

PERFORMANCE MANAGEMENT IN JAMAA TRADE

A TRIANGULATION AND IMPLEMENTATION OF BALANCED SCORECARD, LEAN, AND DEMING'S MANAGEMENT METHOD IN A CONTINUOUS IMPROVEMENT PROGRAMME

© **Nicolai Nielsen** and **Emmet Sharghbin**

Councellor's name and institute:
Kim Sundtoft Hald, Department of Operatios Management

Co-councellor's name and institute:
Aleksandra Gregoric, Department of International Economics and Management

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Abstract

Background: Doing business in Sub-Saharan Africa proposes itself as a sustainable, cost-efficient, and market-driven way to stimulate the African economies and thereby relieve the populations of poverty and aid dependency. Jamaa Trade, an American owned social business, entered Congo[1] in 2007 and is currently engaged in trade and logistics.

Problem: This thesis seeks to determine i) which management frameworks should be applied in order to improve the performance of Jamaa Trade, ii) how the frameworks can be implemented, and iii) the theoretical contributions as well as the implications for foreign-owned firms working in Congo.

Method: In order to answer the research question, the authors take a pragmatic approach influenced by the tenets of action research. After analysing the specific characteristics and requirements of Jamaa, the performance management literature is reviewed in order to determine the ideal approach to answer the research question. The result is a tailored framework called the Continuous Improvement Programme (CIP), which employs a triangulation of Balanced Scorecard, Deming's Management Method, and Lean. Data was collected and analysed during two separate rounds, in between which improvement initiatives were implemented.

Practical results: Round 2 data showed both positive and negative changes in the operational performance of the firm compared to round 1, although the results were statistically insignificant according to parametric, independent t-tests. However, more significant improvements were made in the organisational culture of Jamaa in regards of internal communication and employee motivation.

Theoretical contributions: This thesis creates contributes to academia in four ways. First, it creates a Social Business Balanced Scorecard. Second, it shows Deming and Lean are complementary and not mutually exclusive. Third, it shows that it is possible to establish and implement an eclectic, tailored, and novel triangulation of a Social Business Balanced Scorecard, Deming and Lean to a social business. Fourth, the thesis finds that it is very challenging to transfer established management thinking to Congo without serious adaption, modification, or rethinking. This is due to the fact that the vast majority of management theories have been developed within contexts that differ significantly from Congo in terms of, among other elements, infrastructure, perceptions, values, business customs, and organisational and national cultures.

Suggestions for future research: More research is suggested within the field of performance and quality management in both Congolese and Sub-Saharan firms, not only with regards to the usage of management tools, but also their success rate and applicability. This will provide a comprehensive toolbox for firms in Sub-Saharan Africa as a way to improve their performance and ultimately the socio-economic conditions of the region.

[1] Throughout the thesis, we let Congo denote the Democratic Republic of Congo.

To my family for its unwavering support in all of my endeavours.

The first of many books to come!

Nicolai Nielsen

To Mehdi, Minoo, and Mona for their endless love and support.

You mean the world to me.

Emmet Sharghbin

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All in all, we are grateful to have had the opportunity to undertake this thesis, and we are positive that the experience will benefit us in our future. Among other things, the research has consolidated our knowledge within performance management, hereunder Balanced Scorecard, Deming, and Lean, and has furthermore provided us with insights into many new areas such as Congo, development aid, and social businesses.

"What I have found is that everything in Congo is random, nothing is consistent.

It is one of the most frustrating places to do business in the world."

Ryan Shepherd
CEO, Jamaa Enterprises
Interview June 24, 2011

Preface

The idea for this thesis originated from a strong desire in both authors to assist an organisation in achieving social goals. Furthermore, we wished to contribute theoretically to a field, which often receives less research focus than traditional businesses. There are four arguments for writing the thesis for a non-governmental organisation (NGO) or social business in Sub-Saharan Africa (SSA[2]) instead of writing a purely theoretical thesis or writing for a large multinational corporation (MNC).

First, by choosing an organisation with limited experience within performance management the NGO or social business would benefit to a larger extent than a traditional business from getting external assistance, making the impact of the thesis work more meaningful and important (Kolk & Lenfant 2011, p.1). Second, during the preliminary research, very few theses or reports dealt with performance management within NGOs or social businesses, especially in conflict areas such as Congo, making the research more novel and value adding from a theoretical point of view (Kolk & Lenfant 2011, p.2). Third, as the SSA region is expected to enjoy comparatively high growth in the future, it is likely that there will be increased attention towards doing business in SSA (Benno Ndulu & et al. 2007, pp.31-34). A key motivating factor was thus to gain valuable experiences on behalf of both foreign-owned firms currently in Congo or firms wanting to expand to Congo. Fourth and finally, this area is interesting due to the divergence in opinions among scholars on whether the business approach should be used as a complement to foreign aid development (Shepherd 2010; Wood 2005).

After some contact and meetings with larger organisations in the market, such as Danish Red Cross, UNICEF Denmark, and Care International, the choice fell upon the small, American-owned, Congo-based social business Jamaa Enterprises. One of the authors, Emmet Sharghbin, studied with the firm's American CEO in Hong Kong in the fall of 2008, while the latter was finishing his MBA. Although there were some potential pitfalls due to the personal relation, the dedication and resources that the CEO promised made the offer very favourable.

[2] We will let SSA denote "Sub-Saharan Africa *excluding South Africa"* throughout the thesis

Retrospectively, both authors are tremendously gratified with the opportunity of applying theoretical, academic thesis work to the practical, yet substantial difficulties that Jamaa faces. The thesis revealed several improvement opportunities for Jamaa and started a process that will require significant time, although small improvements were already achieved during the thesis. Furthermore, the authors have learned many things about business that will also help them in the future.

The authors hope that this thesis will inspire more scholars and practitioners within the business field to focus on Congo and the SSA region in general, as it holds great potential for firms to explore the possibilities for doing business while relieving poverty and for academics to research and contribute to this process.

We hope the reader will enjoy reading this thesis as much as we have enjoyed working with it.

Nicolai Nielsen ***Emmet Sharghbin***

Beijing & Copenhagen, August 2011

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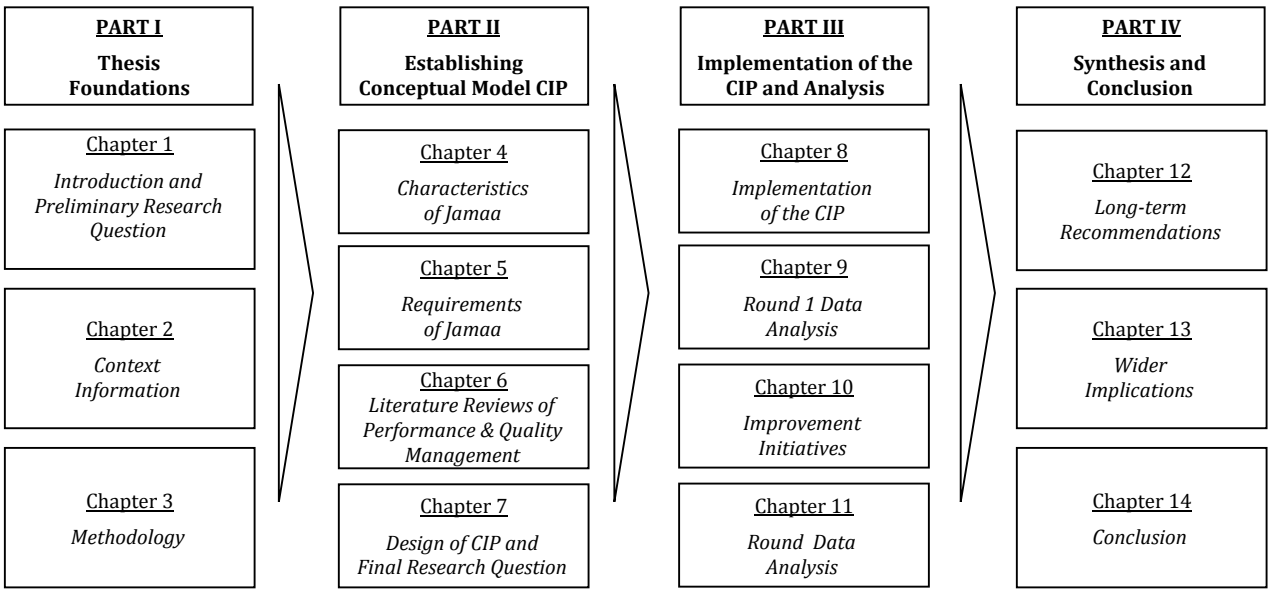
List of Abbreviations

- AI = Anecdotal Evidence
- BSC = Balanced Scorecard
- CEO = Chief Executive Officer
- COO = Chief Operating Officer
- CIP = Continuous Improvement Programme
- Congo = The Democratic Republic of Congo
- CSR = Corporate Social Responsibility
- DF = Deming-inspired Finding
- DI = Deming-inspired Initiative
- DRC = The Democratic Republic of Congo (hereafter Congo)
- GDP = Gross Domestic Product
- IO = International Organisation
- Jamaa = Jamaa Trade, sub-entity of Jamaa Enterprises
- LF = Lean-inspired Finding
- LI = Lean-inspired Initiative
- ND = No Documentation
- NGO = Non-Governmental Organisation
- PMA = Performance Management
- PMB = Profit-Maximising Business
- PME = Performance Measurement
- PPP = Purchasing Power Parity
- SME = Small-medium sized Enterprises
- SSA = Sub-Saharan Africa, excluding South Africa
- Sur. = Consolidated Questionnaire Results
- TT = Trip Ticket Results
- TQM = Total Quality Management
- VSM = Value Stream Map
- USD = United States Dollar

Thesis Outline and Introduction to Part I - Thesis Foundations

This thesis seeks to determine i) which management frameworks should be applied in order to improve the performance of Jamaa Trade ii) how the frameworks can be implemented, and iii) the implications of the research for foreign-owned firms working in Congo. The thesis contains 14 chapters, which are divided into 4 parts. The full thesis outline is shown below in **Figure 1**.

Figure 1– Thesis outline



Source: Authors' own creation

Part I - Thesis Foundations has three chapters. Chapter 1 introduces the thesis and describes the overall aims, the relevance of the research, states the preliminary research question, clarifies key definitions, and defines the thesis delimitations. Chapter 2 provides the reader with background information on the local context and Jamaa Trade, the case-study firm. Chapter 3 explains the methodological foundations of the thesis.

Part II – Establishing Conceptual Model CIP guides the reader through the journey of defining the preliminary research question in more detail. The journey consists of triangulating respectively the characteristics of Jamaa described in Chapter 4, the requirements of Jamaa described in Chapter 5, and the review of available management frameworks in Chapter 6. Chapter 6's review results in a proposed combination of Balanced

Scorecard (BSC) as the overall structure, and the Deming Management Method and Lean as quality improvement initiatives. In chapter 7, the three previous chapters are then triangulated into a tailored, eclectic framework called the Continuous Improvement Programme (CIP) after which the final research question is presented.

Part III – Implementation of the CIP and Analysis has 4 chapters and deals with the implementation of the CIP at Jamaa Trade and subsequent analyses. Chapter 8 has Balanced Scorecard (BSC) as its overall framework and describes the implementation steps and data collection methods of the thesis and presents its overall BSC frame. Chapter 9 then analyses the data from the first round of data collection using Deming & Lean as theoretical foundation. Chapter 10 presents Deming & Lean-based initiatives in response to the data analyses of Chapter 9 in order to improve the performance of Jamaa Trade. Chapter 11 then analyses the data from the second round of data collection using Deming & Lean as basis, whereas the overall BSC framework is applied once more to comment on the changes in performance between the first and the second round.

Part IV – Synthesis and Conclusion has three chapters. Chapter 12 presents the long-term recommendations for Jamaa Trade. The recommendations are based on best practices in academia, the authors' experiences during the implementation of the CIP in round one, and the results of the second round of data collection. Chapter 13 discusses the wider implications of the research, and argues that the thesis contributes to the Balanced Scorecard literature, the Quality Management literature, the Performance Management literature, and also holds valuable lessons for foreign-owned firms operating in Congo. Finally, Chapter 14 concludes the thesis.

We will now commence with Part I, which introduces the thesis and presents the preliminary research question in Chapter 1, provides the reader with background information on the local context and Jamaa Trade in Chapter 2, and explains the methodological foundations of the thesis in Chapter 3.

"In the worst case scenarios, countries like the Democratic Republic of Congo…

have been so ravaged by war that they have no real economy to speak of,

while ceasing or almost ceasing to function as modern nation-states."

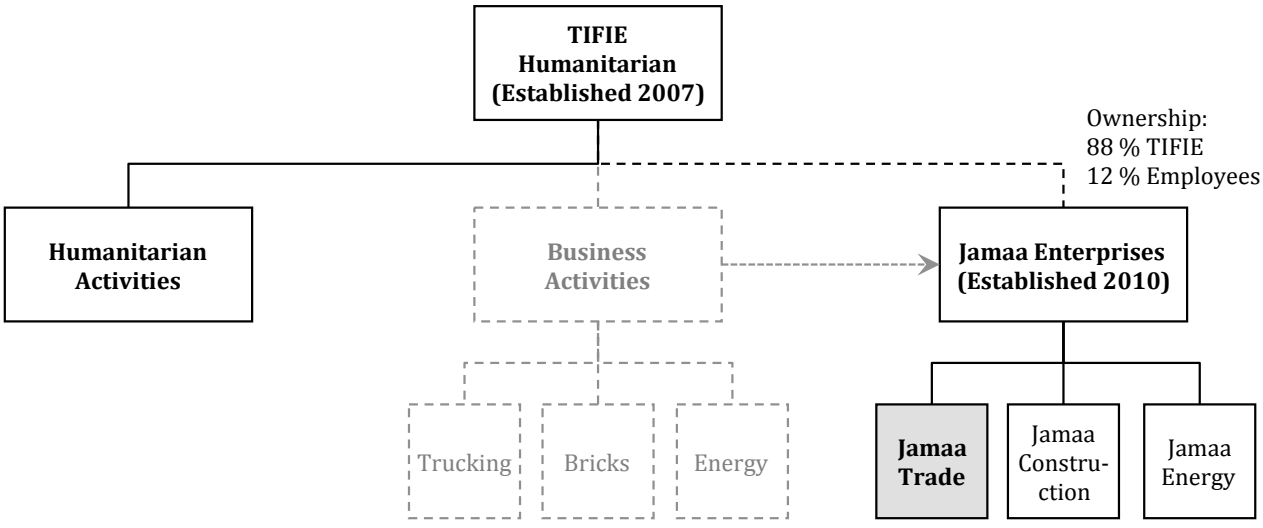
Ken Kamoche

1. Introduction and preliminary research question

1.1 Chapter introduction

The Democratic Republic of Congo (hereafter Congo) is one of the poorest countries in the world with an official Gross Domestic Product (GDP) of US$ 300 at Purchasing Power Parity (PPP) in 2010 (CIA 2011a). The country has vast potential, however, with abundant natural resources and a population of over 70 million people (CIA 2011a). In 2007 TIFIE Humanitarian, an American NGO, entered Congo and began its mission to create social businesses that would provide jobs for the local communities and support humanitarian and development initiatives. For more about TIFIE and its development model, see Appendix 3 on page 168. To facilitate the expansion of the business, Jamaa Enterprises was created in 2010 as a private limited liability company registered in Kinshasa, Congo. Jamaa Enterprises took over the business activities of TIFIE and is currently engaged in Trade, Construction, and Energy, as illustrated in **Figure 2** (TIFIE 2010a). For further information on the structure of Jamaa Enterprises and its three business areas, please see on Appendix 4 on page 169.

Figure 2 – Overview of TIFIE Humanitarian, Jamaa Enterprises, and Jamaa Trade



Source: Authors' own creation

Jamaa Enterprises has grown rapidly and currently has over 45 full time and 130 part-time employees. Except for the CEO and COO positions, all employees are local. As a consequence

of the prior emphasis on establishing and expanding the organisation, no institutionalised process currently exists for measuring and managing performance within the firm. Furthermore, due to a challenging local environment in terms of history, approach to management, and low level of focus on continuously improving quality, the overall output and level of quality have significant potential for stabilisation and improvement (Shepherd 2010a). This thesis seeks to combine theoretical knowledge and practical insights to improve the performance of the company. The thesis focuses uniquely on Jamaa Trade (hereafter Jamaa), the trade and logistics business unit within Jamaa Enterprises, as Jamaa Trade has the most urgent need of improved performance and quality according to the CEO (Shepherd 2010a). Chapter 1 introduces the thesis and describes the overall aims, the relevance of the research, states the preliminary research question, clarifies key definitions, and defines the thesis delimitations.

1.2 Initial aims

This thesis has both theoretical and practical contributions. Regarding the academic contribution, the thesis aims to create new knowledge and make a theoretical contribution to the performance management literature by combining different management frameworks with in a relatively, unexplored context into a new conceptual model, the Continuous Improvement Programme (CIP), and thereafter presenting the wider implications of the research. Regarding the practical contribution, the thesis aims to improve the performance at Jamaa Trade by utilising academic theory, business experience, and primary data analysis in a practical and applied manner. The insights gained from working with the case study organisation will then be induced to formulate broader guidelines to foreign-owned firms doing business in Congo.

1.3 Research relevance

The research is relevant for three main reasons. First of all, the research provides tangible benefits for Jamaa in the form of a clear framework for managing performance after the thesis is completed. Second, our research tests, in a new context, the applicability of different management frameworks, which have taken up significant space in academia as well as among practitioners. Third, the research is relevant for foreigners doing business in Congo. Congo and the SSA region in general have a vast potential for economic growth (Arbache & Page 2010; Broadman 2008; Paulino & Wan 2010). The region will receive much more

attention in the 21st century in particular due to the Chinese demand for resources (CIA 2011b, p.xv-xviii). For foreigners, doing business in Congo requires a deep understanding of the local context (MGI 2010). Our research is therefore also relevant as it provides foreign business people with new knowledge regarding performance management within Congo.

1.4 Preliminary research question

The aims of the thesis lie within an area of study, which has received limited research and few benchmarking possibilities. An important aspect of the thesis is thus to establish in further detail both the precise requirements of Jamaa and the specific management frameworks to that would enable Jamaa to improve its performance. The thesis therefore operates with two research questions. We begin with an open, preliminary research question that lays out in broad terms the aims of the thesis. The authors hereafter embark on an academic journey in order to formulate the specific requirements of Jamaa and the frameworks needed. The journey will lead to a final, more detailed research question at the end of Chapter 7. We thus state the following preliminary research question:

This thesis seeks to determine i) which management frameworks should be applied in order to improve the performance of Jamaa Trade, ii) how the frameworks can be implemented, and iii) the theoretical contributions as well as the implications for foreign-owned firms working in Congo.

1.5 Definitions

This section provides definitions of the different parts of the preliminary research question as stated above.

1.5.1 Management framework

First, the terms "framework", "tools", "methods", "models", and "approaches" are used interchangeably. Furthermore, the terms are always used within a business context, thus the word "management" is often omitted. Second, a "management framework" refers to any concept, philosophy, structure, or technology, which has the potential to improve the performance of an organisation or individual (Burtonshaw-Gunn 2008).

1.5.2 Performance

Very few sources in the literature define "performance" before proceeding to measure and manage it, and Lebas states that *"Few people agree on what performance really means: it can mean anything from efficiency, to robustness or resistance or return on investment, or plenty of other definitions never fully specified."* (Lebas 1995, p.23).

"Performance" in this thesis follows Lebas' definition but is not future-oriented, that is, "performance" is defined as *"the successful implementation of actions in order to reach the objectives and targets previously set by the management team* (Lebas 1995, p.23)*"*

It is clear from Lebas' definition that performance is not definable in the absolute sense but is relative to historical targets, that is, future performance will necessarily be judged relative to targets set in the past. In this thesis, the CEO of Jamaa and the authors will define performance objectives and targets jointly.[3]

1.5.3 "Foreign-owned" firms in Congo

The wider implications of the thesis are intended to be applicable mainly to foreign-owned firms working in Congo, as we hypothesise that cultural differences pose a larger challenge for foreign managers compared to their local counterparts. The term "foreign-owned" can, however, also include locally owned firms that are run by non-local managers. What is crucial is whether someone in the executive management team is foreign, understands the frameworks and theories, and actively supports them. In this case study the CEO, Ryan Shepherd, was American. If Jamaa had not had a foreign CEO, or somebody who knew and supported the frameworks, it would have been significantly more difficult to implement the CIP. As such, the methods and frameworks presented in the thesis are potentially applicable to all managers in Congo, although the guidelines regarding doing business in Congo are mostly relevant for foreign managers.

1.6 Delimitations

The thesis has five limitations, which are described in more detail below.

[3] It should be noted that for the vast majority of cases for Jamaa Trade, data does not exist and the targets will therefore only be determined after collecting data

1.6.1 Organisational scope

Although Jamaa Enterprises has three business units, we will only work with Jamaa Trade (hereafter "Jamaa") as this business unit has the most pressing problems according to the CEO. For more on Jamaa, see Section 2.3 on page 13.

1.6.2 Cost of improving performance

The cost of improving performance and quality is often discussed prior to implementation of performance initiatives, as opponents often doubt that the benefits outweigh the costs. Proponents argue that as performance improves, prevention costs increase, yet appraisal, internal and external failure costs will decrease even more so (Schroeder 2007, pp.151-54).

However, we shall not deal explicitly with the profitability of our initiatives. First, the desire of the CEO was to improve performance. The CEO was so convinced of the potential benefits of a performance improvement that the increased costs were not relevant initially. Second, the chosen framework of Deming especially deals less explicitly with profitability of the initiatives than for example Six Sigma, so we had theoretical support to delimit ourselves from analysing the profitability of improving performance (Basu 2009, p.10). Finally, for practical issues, very little data was available on the processes of Jamaa, so the authors would have had to allocate significant efforts in possibly erroneous estimations. Although it would have been ideal to measure the financial benefits and costs of our efforts under other circumstances, we chose not to include this area in our thesis.

1.6.3 Strategy and social impact

It is outside the scope of the thesis to determine whether the social business model is the optimal approach to economic and social development. Rather than stating that one approach is necessarily more efficient than others, the authors agree with scholars that argue that a combination of the available approaches is necessary to tackle social issues (Price 2008; Yunus & Weber 2007). Furthermore, the strategy of Jamaa is taken as given and not commented.

1.6.4 Change Management

Change management theory is outside of the scope of this thesis although it plays a crucial role in the success of any change in an organisation. It has been shown that only 1/3 of

change management programmes are a success (Nielsen 2010), and key aspects behind proper change management are only included implicitly in our work, not explicitly.

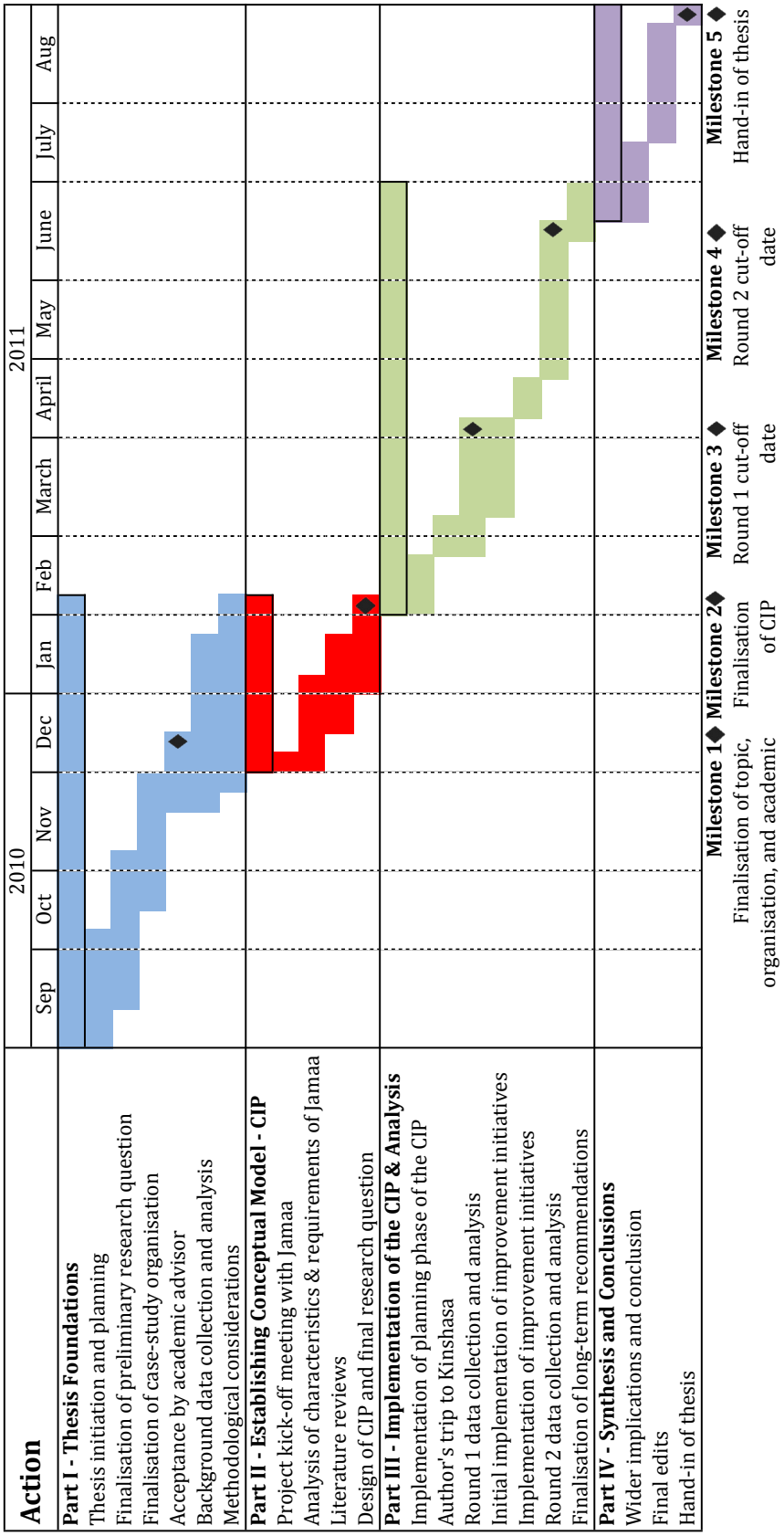
1.6.5 Culture

It is clear that cultural differences pose challenges in terms of using established management frameworks in Congo, and these differences are taken into consideration throughout our research. However, to maintain focus on operational issues, we do not review extensively the implications of cultural differences. Instead, we rely on the work of notably Hofstede and Lewis (Brooks 2003, pp.264-293; R. Lewis 2006).

1.6.6 Time frame and pilot phase

The thesis began in October 2010 and was finalised in August 2011. The performance programme of Jamaa includes measures and corresponding initiatives that have a time frame for implementation that requires action after August 2011, and these measures and initiatives are therefore not addressed. Instead, the authors will establish a complete *programme* for the new performance management system at Jamaa. A "pilot phase" of the new performance management programme was implemented during the thesis, while the missing measures and initiatives are to be implemented by the company after August 2011. The figure on the next page illustrates the full thesis timeline.

Figure 3 – Thesis timeline



Source: Authors' own creation

1.7 Chapter conclusion

This introduction first outlined the initial research aims, research relevance, and preliminary research question. Thereafter each the main elements of the preliminary research question were clarified in more detail, and finally the delimitations of the thesis were presented. The preliminary research question will be clarified in Part 2 of the thesis, and at the end of Chapter 7 the research aims will be restated and a final research question will be presented. The next chapter provides important background information on the local context and on the case-study firm.

