that by reducing process costs (reducing both time and financial costs) and managing process performance through better planning, monitoring and controlling of key resources (Heeks, 2001). One of the key benefits of CM is that it helps in the prevention of any potential risk, which could reduce financial costs of the government. Another benefit of continuous monitoring is the provision of additional management information that is used in driving efficiencies in the monitoring process. Therefore, continuous monitoring could help governments in their need to work lean and utilize the money of citizens, to whom they are accountable.

As can be concluded from this present research continuous monitoring could be applied in municipalities, while continuous audit not yet. The concepts of continuous monitoring and auditing are new for municipalities; most of the interviewees hadn't heard about the term before. Since it is a new concept for them and a new way of working, would it not be recommendable to adopt CM and CA at the same time for two reasons. First, a drawback of high ambition (adopting CM and CA at the same time) would a significantly higher risk of failure be associated (Boehm, 2002). Second, the internal audit team of a municipality first need to be prepared for adopting continuous auditing, which costs time.

One of the basic factors of relationship between CM and CA is the function that one process can be used to improve the other which only operate in one direction from CM to CA and not vice versa (Vasarhelyi, Kuenkaikaew, & Alles, 2010). Therefor, in municipalities it would be good to start with continuous monitoring and when this works well, the municipalities can adopt continuous audit too to attain continuous assurance.

Continuous monitoring can be applied in municipalities and is feasible from technical perspective, economical perspective, legal perspective, and from social perspective.

From a technical perspective, it means that there needs to be enough data available in the systems, and an appropriate monitoring tool, and there needs to be knowledge of what needs to be controlled.

Municipalities are working with a digitally system to perform their tasks and to communicate with partners, which means that there is enough information available that can be analyzed automatically. An example of this is that all municipalities in the Netherlands use standard message traffic to exchange information digitally with care providers in the social domain. The information of the standard message traffic is captured in the systems of the municipalities. This shows that there is enough data available to monitor. In addition, the information flow is continuously as any change in the progress of care of the clients of the municipality is communicated. From a technical perspective continuous monitoring is possible, since there is data (in XML) available that could easily be read by a continuous monitoring tool.

A CM tool (e.g Caseware Cafi) is a technology that could continuously review the processes and transactions in a municipality. In the technology predefined-controls (defined by the organization) need to be built in, so that the software can detect anomalies in the transactions and processes of a municipality. Caseware Cafi (not tested yet) has the feature that it sends an alert to managers in an organization, as soon as the technology detects a deviation. When a manager clicks on the deviation, the root cause of the deviation will be shown, which enhances the ability of the management to quickly identify, analyse and solve issues before escalating into bigger problems. Caseware Cafi is also ideal since it has the feature of a dashboard that can provide all relevant information real-time, which lead to a shared understanding of the situation among stakeholders and increase of transparency.

At the municipalities there is clear view of what they want to monitor in the social domain and what checks need to be build in. This means that from technical perspective it is feasible.

From economical perspective: less administrative chaos would decrease the administration costs, so that more money could be used on the real care of citizens. This is especially important since municipalities have a fixed budget; within they need to perform the tasks of the social domain.

From social perspective there is enough support. In this research was found that in the case of the GR-JR all participating municipalities were interested in continuous monitoring and wanted to deliver information needed. Also in the other cases, there was enough interest to work with continuous monitoring. According to governance it depends where a continuous monitoring could be placed. Municipalities work often in a

common arrangement, it can be decided to place a continuous monitoring tool, so that all the participating municipalities could benefit and share the costs.

When continuous monitoring would be applied at the common arrangement. Then the common arrangement forms the second line of defence monitoring the tool and alerting the municipalities the first line of defence when issues are shown that need to be solved by a particular municipality. The internal audit department would perform than the third line of defence, who checks what actions that are been taken by the management to solve deviations and to improve the internal processes. The internal audit team checks than where the main risks are and performs audit on the main risks.

While at municipalities who work independently, a continuous monitoring tool can be placed at the level of the municipality itself.

From legal perspective, municipalities have to take into account the privacy of their clients and cannot perform all analyses that would be wanted such as integrating the data of people living at one address to understand what problems a family have and to be able to offer an integrated solution that could save money. Nonetheless, there is enough information still available that could be analysed and monitored.

There is also a need for municipalities to use continuous monitoring. An example of this for the social domain is the following municipalities need to perform the tasks of the social domain within budget and to provide good quality of care to all citizens that need it. This means that they have to use their resources very effective and efficient and for this timely information is important.

They need to know where they stand towards their budget execution at any time, so that money from segments that uses less care can be used for a segment that needs more care. This helps to manage the resources. Information about real-time budget execution information also results in less uncertainty about the financial information.

In addition, the daily management of the municipality needs to inform their city council as soon as possible when they are over budget for care. This shows that continuous monitoring could also improve accountability.

Furthermore, continuous monitoring can be used to verify their financial transactions automatically according to predefined controls and norms. When there are not many deviations it shows that the organization is in control. This results in that less time will be needed for the external accountant to control the transactions, which could ultimately lead to a lower audit fee too.

Another benefit is that there are many manual actions at the municipality such as retrieving information from their systems and doing various analyses in Excel. When using continuous monitoring, checks are done automatically and all relevant insights and data are shown in a dashboard. This would save time and costs, so that more money can be spend on care.

In addition, monitoring the financial transactions would result in fewer mistakes such as incorrect payments that need to be solved administratively. Continuous monitoring can be utilized to detect any deviations from the contract with care providers so that actions can be taken on time in order to prevent that more care is invoiced then need it. Incorrect invoices can reduce the amount available to citizens. Also there is the need to prevent any incorrect payments, so that less administration costs is needed and the money could be used for care.

Furthermore, many municipalities work in common arrangement to perform tasks on behalf of the municipalities as an intermediary. This is a strategic choice of municipalities, they choose for this form in order to realize economies of scale and to benefit from the expertise of an intermediary. This re-confirms our expectation that we would find parties who fulfil the role of intermediary, as predicted by Chan and Vasarheli (2011) and Christiaanse and Hulstijn (2013). Other municipalities do not, or with bilateral cooperation.

Moreover this research found that there are big differences between municipalities in starting position (financial) and in approach (expertise). Municipalities differ from each other in the following way. Many municipalities work in a common arrangement for specialised youth care, but there are also municipalities that do not work in a common arrangement and do the procurement themselves (see the case of Zaltbommel).

Furthermore, the access of care can be different, some municipalities work with a social district team with youth professionals employed by them and some work with an external partner that performs the youth access for the municipality. Also, municipalities differ in whether they have problems to stay in budget or not. Municipalities that are using more care then budgeted need to have more insights on the financial level. While municipalities that have no problems with staying in budget are looking for ways to improve the quality of care and would like to monitor quality indicators.

Another difference is that some municipalities have a preference for strict control on all processes when governing their municipality, because they are risk aversive and do not want to take any risk. These municipalities would want to monitor compliance of contracts by the care provider and would like to double-check the invoice specification, in order to prevent any incorrect payments (see the case of Etten-Leur). While other municipalities govern the social domain according to trust of all partners they work with (see the case of Zaltbommel). They would therefore only analyse the information received from their partners periodically and would not need to continuously monitor the information exchange of care. In addition, they would not see the need to check invoices twice.

Municipalities that are using more care then budgeted need to have more insight on the financial level. This means that they would like to monitor real-time the transaction flow of care from the indication of care, start treatment, end treatment and to the

payments. So that they have real time insights, whether the indications of care are higher than expected, whether they have a few clients that uses expensive forms of care, or whether they have more clients that need care then expected.

When a municipality uses an output methodology to pay the care providers also the duration of care is important to monitor, since a longer duration results in more costs. In short these type of municipalities need to monitor the flow continuously in order to understand what causes the excess use of care, so that actions can be taken in time to solve it.

Municipalities that do have problems with their budget could think about ways to get information real-time about quality indicators such as satisfaction. See the case of Zaltbommel were they have the plan to develop a mobile application to monitor the satisfaction of citizens that received care. Continuous monitoring could then be used for monitoring the satisfaction levels real-time and when a care provider performs under a certain level they can take actions by contacting the care provider to solve the issues that results in a low satisfaction of citizens. This shows that continuous monitoring could be used to improve the quality levels of care, since actions can be undertaken as soon as the municipality receives an alert from the continuous monitoring tool.