2. Context information on Congo and Jamaa Trade

2.1 Chapter introduction

This chapter provides first introduce the reader briefly to the history of Congo. Thereafter, more detailed information about the case study firm Jamaa Trade is presented.

2.2 Background history of Congo

For any business initiative, an understanding of the cultural and historic context of the country is important, but in Congo's case a review is unavoidable and crucial in order to understand the complexity of the contemporary issues in Congo, a country ranking as the world's poorest on GDP/PPP (CIA 2011a) and the world's second worst on the Human Development Index (HDI) scale (UNDP 2010, p.146). For more on Congo's history, see 0 on page 164.

Congo has a long history of colonisation, despotic rulers, and war, including the world's most lethal post-WWII conflict from 1997-2004 involving 8 countries in which 5.4 million people died either directly or due to ensuing diseases or hunger (Deibert 2008, p.63). The culturally diverse Congolese population consists of more than 200 different ethnic groups or tribes and 216 languages (CIA 2011c; Etnologue Languges of the World 2011). Due to historic reasons and wars, these tribes have very little trust between each other, and thus focuses on gaining for the tribe rather than for the perceived corrupt society (Kamoche 2007, p.185). The typically collectivistic aspects of African culture also make the Congolese more loyal to their "family", the extended tribe, which further fuels nepotism and ethnic favouritism (Kamoche 2007, pp.xvii & 185).

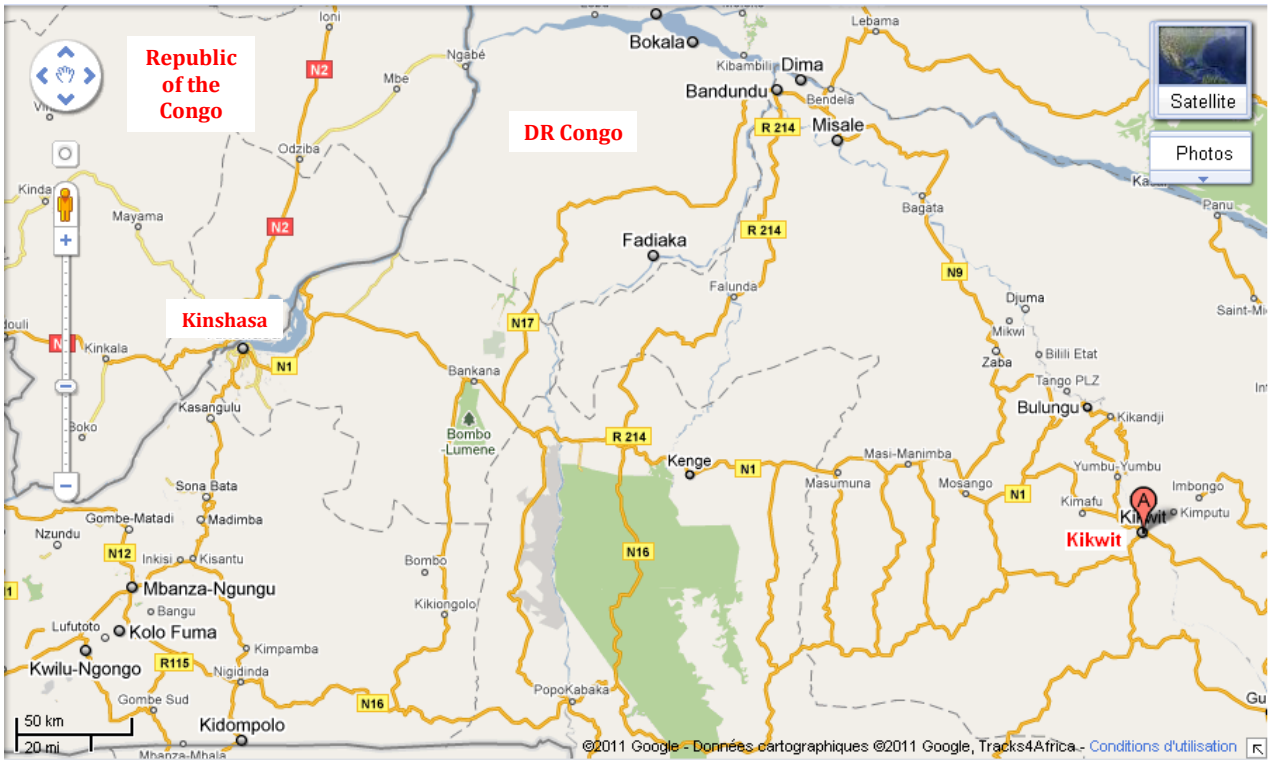
It is against this background that one must understand the severe lack of infrastructure in even the capital Kinshasa, the immense unemployment (Approx. 50%, The PRS Group Inc., 2011, p.14), crippling inflation (Approx. 45% ,OECD 2010, p.2), and the widespread corruption (Transparency International 2010). They are some of the reasons why established management thinking cannot be transferred easily, at least not without significant modification and adaptation to the Congolese culture (Nkongolo-Bakenda in Dana 2007, p.80; Kamoche 2007, p. xvii). During the author Emmet Sharghbin's trip to Congo in February-March 2011, many of the cultural, infrastructural, and socio-economic

characteristics described above were experienced first-hand. For some images of the trip see Appendix 2 on page 165.

2.3 Information on Jamaa Trade as of January 2011

Jamaa Trade (hereafter Jamaa) provides two main services between Kinshasa and the surrounding villages. First, Jamaa provides logistical services between the largest cities and villages for both small and large customers. Second, as a trading company the organisation purchases goods directly from the villages, transports the goods to the Kinshasa and sells them in the local market. The primary operations evolve around truck trips between Kinshasa and Kikwit, an important commercial centre in Congo with approximately 300,000 inhabitants, as well as the surrounding villages. Kikwit is approximately 700 kilometres from Kinshasa and is connected by a new main road, as shown in **Figure 4**. The villages, on the other hand, are not connected to the cities by paved roads. Further details on the geographic location of Jamaa can be found in Appendix 5 on page 182 and a Fishbone Chart of Jamaa is in Appendix 6 on page 184.

Figure 4 - Geographic location of Kikwit - approximately 700 km from Kinshasa

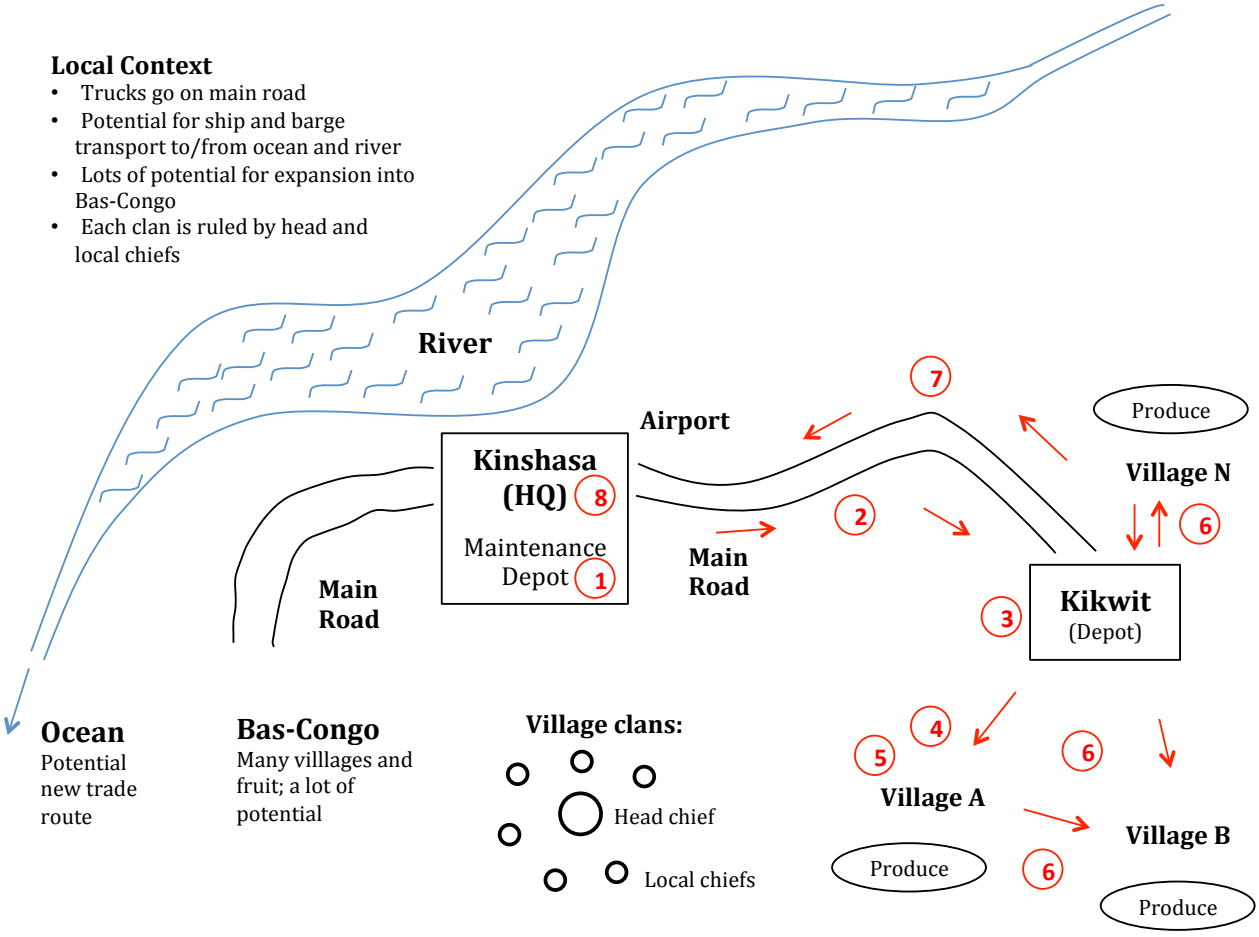


Source: Google Maps

2.3.1 Operations as of January 2011

A typical truck trip consists of 8 steps. First, the truck goes through preventive maintenance in Kinshasa. Second, the goods that have been purchased from Kinshasa by people in Kikwit and the surrounding villages are loaded onto the truck and the truck drives from Kinshasa to Kikwit. Third, the goods bought by customers in Kikwit are offloaded in Kikwit, checked by the third party customers, and a goods receipt is signed. Fourth, the goods are transported from Kikwit out to the surrounding villages. Fifth, the goods purchased from Kinshasa by the villagers are unloaded. Sixth, the trucks drive between the different villages, including Jamaa's own farm, to buy locally produced crops (primarily cassava) and engage in trade. Seventh, the truck is loaded up in Kikwit and drives back to Kinshasa. Eighth, the crops are sold at four markets in Kinshasa before repeating the cycle (Shepherd 2011i). A graphic representation of the operations can be in Figure 5.

Figure 5 – Illustration of Jamaa's operations



Source: Authors´ own creation based on meeting with CEO

2.3.2 Performance management prior to January 2011

At the outset of the project in January 2011, there was no formal performance management system in place at Jamaa. Furthermore, a lot of data would need to be collected in order to establish a baseline for performance metrics. According to the CEO, there are four main things to keep in mind when implementing the new performance measurement system at Jamaa, based on the local context.

First, Jamaa is not a "financially driven firm" as employees do not respond well to this type of management, that is, top-down financial goals will need to be supplemented by a bottoms-up focus on continuous improvement. Many employees still see Jamaa as an NGO and not as a business, and the organisation therefore has a weak "business culture". Earning a profit is not seen as the most important aspect, and many employees believe that the company will be "bailed out" by the owners if needed. Furthermore, financial planning and accountability is not something the employees are used to. Spending and new purchases are often not based on budgets or on the actual amount of money in the bank but rather on ad-hoc requests that are expected to be granted (Shepherd 2010).

Second, many locals feel that they are entitled to a job and a decent wage. The primary emphasis for many employees is still on survival and on feeding their families, and employees feel it is the responsibility of the organisation to provide sufficient means for survival. Regarding social impact, the CEO states that even though making a social impact is the reason he is working in Congo, employees are understandably more worried about their own survival.

Third, it is important that employees see the big picture and understand both where the organisation is trying to go, as well as how their daily work contributes to the overall organisational goals. Therefore, there is a big focus on trust, employee well-being, and passion at Jamaa (Shepherd 2011c).

Fourth, there are currently no incentives in the employees' contracts, and the CEO does not believe in individual rewards. Instead, employees are differentiated through different base salaries. All employees receive generous benefit packages (for example pensions) and take part in a profit-sharing scheme based on the overall performance of the organisation. The CEO believes that the vast majority of employees have an intrinsic motivation to work and

do a good job, and employees are therefore only fired if they cheat or steal. If their performance is poor, the employees are moved to a more suitable position, given training, or equipped with the necessary tools.

2.3.3 The "Tough Love" strategy from January 2011

Initially upon entering Congo, TIFIE (and later Jamaa Enterprises) focused on execution and expansion, which led to external funding by the owner and a decreased focus on performance and quality. A new, more stringent approach was needed and therefore in October 2010, a new "tough love" strategy was communicated to employees for the first time. The main message was that all external funding would be cut from January 2011, that is, if Jamaa was not able to earn enough money each month, workers would have to wait to get their wages. The new policy also means, however, that if Jamaa increases its earnings, the profits can, with some restrictions, be used on things such as social events, language training, and work clothes, which serve as motivational factors for the employees.

Although the new strategy was communicated in October, there were no real effects before January 2011. The CEO is certain that the business has huge potential to earn a profit as long as employees do their jobs properly and take responsibility for managing the business. The business is currently very close to reaching the short-term breakeven point (estimated at approximately 60,000 USD per month) and has further potential for increasing revenues to more than 80,000 USD per month, which is the long-term breakeven point (Shepherd 2011).

2.4 Chapter conclusion

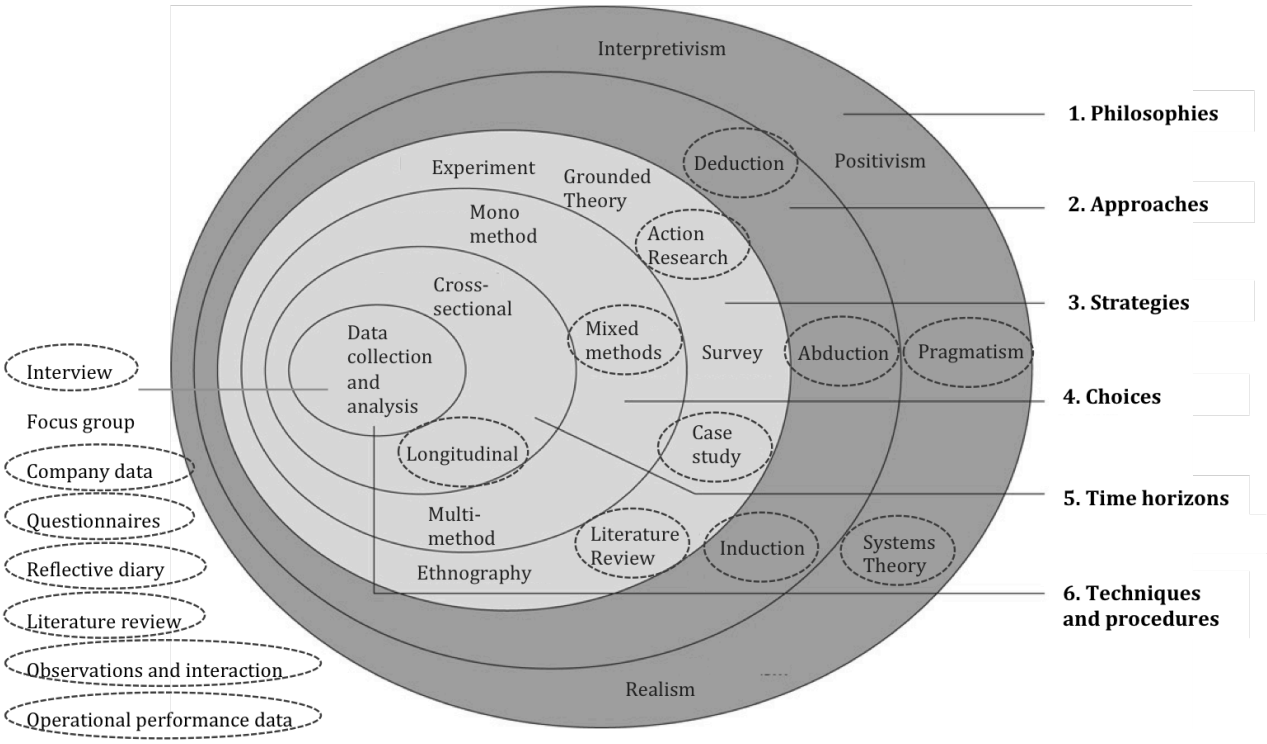
This chapter showed that Congo is a difficult environment to do business in, as established management thinking cannot be transferred easily. In addition, information on Jamaa was given, including an overview of its operations and current performance management systems as of January 2011. The next chapter concludes Part 1 – Thesis Foundations – by presenting the research methodology of the thesis.

3. Research methodology

3.1 Chapter introduction

The purpose of this section is to describe the utilised research methodology in more detail. It is crucial that empirical research is guided by a thorough understanding of all methodological issues, as the choice of methodology influences the nature and reliability of conclusions that can be drawn from the research (Ramsey 1998). A well-known approach to illustrating a research methodology is the 6-layered research "onion" put forward by Saunders *et al.* **Figure 6** below illustrates the research "onion" and highlights the thesis' chosen research methodology within each layer. An explanation of each layer of the "onion" follows; hence the chapter has six sections.

Figure 6 – The Research "onion"



Source: Adapted from Saunders et al. 2007

3.2 Research philosophies

We begin by looking at philosophies. A research philosophy is a paradigm regarding the way one thinks about the development of knowledge. Bryman states that a paradigm is a cluster

of beliefs and dictates for scientists in a particular discipline what should be studied, how research should be done, and how results should be interpreted (Bryman 2004, p.453). The "optimal" research philosophy depends on the specific research question(s) the researcher is seeking to answer, although it should be noted that research questions rarely fit neatly into only one specific category. Saunders *et al.* emphasise positivism, realism, interpretivism, and pragmatism as the four dominant research philosophies, and analyse them according to their respective ontology (the nature of reality and being), epistemology (what constitutes acceptable knowledge), axiology (the role of values in research), and data collection techniques most often used. Please see Saunders et al. 2009 for further details. The authors subscribe to the view held by pragmatists. This view is described in section 3.2.1 below.

In addition, the authors subscribe to the view of systems theory. The generic "onion" includes only positivism, realism, interpretivism, and pragmatism as research philosophies. However, the authors follow the lead of Korpel and include *systems theory* the onion due to its importance in the research design (Korpel 2004). Systems theory is included in the under research philosophies as it spans a number of different paradigms (Arbnor & Bjerke 1997). Systems theory is described in more detail in section 3.2.2 below.

3.2.1 The Pragmatic approach

Pragmatists link the choice of approach directly to the purpose of and the nature of the research questions posed (Creswell 2008). Pragmatists state that the most important determinant of research philosophy depends on the research question, and it is perfectly possible to work with variations within ontology, epistemology, axiology, and data collection techniques. **Figure 7** illustrates the pragmatist research philosophy across these four main dimensions (Saunders et al. 2009).

As with any paradigm there are inherent strengths and weaknesses with the methodology. The authors see pragmatism as a way for researchers to think about and leverage the different paradigms into a workable solution (R. B. Johnson & Onwuegbuzie 2004). This thesis aims to follow the view of Dewey, who stated that it is not a question of theory *versus* practice but rather of intelligent practice versus uninformed practice, and utilises a pragmatic approach in order to best answer the research question (Eldridge 1998).

Figure 7 – The pragmatist research philosophy

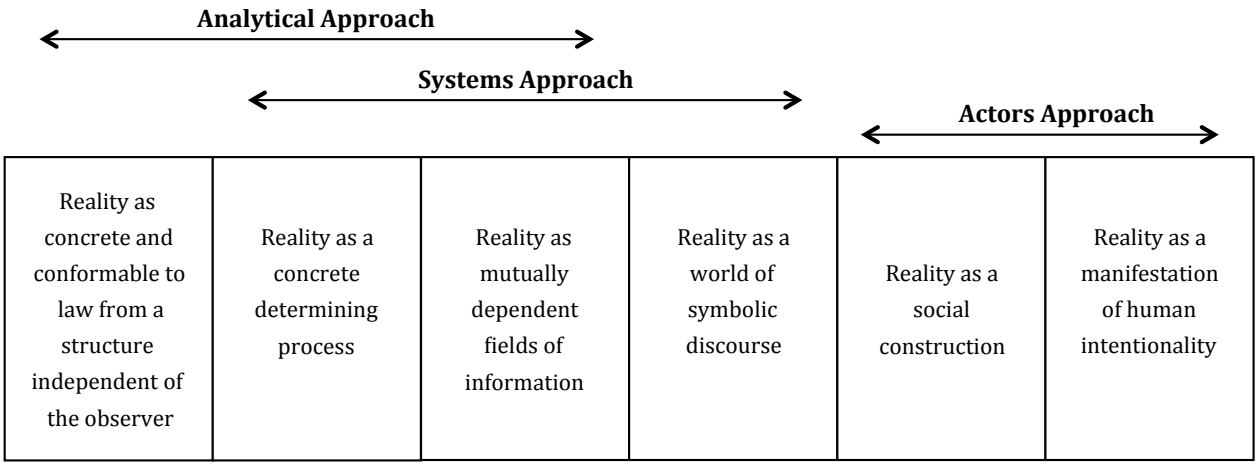
Ontology	External, multiple, view chosen to best enable answering of reserach question
Epistemology	Either or both observable phenomena and subjective meanings can provide acceptable knowledge dependent upon the research question. Focus on practical applied research, integrating different perspectives to help interpret the data
Axiology	Values play a large role in interpreting results, the research adopting both objective and subjective points of view
Data collection techniques most often used	Mixed or multiple method designs, quantitative and qualitative

Source: Adapted from Saunders et al. 2007

3.2.2 Systems theory

A different categorisation of research methodologies in business is the analytical approach, systems approach, and actors' approach, each of which hold different assumptions about reality. Arbnor and Bjerke highlight six different paradigmatic categories within which each of three approaches fall (Arbnor & Bjerke 1997). This is shown in **Figure 8.** Each approach is described in more detail below.

Figure 8 – The three approaches and research philosophies



Source: Adapted from Arbnor & Bjerke 1997

First, *the analytical approach* states that reality has a summative character, and knowledge is advanced through formal logic that is independent of subjective experience.

Second, *systems theory* is a holistic approach to solving problems and explains or understands individual parts through the characteristics of the system as a whole. (Arbnor & Bjerke 1997).

Third, *the actors' approach* is not interested in explanations but rather aims at understanding social wholes and reproducing the meaning(s) of the actors. Reality is believed to be socially constructed, and the creation of knowledge is therefore dependent on actors (Arbnor & Bjerke 1997).

Figure 9 below summarises the differences.

Figure 9 – The three methodological approaches

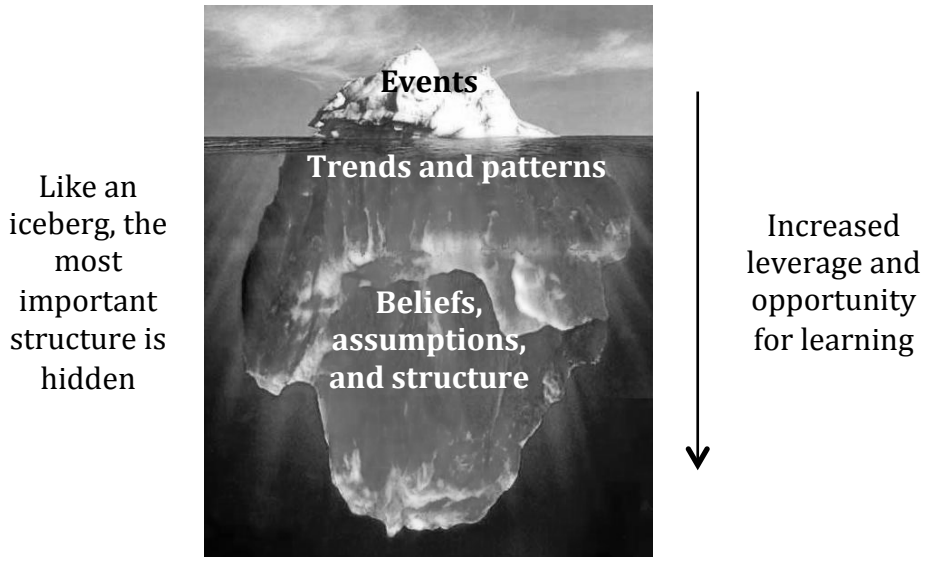
Analytical Approach	Systems Approach	Actors Approach
The whole is equal to the sum of Its parts	The whole does not equal the sum of its parts	The whole exists only as meaning structures, which are socially constructed
Knowledge does not depend on individuals	Knowledge depends on systems	Knowledge depends on individuals
Parts are explained by verified judgements	Parts are explained (sometimes understood) by the characteristics of the whole	The whole is understood via the actors' finite provinces of meaning
Assumes that reality is objective	Assumes that reality is objectively accessible	Assumes that reality is a social construction

Source: Adapted from Arbnor & Bjerke 1997

This thesis adopts a systems approach and views Jamaa as a system of interacting human beings which itself is part of wider system, for example the socio-economic context in Congo. Systems thinking allows the authors to go beyond everyday "events" and "trends and patterns" in order to delve into the specific "beliefs, assumptions and structures" that drive everyday behaviour, much like the iceberg depicted in **Figure 10** (Adapted from Korpel 2004).

A systems approach is used in this thesis, as it is crucial to the success of the project that a deeper understanding of the underlying forces and surrounding context is gained.[4] For example, the fact that Jamaa characteristics and its context must be taken into account, both when structuring the intervention and when attempting to draw wider implications of the analysis. Systems thinking enables a thorough and holistic approach to answer the research question, while including the ability to learn and adapt the approach along the way (Korpel 2004).