With transparency is meant in which sense the municipalities have insights into the work of their partners (common arrangements) as well as the care that care providers provide in terms of financial information as well as the quality of care offered to citizens by them. At the level of common arrangement Rijnmond a continuous monitoring tool could be placed that analyse real-time the care transaction and shared in a dashboard, this has the advantage that it improves transparency in the chain. As can be concluded continuous monitoring could help to improve the transparency.

With accountability is meant that the daily management of municipalities are accountable to their own city council of the results of the policy conducted. They have to give timely information to the city council in case of large deviation. Continuous monitoring could be used for analysing the budget execution when they are using more care than budgeted they could inform the city council immediately. As can be concluded continuous monitoring could help to improve the accountability.

Finally, this research shows also that continuous monitoring could improve the governance of the municipality. With governance is meant how municipalities arrange their tasks and how they perform policy to spend the money of youth aid in the most effective manner. An example of this are that insights in budget execution have the benefit that municipalities can take actions on time, so that resources are used there were most needed. This improves the governance ability of municipalities.

To conclude continuous monitoring could be applied in the municipality in the social domain of municipalities and improve in terms of governance, transparency and accountability.

10.1 Future Research

The author has the following suggestions for future research:

From the workshop with the policy officers of the participating municipalities a respondent asked whether it would be possible to have a continuous monitoring tool that support the municipality along with a continuous monitoring tool at the level of common arrangement. This shows that there is a demand from municipalities to a hybrid form of a continuous monitoring tool. Since many municipalities in the Netherlands work together in common arrangements for some tasks and perform other taks independently. A hybrid form of continuous monitoring could help municipalities to get a complete view of the whole youth domain at any time they want. Future research could investigate how a hybrid form of continuous monitoring should look like, or how two different continuous monitoring systems can share knowledge between each other.

Another suggestion for future research would be to zoom in the privacy aspects of municipalities. In the youth domain there is the principle to work from one family, one plan and one coordinator. But due to privacy reasons it is diffult for the municipalities to integrate care from the three domains to one plan for a family. Therefore, it would be interesting when future research would examine to what extent it is possible to link information from different domains in a continuous monitoring tool according to the laws from privacy as well as the right of municipalities to use information for policy reasons.

Another suggestion for future research is to focus completely on the accounting perspective. To investigate what municipalities exactly need to show in their financial statements and how could continuous monitoring help to facilitate the annual statements, sothat the audit fee could be lower. In this way more money could be used on the real care to citizens.

Another suggestion for future research is to focus on the technical side of the monitoring tool itself and to make architecture of the continuous monitoring tool that best could be used in the municipality domain.

10.2 Limitations

This research has the following limitations. The study used a small number of cases, due to the limited time to conduct this research, which influences the generalizability of this research for all municipalies in the Netherlands. However, the author tried to decrease this limitation by interviewing municipalities from different sizes and from different regions in the Netherlands. The municipalities were located in three different provinces, namely North Brabant, Gelderland, and South Holland. This means that the location of municipalities ranged from the middle to the south of the Netherlands.

The study should be replicated with many municipalities across the whole Netherlands to investigate wheter also size has influence on wheter municipalities have difficulties to stay in budget and attain the decentralization goals of the youth domain. It likely that the rural areas have different problems concerning youth aid than municipalities from cities. These differences in problems could determine the view of municipalities in which sense they want to have close control on the figures and want to use continuous monitoring technology to get more grip on the data. To generalize the findings for all municipalities in the Netherlands the study should replicate this study with more cases from all over the Netherlands.

Another limititation of this study is that the author could unfortunately not built in some controls in the Cafi Monitoring tool. This had as main reason that first permissision needed to be asked from the participating municipalities to access the standard message traffic, in order to perform check on the transaction flow. After the workshops held, it was clear that some of the municipalities would like to give access to their standard message traffic, so that a test could be done. Unfortunately, there was no time to built the controls in the tool and test it for this research. However this research provides the knowledge of what municipalities want to have checked. Future research could use this knowledge and conduct the tests.