Figure 10 – Systems thinking as an iceberg



Source: Adapted from Korpel 2004

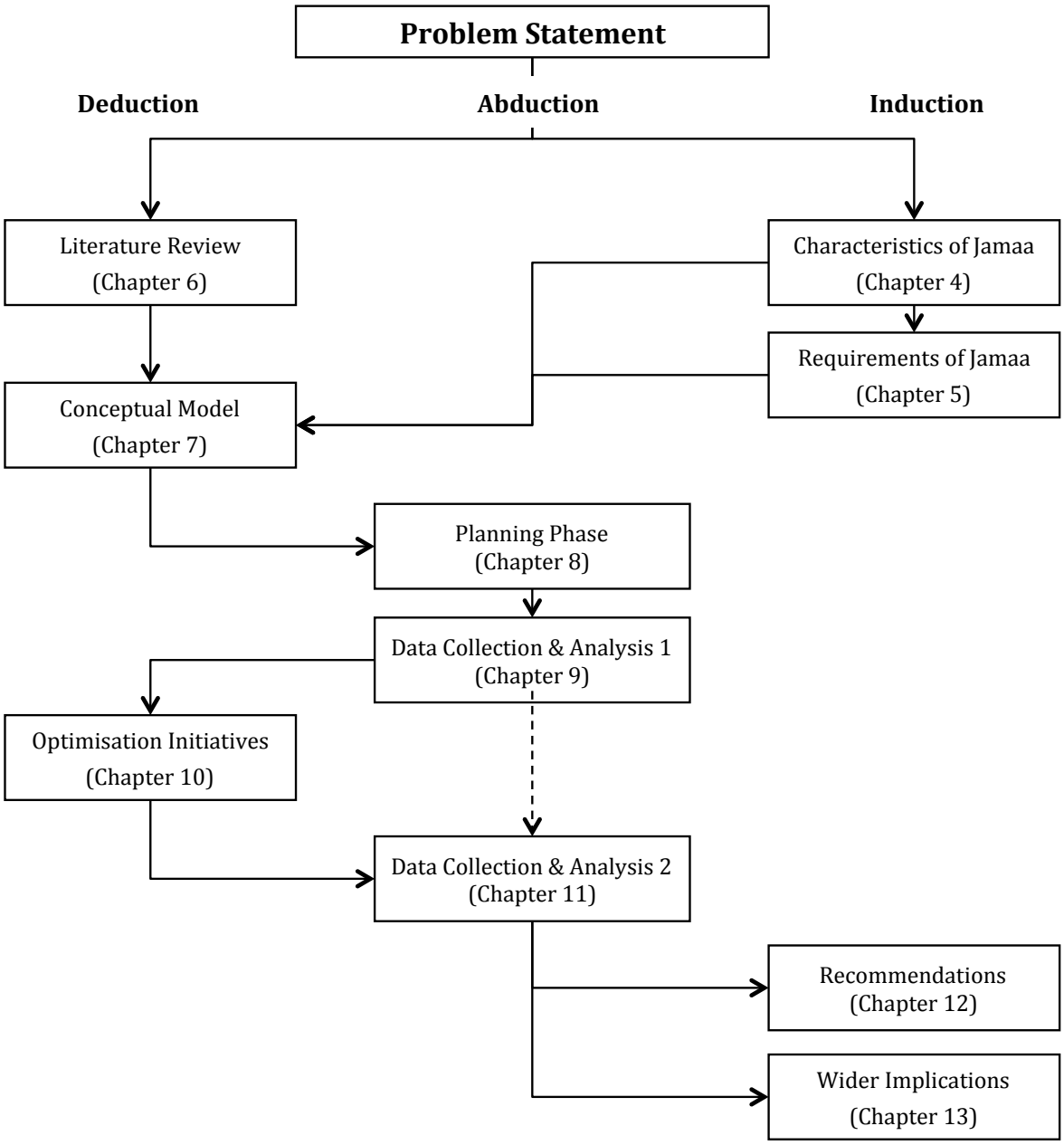
3.3 Research approaches

The second layer of the onion describes the research approaches and includes deduction, induction, and abduction. The three approaches to reasoning use logic to arrive at a conclusion based on information assumed to be true. The deductive approach is primarily concerned with testing and verifying propositions and hypotheses derived from theory. The inductive approach is a method of creating knowledge that concludes general laws from individual cases (Arbnor & Bjerke 1997). Abduction consists of noticing an (undesirable) result, looking for its cause, and then testing whether the hypothesised cause is correct

[4] It is important to note that systems theory is a complement to the analytical approach and the two approaches are therefore not mutually exclusive (Mämmelä 2009). In line with the adopted research philosophy, a pragmatic stance is taken on the issue at hand.

(Minto 1996). It is, however, perfectly possible and often advantageous to combine the different approaches within the same piece of research, especially when dealing with complex problems (Minto 1996; Saunders et al. 2009). Given the broad, multi-faceted nature of this thesis, the authors use a combined deductive, inductive, and abductive approach in order to more optimally answer the different parts of the research question. **Figure 11** illustrates the combined research approach and delineates between the three methods of reasoning by chapter. However, it is important to note that all three forms of logic are closely related and often used simultaneously. The delineations shown in the following figure are thus generally less clear-cut in practice.

Figure 11 - Overview of research methodology



Source: Authors' own creation

3.4 Research strategy

Thirdly, the research strategy is a general plan for how to go about answering the stated research question. It includes considerations of which data sources you will use, how you will collect the data, and the constraints you will inevitably have (Saunders et al. 2009). This thesis specifically uses the case study method, action research, and literature reviews, as described below.

3.4.1 Case study

The thesis focuses on optimising the performance at Jamaa, a single organisation operating in Kinshasa, Congo, and the case study method is therefore the optimal approach in order to gain *"a rich understanding of the context of the research and the processes being enacted"* (Morris & Wood 1991). Although a case study may have an "unscientific" feel to it, Saunders *et al.* argue that case studies are useful ways of exploring and challenging existing theory and also provide a source of new hypotheses. A wide variety of data methods can be employed, including questionnaires, interviews, observations, and documentary analysis (Saunders et al. 2009). One potential obstacle is the low level of resources currently available to collect data at Jamaa. The authors will mitigate this by collecting as much data as possible themselves.

3.4.2 Action research

Action research is a scientific approach to study the resolution of an important social or organisational issue together with those who experience it, that is, it entails research *in* action, rather than research *about* action (Coughlan & Coghlan 2002). Action research differs from other forms of applied research because of its explicit focus on action and on promoting change within organisations. The term was first coined in 1946 by Lewin and has been interpreted in a variety of ways by management researchers since then. There are three overarching themes, however.[5]

1. The main purpose of the research is the management of change (Eden & Huxham 1996)
2. There is a close collaboration between the practitioners and researchers, who become a part of the researched organisation.
3. Action research should have implications beyond the immediate project. For academics undertaking action research, this often entails the development of theory (Saunders et al. 2009).

Lewin developed an action research strategy with three main stages. The process starts with initial idea for a change intervention, typically stated as an objective. Thereafter fact finding

[5] For a more detailed discussion of the characteristics of action research, please see Gummesson (1999), who highlights 10 specific characteristics of action research

and analysis ("reconnaissance") is undertaken in order to create an overall plan and lay out the initial steps for implementation. Finally there is execution, which entails four main steps – planning, acting, observing, and reflecting. The steps, known as the "action-reflection cycles", are repeated in an iterative fashion with an amendment of the strategy along the way as further knowledge is gained through undertaking the research Adapted from McNiff 2002. The strengths of an action research strategy are a focus on change, the recognition that time is needed at the beginning for reconnaissance, the ability to monitor, evaluate, and amend planned action steps along the way, and the involvement of employees throughout the process[6] (Saunders et al. 2009).

Action research falls neatly under a pragmatic research philosophy, a combination of deductive and inductive reasoning, and systems theory in that it focuses on applying academic theory to real-life problems in a practical way in order to solve the issue at hand and create new knowledge. An action research strategy will thus be utilised as it fits the research problem at hand extremely well: The thesis aims to implement change within an organisation while working closely with the employees, and thereafter highlight the wider implications of the research in order to create novel theories.[7]

Regarding data sources, action research can include all types of data gathering methods. However, researchers must address the fact that data collection tools are themselves interventions and can thus influence the findings. For example, surveys with employees can cause anxiety and suspicion and generate expectations in the workforce (Coughlan & Coghlan 2002). The authors will address this by ensuring adequate communication with all the employees throughout the whole process including a kick-off presentation prior to beginning the data gathering, using anonymous data gathering methods where necessary, and managing expectations. Finally, it is worth mentioning that while action research can have two main foci – fulfilling the agenda of the researchers vs. focusing on the needs of the sponsor (Schein 1995) – this thesis aims to fulfil the academic aspects of the thesis while adding value to the sponsor, the CEO of Jamaa.

[6] Schein emphasises the importance of employee involvement during times of change, as employees are more likely to implement change they have been involved in creating and planning (Schein 1995).
[7] It should be noted that the authors do not seek to follow Lewin's sequences of action-reflection cycles explicitly, although the design of the methodology reflects Lewin's approach very closely

3.4.3 Literature review

The third and final research strategy is a review of the literature using primary, secondary, and tertiary sources. The existing literature will be thoroughly reviewed in order to form a foundation of knowledge and guide the creation of an optimal intervention approach to answer our research question.

3.5 Research choice

With regards to the fourth layer, Saunders *et al.* refer to the way in which a researcher chooses to combine quantitative and qualitative techniques and procedures as *research choice*. Three main research choices exist: mono methods, which use a single data collection technique and corresponding analysis procedure; multiple methods, which use more than one data collection technique and analysis procedure but within a single paradigm (that is, either within a quantitative or qualitative world view), and mixed methods, which is a general term for when both quantitative and qualitative data collection techniques and analysis procedures are used. Methods that use more than one data collection technique and analysis procedure are being increasingly advocated within business and management research (Saunders et al. 2009).

In line with the adopted pragmatic research philosophy, as well as the large amounts of both primary and secondary data required to answer the research question, a *mixed method* approach to research choice will be adopted in this thesis. Advocates of the mixed method approach do not claim that the method provides a perfect solution. Rather, the method should be seen as a way to fit together the insights provided by qualitative and quantitative research into a workable solution, and is closely aligned to the pragmatist research philosophy (R. B. Johnson & Onwuegbuzie 2004).

3.6 Time horizon

In the fifth layer, time horizon, there are two main categorisations of research based on time horizons: *cross-sectional* study where the research is undertaken at a specific point in time, and *longitudinal* study where the research is a representation of events over a given period of time. The main strengths of longitudinal research is the capacity that it has to study change and development (Saunders et al. 2009). The primary part of the research question demands that change is implemented and measured over a given period of time at Jamaa,

and this thesis is therefore a longitudinal study over a period of approximately seven months from January 2011 to July 2011.

3.7 Research techniques and procedures

Finally, the sixth layer, the core, is research techniques and procedures. Ramsey states that the best way to test for reliability and validity of research findings when studying social systems is to combine different research "instruments" (Ramsey 1998). This thesis uses several research instruments that are both qualitative and quantitative in nature in order to leverage the ability within a mixed method approach to use triangulations and complementary techniques. This section describes in more detail the six data sources that are used to answer the research question - interviews, observations and interactions with organisation and local context, literature reviews, questionnaires, operational performance data, and a reflective diary - during part II-IV of the research design, see **Figure 1** on page 1.

3.7.1 Research techniques in Part II – Conceptual Model

Prior to undertaking the data collection and analysis, a detailed conceptual model is created based on a triangulation of the characteristics of Jamaa, and the requirements of Jamaa, and the available theory from academia. First, company data, in-depth interviews with the senior management of Jamaa, as well as the authors' own interaction with the organisation's employees help clarify the requirements and characteristics of Jamaa. The company data consists of both existing and newly generated data. The interviews are semi-structured so that all the key pieces of information is obtained in a structured way while ensuring that there is enough flexibility to incorporate new findings through the discussion (Arbnor & Bjerke 1997, pp.294-299). The authors' own observations are documented in a reflective diary. The interviews and interaction with the organisation allow the authors to understand the unique characteristics and requirements of Jamaa prior to creating and implementing the planned intervention (Arbnor & Bjerke 1997, pp.213-253).

Second, this knowledge is supplemented by analyses of doing business in Congo and social businesses, as well as two thorough literature reviews of performance management, and quality management. This gives a strong foundation for creating a tailored performance management and quality optimisation system, the Continuous Improvement Programme (CIP), for a social business working in Congo.

3.7.2 Research Techniques in Part III – Implementation and Analysis

The next step involves the implementation of the conceptual model, including a preliminary round of data collection and analysis, optimisation initiatives, a second round of data collection and analysis, and long-term recommendations. The goal of this phase is both to measure the current performance and understand the underlying reasons for the results, and in agreement with the senior management team, the data is collected in four main ways.

First, interviews based on questionnaires with the CEO, employees, suppliers, customers, and sales agents. The questionnaires include questions with answers according to a Likert scale as well as open-ended questions. This allows the authors to quantify many of the answers, as well as include more detailed qualitative responses. Each questionnaire is conducted one-on-one between the authors and the respondent in order to avoid potential misunderstandings.

Second, a questionnaire will accompany truck drivers throughout the duration of their trips in order to gather operational data, a so-called "trip ticket" (Walton 1989, p.228). Due to the lack of a technical infrastructure at Jamaa, physical trip tickets are used in order to gather quantitative data on the operational performance of the trucks.

Third, the authors' own observations and interactions with the organisation are documented in a reflective diary and incorporated in the CIP. Given the action research-based method of driving change and creating new knowledge, it is imperative that the authors constantly seek to learn from their experiences, document their findings, and use the new knowledge to amend the strategy for change on a regular basis.

Finally, quantitative company data will be compiled by the local managers as needed; for example financial data and so forth (Arbnor & Bjerke 1997, pp.213-253).

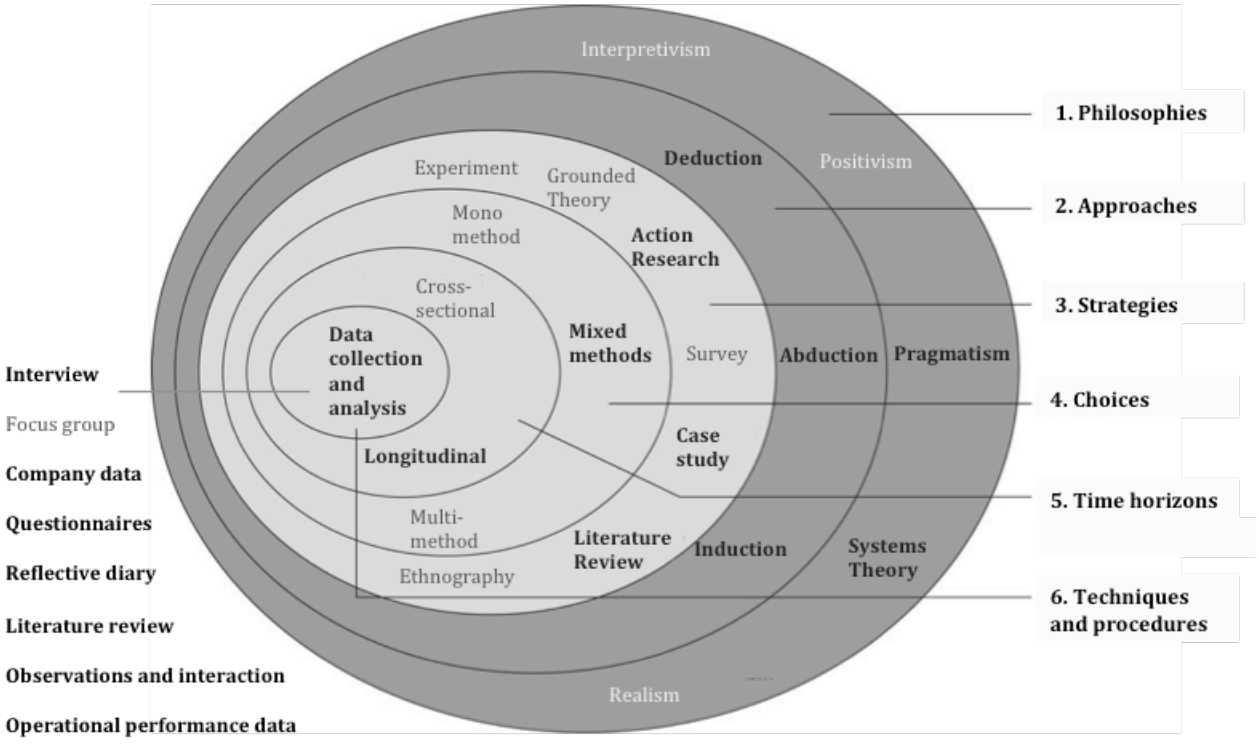
3.7.3 Research Techniques in Part IV – Synthesis and Conclusions

The last part of the thesis seeks to create new knowledge by using an inductive approach to induce general laws based on the experiences and knowledge obtained through the research on Jamaa. The focus will therefore be on using the corresponding analyses from the earlier parts to synthesise and highlight the wider implications and applicability of the research.

3.8 Chapter conclusion

This chapter presented the research methodology and thesis structure that will be applied. In order to answer the research question, the authors take a pragmatic approach that utilises both qualitative and quantitative data collection techniques and analysis procedures, as well as a combination of deductive and inductive methods of logic. This is combined with systems thinking, as the authors acknowledge the importance of understanding the underlying structures that influence and shape the perceptions and actions of an organisation and its surrounding context. The applied method is influenced by the tenets of action research, as the authors seek to drive change at Jamaa in an iterative learning process, collaborate closely with the organisation's employees, and draw wider implications from the research. Finally, the study is longitudinal and takes place from January to July 2011, and draws on six main sources of. **Figure 12** shows the Research "onion" as applied in this thesis with the excluded elements shown in grey.

Figure 12 – Research "onion" as applied in this thesis

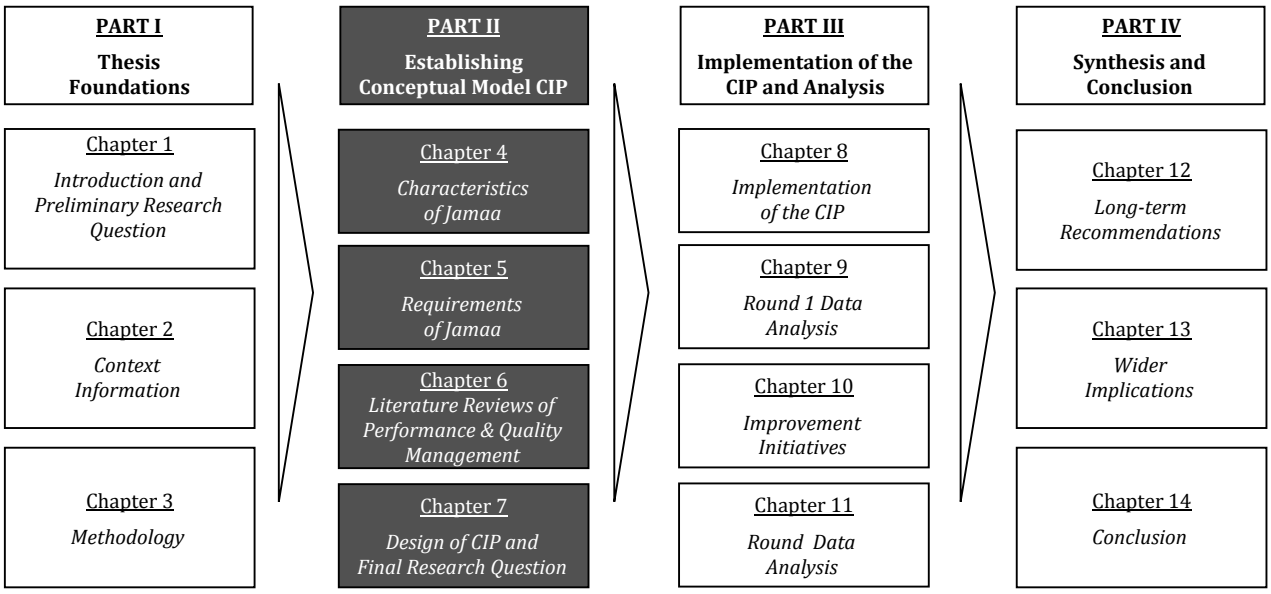


Source: Adapted from Saunders et al. 2007

Introduction to Part II – Establishing the Conceptual Model: CIP

Part II – Establishing Conceptual Model CIP - guides the reader through the journey of establishing the overall conceptual model and, based on the preliminary research question, designs the final research question, as the figure below shows.

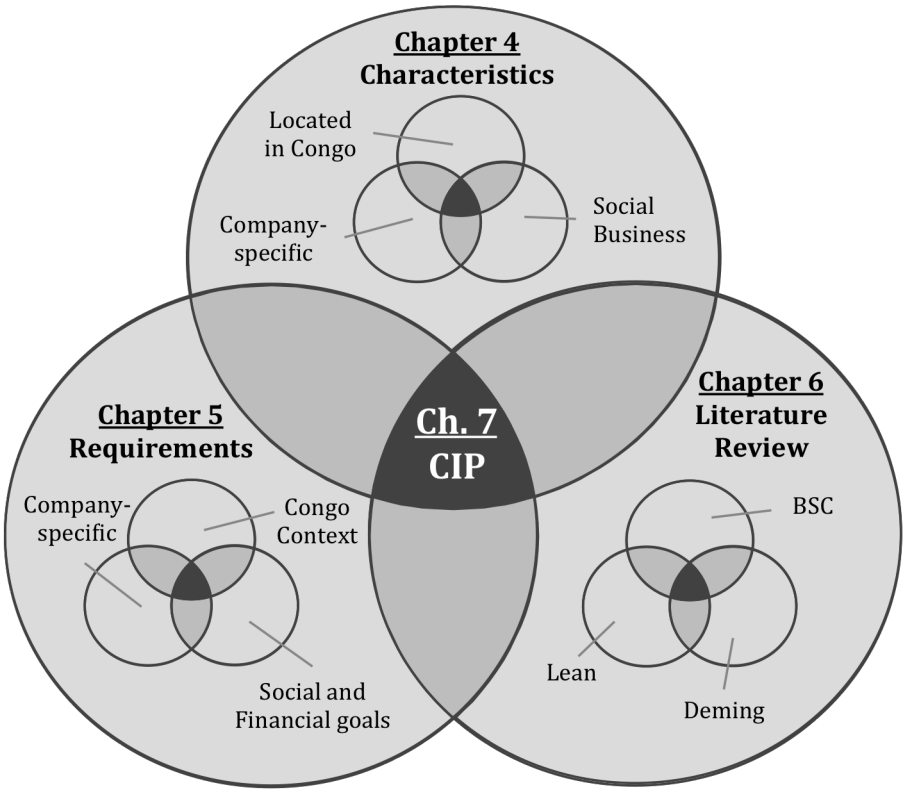
Figure 13 – Thesis outline



Source: Authors' own creation

The overall issue in this part is to determine the best approach to improve the performance at Jamaa. The best approach is found by triangulating the characteristics of Jamaa, the requirements of Jamaa, and the available management frameworks, each of which are also the results of 3 sub-analyses. This "triple triangulation" leads to a tailored, eclectic framework that we call the Continuous Improvement Programme (CIP). **Figure 14** illustrates our approach.

Figure 14 – Triple triangulation between three key factors



Source: Authors' own creation

The characteristics of Jamaa are presented in Chapter 4 and are a result of three analyses. First, the local context is taken into account and a review of doing business in Congo is undertaken. Second, a review on social businesses is presented in order to determine to which extent Jamaa is a social business. Finally, the company-specific characteristics of Jamaa are presented, as experienced by the CEO and the authors.

In Chapter 5, the requirements of Jamaa are explained which are also the result of three sub-components: the influence of the local context and doing business in Congo, the implications of being categorised as a "social business" in terms of the duality of social and financial goals, and the company-specific requirements according to the CEO.

In Chapter 6, potential, theoretical frameworks are analysed through two thorough literature reviews within performance and quality management respectively, which results in a triangulation of Balanced Scorecard, the Deming Management Method, and Lean. The full conceptual model, CIP, and the final research question are presented in Chapter 7.

"…just as Japanese, American, or German firms may have organizational cultures

which reflect particular values and practices in those societies,

it is valid to endeavour to develop organizational cultures in Africa

which reflect indigenous values"

Ken Kamoche

4. Characteristics of Jamaa

4.1 Chapter introduction

In this chapter, the characteristics of Jamaa are analysed according to three factors. First, the local context is taken into account through a review on doing business Congo. Second, it is determined to which extent Jamaa is a social business through a review of social businesses. Third, the specific characteristics of Jamaa, the experiences of the CEO, and the authors' own observations are presented.

4.2 Contextual factors of doing business in Congo

In this first section, we will look at doing business in Congo by providing an application of the PESTEL model to Congo, based on Grant and Ireland, as a way to provide us with a solid foundation of the business life's environment in Congo (Grant 2008; Ireland 2011). The model shows important aspects to consider especially for foreign firms entering Congo, as they may experience a cultural clash, but the aspects have relevance for all firms operating in Congo. Second, one of the authors' own empirical evidence on doing business in Congo is presented.

4.2.1 PESTEL analysis of doing business in Congo

All the 6 segments of the PESTEL, their underlying elements, and the conclusions are summarised in the figure below. In the table, the coloured cells to the right indicate the sign and importance of the underlying elements. For the detailed analysis, refer to Appendix 7 on page 185.

Figure 15 - PESTEL analysis of Congo

General Segment	Underlying element	Overall effect	Reference(s)
Political	Bad relations to powerful neighbours	-2	(Deibert 2008, p.63; Economist Intelligence Unit 2011, p.16; Transparency International 2010)
	Wide-spread corruption	-2	
	Unstable, fragile democracy	-3	
Economic	Comparatively high economic growth	+2	(Economist Intelligence Unit 2011)
	Dependency on donor help	-2	
	Large public debt	-3	
	Impeding inflation	-3	
Social	Strong population growth	+2	(CIA 2011c; Fafchamps 2003; Nkongolo-Bakenda in Dana 2007, pp.61-80)
	Young population	+1	
	Lack of trust	-1	
	Comparatively low level of education	-2	
	Culturally fragmented population	-3	
Technological	Growth of mobile network	+2	(Foster & Benitez 2011)
	Lack of Internet	-2	
	Very unstable electricity supply	-3	
	Fundamental lack of roads	-3	
Environmental	Low CO2 emissions	+2	(Economist Intelligence Unit 2011, p.21; International Energy Agency 2010, p.96)
	Little government control	-3	
	Lack of environmental protection	-3	
Legislative	Bureaucratic, impeding legislation	-3	(World Bank 2010, p.157)

Source: Adapted by the author, model synthesises Grant 2008; Ireland 2011

Overall, it is clear, that Congo provide a very uninviting and disadvantageous environment for doing business. It is against this background that any foreigner must understand the severe difficulties in conducting business in Congo, as the obstacles in the 6 areas of the PESTEL are grossly impeding for doing business (World Bank 2010, p.157).

4.2.2 Author Emmet Sharghbin's empirical evidence on doing business in Congo

Although several scholars have examined different aspects of business in SSA, see for example (Mamadou 1996), not many academics deal with the business conditions in SSA on a case-study basis. One empirical example is of a more anecdotal nature, namely Andrew Sardanis's personal history of banking in Africa, in which many of the previously mentioned findings also come through (Sardanis 2007). To further support the validity of the above-mentioned findings in the PESTEL analysis, we will here supplement with the co-author's own experiences in Congo, for more see Appendix 9, Section v on page 191.

The observations on national, business, and organisational culture were limited to the single case study of Jamaa, so the findings are not statistically representative. What was observed was that the organisation was comparatively more hierarchical, in the sense that senior management consulted office staff rather infrequently and even less to non-office staff. Further indicating a high power distance was that the communication was also limited between the office and non-office staff (Brooks 2003).

Furthermore, as employees had a different approach to time, appointments were not always kept. On a positive side, the perception of time meant that employees were less stressed and most often had time to help out each other. Additionally, the employees were good at socialising with colleagues but focused less on individual performance, because many external obstacles could interfere with work, meaning that deadlines were met less strictly (Appendix 9, Section v on page 191).

The lack of infrastructure was also visible in the capital, a city of 10 million people, which had few asphalted roads, few streetlights, no public transportation, frequent black outs, and expensive, yet unstable internet. The lack of basic facilities such as water and electricity in rural Congo also became apparent during the author's visit to the village of Dumi (Appendix 9, Section v on page 191).

4.2.3 Sub-conclusion on doing business in Congo

Based on the PESTEL analysis of Congo supplemented with the personal experiences of the author, it is found that doing business in the case-country Congo is significantly more challenging than doing business in the more mature markets of US, Europe and East Asia. Furthermore, it is found that best practices cannot be transferred easily to Congo, at least not without significant modification and adaptation.

4.3 Review on social businesses

This section reviews the main literature within the area of social businesses in order to determine the extent to which Jamaa is a social business and give the reader an understanding of this particular approach to economic and social development. First, a "social problem" is defined. Second, the main approaches for creating social change are

evaluated. Third, the definition of a social business is given. Fourth, the categorisation of Jamaa as a social business is discussed. [8]

4.3.1 Definition of a social problem

Numerous typologies and definitions of social problems exist. Crone states that *"A social problem exists when people subjectively perceive and have empirical evidence to show that societal conditions combine at a local, societal, or global level to cause personal problems"* (Crone 2010, p.2). Crone's definition is broad enough to include a wide range of social problems and is therefore used to define "social problems" in this thesis.[9]

4.3.2 Approaches to tackling social problems

Numerous authors argue that traditional profit-maximising businesses (PMBs) are not sufficient for the tackling social problems and that complementary methods are needed. Below is an overview of the main approaches advocated within the development literature (Peredo & McLean 2006; Yunus & Weber 2007; Price 2008):

- Government aid, intervention, and regulation
- Multilateral institutions and International Organisations (IOs)
- Non-Governmental Organisations (NGOs)
- Public-Private Partnerships
- Corporate philanthropy and Corporate Social Responsibility (CSR)
- Triple Bottom Line
- Targeting the "Bottom of the Pyramid"
- Labelling schemes (for example Fair-trade and (Product) RED).
- Private philanthropy and charity
- Social entrepreneurship, hereunder Social business

The question of how to tackle social issues optimally remains unresolved. There are a large number of opinions in the literature regarding this multifaceted issue, ranging from extreme

[8] As highlighted in Section 1.6 - Delimitations, it is outside the scope of our thesis to discuss whether the social business operating model is the optimal approach to economic and social development, it is not discussed which particular social problems should have priority over others. For a comprehensive yet controversial attempt to rank in order of importance nine key social problems, see Lomborg 2006.

[9] For further discussions on defining a social problem, see Appendix 10 on page 234.

capitalism - profit-maximising businesses in a capitalist society is the most effective way to provide for the needs of people and foster the democratic and moral values of a free society (Forbes & Ames 2009) - to social entrepreneurship - the strengths of capitalism and business should be utilised in order to achieve social goals and create value (Price 2008) - to socialism - a society built from the bottom up based on the principles of equality, democracy, and freedom, and where people come before profit (Maass 2010). It is extremely difficult, however, to accurately and objectively measure and rank the social impact of the approaches listed above due to the nature of social problems. Nevertheless, many scholars criticise heavily traditional foreign aid scheme, and argue that foreign aid should include more often alternatives such the business approach (Bebbington 1997; Easterly 2008; Lancaster 1999; Sullivan 1996). Rather than stating that one approach is necessarily more efficient than others, the authors agree with scholars that argue that all the approaches are necessary to tackle social issues (Price 2008; Yunus & Weber 2007).

4.3.3 The definition of a social business

A "social business" falls under the umbrella of "social entrepreneurship" and is a relatively new designation.[10] A uniform definition does not exist and the term is not a legal concept. Noble Peace Prize winner Muhammad Yunus offers perhaps the most detailed set of criteria that social businesses must adhere to, which are summarised below (Yunus 2011a):

1. The businesses pursue specific social goals and seeks to maximise social rather than financial returns
2. The businesses are run like profit-maximising businesses and must cover their costs (that is, they do not rely on outside donations to survive)
3. Profits are used for two things: First, to pay back investors (initial investments only with no financial interest) and second, to expand the business. No dividends are paid to the owners.

Yunus furthermore distinguishes between two types of social businesses. Type I Social Businesses create a product or service, which has a direct social impact. This is similar to Prahalad's "Bottom of the Pyramid" concept (Prahalad 2009). Type II Social Businesses work as traditional profit-maximising businesses, except that all of the net-profits are either

[10] For an introduction to Social Entrepreneurship, please see Appendix 11 on page 234

placed into a trust, which will help a disadvantaged group of people, or are wholly owned by poor people that then benefit directly from the profits (Yunus 2011b). Although numerous definitions of "social businesses" exist, for this thesis the most important characteristic of social businesses is that they are financially self-sustaining and work towards social goals.

4.3.4 Sub-conclusion of social businesses - categorisation of Jamaa

The principles outlined by Muhammad Yunus provide a strong foundation for understanding the social business model, yet these are not the only forms of social businesses that exist. Jamaa Enterprises, like many other organisations, has its own unique development philosophy as outlined in Appendix 3, Subsection ii on page 169. Although it is impossible to state which definition is "correct" and which method is optimal for tackling social issues, it is clear that the TIFIE Development Model falls under the "Type I Social Business" category as defined by Yunus and Jamaa can therefore be categorised as a "social business".

4.4 Specific characteristics of Jamaa

The following figure lists characteristics of Jamaa Trade comprised by objective facts, inside perspectives from the CEO, and the authors' perceptions based on their interactions with local employees. For further information on the financial situation at Jamaa, please see Appendix 8 on page 186, while a more detailed logbook of the authors' experiences can be found in Appendix 9 on page 188.

Figure 16 – Characteristics of Jamaa

Fact	Sub-Fact	CEO's Perceptions	Authors' Perceptions
Social business located in Congo that seeks to address market needs at the bottom of the pyramid	Originated based on the following market needs: lack of food, lack of jobs, inefficient distribution system, poor infrastructure, and underdeveloped rural markets	Few employees have business backgrounds, and a previous attempt at managing by objectives and cascading goals did not work	Most employees require some supervision and frequent follow-ups, and deadlines and promises are not always kept despite good intentions
	Provides trade and logistical services between Kinshasa and the surrounding villages (700km + radius) in Congo, often in areas where there are no other transportation means for the local villages	Employees do not always understand how their performance is measured and do not always see the link between their daily work and the goals of the organisation	The organisation is very hierarchical, and most employees are afraid to speak up and make suggestions for improvements. However, there is an extremely good team spirit among employees
	Donates 10% of profits to TIFIE for Humanitarian goals each month	There is no culture of continuous improvement, but employees are eager to learn	Employees have a low performance orientation, and there is a low focus on continuous improvement and quality. However, most are eager to learn
	Has in the past few years injected over $1.1 million in cash to markets in Kinshasa and in -the villages, positively affecting over 10,000 people	Making a social impact is is currently achieved by meeting market needs through business methods (that is, Jamaa makes a positive social impact by merely "doing what it does" due to the nature of the work) and by donating part of the profit to humanitarian project	Most employees are very short-term oriented, and making a social impact is not a motivating factor for them
Is financially self-sustaining but financial performance is not consistent	2009 profits of $35,000 on revenues of $478,000	Run like a standard profit-maximising business with a dual focus on social impact	For most employees, their job is mainly a transactional relation to provide for their families
	2010 profits of $99,000 on revenues of $397,000	Only once financial viability has been secured can the firm begin focusing more increasing social goals	Wages are openly discussed among employees and a central part of work
	Great degree of month-to-month variability in financial performance	Limited shareholder pressure	Work weeks above 40-50 hours a week are very rare, as in the rest of Congo
Is an SME but has grown rapidly in recent years	Has grown from four employees and one truck in 2007 to six trucks, 45 full time employees and 130 part-time employees as of March 2011	No performance management system currently exists, and social returns or impact on the environment are not currently measured	Strong, informal intra-organisational bonds and groupings between people from same tribe or region
	Transports 4000 tonnes of goods annually	Goal is to increase quality and then grow from a position of strength	Low level of technology

Source: TIFIE 2011; TIFIE 2010d; Shepherd 2010c; Shepherd 2011b, authors

4.5 Chapter conclusion

The characteristics of Jamaa were analysed according to three dimensions. First, analysing the local context yielded important insights. Second, the categorisation of Jamaa as a social business brings with it specific requirements. Third, Jamaa's unique organisational characteristics must also be taken into account. Each element is incorporated into an analysis of the requirements of Jamaa in the next chapter.

5. Requirements of Jamaa

5.1 Chapter introduction

The overall issue for Jamaa is how to improve its performance. When determining the specific requirements of Jamaa that need to be addressed in order to so do, it is important to first take the local context into consideration, second, the categorisation as a "social business", and third, the specific organisational characteristics. Each element is analysed in more detail below.

5.2 Context's consequences on doing business in Congo

This section is based primarily on the findings found in section 4.2 on page 33 and focuses on the most important PESTEL[11] aspects of the local context that needs to be taken into consideration in our CIP framework. For the detailed analysis, please refer to Appendix 12 on page 200.

Figure 17 –Context's consequences on doing business in Congo

General Segment	Overall effect	Consequences	Reference(s)
Political	-3	Establish relation with officials Have contingency plans Establish ethical guidelines	(Transparency International 2010)
Economic	-2	Prepare for increased market demand Take advantage for labour supply	(AfDB 2010, pp.272-273; OECD 2010; Simon Johnson et al. 2007, p.1)
Social	-1	Make more collective decisions Break down high power distance Attract & retain well-educated employees Communicate clearly to all employees	(Brooks 2003, pp.270-273)
Technological	-3	Expect shortages, and blackouts Expect high prices on internet Expect unreliable roads	(Foster & Benitez 2011)
Environmental	-3	Negligible	Not relevant
Legislative	-3	Hire local experts Anticipate impeding laws	(World Bank 2011)

Source: See references above

[11] Excludes environmental factors as they have little importance for the requirements of Jamaa.

These requirements indicate that there are strong contextual factors that need to be taken into consideration and that our ideas need serious and dramatic alterations and modifications to be usable in Jamaa.

5.3 Implications of categorisation as a social business

In Section 4.3.4 on page 38, it was determined that Jamaa can be categorised as a social business due to its overall philosophy and the principles of the TIFIE Development Model. There are three main implications of this categorisation on our chosen framework.

First, measuring and managing social impact will be a necessary component of increasing organisation performance. Although Jamaa primarily follows a "Type I Social Business" development model where the organisation creates social value merely by being in business, it is crucial that our framework includes social measures and that the social aspects are actively managed so that social return on investment can be increased.

Second, a social business cannot rely on outside investors for funds, and it is therefore equally important to ensure a financially viable self-sustaining organisation. The chosen performance management framework must thus be able to incorporate both social and financial elements in a complementary manner.

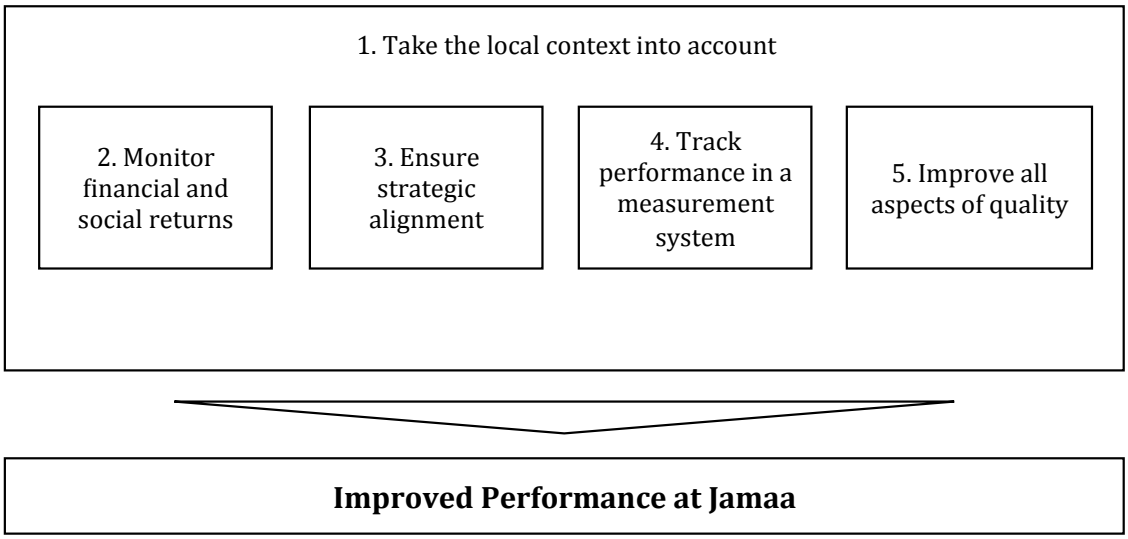
Third, because a social business seeks to achieve a profit while pursuing social goals, it can be treated like a normal profit-maximising business when seeking to improve organisational performance. Existing performance management and quality improvement techniques are therefore applicable to Jamaa, although the local context as described above needs to be taken into account.

5.4 Implications of the specific organisational characteristics

After a review and analysis of the specific characteristics of Jamaa in section 4.4 on page 38, the main requirements of the organisation were defined together with the CEO. The overarching goal of our project is to improve the performance at Jamaa and, after discussing the characteristics of Jamaa as well as the implications of the local context and the

categorisation of Jamaa as a social business, five points were identified as the key requirements for success, as illustrated in **Figure 18** (Shepherd 2010a; Shepherd 2010b).[12]

Figure 18 – Five requirements to improve the performance at Jamaa



Source: Authors' own creation

A description of each requirement follows. First, the local context must be taken into account, as it is unlikely that established performance management frameworks can be implemented without adaption. Second, it is important to maintain a dual focus on measuring and managing both financial and social performance. Third, it will be crucial that the organisational mission is translated into specific performance measures, that there is a clear link between the day-to-day job of each employee and the overall performance of the organisation, and that the new initiative is communicated to and understood by all. Fourth, there is a need to track the performance measures on a regular basis in order to understand where the changes are coming from. Finally, the framework must be able to incorporate initiatives to improve the quality of every relevant aspect of the organisation.

5.5 Chapter conclusion

The requirements of Jamaa are influenced by its local context, its categorisation as a "social business", and its specific organisational characteristics. It was found that in order to

[12] As highlighted in Chapter 1, the definition of high performance used in this thesis is *"the successful implementation of actions in order to reach the objectives and targets previously set by the management team."*

improve the performance of the organisation, five key requirements had to be addressed. The next chapter therefore conducts a literature review in order to determine the ideal frameworks to be included in our conceptual model to address each requirement and thus improve the performance at Jamaa. Note while there are frameworks that are able to address requirements 2 to 5, there are no specific frameworks to address requirement 1. The local context will therefore be taken into account by adapting the choice and implementation of the framework(s) to Congo, especially in terms of data collection methods and expected timelines.

6. Literature review

6.1 Chapter introduction

This chapter conducts a literature review in order to determine the ideal frameworks to be used to improve the performance at Jamaa. This chapter begins with a literature review within the broad field of performance management (hereafter PMA) in Section 6.2. It is found that the Balanced Scorecard (hereafter BSC) is able to address some, but not all, of the requirements of Jamaa. Section 6.3 therefore conducts a literature review within quality management determine the ideal frameworks to use together with the BSC. Section 6.4 concludes the chapter.

6.2 Performance management literature review

First, we explain the difference between performance management (PMA) and performance measurement (PME). Thereafter, we review why companies manage performance at all. Third, the literature within the field of PMA is reviewed. Fourth, the prerequisites for an optimal PMA system are highlighted. Fifth, the question of "optimal performance management system" is discussed. Thereafter the BSC is described in more detail, and finally the choice of a BSC for Jamaa is highlighted.

6.2.1 Performance management (PMA) vs. performance measurement (PME)

6.2.1.1 Definition of "performance management" (PMA)

We begin by clarifying the difference between PMA and PME, as overlapping definitions exist in the literature. Regarding PMA, a wide range of definitions exists. "Performance management", as originally termed by Aubrey Daniels in the late 1970s, was closely related to the scientific methods of Frederick Taylor and the behavioural principles of B.F. Skinner which served as starting points for using the science of behaviour in the workplace to improve employee and organisation performance. This strand of PMA is primarily concerned with understanding and manipulating the behaviours of individuals through mechanisms such as setting KPIs, incentives, and feedback (A. C. Daniels & J. E. Daniels 2004). Broader definitions also exist, however, and these types of definitions are more common in the contemporary PMA literature. This thesis defines PMA as *"the strategic use of*

performance standards, measures, progress reports, and on-going quality improvement efforts to ensure an agency achieves desired results" (Kyle 2005).

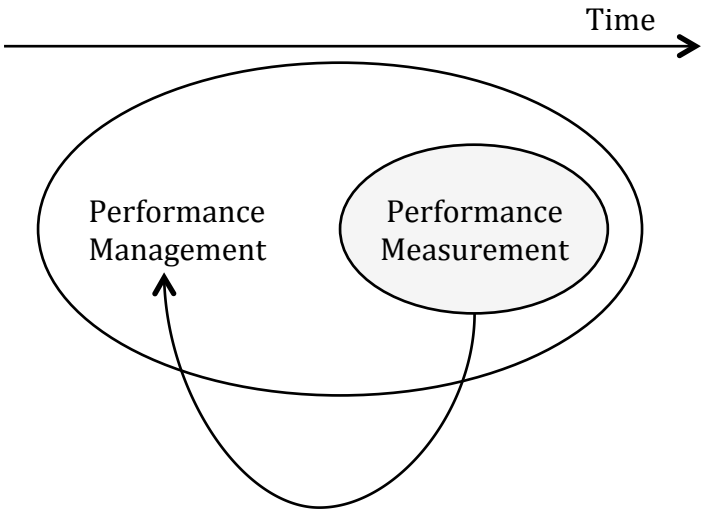
6.2.1.2 Definition of "performance measurement" (PME)

Definitions of PME are often more straightforward. Neely has a relatively narrow view of PME and defines performance measurement very simply as *"the process of quantifying the efficiency and effectiveness of action."* In relation, a "performance measure" is defined as *"a metric used to quantify the efficiency and/or effectiveness of an action"* (Neely et al. 1995). Although other definitions of PME broaden the scope to include strategy formulation and execution (e.g. Ittner et al. 2003; Gates 1999; Otley 1999), the above definitions from Neely *et al.* are some of the most precise and often quoted definitions (Cranfield 2004), and Neely's precise definition of performance measurement is therefore the one adopted in this thesis.

6.2.1.3 PME vs. PMA

Very simply, performance management precedes performance measurement by creating the context for, and measures of, performance, that is, PME is a necessary component of PMA; yet PME cannot exist without PMA. Performance management starts out by defining "what is performance?" which then translates into "what do we measure?" as one must first understand the processes underlying performance in order to then define the measures that lead to actions (Lebas 1995). **Figure 19** below indicate these differences.

Figure 19 – Performance measurement vs. performance management



Performance Measures	Performance Management
• Measures based on key success factors • Measures for detection of deviations • Measures to track past achievements • Measures to describe the status potential • Measures of output • Measures of input • Etc.	• Training • Teamwork • Dialogue • Management style • Attitudes • Shared vision • Statistical Process Control • Employee involvement • Multicompetence • Total Quality Control • Incentives, Rewards • Etc.

Source: Adapted from Lebas 1995

6.2.1.4 Implications for thesis

PME and PMA are to a large degree both used interchangeably in the literature to mean "performance management" as defined above (Bourne et al. 2003; Shulver et al. 2000). Despite the ambiguity in the literature, the authors agree with the above distinction made by Lebas and consider PME to be only one of the activities under the broader term of PMA. The term "performance management" (PMA) will therefore be used from now on when referring to the strategic use of performance standards, measures, progress reports, and on-going quality improvement efforts to ensure that an organisation meets its pre-defined performance targets, while "performance measurement" (PME) will refer solely to the actual measurement of performance metrics.

6.2.2 Why manage performance?

Having determined the difference between PME and PMA, the next question is "why measure and manage performance at all?" Research indicates that organisations that use PMA systems perform better than organisations that do not other (Lingle & Schiemann 1996). However, it should be noted that some firms choose specifically not to employ PMA systems due to a perceived low return on investment given the implementation time and resources required (Speckbacher et al. 2003), especially small-medium sized enterprises (SMEs) (Davig et al. 2004). See Appendix 13 on page 202 for a discussion of the pros and cons of using PMA systems.

The top reasons for implementing a PMA system include increased organisational focus, improved performance, and increased customer satisfaction. One the other hand, the top reasons for not implementing a PMA system include that they are time consuming, expensive, and lead to bureaucracy (Martinez 2005).

Most research shows that PMA systems are becoming increasingly widespread among organisations(Frigo & Krumwiede 1999) and that 85% of organisations had PMA initiatives in place in 2004 (A. D. Neely 2008). Furthermore, it has been shown that the benefits of PMA systems generally outweigh their costs (Kennerley et al. 2004; Marr 2004)

6.2.3 Prerequisites for an optimal PMA system

As shown in the previous section, research has indicated that the benefits of implementing PMA systems generally outweigh their costs. The next logical step is then to look at the prerequisites for an optimal PMA system. Neely identifies six key characteristics of successful PMA systems (A. D. Neely 2002), while Cranfield provides further insights to the above topic (Cranfield 2004). Based on a review of the literature, as well as the authors' own experiences, **Figure 20** provides an overview of the prerequisites for an optimal PMA system.

Figure 20 – Prerequisites for an optimal PMA System

A PMA System must…	
1	Support all stages of the managerial decision-making process and ensure a systematic approach to performance planning, execution, measurement, and management, including the integration of quality management methods that are directly linked to the performance measures
2	Provide a balanced picture of the business and reflect financial and non-financial measures, internal and external stakeholders, and measures of both efficiency and effectiveness
3	Be comprehensive so that all areas of performance that are important to the organisation's success are measured, including helping to identify where there are omissions or where there is a need for greater focus
4	Offer a succinct overview of the organisation's performance (e.g. through a "dashboard") that is simple, intuitive, and easily understood, i.e. it must distinguish between "data" and "information"
5	Ensure integration across an organisation's functions (e.g. IT, budgeting and compensation) and strategic alignment through its hierarchy, especially in terms of KPIs
6	Act as a communication tool to "tell the story" of the overall mission and strategy of the firm, motivate employees, provide feedback, and demonstrate causal relations and linkages between inputs and outputs
7	Allow for double-loop learning and ongoing performance management development, i.e. through hypothesis testing, learning, corrective action, and feedback loops
8	Be easy to implement with a clear view of the benefits
9	Be flexible and dynamic in regards to rapidly changing business environments
10	Be flexible for non-profit-maximising businesses, e.g. NGOs, social businesses etc.

Source: Literature review (Neely 2002) and authors' own experiences

6.2.4 Overview of approaches to PMA

A review of the literature found a large number of approaches to PMA.[13] A systematic approach to the management of performance originated in the early bookkeeping systems of pre-industrial organisations, with the Medici financial accounts as a well-known example of such methods (H. T. Johnson 1981). Despite the early development, there were no significant changes in management accounting methods between 1925 and 1980 (H. T. Johnson & Kaplan 1991). This led to traditional accounting methods being criticised for being out-dated (Gupta 1996; Niven 2008), encouraging short-termism (Banks & Wheelwright 1979), and being inadequate for modern manufacturing processes (Kaplan 1984).

In the last few decades a new series of PMA frameworks have emerged that seek to address these shortcomings in a more integrated way. Today, most definitions of PMA concern the overall management of performance throughout the organisation, indicating that PMA

[13] The terms "performance measurement", "performance measurement system" and "performance management" are used interchangeably in the literature, and the reader should keep this in mind when comparing the different approaches

entails a multidisciplinary approach (Cranfield 2004). Below is an overview of some of the most common approaches.

Framework	Source(s)
Tableau de Bord	(Guerny 1973)
Stakeholder Approach	(Freeman 1984)
The SMART Pyramid	(Cross & Lynch 1988)
The Performance Matrix	(Keegan et al. 1989)
Process Consulting	(Schein 1989)
Results-Based Management	(OECD 2000)
The Results/Determinants Matrix	(Brignall et al. 1991)
EFQM Excellence Model	(EFQM 1991)
The Balanced Scorecard	(Kaplan & Norton 1992; Kaplan & Norton 1993)
The Performance Prism	(A. Neely et al. 2001; A. Neely et al. 2002),

Source: See references above

Furthermore, new frameworks and methods are still emerging to reflect a changing business environment, including hybrids such as EVA and BSC, Service Level Agreements and BSC, and Risk Management and BSC (2GC 2011). However, it is important to note that PMA and PME systems such as the ones mentioned above are not solutions in themselves but are merely facilitating frameworks that provide structure and balance to firms (Bourne et al. 2003).

6.2.5 Which PMA system is "best"?

A lot of research and resources has gone into determining which PMA system is the "best" or the most "successful" in the business world. However, little in-depth comparison of different performance management methods exists, although the BSC is often emphasised. Cranfield, for example, states *"by far the most well-known and accepted approach to organisational performance management is the Balanced Scorecard"* (Cranfield 2004, p.10). In 2009, the BSC was cited as the most widely adopted performance management tool in a survey of management tools with 53% of more than 1,400 senior executives stating that they used the framework (Rigby & Bilodeau 2009). Furthermore, due to the flexible nature of the BSC, many hybrid and tailored adaptations have been created, and it can be argued that many of the more contemporary PMA systems, for example the Performance Prism and Results-Based Management, are merely derivatives of the original BSC concept.

Regarding success rates, empirical evidence that explores the performance impact of the BSC is still rare and further research is required (Andy Neely 2008). Most existing studies, however, have shown that firms adopting BSCs did better than companies that did not. For example, empirical evidence gathered by Sim and Koh showed that manufacturing plants that had strategically linked their corporate goals to a BSC performed better than those that had not (Sim & Koh 2001). In addition, of the organisations using a BSC (among members of the US Institute of Management Accountants), 88% reported improvements in operating performance, while 66% stated increased profits (2GC 2008). Furthermore, while there is substantial evidence of large firms benefiting from adoption a BSC (Kaplan & Norton 2000), there is also empirical evidence that shows that SMEs also derive benefits from a BSC (Andersen 2001).

Given its high success rates and inherent flexibility, it can therefore be argued that the BSC, or a derivative of it which maintains the conceptual core, is the "best" solution for comprehensively managing strategy and improving the performance of organisations. Therefore, the performance management framework to be implemented at Jamaa will include a BSC, although other frameworks may be included as well. The next section describes the BSC in more detail.

6.2.6 The Balanced Scorecard

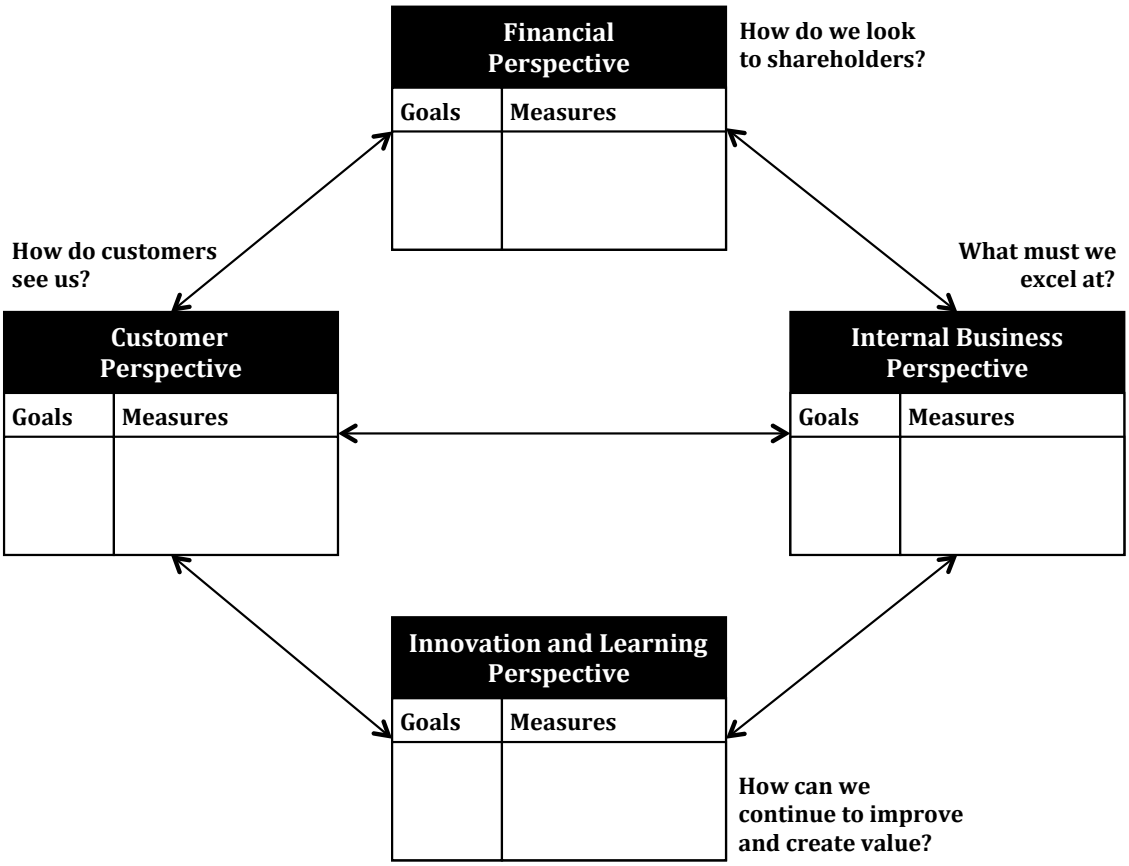
This section presents the current BSC in more detail, including the three "generations" of scorecards (Cobbold & G. Lawrie 2002), background information, some of the criticism levied on the framework, the different scorecards in use today, and potential future directions. For more information on the evolution of the BSC, please see Appendix 14 on page 204.