Another limitation is that it has the restriction of a complex case; it was diffult to isolate 'CM' from other factors. In addition, the accountants view was somewhat limited; the care domain is not only about numbers and financial transactions but more so about people. An approach from the improved business process improvements would probably been better. The author, therefore as soon as realized tried to incorporate some theories about business improvement to reduce the limitation. Future research should therefore take an approach from the business improvements and see whether this would help municipalities better to manage the social domain and improve the quality offered to citizens.

Another limitation is that the theory of CA and CM are very practical, there are too few hypotheses on where this thesis could be build on.

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12 APPENDIX

12.1 Explanation Interview list

This study has four main cases namely:

The case of GR-JR (common arrangement, represents 15 municipalities) is the most important case of this study, since it exactly shows the complex dynamiek of municipalities. Namely, working in a chain with many other partners (municipalities) to perform some tasks of the social domain. The importance of this case can be seen in the interview list, wherein is shown that most of the interviewees, were part of the case GR-JR.

For this case, people working for the GR-JR itself are interviewed, as well as, people from the participating municipalities to get a complete overview of the case. In the table, the participating municipalities are indicated by the letter M, after Case GR-JR, as can be seen in the column case. Three participating municipalities as well as a GR (common arrangement that represents three municipalities in the GR-JR) are interviewed. This means that a total of six participating municipalites of GR-JR are interviewed. The other cases are municipality Maasdriel, municipality Zaltbommel and municipality Etten-Leur.

This study had three types of interviews: exploratory interviews, semi-structured interviews and focus group. After each interviewee ID is indicated in which type of interview the interviewee participated. Some interviewees were part of all three types of interviews (first two interviewees indicated in the table).

That is because they have good knowledge of the GR-JR as well as the participating municipalities, since they have many meeting during the year with the participating municipalities. In Table 4 can be seen that people from various functions are interviewed. A total of 35 people are interviewed.

Table 4 Interview list

Interviewee ID	***Interviewee Function***	***Type of interview***	***Case***
GR-1	Business Controller	Exploratory Interview/ semi structured interview/focus group	Case GR-JR
GR-2	Coordinator	Exploratory Interview/ semi structured interview/ focus group	Case GR-JR
GR-3	Bookkeeping/Administration	Semi-structured interview	Case GR-JR
GR-4	Account manager J-GGZ	Semi-structured interview	Case GR-JR
GR-5	Account manager Youth with a Disability	Semi-Structured interview	Case GR-JR
GR-6	Project Manager Purchasing of Specialist Youth Aid	Semi-Structured Interview	Case GR-JR
GR-7	Program Manager Implementing New Purchase	Semi-Structured Interview	Case GR-JR
GR-8	Project Leader Standard Message Traffic	Semi-Structured Interview	Case GR-JR
GR-9	Policy Officer Youth, responsible for development of a quality monitor	Semi-Structured Interview	Case GR-JR
GR-10	Responsible Financial statements/ advisory legitimacy	Semi-Structured Interview	Case GR-JR
GR-11	Financial Controller	Semi-Structured Interview	Case GR-JR
GR-M1-12	Legal Advisor / Legal Controller	Semi-Structured Interview	Case GR-JR, M1
GR-M1-13	Privacy Consultant	Semi-Structured Interview	Case GR-JR, M1
GR-M1-14	Controller WMO/ knows lot about Standard Message Traffic	Semi-Structured Interview	Case GR-JR, M1
GR-M1-15	Controller Youth	Semi-Structured Interview	Case GR-JR, M1
GR-M1-16	Financial Audit	Exploratory Interview	Case GR-JR, M1
GR-M1-17	Financial Audit	Exploratory Interview	Case GR-JR, M1
GR-M1-18	Financial Audit	Exploratory Interview	Case GR-JR, M1
GR-M1-19	Financial Advisor	Semi-Structured Interview	Case GR-JR, M1
GR-M2-20	Administration Social Domain Youth Aid	Focus Group	Case Gr-JR, M2

GR-M3-21	Portfolio Manager Finance	Focus Group	Case GR-JR, M3
GR-GR-22	Coordinator Back office Youth Aid	Focus Group	Case GR-JR, (M4, M5, M6)
GR-GR-23	Head control and Management	Focus Group	Case GR-JR, (M4, M5, M6)
MA-24	Financial advisor	Exploratory Interview	Case Maasdriel
ZA-25	Team leader Finance	Semi-structured interview	Case Zaltbommel
ET-26	Finance Advisor Youth	Semi-structured interview	Case Etten-Leur
ET-27	Functional/ Application Manager	Semi-structured interview	Case Etten-Leur
ET-28	Process Support Youth	Semi-structured interview	Case Etten-Leur
AC-29	IT auditor	Exploratory Interview	Accounting firm
AC-30	Manager RA	Semi-structured Interview	Accounting firm
AC-31	Senior Manager RA	Exploratory Interview	Accounting firm
AC-32	Supervisor	Exploratory Interview	Accounting firm
AC-34	Manager IT advisory	Focus Group	Accounting firm
AC-35	Partner IT advisory	Exploratory interviews	Accounting firm

12.2 Workshop list

Two workshops were held, each with duration of a half hour.

Table 5 Workshop list

Workshop Policy Offices	**Workshop Controller**
15 Policy offices (Each Policy officer represents one Municipality)	15 Policy offices (Each Policy officer represents one Municipality)
IT advisory Partner Medium-Sized Accounting Firm	IT advisory Partner Medium-Sized Accounting Firm
Business Coordinator GR-JR	Senior Manager RA Medium-Sized Accounting Firm
Coordinator GR-JR	Business Controller GR-JR

	Coordinator GR-JR

12.3 Questioniare GR-JR

Questions asked at the Common Arrangement for Youth Aid Rijnmond
(Translated from Dutch)

The interviewees were asked permission when the interview was taped. The interviews held were all approximately an hour.

Abbreviation = GR-JR

Table 6 Case study question

General
Since when does the GR-JR exist and what is the reason for foundation and existence? How does municipality domain generally look like related to youth care? What does the GR-JR mean, who do you represent exactly? What is the role of GR-JR in the youth aid process? What is the role of the other parties in the youth aid process? How does the cooperation interact with other parties, in other words, how are information exchanged and policy performed? How is policy currently being conducted at the GR-JR specifically? What does the role distribution look like?
Trends
What trends do you generally see in youth counseling? How does the GR-JR deal with these trends?
Future
How does the future of youth care look like? How does GR-JR prepare for this future? What is your strategy? What does your ideal image look like?
Monitoring
What are the processes currently being monitored? Why these processes and in what way? Do you feel that you have a certain degree of control / overview of the processes? What payment flows and management information are already monitored / verified? What would you like to have more insight into and why?

What is the frequency of monitoring currently being conducted? Is there any need for more information? If so, what kind of? Is there a need for more frequent information? If so, why? What would be the ideal situation in internal control? How is that different from the situation now? And what steps should be taken to achieve this according to you? What are the major obstacles that prevent this? What challenges do you see about child support in the future and control / internal control?
To check
How is the GR-JR checked? What is your responsibility with regard to control? Are you required by law to check certain matters? What controls are done internally and what is being done externally? Who checks what in the specific divisions? How does control take place manually or via systems?
Applications
Which applications does the GR-JR use? How are those applications used?
Information
What information sources does the GR-JR use? How is information / data delivered to the GR-JR? What information does the GR-JR own and what information is received from other parties? How is the quality of information? How is information delivered in the rest of the chain? Is the circulating information standardized or different in the chain?
Law / regulation
What are specific aspects that are considered in the Youth Aid regarding laws / regulations? What law and regulation should specifically take into account for the GR-JR?
Privacy law
What privacy legislation is now specifically taken into account? What data may be shared in the chain according to the Act? Can BSN data be used or not?
Risks
How has the GR-JR arrange the risk management? Are there any risks that are currently being monitored? Is there a need for more frequent monitoring?