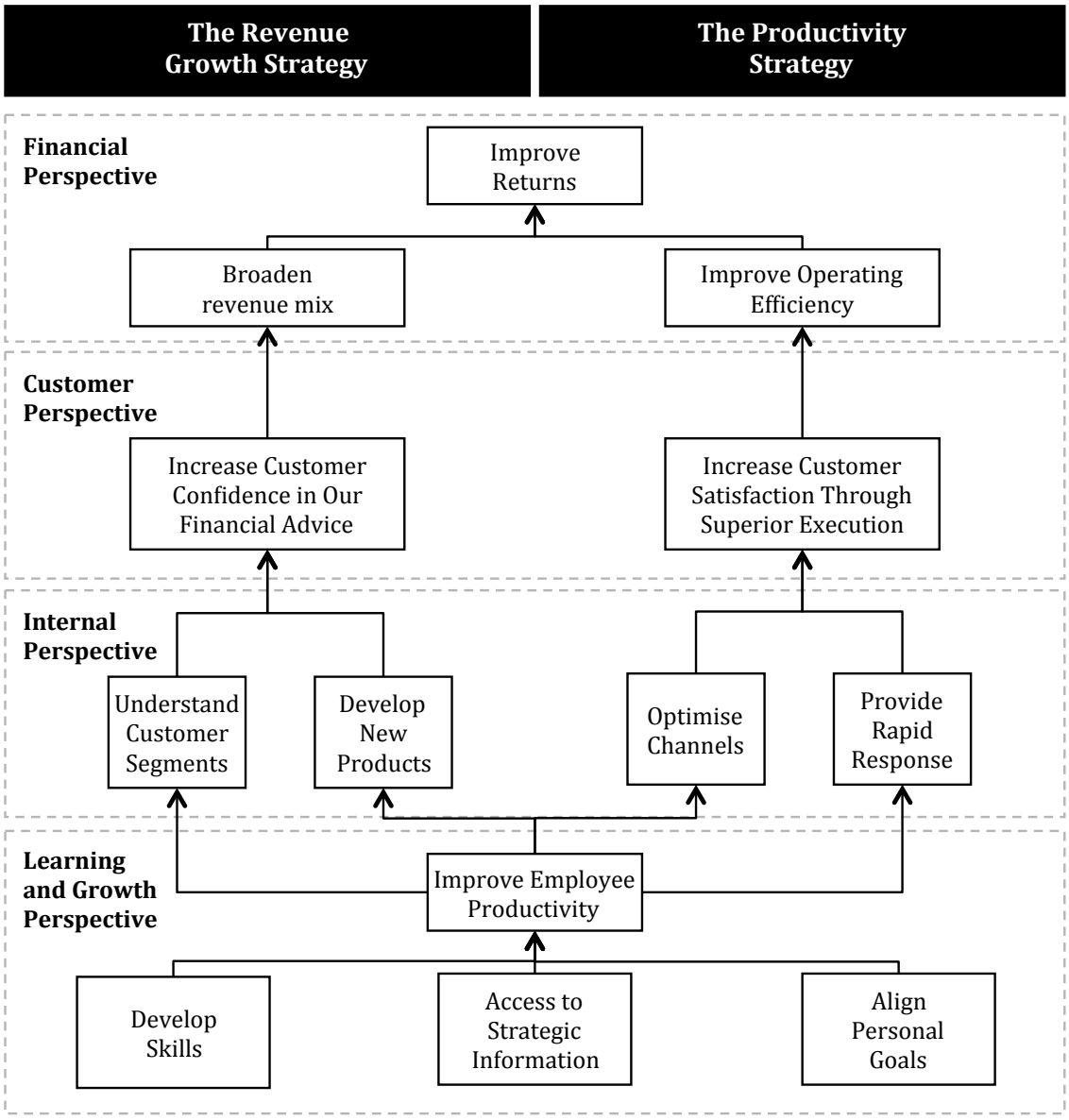
6.2.6.1 Evolution of the Balanced Scorecard

The concept of the BSC first appeared 1992 as a response to existing PMA systems, which were deemed to be too financially focused. Instead, the BSC gave managers a balanced and comprehensive overview of the performance of the organisation based on four key perspectives – financial, customer, internal business, and innovation and learning (Kaplan & Norton 1992). The original BSC was mainly a reporting framework, and a second generation of scorecards thus emerged which included strategic linkage models called a "Strategy

Maps". With a strategy map, users of the BSC were able to formulate cause-and-effect relationships between the different perspectives and use the framework to cascade objectives, link initiatives to the financial results, and communicate the strategy (Kaplan & Norton 1996). As a consequence, the sum of the above changes enabled the BSC *"to evolve from an improved measurement system to a core management system"* (Cobbold & G. Lawrie 2002). **Figure 21** illustrates the frameworks.

Figure 21 – The Balanced Scorecard and a Strategy Map





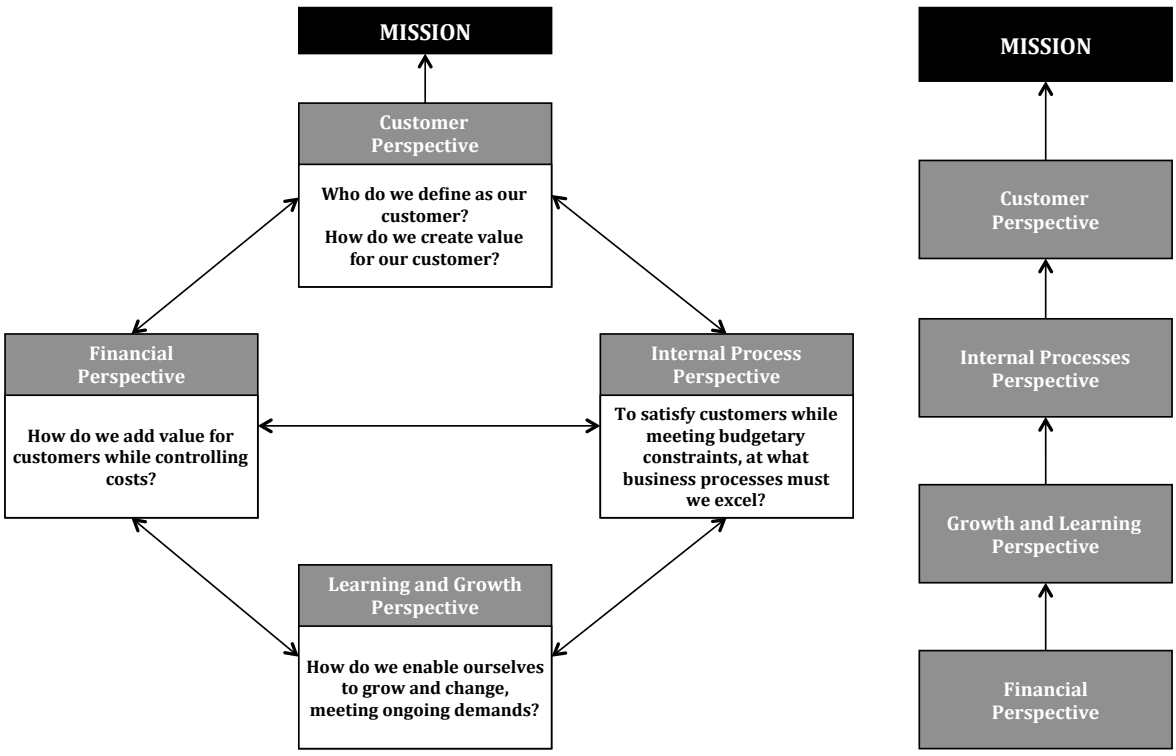
Source: Adapted from Kaplan & Norton 1992; Kaplan & Norton 1996

The BSC continues to evolve and is currently in its "3rd generation" according to some scholars (Cobbold & G. Lawrie 2002). Modern BSC frameworks have a higher degree of adaptability (in order to fit a wider audience) and often provide more details on actual implementation. Furthermore, modern BSCs use "destination" or "objective statements" in order to include the desired future state of the organisation as a result of the BSC, as well as more flexible and practical strategic linkage models (Cobbold & G. Lawrie 2002). For an overview of the steps of a generic BSC implementation, see Appendix 15 on page 212.

6.2.6.2 Different types of Balanced Scorecards

Numerous types of BSC in a wide range of industries and organisations have emerged in recent years, underlining the flexibility of the framework (see for example Aidemark 2004; Dabhilakar & Bengtsson 2004; Sim & Koh 2001). **Figure 22** shows an adapted BSC for governments and non-profit agencies. As can be seen from the diagram, the financial perspective is at the bottom of the strategy map and is seen as the means to delivering on the mission and is not an end in itself. This model of delivering social value relies on a constant stream of funding and typically does not include revenue generation aspects to it. It should be noted that a social business BSC does not exist in the literature, to the best of the authors' knowledge after a thorough literature review.

Figure 22 - Balanced Scorecard and Strategy Map for non-profits



Source: Adapted from Niven 2008

6.2.6.3 Criticisms of the Balanced Scorecard

Despite its popularity, the BSC has also received criticism from a variety of sources. Most of the criticism has come from the academic community, which has questioned BSC's robustness. For example, Norreklit levies two main points of criticism on the BSC. First, it is

stated that there are not always cause-and-effect relationships between some of the suggested areas of measurement. Second, Norreklit questions the validity of BSC as a strategic control model that is able to handle the problem of strategy implementation (Norreklit 2003). Norreklit has also highlighted the lack of citations as a flaw (Norreklit 2000).

Another point of criticism is the amount of resource required to successfully implement a BSC, which is especially problematic smaller organisations. An important issue when deciding whether to implement a BSC is thus making a cost-benefit analysis in order to determine whether the BSC will add value to the organisation (Mooraj et al. 1999).

Furthermore the BSC framework has been likened to the *"tip of an iceberg"* that requires significant understanding of underlying processes and resources in order to be successful. Although Schneiderman believes that *"a good scorecard can be the single most important management tool"* (Schneiderman 1999, p.7), he states following six reasons for why many scorecards fail:

1. The independent (that is, non-financial) variables on the scorecard are incorrectly identified as the primary drivers of future stakeholder satisfaction
2. The metrics are poorly defined
3. Improvement goals are negotiated rather than based on stakeholder requirements, fundamental process limits, and improvement process capabilities
4. There is no deployment system that breaks high level goals down to the sub-process level where actual improvement activities reside
5. A scientific problem-solving and improvement method is not utilised
6. There is not and cannot be a quantitative linkage between non-financial and expected financial results (Schneiderman 1999)

Organisations that choose to implement the BSC should thus not view it as a panacea but instead acknowledge that it is it to a large extent a conceptual framework and more of a "shell". The BSC relies on accurately identifying and testing cause-and-effect relationships among performance drivers and identifying correct measures that can drive improvements.

Furthermore, and perhaps most critically, the BSC does not provide suggestions on how to improve the measures (Schneiderman 1999).

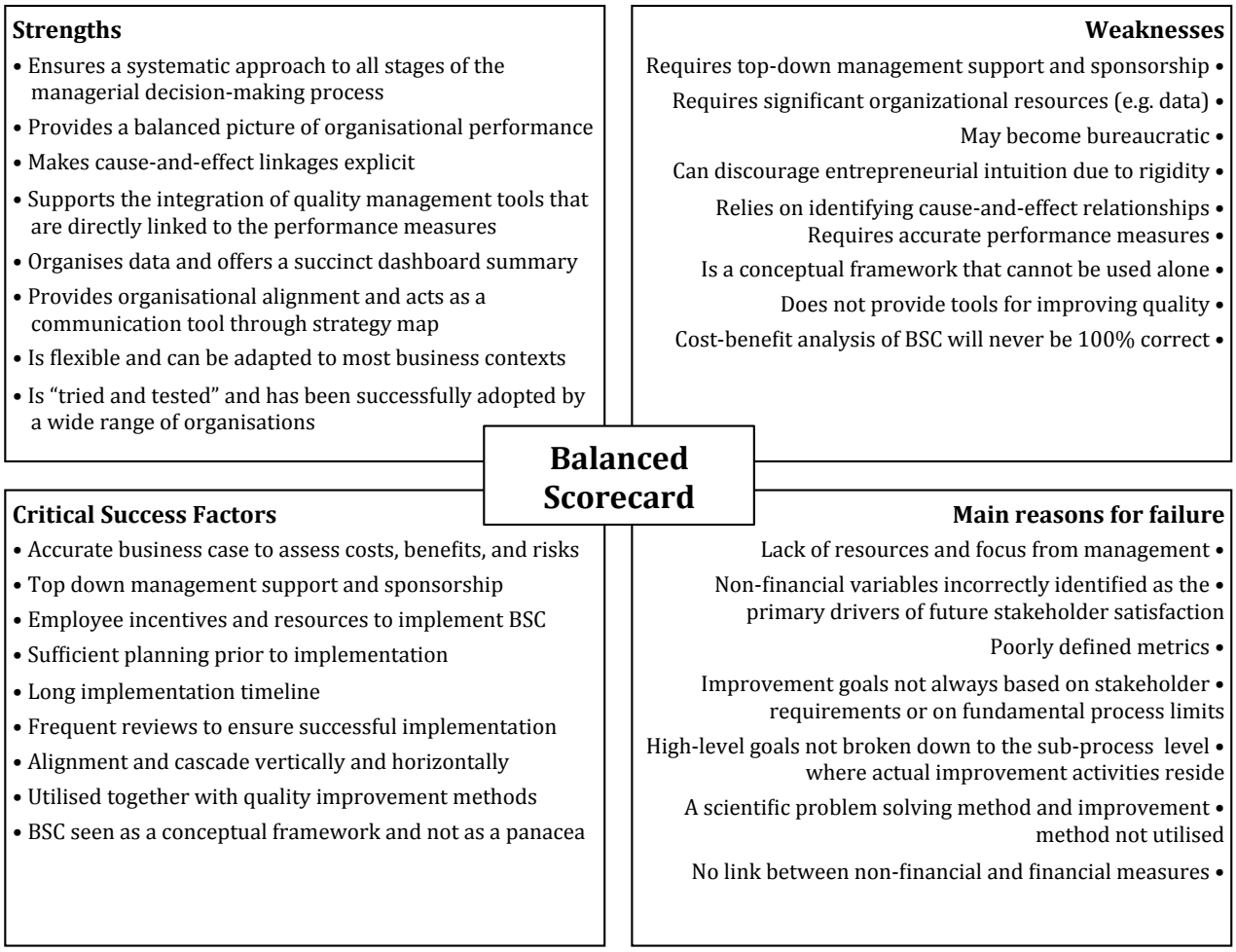
6.2.6.4 Future directions

The BSC has been widely adopted among organisations of many different types and sizes, and most empirical studies have shown that firms adopting the BSC did better than companies that did not. However, most companies adapt their scorecards to better fit their particular needs - it has been shown that only 14% of companies that use the BSC use it alone (Marr 2004). For example, hybrid models triangulating BSC with Lean and other quality frameworks are becoming increasingly prominent (Bhuiyan & Baghel 2005). It is thus likely that the BSC framework will continue to be developed and improved as more organisations adopt it and more empirical evidence is gathered that tests its effectiveness.

6.2.7 Chapter sub-conclusion: The choice of a Balanced Scorecard for Jamaa

Almost all users adapt their scorecards to their specific contexts, and the vast majority combine the BSC with other performance management tools. However, the BSC is not a panacea and it is crucial that managers are aware of its weaknesses and eliminate the main reasons for implementation failure. **Figure 23** below summarises the strengths, weaknesses, main reasons for failure, and critical success factors of the BSC.

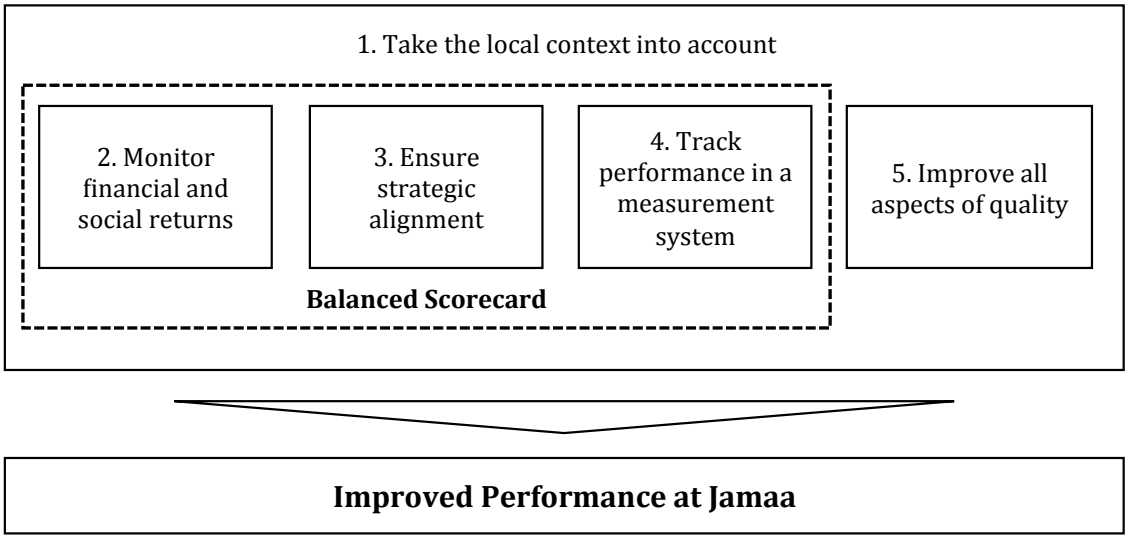
Figure 23 – Summary of the BSC



Source: Authors' adaptation based on literature review

When holding the strengths and weaknesses of the BSC up against the five requirements of Jamaa that were identified in the previous chapter, it can be seen that the BSC is able to fulfil requirements 2-4. However, the fifth requirement, "Improve all aspects of quality", cannot be adequately by the BSC alone, as the BSC does not provide the tools for doing so (Schneiderman 1999). This is illustrated in **Figure 24**.

Figure 24 – Application of the BSC to Jamaa



Source: Authors' own creation

In order to identify the frameworks that can be used to address quality issues and thereby complete our conceptual framework to improve the quality at Jamaa, it is necessary to investigate the quality management literature and conduct a literature review of the field, which we will do in the next section.

6.3 Quality framework literature review

This section has four parts and has as its purpose to find the framework(s) to improve Jamaa's quality. First, an introduction to quality and quality frameworks is given. Our definition of quality is presented, and the implications for chosen theoretical model are presented. Thereafter, the main quality frameworks are reviewed. Third, the quality frameworks are compared in terms of applicability to Jamaa. Finally, the choice of the Deming Management Method and Lean to address the quality requirements of Jamaa is explained.

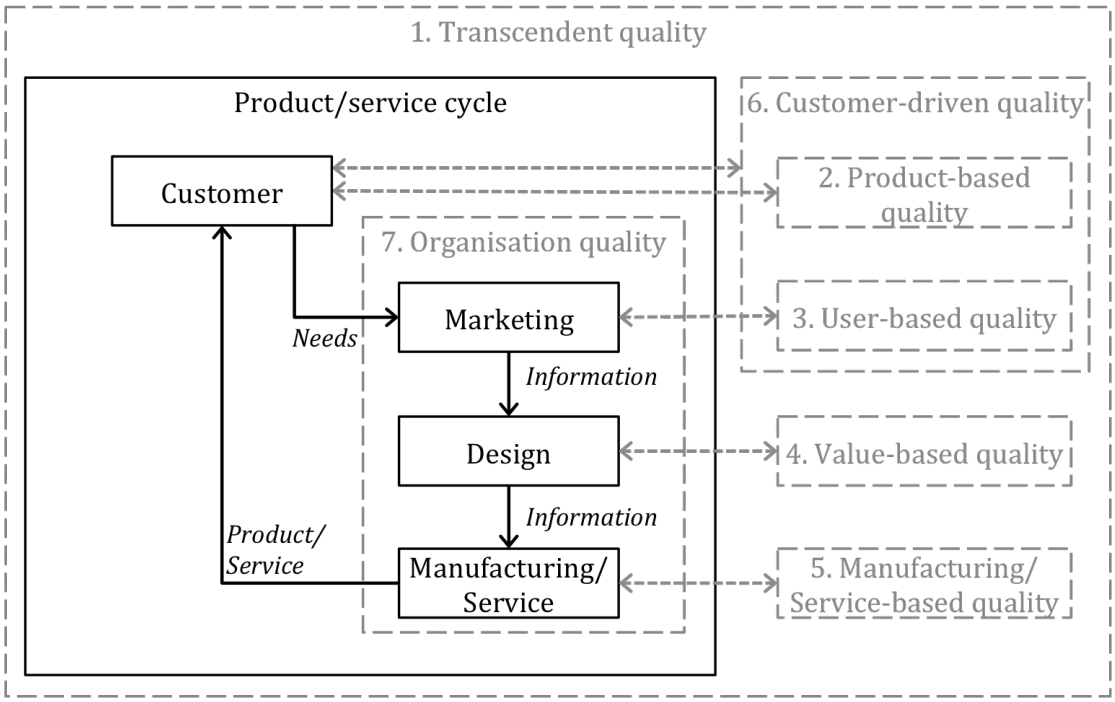
6.3.1 Defining "quality"

6.3.1.1 Overview of scholars' seven different perspectives on quality

We will first define "quality". As Basu, Beckford, and Evans point out, several competing definitions of quality exist (Basu 2009, pp.4-8; Beckford 2010, pp.14-15; Evans 2005, pp.12-17). One aspect is the wording, as Basu points out, since quality can be perceived as both "Right first time", "What the customer wants", "Conformance to standards", "Value for

money", and so forth (Basu 2009, pp.4-5). As Beckford points out, the very scope and perspective of quality is also important. Practitioners have typically had a narrow focus on the part of the organisation that produced a physical product for manufacturers or interacted with the customers for service organisations (Beckford 2010, p.15). After a literature review of the field, the authors have found that there are seven common perspectives on quality (Basu 2009, p.7; Evans 2005, pp.12-16; Garvin 1984). The seven perspectives include the 5 major quality perspectives in Garvin's seminal paper from 1984, *"What Does "Product Quality" Really Mean?"*, Evans' "Customer-driven quality" perspective, and Basu's "Organisation quality" perspective. **Figure 25** illustrates the 7 perspectives. Each perspective is elaborated on in Appendix 16 on page 217.

Figure 25 – Overview of the seven different perspectives on quality



Source: Authors own creation inspired by Basu 2009, p.7; Evans 2005, p.15; Garvin 1984

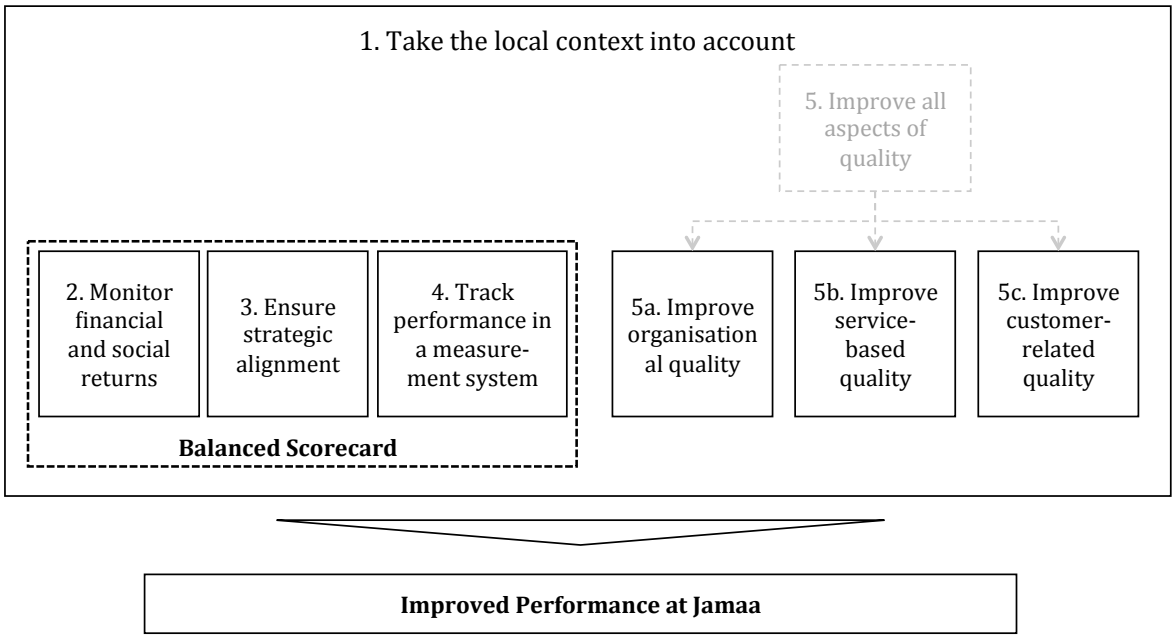
6.3.1.2 Our three dimensional definition of quality for Jamaa

Of the above-mentioned model and its 7 quality definitions, we employ three aspects in our definition of quality for Jamaa. The internal process perspective (5. Service-based perspective) is crucial as it is important to have conformed, standardised procedures to deliver a conformed, high-quality service. The customer aspect (6. Customer-driven quality)

is also crucial, as its focus on products characteristics and customer needs are well founded. Finally, the organisational perspective (7. Organisational quality) is analogously important, as having quality organisationally is the basis for achieving quality in other areas of the business. Note that we do not focus on the transcendent perspective because of its undefined nature. Also, the value-based perspective is outside our scope, as we have chosen to focus on the internal capabilities of Jamaa instead of focusing on the competitive landscape and Jamaa's comparative level of price and quality (Basu 2009, p.7; Evans 2005, pp.12-16; Garvin 1984).

The three aspects of quality lead to a more detailed overview requirement " 5. Improve all aspects of quality" as shown in **Figure 26.** The relevant frameworks to address the new requirement 5a, 5b, and 5c, still need to be found, which we will do next.