Continuous monitoring
Have you previously heard of the term continuous monitoring? What do you think of that term? With continuous monitoring, any abnormalities could be quick to signal. What data streams in youth help, or specifically within the GR-JR, might be appropriate to monitor and why? What is continuous monitoring / audit according to you? And what benefits do you think it's going to yield and what do you hope it brings?
Deviations
What is the moment when deviations need to be detected? Who will pick it up internally? Is there an active policy present to report any deviations to and to do something about it?
Contracts / Purchasing Policy
What is being noted with healthcare providers? What requirements do you provide to healthcare providers? What is included in the contracts with healthcare providers? Are the contracts equal or different? How is compliance with the contracts checked internally? How are healthcare providers monitored? On what frequency does control of healthcare providers take place? Do you feel like having enough information to be able to monitor healthcare providers properly? What risks are there when healthcare providers did not perform properly? How is it monitored? What actions are taken? Is there a need for more control? If yes, what frequency? Could continuous control monitoring assist the controls?

12.4 Document List

- Budgetspecification care providers
- Contract care providers
- New arrangement working plan
- Procurement documents
- Productcatalagos of care
- Excel files of production figures that careproviders sent quarterly
- Organogram of GR-JR

- Processflow diagrams within GR-JR
- Standard Accounting Protocol of care providers
- Example of a standard message traffic message in XML
- Information of standard message traffic and the content

12.5 Questioniare Municipalities

Table 7 Questioniare Municipalities

General
How does municipality domain generally look like related to youth care? Are you working in a common arrangement for youth care, why yes and why not? What is the role of the common arrangement in the youth aid process? What is the role of the other parties in the youth aid process? How does the cooperation interact with other parties, in other words, how are information exchanged and policy performed? How is policy currently being conducted at the Municipality specifically? What does the role distribution look like?
Trends
What trends do you generally see in youth counseling? How does the municipality deal with these trends?
Future
How does the future of youth care look like? How does the municipality prepare for this future? What is your strategy? What does your ideal image look like?
Monitoring
What are the processes currently being monitored? Why these processes and in what way? Do you feel that you have a certain degree of control / overview of the processes? What payment flows and management information are already monitored / verified? What would you like to have more insight into and why? What is the frequency of monitoring currently being conducted? Is there any need for more information? If so, what kind of? Is there a need for more frequent information? If so, why? What would be the ideal situation in internal control? How is that different from the situation now? And what steps should be taken to achieve this according to you?

What are the major obstacles that prevent this? What challenges do you see about child support in the future and control / internal control?
To check
On which process does the municipality do checks? What is the municipality's responsibility with regard to control? Are you required by law to check certain matters? What control is done internally and what is being done externally? How does control take place manually or via systems?
Applications
Which applications do the municipality use? How are those applications used?
Information
What information sources does the municipality use? How is information / data delivered to the common arrangement? What information does the municipality own and what is supplied from other parties? How is the quality of information? How is information delivered in the rest of the chain? Is the circulating information standardized or different in the chain?
Privacy law
What privacy legislation is now specifically taken into account? What data may be shared in the chain? Can BSN data be used or not?
Risks
How has your risk management been arranged, are there any risks you currently monitor? Is there a need for more frequent monitoring of this?
Continuous monitoring
Have you previously heard of the term continuous monitoring? What do you think of that term? With continuous monitoring, any abnormalities could be quick to signal. What data streams in youth help, or specifically within the municipality, might be appropriate to monitor according to you? When is a continuous monitoring project / tool, according to you effective?
Contracts / Purchasing Policy
What is being noted with healthcare providers? What requirements do you provide to healthcare providers? What are the contracts with healthcare providers?

Are the contracts equal or different?
How is compliance with the contracts checked internally?
In what frequency does control of healthcare providers take place?
Do you feel like having enough information to be able to steer healthcare providers properly?
What risks would be there when healthcare providers did not perform properly?
How is it monitored? What actions are taken?
Is there a need for more control? If yes, what frequency?
What information is needed to be able to steer/monitor healthcare providers properly?
Could continuous control monitoring assist the controls and in which sense?