Figure 26 – Detailed requirements of Jamaa, including our definition of quality



Source: Authors own creation inspired on Basu 2009, p.7; Evans 2005, p.15; Garvin 1984

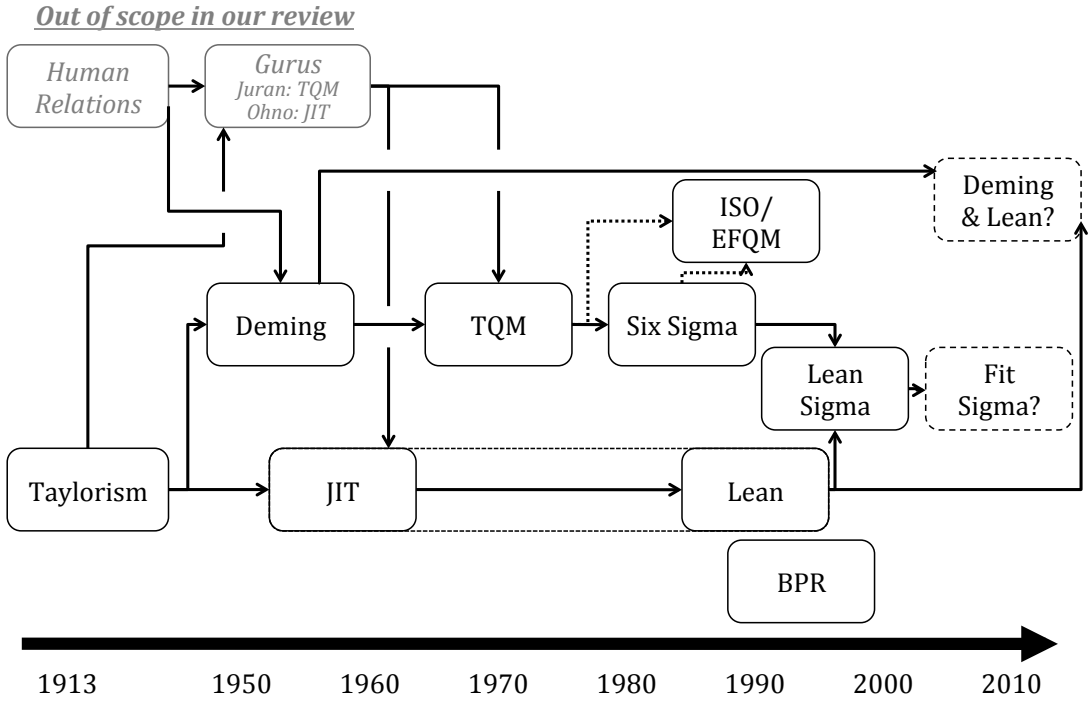
6.3.2 Overview of the evolution of individual quality frameworks

6.3.2.1 Evolution of the quality movement

Before evaluating the individual frameworks, we first need to understand the evolution of the quality movement and the frameworks relations. A plethora of competing quality management philosophies and frameworks exist today, and organisations are increasingly using them as a core part of their strategy (Basu 2009, pp.18-48; Kedar et al. 2008, pp.725-730). As Basu and Näslund point out, it can sometimes be very challenging to distinguish between the somewhat overlapping yet different frameworks (Basu 2009, p.12; Näslund 2008, p.269). We shall only review the most prominent frameworks. For overview purposes, we first present a summarising overview in **Figure 27** showing the evolution of the frameworks.

The figure shows that Human Relations and Taylorism (Scientific Management) are the origin of most quality frameworks. These theories inspired the gurus, including Deming, which were then followed by TQM/JIT that evolved into Six Sigma/Lean, which have finally been combined in Lean Sigma. Alternatives include BPR and ISO/EFQM, the latter of which relies to some extent on the same conformance principles as TQM and Six Sigma. The two hybrids, Fit Sigma, and our own hybrid Deming & Lean, are not established as frameworks (Basu 2009, p.12; Näslund 2008, p.269).

Figure 27 – Overview of the evolution within quality frameworks



Source: Authors own creation inspired by Basu 2009, p.13

6.3.2.2 Delimitations: Human Relations and choice of gurus

Prior to presenting some of the frameworks, we briefly want to comment why Human Relations and the other gurus are out of scope.

As we found Taylorism and Scientific Management to have a more essential role in both the Deming and Lean branches, but Human Relations was less directly behind Lean, we chose to delimit from focusing on Human Relations.

In general, the quality movement has several prominent gurus, most notably, Joseph Juran, Philip Crosby, Armand Feigenbaum, but we have chosen to focus solely on the most acknowledged, the American statistician W.E. Deming (Omachonu 2004, p.7). As Beckford further notes:

> *"[Deming] is considered by many to be the founding father of the modern quality movement...[and]...perhaps the most widely known of the gurus both within and outside the quality field."* (Beckford 2010, p.67).

It would be outside the scope of this thesis to deal with all 9-10 gurus individually, as they have strong similarities (Evans 2005, p.110). The work of the other gurus will be indirectly included in either the broad Total Quality Management review, or for others such as Ohno, in JIT (Beckford 2010; Basu 2009).

6.3.3 Individual quality frameworks

In this section we shall only present Deming, Lean, and Hybrid frameworks, the rest of the literature review of the framework can be found in Appendix 17 on page 218 due to space constraints.

6.3.3.1 Deming – The main quality guru

Deming was inspired by Taylorism, as management still played a central role in the quality improvement, albeit employees now also had a large role to play (Beckford 2010, p.67). He was however also strongly influenced by the Human Relations School, as he had a high focus on employee trust, training and development (Brooks 2003, pp.128-130). As an example, Deming completely despised the idea of performance targets, a prominent feature of Taylorism, calling it one of his 5 deadly sins[14] (Walton 1989, pp.88-90; Beckford 2010, p.70). Deming's strengths included his focus on the long-term employee training and involvement; a bottom-up approach, and as such he focuses very much on what we defined as Organisational quality, see Section 6.3.1 on page 57 (Beckford 2010, pp.67-85).

Furthermore, another strength was his focus on continuous improvement via his Plan-Do-Check-Act (PDCA) cycle, which were later used in TQM and also provided the foundation for Six Sigma's DMAIC cycle (Bozarth 2006, p.86; Näslund 2008, p.273). In collectivistic cultures, his contempt for individual performance targets could also be seen as a strength, albeit this is potentially also a weakness in individualistic cultures (Brooks 2003, pp.271-273; Walton 1989, pp.77-79). Deming furthermore has ethical considerations with regards to lay-offs, arguing that low-performers are more likely to be the results of bad management or wrong work position, which also fits better in collectivistic cultures (Walton 1989, p.70). Beckford also points to the weakness that Deming talks mostly about which goals to achieve, not specifically how to achieve them, but argues this can be seen as an opportunity to adapt Deming to the context (Beckford 2010, p.83) In the authors' research, it was found that

[14] The two latter diseases of the original 7 are mainly relevant in the US (Beckford 2010, p.72)

Deming's Management Method is rarely used in its original form, but his influence still continues through his influence on the contemporary, more popular Total Quality Management and Six Sigma methodologies (Bozarth 2006, pp.78-79; Näslund 2008, p.269). Deming still seems relevant for smaller, younger, and ethically driven firms, particularly within collectivistic cultures.

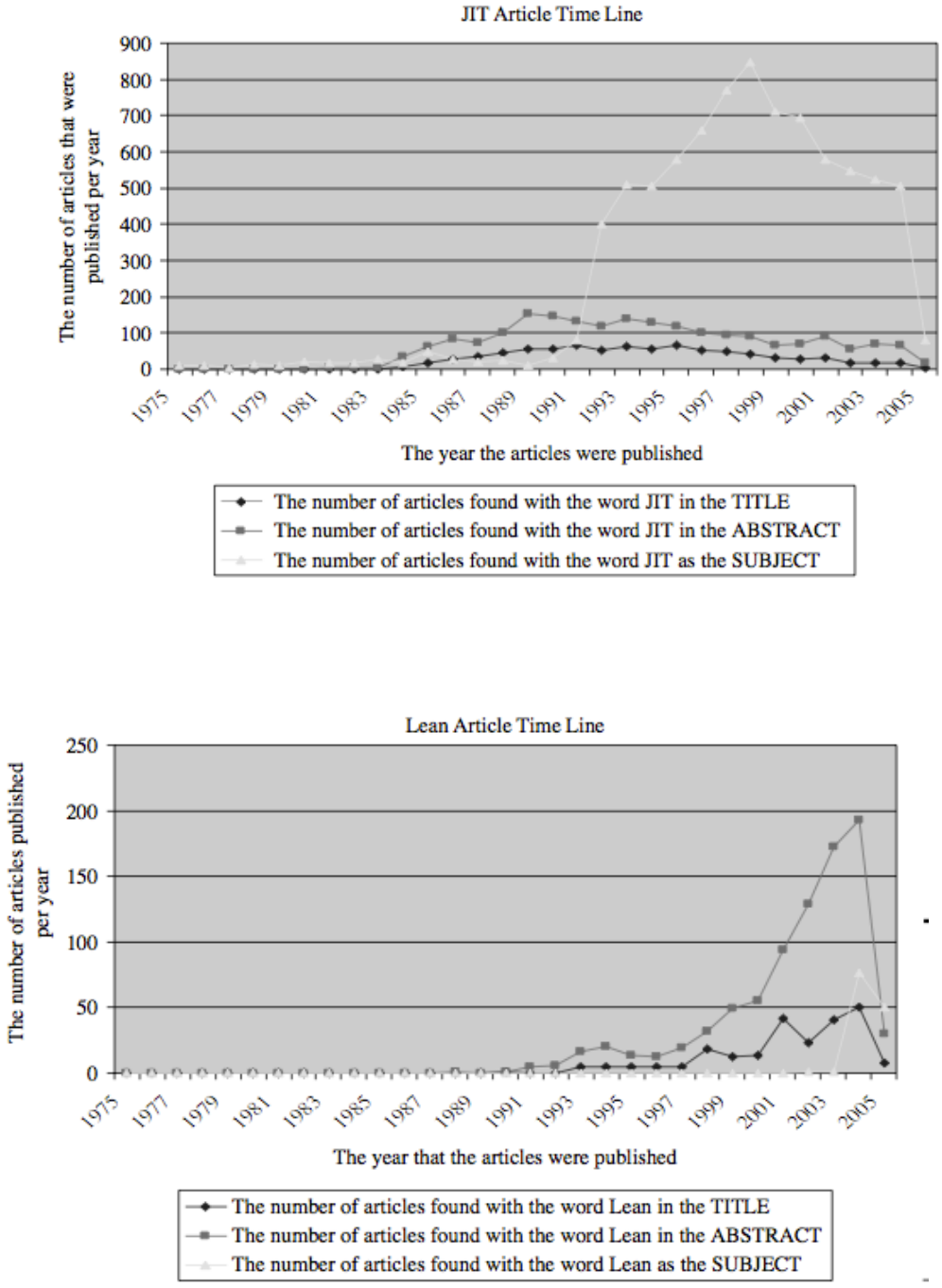
6.3.3.2 Lean

The term "Lean" first gained broad popularity by Womack *et al.* in 1990 and gained huge popularity, as it makes into organisations efficient and *lean* by focusing on eliminating all sources of waste (Kedar et al. 2008, p.729; Womack et al. 1990). Womack *et al.* propose 5 key principles of Lean in their book *"Lean Thinking"*; Value, Value Stream, Flow, Pull, and Perfection (Womack & D. T. Jones 2003).

"Pull" means that Lean focuses very much on what we defined as Customer-related quality whereas eliminating waste deals with what we refer to as Service-based quality, that is, the "production" process, see Section 6.3.1 on page 57. Lean also consists of a wide range of tools hereunder the aforementioned JIT approach and its kanban pull system (Basu 2009, p.233), but also encompasses Value-stream mapping, Five S, Kaizen Poka-Yoke, and TPM and other tools (Basu 2009, p.233; Evans 2005, p.496; Näslund 2008, p.275).

Lean encompasses JIT and adds several tools and methodologies to JIT, similar to the relationship between TQM and Six Sigma (Basu 2009, pp.26, 233), see Appendix 17 on page 218. After JIT peaked, Lean basically took over (Näslund 2008, p.276), as illustrated in **Figure 28**.

Figure 28 - Life-cycle patterns of JIT and Lean – Academic articles timeline



Source: Näslund 2008, p.277

Lean's main strength is that is it provides both a wide-ranging philosophical framework as well as an extensive framework of tools (Womack et al. 1990). It also has potentially huge efficiency gains; best example is probably the efficiency gains in Lean's creator Toyota (Shah et al. 2008, p.6679). Service organisations can also benefit from Lean (Andersson et al. 2006,

pp.289-291; Evans 2005, pp.498-499). However, there is also the risk of making the organisation inflexible (Andersson et al. 2006, p.289). Furthermore, many argue that Lean cannot be only partially implemented; the organisation needs to secure full organisational support to incorporate Lean fully and completely (Andersson et al. 2006, p.289; Basu 2009, p.236). In our view, a stringent implementation of Lean is more relevant for larger firms, whereas smaller, younger firms can benefit from implementing major elements.

6.3.3.3 Hybrid models: Lean Sigma, Fit Sigma, Deming & Lean… What is next?

The literature review mainly consists of two types of approaches; the more quality- and consistency-focused Deming, TQM and Six Sigma as well as the more efficiency-focused Taylorism, JIT, and Lean. The first group focuses on more on invisible problems such as performance variations, business philosophy and employee motivation, whereas the latter group focuses more on visible problems, such as inventory and work processes (Evans 2005, p.498). Some scholars argue that the two groups are complementary and are therefore increasingly being used simultaneously as the two-legged approach *Lean Sigma* (Basu 2009, p.15; Evans 2005, p.498; Shah et al. 2008, p.6680). The exact origin of Lean Sigma seems unclear, as it appears to have appeared mainly as an invention of practitioners around the millennium, notably GlaxoSmithKline and Seagate (Basu 2009, p.15), followed by authors such as Michael George (George 2002).

Basu is very positive of the concept, calling it *"The next wave"* (Basu 2009, p.15). Arnheiter sees Lean Sigma as a necessity for modern firms to remain competitive. They need to deliver both low costs for the producer via Six Sigma and high value products for the customer via Lean, and only via Lean Sigma can they do both (Arnheiter & Maleyeff 2005).

Nonetheless, some scholars remain very critical of hybrids, especially "Lean Sigma", with Näslund calling it *"preposterous"* (Basu 2009, p.16; Näslund 2008, p.269). Bendell is perhaps the most critical, saying that the approach is ill-defined, and lacks theoretical underpinning, but is mainly driven by consultants eager to advise firms on Lean Sigma implementations (Bendell 2006, p.258; Pepper & Spedding 2010, pp.148-149).

Despite the criticism, the proponent Basu takes Lean Sigma even further by developing it into "Fit Sigma", although the framework has gained little awareness since its inception in 2001 (Basu 2009, p.16). However, as the constant renewal of **Figure 27** on page 61 shows, it

is in all probability only a matter of time before the next, new catchy performance framework catches on (Näslund 2008, p.281). Still, with the added complexity of simultaneously implementing Lean and especially Six Sigma, Lean Sigma is more relevant for large, mature organisations with experience within change management.

Within hybrid models, most academics have focused on Lean Sigma (Basu 2009; Näslund 2008). The literature seems rarely to focus on other combinations such as for instance "Deming & Lean", as it is uncommon among practitioners. In the authors' opinion, there can be three main arguments against Deming & Lean:

Firstly, if Six Sigma arguably is more advanced than both Deming and TQM, one could question using the potentially obsolete Deming & Lean (Basu 2009, p.14)? However, the authors find a "developed-world bias" in most of the hybrid literature, in the sense that many organisations in the developed world have the resources and employees to drive for example a Six Sigma improvement (Shah et al. 2008). There is much less work done on the relevance of Six Sigma in the context of the developing world (Kumar et al. 2008). As such, Six Sigma in small, simple, resource-restrained organisations in very impoverished countries has not received much attention from neither academics nor practitioners to the best of the authors' knowledge (Tjahjono et al. 2010, p.224). Therefore, more research is needed in the practical applicability and usefulness of Six Sigma in developing countries, and until then, Deming's simpler framework could provide a useful framework.

Secondly, as Deming's philosophy already has elements of Lean within his philosophy, critics would question the value-added from using both (Walton 1989, pp.58, 65 & 71). However, as shown, Lean is much more than just reducing waste; Lean also provides a broad philosophy as well as a huge toolbox of methods to improve operations directly, while Deming has its strength in improving human capital directly (Shah et al. 2008, p.6681). Therefore, the authors find theoretical foundation in the relatively novel concept of "Deming & Lean" (Tjahjono et al. 2010, p.224).

Finally, these two philosophies both claim that partial implementations of them can be potentially devastating for organisations, and therefore firms should only focus on one of them (Deming 2000; Womack & D. T. Jones 2003). Despite the admittedly increased complexity, the authors believe it is feasible to implement and benefit from Deming & Lean

simultaneously, although purists would disagree. Still, we do acknowledge that this will be more challenging and either framework will not followed as stringently, as would have been the case with a single framework, but doing so fits well with our pragmatic approach discussed in Chapter 3 on page 17.

6.3.3.4 Overview of quality frameworks

The following figure provides an overview of the discussed quality frameworks. The frameworks with white backgrounds are presented in this chapter; the frameworks with light grey backgrounds are presented in Appendix 17 on page 218.

Figure 29 – Comprehensive overview of quality frameworks

Frame-work	Origin	Start time	Peak	Hierarchy	Appro-ach	Advantages (+)	Disadvantages (-)	Most suitable for	References
Taylo-rism	US	1913	1920-30	Top-down	Increased labour prod-uctivity	Simple, offers measurable productivity results,	Assumes workers cannot think; Does not use worker creativitiy/input at all	In pure form, no one. Could be adapted to small 3rd-World manufacturers	(Basu 2009; Brooks 2003; Kennedy 2010; Taylor 1913)
Dem-ing's Mgmt. Meth.	JPN	1950-60	1950-60	Bottom-up	Quality through employee training & data analysis	Simpler than TQM/Six Sigma; Ethical wrt. firing; Employee leadership, motivation are key	Disregards short-term gains; may clash with individualistic cultures; Requires 100 % dedication to 14 points; What to do, not how	Small firms with long-term perspective or in "ethical" firms prioritising employees	(Beckford 2010; Bozarth 2006; Deming 2000; Evans 2005; Omachonu 2004; Trist 1951, Walton 1989)
TQM	JPN	1970-1980	1992	Bottom-up	Total quality througho ut entire organ-isation	Relatively simple; Employee leadership, motivation and goodwill are key	Disregards short-term gains; Does not focus on bottom-line impact; Change really requires 100% employee dedication	Hardcore proponents of TQM; Organisations with good experience of TQM	(Basu 2009; Bozarth 2006; Brown 1994; Evans 2005; Flood 1993; Näslund 2004; Wayhan & Balderson 2007)
Six Sigma	US	1985	?	Top-down	Quality through reduction of variance	Checks profitability of initiatives and champions; Better at providing measurable results	Advanced data analysis skills; Expensive data management, training of green/black belts, consultants	Mainly manufacturing firms, although service firms are using it increasingly.	(Basu 2009; Bozarth 2006; Evans 2005; Näslund 2004; Tjahjono et al. 2010)
JIT	JPN	1950-60	1970	Top-down	Cut away waste	Relatively simple; Most applicable for manufacturing firms	Very top-dow; Not a full method; Can make firm inflexible; Requires 100 % JIT dedication	Proponents of JIT wanting rethinking without all elements of Lean	(Basu 2009; Beckford 2010; Bozarth 2006; Näslund 2004)
Lean	US	1990	?	Top-down	Cut away waste, and think "Lean"	Provides both a philosophy and a framework of tools; Has potentially huge efficiency gains	Can make the organisation inflexible; Requires 100 % Lean dedication	Nearly all organisations could benefit from Lean. Careful to gain organisational	(Andersson 2006; Evans 2005; Kedar et al. 2008; Näslund 2004; Shah et al. 2008; Womack 1990)
Lean Sigma	US (?)	2000 (?)	?	Top-down	Take the best of Lean AND Six Sigma	Provide both's advantages in theory; Lean speeds up Six Sigma implementation	Questionable if both can be implemented at once; May put critical, damaging pressure on the organisation.	Ambitious, flexible organisations with change experience and large ressources	(Arnheiter & Maleyeff 2005; Basu 2009; Evans 2005; Klefsjo 2006; Näslund 2004; Shah 2008)
Dem-ing & Lean	DK	2011	?	Bottom-up	Take best of Lean & Deming	Could theoretically provide all advantages of both Lean and Deming in organisations that are not ready for Six	Questionable if both can be implemented simultaneously; May put critical, damaging pressure on the organisation.	Relavtively ambitious, ethical, yet simple organisations needing both Deming and Lean fast	(Basu 2009; Deming 2000; Kumar et al. 2008; Näslund 2004; Shah et al. 2008; Tjahjono et al. 2010; Walton 1989)
ISO	EU	1987	?	Top-down	Document ation and Con-sistency	Ensures min. quality level; Objective, international framework; Usable with initiatives	Too bureaucratic; "one-size-fits-all" approach; External assessors disables employees' self-assessment	Large, complex organisation with resources and need to standardise processes	(Basu 2009; Evans 2005)
BPR	US	1993	1990-2000	Top-down	Dramatic, radical restructur ing	Rethinks entire firm; Provides significant changes fast	Requires very flexible organisation and employees; Has had little practical success.	Firms experienced with changes who need fast and dramatic rethinking	(Basu 2009; Beckford 2010; Evans 2005; Hammer 2003; Kedar et al. 2008)

Source: See right-most column

6.3.4 Evaluation of quality frameworks in regards to the requirements of Jamaa

The above section showed that a variety of different quality management tools exist, each with specific strengths and weaknesses. Which tool an organisation should choose to implement depends very much on the context and maturity, competencies, and resources of the organisation. In this section, we summarise the findings in our quality management literature review and determine which model is most applicable and relevant for Jamaa. To judge the frameworks in an objective manner, we have created a methodology consisting of the 8 most important parameters in the eyes of the authors.

One of the two parameter groups is "Theoretical fit", which is consists of three parameters being our quality definition; organisational, service-based, and customer-related quality, see **Figure 26** on page 59. The second group is "practical fit" with Jamaa, which has six parameters. In this group, Jamaa's position in its life cycle as a young growth firm has been taken into consideration. "Company Desire" is based on our multiple conversations where we have been able to understand the desires of the CEO. Next, "Ease of implementation" is based on the authors' perception and experience of how the capabilities of Jamaa to implement the individual frameworks. "Potential payoff" is the authors' perception of the potential payoff of the framework to the firm. Fifth, "Cost of implementation" is how expensive the proposed framework would be to implement in terms of required resources; time-wise, financially, and human capital-wise. Finally, "Risk" covers the authors' perception of how much risk the framework would entail, and the probability of a successful framework implementation.

In the figure below, the authors used Basu's Nominal Group Technique or Weighted Multi-voting technique to rate each framework on a scale from 1 to 5[15] for each of the 8 parameters. The authors first rated individually, and afterwards discussed the final grades together (Basu 2009, pp.115-116). The total is then calculated as an equally weighted measure, as a way to assist us in the selection of our quality framework(s) for the CIP, see figure below. [16]

[15] Each framework is rated on for each of the 8 parameters on a scale from 1-5. 1 is defined as "Extremely unattractive and inapplicable for Jamaa", 3 defined as "Somewhat attractive and applicable for Jamaa", and 5 as "Extremely attractive and applicable for Jamaa". The grade was given from an overall evaluation of the framework and the contextual situation of Jamaa and Congo.

[16] * = Notice that for the latter two parameters, "Cost of implementation" and "Risk", in the scale is reversed, so that a 5 means low costs/risk and high attractiveness and so forth, so a high level of risk would be a 1.

Figure 30 – Fit of quality frameworks to Jamaa

Quality framework	Theoretical fit			Practical fit					Total
	Organisational quality	Service-based quality	Customer-related quality	Company desire	Ease of implementation	Potential financial payoff	Cost of implementation*	Risk*	
Deming & Lean	**5**	**5**	**5**	**5**	**3**	**5**	**3**	**4**	**4.4**
Deming	5	3	3	5	4	3	4	4	**3.9**
TQM	4	4	4	4	3	4	3	4	**3.8**
Lean	4	5	5	3	3	4	3	3	**3.8**
JIT	3	4	4	2	2	3	4	3	**3.1**
Taylorism	1	5	1	1	4	2	5	1	**2.5**
BPR	1	2	3	2	3	5	3	1	**2.5**
Six Sigma	3	4	1	1	1	4	2	2	**2.3**
Lean Sigma	3	5	1	2	1	5	1	1	**1.8**
ISO	1	3	1	1	1	2	1	4	**1.8**

Source: Authors' adaptation based on literature review

Below, an explanation for the quality frameworks' ranking is given. Note that here we will only elaborate on our grades for Deming & Lean as an example; the remaining frameworks' grades have been given the same efforts and discussions, see Appendix 18 on page 223.

Beginning from the top, Deming & Lean fit well theoretically with Jamaa and its context, as the firm was relatively ambitious, yet simple and in need of the advantages of both Deming and Lean. As mentioned, Deming ensures a high level of Organisational quality, whereas Lean ensures high level of Service and Customer-related quality, giving the framework a grade of 5 on all three. With regards to company fit, Deming & Lean fit well with what the CEO wanted, as he wanted bottom-line results and to train his employees; a 5 was given. Still, Deming & Lean would due to its hybrid nature be more complex to implement than a pure Deming framework, and it received a 3 here. However, the potential benefits of both Deming & Lean could entail a significant financial payoff; a 5. On the other hand, the required training and long-term efforts of Deming in particular would make the framework comparatively expensive to implement; a 3. Finally, due to the complexity, there was some risk involved, but given that it fit well with what the CEO wanted and included some nice appealing aspects for employees; a 4 was given. This amounted to a weighted average of 4.4, which was the highest. Deming & Lean would be somewhat more challenging to implement,

but overall we believed it was worth the trade-off, and it posed itself as the most attractive framework.

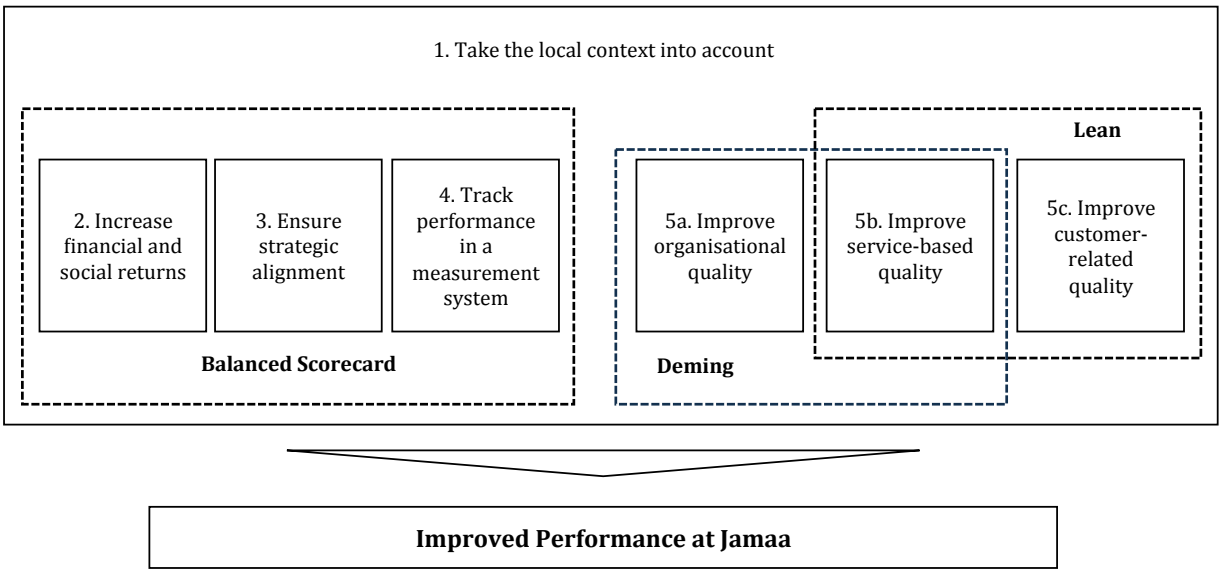
6.3.5 Chapter sub-conclusion: The choice of Deming & Lean for Jamaa

In conclusion, the hybrid Deming & Lean is arguably the best framework to address the three quality requirements of Jamaa as well as the best practical fit. Deming & Lean will be used with BSC in our final conceptual model CIP, which is presented in the next chapter. Although both frameworks touch upon all three quality requirements to some degree, the organisational quality requirements will primarily be addressed through concepts pertaining to the Deming, the customer-related quality requirements will primarily be addressed by concepts pertaining to Lean, while the service-based quality requirements will be addressed by Lean primarily and supplemented by Deming.

6.4 Chapter conclusion

In this chapter we found that the BSC is the ideal framework to address requirements 2-4 of Jamaa, but did not offer any tools to increase quality. After further defining quality into three sub-components, it was determined that Deming and Lean were the ideal approaches to address the 3 quality requirements of Jamaa, see **Figure 31**.

Figure 31 – Applicability of quality management tools to Jamaa



Source: Authors' adaptation based on literature review

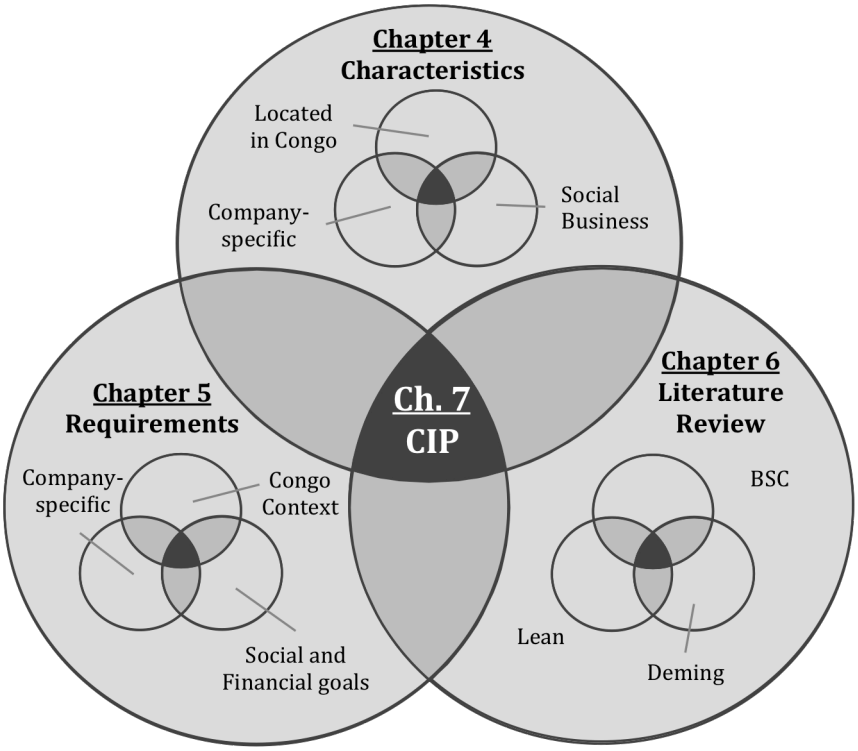
Although the difficulty admittedly increases with the usage of all three models, the authors believe it is feasible to implement and gain from them simultaneously with theoretical support from Arnheiter and Basu among others (Arnheiter & Maleyeff 2005, p.15; Basu 2009) although some theorists disagree (Bendell 2006, p.258; Pepper & Spedding 2010, pp.148-149)(Kennerley et al. 2004; Marr 2004)(Michael Kennerley et al. 2004; Marr 2004)(Michael Kennerley et al. 2004; Marr 2004). The next chapter presents the CIP, which is based on a combination of the BSC, Deming, and Lean, while also taking the local context into account.

7. Conceptual model

7.1 Chapter introduction

The final conceptual model, which we call the Continuous Improvement Programme (CIP), was conceived after conducting a triple triangulation as shown in **Figure 32**. Given the characteristics and requirements of Jamaa described in Chapter 4 and 5, and after the performance and quality management literature reviews in Chapter 6, it was found that a combination of a BSC, Deming, and Lean is the ideal way to address the specific requirements of Jamaa in a structured way. This chapter explains the CIP in more detail, including the actual implementation plan, and concludes by restating the thesis aims and presenting the final research question.

Figure 32 – Triple triangulation



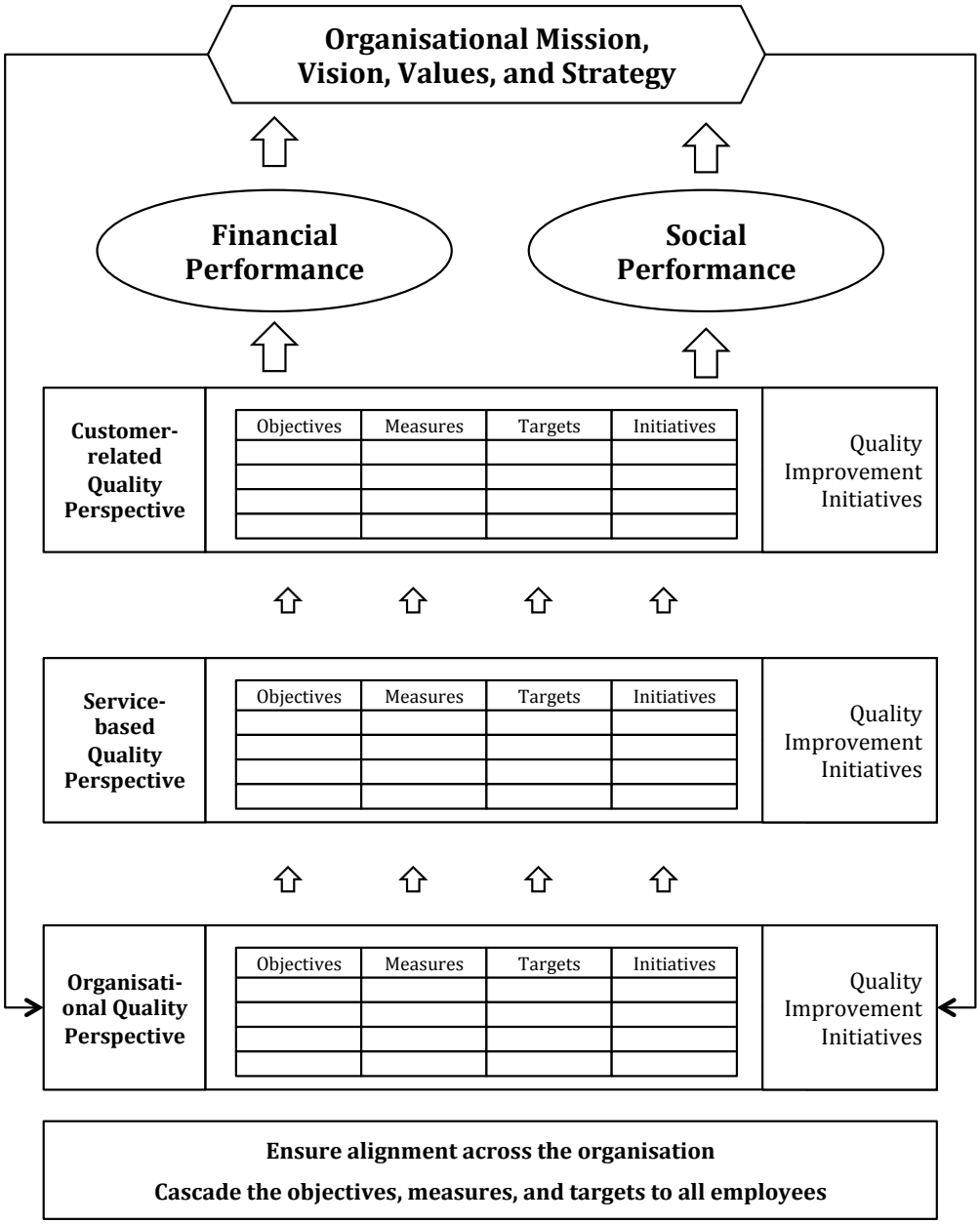
Source: Authors' own creation

7.2 The Continuous Improvement Programme (CIP) for Jamaa

The CIP, as shown in **Figure 33**, is a hybrid BSC/Deming/Lean framework that meets the requirements of Jamaa, as outlined in Chapter 6. The underlying framework utilised is an

adapted BSC due to its inherent flexibility and systematic approach to performance management, while Deming and Lean will be used in order to identify relevant objectives, measures, and improvement initiatives within each perspective.

Figure 33 – The Continuous Improvement Programme Framework



Source: Authors' own creation

The BSC part of the CIP will address requirements 2-4, while providing the framework for addressing requirements 5a-c.[17] This is done by including both financial and social

[17] As mentioned earlier, the local context will be taken into consideration during the actual implementation

performance at the top of the Scorecard, ensuring strategic alignment by providing the framework to cascade to the overall organisational mission to down to specific measures, and providing a framework for tracking the performance measures on a regular basis.

Furthermore, the CIP will include the three aspects of quality as its bottom three perspectives in order to ensure that all aspects of quality are actively managed.[18]. Deming and Lean will thereafter be used to identify relevant objectives, measures, and data collection techniques, and thereafter to analyse the data collected in order to identify issues and propose initiatives to improve the performance on each measure. Note that the financial and social goals are primarily lagging performance indicators that are affected by initiatives implemented further down the CIP. As a result, the future improvement initiatives will focus on performance measures pertaining to the bottom three perspectives, and the financial and social goals are thus illustrated with smaller ovals that do not focus on identifying targets and quality improvement initiatives.

7.3 Implementation plan

The implementation will be done in close cooperation with the senior management team at Jamaa. **Figure 34** below outlines our 12 step implementation plan for the CIP, which is based on Kotter's 8-step model for change (Kotter 1995) as shown in Appendix 55 on page 323. It should be noted that the plan does not seek to follow Kotter's model explicitly, but is heavily inspired by the model.

[18] Note that the original BSC as conceived by Kaplan and Norton includes perspectives which are very similar to the three aspects of quality used in this thesis: the Customer Perspective, Internal Processes Perspective, and Learning & Development Perspective

Figure 34 – 12-step implementation plan

Step 1	**Needs Analysis:** Determine need for implementing a quality improvement programme at Jamaa
Step 2	**Process Mapping:** Map processes and collect information in order to document and understand the current operations
Step 3	**Determine Goals:** Clarify Jamaa's mission, values, vision, and strategy
Step 4	**Implement BSC:** Begin the creation of a Balanced Scorecard by translating the organisational mission and vision into financial and social goals for 2011
Step 5	**Create Strategy Map:** Further develop the Balanced Scorecard and create a Strategy Map by elaborating on the three aspects of quality, which form the backdrop of the bottom three perspectives in the strategy map
Step 6	**Formulate Objectives:** Finalise the Balanced Scorecard and Strategy Map for Jamaa by using concepts from the Deming Management Method and Lean to create 4-5 objectives within each perspective
Step 7	**Determine Performance Measures:** Utilise the Deming Management Method and Lean in order to define relevant performance measures for each objective
Step 8	**Set targets:** Define targets within each measure where possible (for the vast majority of cases, data does not exist and the targets will therefore only be determined after collecting data)
Step 9	**Round 1 Data:** Determine data collection techniques and collect data on performance measures during a period of approximately 4-6 weeks in order to define a baseline for analysis and target setting
Step 10	**Create improvement initatiatives:** Utilise concepts from the Deming Management Method and Lean to create initiatives that will address the issues identified in the data in order to improve the performance on each measure
Step 11	**Round 2 Data:** Collect data during a new defined period in order to evaluate improvement initiatives and present results in a BSC. Put forward recommendations to be implemented after the thesis has been finalised
Step 12	**Instituionalise changes:** Anchor the changes in the organisation and implement a regular data collection process to ensure continuous improvement

Source: Authors' own creation based on Kotter 1995

7.3.1 Limitations to the CIP

Note that the "pilot phase" of the CIP, which was implemented by authors, does not include Step 12. Step 12 is to be done by Jamaa after the thesis has been handed in. Note also that the first step of the implementation plan would usually entail an internal business case and an evaluation of projected costs and benefits of undertaking the improvement initiatives. However, the CEO made it very clear from the beginning that the cost of quality, at least initially, was not an issue, as there was a huge need for quality improvement at Jamaa. Furthermore, due to time constraints, it was agreed with the CEO that only a subset of the performance objectives would be addressed in a pilot phase, which is described in more detail in Chapter 8. For the remaining objectives, the authors would provide a framework and recommendations for future employment.

7.3.2 Our application of the Balanced Scorecard framework to Jamaa

The BSC concept is utilised in a pragmatic way in the CIP. A BSC will provide the overall framework for the CIP due to its flexibility and systematic approach to performance management. A customised Strategy Map will be used to include both financial and social performance at the top under the overall organisational mission. Furthermore, concepts from the BSC literature such as cascading the overall mission down to specific measures, identifying cause-and-effect linkages, using the tool to track performance on a regular basis, and using the strategy map to communicate strategy to employees will also be used.

The CIP also addresses each weakness of the BSC and the common reasons for its failure. This is done by clarifying the need for an adapted BSC at Jamaa, ensuring sufficient management time, support, and organisational resources, providing adequate time for the initial planning to make sure that the correct cause-and-effect relationships and performance measures are defined, and ensuring that the new framework is adopted by all employees and cascaded down the organisation.

Translating the overall strategy into specific measures will be done on a top-down basis, where the overall financial and social goals of the organisation will be cascaded down the perspectives through the identification of cause-and-effect linkages. However, the traditional top-down approach of the BSC will be supplemented by a bottom-up focus on continuous quality improvement, as advocated by Deming. This is primarily due to the specific characteristics of Jamaa where there the local employees are generally not accustomed to working with pre-determined cascaded targets and high level strategic thinking.[19] The model therefore includes a feedback loop that ensures that there is not only a focus on meeting cascaded targets, but also on continuous improvement on a daily basis.

It should be noted that there are currently two broad balanced scorecards in the literature and in practice. The first is the traditional BSC for profit-maximising businesses where financial goals (typically shareholder value) are at the top. The second is the balanced scorecard for government and non-profit agencies, where the financial perspective is at the bottom as an enabler for meeting the social mission. This type of BSC relies on a steady

[19] It should be noted that an attempt to cascade objectives with pre-determined performance targets undertaken in 2010 was unsuccessful, as it did not lead to improved performance. The CEO therefore shifted the focus to simple daily performance targets and a focus on continuous improvement for each employee

inflow of funding and does not include a revenue-generating strategy. The CIP is thus a new type of framework that combines a focus on creating a profit through business means with an explicit goal of making a positive social impact, both by fulfilling a market demand and by working with the local society to improve the lives of the local citizens.

7.3.3 Our definition and application of Deming's concepts to Jamaa

In Chapter 8 to 14, we shall base our understanding of Deming's Management Method on his 14 points, 7 deadly diseases, and 13 obstacles. As Walton points out that much of Deming's management method can be summed up by his 14 points, but we add the deadly diseases and obstacles to employ a comprehensive understanding of Deming (Walton 1989, p.33).

Next, we asked ourselves if the information or data regarding Jamaa could potentially be conflicting with either of his 14 points, or if it could be an indication of one of Deming's 7 deadly diseases or 13 obstacles via the question *Could this potentially be impeding for the quality of Jamaa according to Deming's management method?"* (Deming 2000, pp.18-149). Note, that we shall not use all elements of Deming's management method in a rigorist manner. For instance, Deming proposes that both all of management and all staff should understand all points of Deming and so forth (Walton 1989, pp.85-86). Instead, we carefully select and adapt the major, important parts and in our communication to the employees we have focused on the desired impact and goals of Deming rather than explicitly stressing that we were using Deming.[20]

[20] It should be noted that although the design of the methodology reflects Deming's PDCA cycle very closely, the authors do not seek to follow Deming's approach explicitly

Figure 35 - Our usage of Deming's management method

Our usage of Deming's management method		
14 Points	**7 Deadly Diseases**	**14 Obstacles**
Point 1 Constancy of purpose	Disease 1 Lack of constancy of purpose	Obstacle 1 Neglect of long-range planning
Point 2 Adopt new philosophy	Disease 2 Emphasis on short-term profits	Obstacle 2 "Technology solves quality problems"
Point 3 Stop Mass Inspection	Disease 3 Evaluation by performance & merit rating	Obstacle 3 Search for examples
Point 4 Don't price-select suppliers	Disease 4 Mobility of management	Obstacle 4 "Our problems are different"
Point 5 Constant improvement	Disease 5 Focusing on visible figures alone	Obstacle 5 Obsolescences in business schools
Point 6 Institute training	Disease 6 Excessive medical costs	Obstacle 6 Reliance on control departments
Point 7 Institute Leadership	Disease 7 Excessive costs of warranty, fueled by lawyers who work for contingency fees	Obstacle 7 Blaming workforce for problems
Point 8 Drive out fear		Obstacle 8 Quality by inspection
Point 9 Break down staff barriers		Obstacle 9 False starts
Point 10 Eliminate slogans & targets		Obstacle 10 The unmanned computer
Point 11 Eliminate numerical quotas		Obstacle 11 "Sufficienct to meet specifications"
Point 12 Enable workmanship pride		Obstacle 12 The fallacy of zero defects
Point 13 Institute education		Obstacle 13 Indadequate testing of prototypes
Point 14 Accomplish transformation		Obstacle 14 "Consultants must understand us 100%" [21]

Source: Deming 2000; Walton 1989

Our approach has been to primarily use our theoretical foundation to identify problematic issues in our findings but at the same time our pragmatic approach also dictated that we should try to come up with solutions according to the needs of Jamaa.

7.3.4 Our definition and application of the Lean concept to Jamaa

We shall base our approach mainly on two of the most well-known contributing sources to Lean. We use respectively Ohno to identify sources of waste, and the Womack and Jones' collaboration to deal with these sources of waste and to make the operations leaner.

First, to identify sources of waste, we shall use the original seven sources of waste – or in Japanese, *mudas* - identified around 1960 by Taiichi Ohno. Ohno provided to a large extent the foundation of first the Toyota Production system and Just-in-Time, and his idea later became an integral part of Womack and Jones' definition of Lean as well (Basu 2009, p.25; Beckford 2010, p.130). We will also use the eighth source of waste, added by Liker in 2004, "Non-utilisation of human creativity", as we believe that utilising and enabling human resources is increasingly becoming decisive for firms' success. (Liker 2004, p.89). These eight, revised sources of waste can be remembered via the acronym DOWNTIME, see **Figure 36** on page 80.

Secondly, we shall also use Womack and Jones' proposed, 5-step approach to Lean being; "Value", "Value Stream", "Flow", "Pull", and "Perfection", which they propose as the anti-dote

[21] We have in a few cases altered the titles of the issues somewhat, and in obstacles, we have combined Deming and Walton's individual understandings of the number of obstacles as they differ somewhat.

to the above-mentioned sources of waste (Beckford 2010, pp.130-131; Meredith 2007, p.357; Womack & D. T. Jones 2003). In this problem identification phase, we asked ourselves if the information could potentially be either an example of the revised, eight sources of waste, or conflicting with Womack and Jones' 5 principles of Lean via the question *"Could this finding potentially be a source of waste or be conflicting with the 5 principles of Lean?"* (Beckford 2010, p.130; Womack & D. T. Jones 2003, pp.15-102).

Figure 36 - Our usage of Lean

Our usage of Lean	
Ohno and Liker's combined 8 sources of waste	**Womack and Jones' 5 major principles of Lean**
Waste 1 *D* Defects: incorrect or incomplete work delivered to the next step of the process	Principle 1 Value: The firm should turn around its process according to what creates value from the customers' perspectives
Waste 2 *O* Over-production: making too much, too early or too soon than required by the next step of process	Principle 2 Value Stream: Identify all value-adding steps along the process chain and eliminate to the extent possible non-value steps
Waste 3 *W* Waiting: idle time created while waiting for equipment/tools	Principle 3 Flow: Ensure the processes flow freely
Waste 4 *N* Non-utilized talent/resources: not fully utilizing employees' knowledge, skills and abilities	Principle 4 Pull: Make only what is pulled by the customer instead of what is pushed by the producer
Waste 5 *T* Transportation: movement of the product that does not add value to the end product/service	Principle 5 Perfection: Strive for perfection by continually removing wastes via Lean's Kaizen method of continuous improvement
Waste 6 *I* Inventory: having more work and supplies than is needed at any given time	
Waste 7 *M* Motion: movement of people that does not add value to the product or service	
Waste 8 *E* Excess Processing: Any other effort that adds no value to the product or service from the customer point of view	

Sources: Beckford 2010, p.130; Leaningforward 2005; Sticklen 2008; Womack & D. T. Jones 2003, pp.15-102

7.4 Chapter conclusion: Restatement of thesis aims and final research question

As stated in Chapter 1, this thesis has both a practical contribution and a theoretical contribution. First, regarding the practical contribution, the thesis aims to improve the performance at Jamaa by focusing specifically on strategic alignment, performance

measurement, organisational quality, service-based quality, and customer-driven quality, while taking the local context into account.

Second, the thesis aims to contribute to theory in four ways. First, we aim to show how a Balanced Scorecard tailored specifically for social businesses can be implemented. Second, we seek to demonstrate that Deming and Lean within quality management are complementary and not mutually exclusive. Third, we seek to demonstrate that it is possible to implement the eclectic, tailored approach CIP in practice. Fourth, the thesis also provides new knowledge regarding doing business in Congo for other foreign-owned firms.

After conducting the triple triangulation in Chapter 4, 5, and 6 and thereafter presenting the final conceptual model in the current chapter, it is now possible to restate the thesis aims in more detail and present a final, more comprehensive research question:

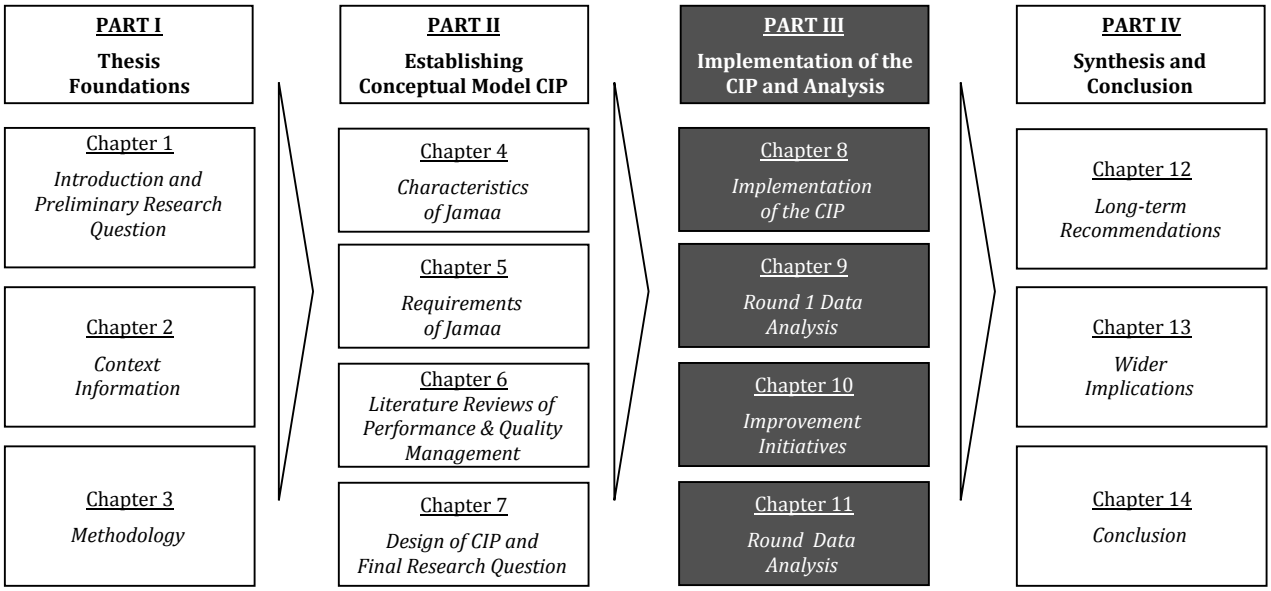
How can Jamaa Trade's performance be improved by using the Continuous Improvement Programme, which is based on a triangulation of a Balanced Scorecard, Deming's Management Method, and Lean, and what are the theoretical contributions as well as the implications for performance improvement initiatives for foreign-owned firms working in Congo?

Introduction to Part III – Implementation of the CIP and Analysis

Part III – Implementation of the CIP and Analysis – has 4 chapters and deals with the implementation of the CIP at Jamaa and subsequent analyses. Chapter 8 has BSC as its overall framework and describes the implementation steps and data collection methods that were followed by the authors and presents the overall BSC structure of the CIP. Chapter 9 then analyses the data from the first round of data collection using Deming & Lean as theoretical foundation, while Chapter 10 presents Deming & Lean-based initiatives to improve performance. Again using Deming & Lean, Chapter 11 then analyses the data from the second round of data collection, where after the overall BSC framework is applied once more to comment on the changes in performance between the first and the second round.

The figure below illustrates the full thesis outline.

Figure 37 – Thesis outline



Source: Authors' own creation

"*Measurement is the first step that leads to control and eventually to improvement.*

If you can't measure something, you can't understand it.

If you can't understand it, you can't control it.

If you can't control it, you can't improve it."

H. James Harrington

8. Implementing the CIP at Jamaa

8.1 Chapter introduction

This chapter briefly presents the implementation of the first 11 steps of the CIP, as outlined in the 12-step implementation plan in **Figure 34** on page 76. The implementation was done in close cooperation with the senior management team at Jamaa, especially CEO Ryan Shepherd. A full unabridged version of the implementation can be found in Appendix 19 on page 225. Furthermore, please see the authors' logbook in Appendix 9 on page 188, which covers the full implementation process from November 2010 to July 2011.

8.2 Steps 1-3: Initial contact and kick-off, Nov.2010 – Feb. 2011

The initial contact with Jamaa took place in November 2010, where it was agreed by both parties to collaborate on the project. After the specific needs of Jamaa and scope of the project had been determined, the authors began analysing information on and documenting the processes of the firm. At the end of January 2011 the new performance management approach was presented to the CEO, and it was decided that the initiative should be called the Continuous Improvement Programme (CIP).

8.3 Steps 4-6: Initial Balanced Scorecard and Strategy Map, 4 Feb. 2011

In the beginning of February, the CIP kick-off meetings in Paris with the CEO took place. During this meeting, the overall mission, values, vision, and strategy of Jamaa were clarified and translated into an overall organisation objective. Although Jamaa has a dual focus on profits and social impact, the CEO made it clear that at this point in time that ensuring financial viability is the overarching organisational objective. Only once the future of the organisation is secure can it begin focusing on measuring and maximising social impact.

The CEO estimates that a monthly revenue of 60,000 USD is the minimum scale necessary for short-term survival, and a specific goal is to have 80,000 USD in revenue per month by August 2011 (the highest ever monthly revenue by Jamaa was 64,500 USD in October 2009. This translates into approximately an average of 3 trucks making 3 trips per month (9 trips per month). Currently there are five truck trips on average per month.

The next step was to cascade the overall financial goal into the perspectives in the BSC. Given Jamaa's unique context and business model, the perspectives within a generic strategy map were deemed to be not fully applicable. Furthermore, we wanted to include the three aspects of quality as defined in section 6.3.1 on page 57 in the perspectives. Therefore, in collaboration with the CEO, the following four perspectives were chosen:

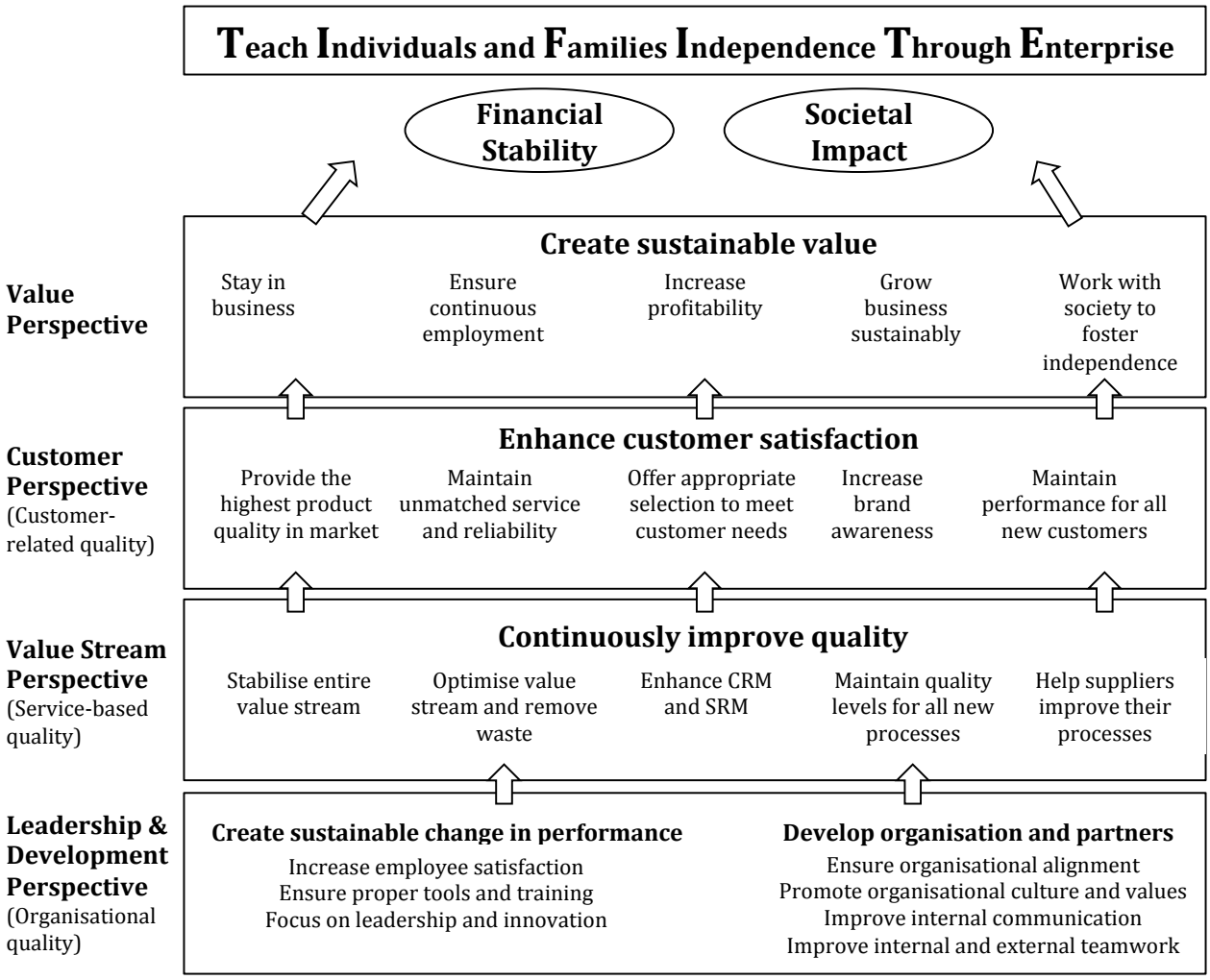
- Value Perspective – Jamaa has a need to look beyond financial results and meeting shareholder requirements, and it was therefore decided to call this the "Value Perspective" to symbolise a broader definition of creating value in society
- Customer Perspective (address "customer-related quality") – Similar to a traditional BSC with a strong focus on meeting customer needs in a consistent and reliable manner
- Value Stream Perspective (addresses "service-based quality") – While a traditional BSC primarily focuses on internal processes, it is important for Jamaa to focus on the whole supply chain, including the suppliers of its suppliers.
- Leadership and Development Perspective (addresses "organisational quality") – This perspective is similar to a traditional BSC and has seven main focus areas – employee satisfaction, having the right physical equipment and tools available, ensuring organisational alignment (vertically and horizontally), fostering a leadership mentality at all levels of the organisation, promoting the organisational culture and values, improving internal communication, and fostering internal and external team-work.

Once the four perspectives had been identified, a top-down approach was taken in order to identify cause-and-effect relationships among each perspective and determine the specific objectives that had to be met in order to meet the overall organisational goal.[22] The meeting resulted in the creation of a strategy map for Jamaa with 22 objectives in total, as illustrated in **Figure 38** (Shepherd 2011i). For each objective, "objective statements" were created, which are listed in Appendix 20 on page 232 (Shepherd 2011g). Although some of the measures would only be addressed in the long-run, that is, after the thesis had been handed

[22] As mentioned earlier, a previous attempt at cascading objectives down the organisation did not work, and the short-term strategy is thus to supplement the formal BSC process with a bottoms-up focus on quality and continuous improvement.

in, it was important to include them in order to guide the longer-term future strategic direction.

Figure 38 – Strategy Map for Jamaa



Source: Authors' own creation

8.4 Steps 7-8: Finalisation of measures and data collection process, 18 Feb. 2011

The next step of the CIP at Jamaa involved translating the objectives into performance measures and setting up a process for collecting data. As stated in Chapter 6, the BSC does not provide specific measures or initiatives to improve the performance on each objective. Therefore, Deming and Lean were used to identify more accurate performance measures within each of the bottom three perspectives. Thereafter, a data collection process that

covered each measure within each objective was discussed, including the amount of data needed per method.[23]

It was agreed that eight different data collection methods would be used to cover all measures during the pilot phase: "trip tickets" to be filled out by the truck drivers on their trips, non-office staff questionnaire, manager questionnaire, customer questionnaire in Kinshasa's markets, agent questionnaire, village questionnaire, new and existing company data, and interviews with the CEO. The amount of data collected would be determined by the resources and time frame available. The actual trip tickets and questionnaires can be seen in from Appendix 21 to Appendix 29 on page 237-265. The data collection methods and questions in the questionnaires were influenced by Deming and Lean, as the theories formed the backdrop of the performance measures we were trying to improve. Furthermore, general best practices regarding customer and employee questionnaires and were taken into account (McConnell 2003), as well as theories regarding measuring social return on investment for the village questionnaire (Nicholls et al. 2009).

8.4.1 Notes to implementation process

First, note that Step 8, "set targets", was skipped as data did not exist on the performance measures, and targets were therefore only determined after collecting data. Second, the general quality of the data varied significantly and some data points were not filled out correctly. The authors attempted to mitigate this by collecting data from the questionnaires during interviews, of which 22 out of 27 were conducted by the authors.

Third, the original number of measures had to be scaled down as it was not possible to collect all the data as envisioned due to resource constraints. Customer questionnaires were prepared but could not be implemented. The agent and village questionnaires were only conducted in Round 1 while the author was in Kinshasa but not in Round 2. Therefore, only the data from the trip tickets, employee and manager questionnaires, company data, and CEO interviews figure in our analysis and Balanced Scorecard. The final data collection measures are presented below, with the data utilised in our analysis and BSC shown in **bold**.

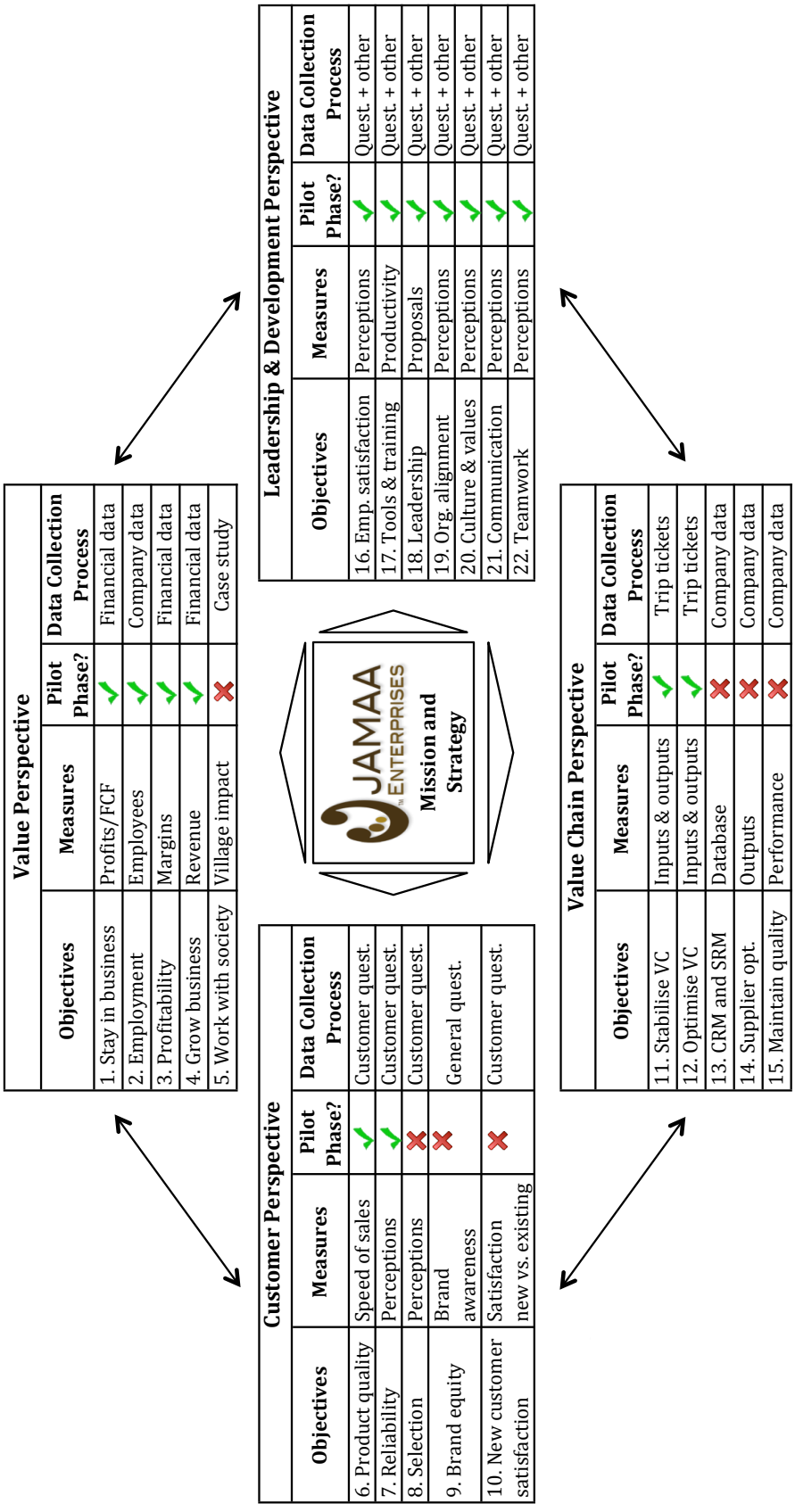
[23] At the time of the meeting, a large portion of the required data was not being collected in a structured or consistent manner. Furthermore, there is a very low degree of information technology usage at Jamaa and in the villages. The proposed data collection process therefore had to be extremely pragmatic and simple and relied heavily on manual data collection.

1. **Trip tickets (9 in round 1 and 4 in round 2)**
2. **Employee questionnaire done during an interview (9 in round 1 and 4 in round 2)**
3. **Manager questionnaire done during an interview (10 in round 1 and 4 in round 2)**
4. Customer questionnaire (0)
5. Agent questionnaire (1 – Jamaa only uses 1 agent – only Round 1)
6. Village questionnaire and case study, done in person (2 – only Round 1)
7. **New and existing company data (numerous, as needed)**
8. **Interviews with CEO (numerous, as needed, to supplement other data)**

8.4.2 Final BSC

The final BSC is presented in Figure 39 (Shepherd 2011h). The data collection process would be initiated during the author's trip to Kinshasa, which is described in the next section. It should be noted that interviews with the CEO were used mainly to supplement the other data collection methods and, and interviews/dialogues with the CEO were held on a regular basis throughout the process.

Figure 39 – High-level BSC and four detailed BSCs



Value Perspective				
Objectives		**Measures**	**Pilot Phase?**	**Data**
1	Stay in business	1.1 Profit (before humanitarian donation)	✓	• Financial data
		1.2 No. of days with negative cash flow (%)	✗	• Financial data
2	Continuous employment	2.1 No. of staff fired or moved (last 3 months)	✓	• Company data
		2.2 No. of employees that quit (last 3 months)	✓	• Company data
		2.3 Employment / screening procedure	✗	• Manager interview
3	Increase profitability	3.1 Revenue per product	✓	• Financial data
		3.2 COGS margin	✓	• Financial data
		3.3 Profit margin (before hum. donation)	✓	• Financial data
4	Grow business sustainably	4.1 Total revenue	✓	• Financial data
		4.2 No. of truck trips to villages	✓	• Financial data
5	Work with society to foster independence	5.1 Humanitarian donation (10% of profit)	✓	• Village questionnaire
		5.2 General village satisfaction	✗	• Case study
		5.3 Income proxies - no. of mobiles, machinery, transport vehicles, tin roofs, educated villagers, clean water etc.	✗	

Customer Perspective				
Objectives		**Measures**	**Pilot Phase?**	**Data**
6	Highest quality in the market	6.1 Speed of selling stock	✓	• Anecdotal evidence
		6.2 Customer perception on quality	✗	• Customer questionnaire
7	Unmatched reliability and service	7.1 Actual vs. planned schedule variances	✓	• Anecdotal evidence
		7.2 Customer perception on reliability	✗	• Customer questionnaire
8	Offer appropriate selection to meet customer needs	8.1 Average spending per customer	✗	• Anecdotal evidence
		8.2 Customer perception on selection	✗	• Customer questionnaire
9	Increase brand equity	9.1 Brand awareness	✗	• Customer questionnaire
		9.2 Brand perception	✗	• Customer questionnaire
10	New customer satisfaction	10.1 Customer satisfacation new vs. existing	✗	• Customer questionnaire

Value Chain Perspective				
Objectives		**Measures**	**Pilot Phase?**	**Data**
11	Stabilise entire value chain	11.1 % of completed trip tickets (last 3 months)	✓	• Company data
		11.2 % of workflows covered by workflows	✓	• Company data
		11.3 Std.Dev. of truck times	✓	• Fig. 10 Two-sample
12	Optimise value stream and remove waste	12.1 Avg. no. of goods damaged per trip	✓	• TT Q2.4 and 2.5
		12.2 % of trips where truck is delayed	✓	• TT Calc. + Title
		12.3 Average truck time	✓	• Fig. 10 Two-sample
		12.4 Decrease % and absolute wasteful time	✓	• TT Comparing value add
		12.5 % of trips where truck is punctured	✓	• TT Punctures and delays
		12.6 Increase % and absolute value-adding time	✓	• TT Comparing value add
		12.7 Fuel and material costs	✗	• Company data
13	Enhance CRM and SRM	13.1 Entries in CRM database	✗	• New company data
		13.2 No. of customer surveys	✗	• New company data
		13.3 No. of customer meetings / calls	✗	• New company data
		13.4 Repurchase rate	✗	• New company data
		13.5 Entries in SRM database	✗	• New company data
14	Work with suppliers improve their processes	14.1 No. of supplier development engagements	✗	• New company data
		14.2 Developments in inputs and outputs of each supplier	✗	• New company data
15	Maintain quality levels for all new processes	15.1 New vs. existing employee survey results	✗	• Questionnaires
		15.2 Performance of new vs. existing drivers	✗	• Trip tickets
		15.3 Comparison of new vs. existing processes	✗	• New company data

Leadership & Development Perspective				
Objectives		**Measures**	**Pilot Phase?**	**Data**
16	Increase employee satisfaction and engagement	16.1 Employee satisfaction	✓	• Sur. Q2.6.1 • Anecdotal evidence
		16.2 Employee engagement (inverted scale)	✓	• Sur. Q6.3
		16.3 No. of social events held	✓	• Company data
17	Ensure proper tools and training	17.1 Employee perception on proper tools	✓	• Sur. Q3.1.1
		17.2 Employee perception on proper training	✓	• Sur. Q3.2
		17.3 No. of training hours	✓	• Company data
		17.4 Budget per employee for training	✗	• Financials
		17.4 % employees with personal training plans	✗	• Company data
		17.5 Productivity per employee	✗	• New company data
18	Focus on leadership and innovation	18.1 Employee perception	✓	• Sur. Q5.2.2
		18.2 No. of employee proposals + no. of proposals implemented	✓	• New Company data
		18.3 No. of of seminars on leadership	✗	• Company data
		18.4 No. of special initiatives ("leadership week", "best practice week" etc.)	✗	• Company data
19	Ensure organisational alignment	19.1 Employee perception	✓	• Sur. Avg. Q1.1.1 and Q1.2
		19.2 No. of strategy sessions held	✓	• Company data
20	Promote organisational culture and values	20.1 Employee perception	✓	• Sur. Q1.1.1
		20.2 No. of values sessions	✓	• Company data
		20.3 No. of communication initiatives	✗	• Company data
21	Improve internal communication	21.1 Employee perception on CEO's communication	✓	• Sur. Q5.1
		21.2 Manager perception on their communication	✓	• Sur. Q2.12
22	Improve internal and external teamwork	22.1 Employee perceptions on teamwork	✓	• Sur. Avg. Q4.1 - Q4.4
		22.2 No. of town hall meetings	✓	• Company data
		22.3 No. of team meetings	✓	• Company data
		22.4 No. of teambuilding exercises	✗	• Company data
		22.5 No. of development workshops with key stakeholders	✗	• Company data

Source: Authors' own creation

8.5 Step 9: Trip to Kinshasa, 20 Feb. – 2 Mar. 2011

One of the authors, Emmet Sharghbin, travelled to Kinshasa mid February in order to initiate the data collection process, meet the local employees, and see the actual operations of the organisation. The author spent 10 days in Kinshasa together with the CEO and all in all the trip was a success both academically and on a personal level. The main purpose of the trip was to initiate the data collection process and carry out the employee, manager, and village questionnaires. The remaining data, consisting of the trip tickets, the agent questionnaire, and customer questionnaires would be collected by the local employees and would be coordinated by Flavie Tshidibi, the newly assigned "quality champion" at Jamaa.

8.6 Step 10-11: 2 Rounds of data collection, analysis, optimisation initiatives, and long-term recommendations, 20 Feb. – July 2011

The first round of data collection took place from the beginning of the author's trip to Kinshasa on the 21/2 until the 11/4. The employee, village, and agent questionnaires were finalised between 21/2 – 25/2 in Kinshasa, while the trip tickets were collected from 24/2 – 11/4. After the data had been collected during the first round of measurement, it was compiled and analysed. Based on the analysis, optimisation initiatives were put in place based on Deming's management method and the lean methodology. The initiatives based on the data from the questionnaires were implemented between 25/2 – 11/4, while the initiatives based on the data from the trip tickets were implemented between 11/4 and 25/4.[24]

Thereafter a second data collection period was initiated in order to document the changes. The trip tickets were collected between 25/4 – 22/6, while the employee questionnaires were carried out between 6/6 – 13/6. Finally, the new data was analysed and recommendations for the future were put forward. These steps are described in more detail in the following chapters: Chapter 9 presents the empirical findings during the first round of measurement, Chapter 10 analyses the data and highlights the proposed initiatives, Chapter 11 presents the empirical findings of the second round of measurement, and Chapter 12 puts forward recommendations for the future, including an initiative to collect data on a regular basis in an iterative process in order to ensure continuous improvement.

8.7 Chapter conclusion

This chapter presented the implementation of the first 11 steps of the CIP. Together with the senior management team of Jamaa, a customised strategy map and balanced scorecard was created, including objectives and performance measures within each perspective based on Deming and Lean. Furthermore, the scope of the pilot phase and data collection methods were determined. The first round of data was collected from 21/2 until the 11/4, and the next chapter analyses the results.

[24] The authors had originally planned to have a minimum of 4 weeks to implement the initiatives based on the trip tickets, but the trip ticket data took significantly longer to gather than originally expected, and there was therefore only a formal 2-week implementation period between rounds 1 and 2.

9. Empirical findings - Round 1

9.1 Chapter introduction

This chapter consists of three parts, respectively Deming-related, Lean-related, and additional findings, and it describes the key empirical findings collected via on-site observations, personal interviews, and our trip tickets.

As the pilot phase had limited time, our approach was to address the most critical issues identified by analysing the data instead of attempting to address all the measures directly. By analysing all the data we found the most pressing issues, ranked them, and created initiatives to address them. In the future, Jamaa can create initiatives to improve the sub-group of measures, which we did not include in the pilot.

For the first two parts, Deming and Lean, our overall approach was to have the following two questions in mind at all times both *a priori* and *a posteriori* during our observations, interviews, and the analysis of the trip tickets, namely *"Could this potentially be impeding for the quality of Jamaa according to Deming's Management Method?"* and also *"Could this potentially be a source of waste for Jamaa or conflicting with the Lean principles?"* (Basu 2009, pp.234-237; Deming 1986, pp.18-149; Stevenson 2009, pp.692-720).

We shall first commence with 15 empirical findings, which we found to be potentially impeding for Jamaa's quality based on Deming's Management Method. Next, we will deal with 17 findings, which we found to be potential sources of waste for Jamaa basing our theory on Lean. Finally, we will present additional, interesting findings, which, although not dealt with explicitly in the thesis, are relevant for Jamaa, and can thus be addressed by the organisation in the future. We will actively deal with the Deming- and Lean-related findings in Chapter 10 on page 108 and propose initiatives to improve them, whereas the additional findings will not be dealt with directly. Nonetheless, they are noteworthy and will be implicitly taken into consideration for the rest of the thesis.

9.2 15 empirical findings - potential issues according to Deming

9.2.1 Introduction

In this section, we shall present 15 findings that were mainly identified during 19 employee interviews, but also using other methods such as observations and notifications by the CEO[25]. Jamaa's own administrative employee, Flavie Tshidibi, assisted author Emmet Sharghbin as a French-Lingala translator in 10 of the interviews due to language difficulties. For some images of an interview session, see Appendix 2 on page 165. The presence of a translator could inhibit some from speaking the truth, but we still believe our collected data is relatively valid. These interviews, alongside the author's observations and notifications from the CEO, formed the basis for 15 findings, which were found to be problems according to Deming's Management Method.

9.2.2 15 findings conflicting with Deming's Management Method – 3 examples

The following figure shows in the first column the 15 findings that conflicted with Deming's Management Method. DF1 refers to "Deming Finding 1" and so forth. The second column shows why the finding conflicted with Deming's theory. Here, DP, DS, and OB refer Deming's points, diseases, and obstacles, respectively – for more on our adaptation of Deming, see section 7.3.3 on page 78. The third column puts forward the potential consequences of the findings. Using Basu's Nominal Group Technique, in the fourth column the findings are ranked[26] based on the authors' best judgments of how much the finding could be impeding for the quality of Jamaa (Basu 2009, pp.115-116). The fifth column shows the addressed BSC measures, whereas column 6 and 7 show the data source type.

[25] With notification by the CEO, we refer to issues where the CEO felt there was be an issue, and the authors thereafter investigated the matter further.

[26] On the scale, 1 is defined as "Potentially very unimportant and very improbable (0-20% likelihood)" and 5 as "Potentially very important and very probable (80-100% likelihood)" "to be crucially and decisively impeding for the quality of Jamaa". The grade was given from an overall evaluation of the finding and the contextual situation of Jamaa and Congo.

Figure 40 – Overview of 15 findings conflicting with Deming

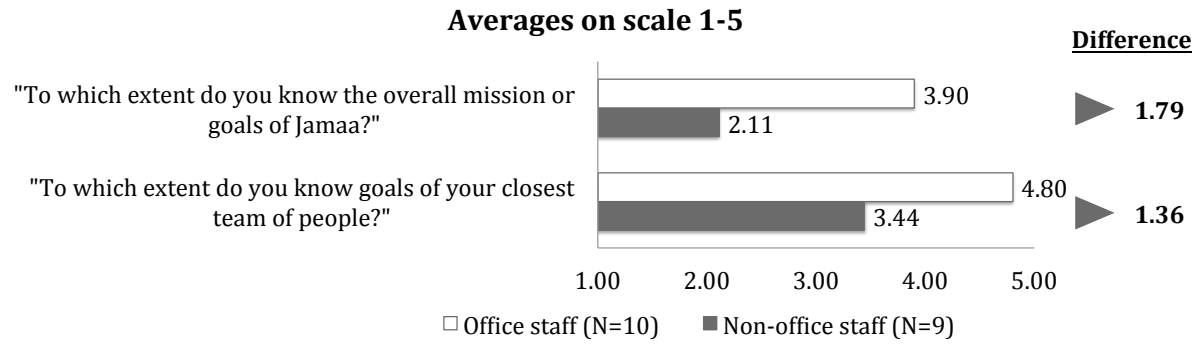
Deming-inspired finding and number		Potential conflict with following aspect(s) of Deming		Potential consequence	Potential importance for quality of Jamaa	BSC Measure Addressed	Data sources: Type of source: Interviews	Own obs/talks with employees	Notified by CEO	Data type and Question number: Quantitative	Qualitative
DF1	Limited direct, daily communication between CEO and non-office staff	DP8 DP9 DP12	Drive out fear Break down staff barriers Enable workmanship pride	→ Communication problem, employee frustration	5	21.1	✓	✓		5.1 1.1.1 1.2	3.7.1
DF2	Lack of clear strategy and goals	DS1 DS2 OB1	Lack of constancy of purpose Emphasis on short-term profits Neglect of long-range planning and transformation	→ Confused employees, unfocused efforts	5	19.1, 19.2. 20.1, and 20.2	✓		✓	1.1.1 & 1.2	
DF3	Employees missing tools	DP12	Enable workmanship pride	→ Employee frustration, inefficiencies	5	17.1	✓			3.1.1	3.1.2
DF4	Lack of development talks between CEO & employees	DP13	Institute program of education	→ Unmotivated employees, higher employee churn	4	17.2, 22.1			✓		Anec cf. 2.11
DF5	Missing CRM for middle managers and sales reps	DP12 OB10	Enable workmanship pride The unmanned computer	→ Lost customers, employee frustration	4	17.1	✓		✓		3.1.2
DF6	Language issue	DP8 DP9	Drive out fear Break down staff barriers	→ Communication problem, inefficiencies	3	21.1	✓	✓		7.5.1, 7.5.2 & 7.5.4	Own obs
DF7	Need of energetic, passionate role-model and leader	DP8	Drive out fear	→ Mild apathy, and missing passion for Jamaa	3	16.2		✓			Own obs
DF8	Lack of employee ideas and decision making	DP1	Create constancy of purpose	→ Lack of employee innovation and decision making	3	18.1 and 18.2	✓	✓		5.2.2	2.5.1 & 3.7.2
DF9	Unfulfilled desire for long-term employee contracts	DS4	Mobility of top management	→ Lack of employee dedication	3	16.1	✓				2.6.2
DF10	Lack of education, despite strong desire	DP13	Institute program of education	→ Employee demotivation, less skilled employees	3	17.2 and 17.3	✓		✓		3.1.2, 3.7.1, 7.1 & 7.11
DF11	CEO and employees eat separately	DP9	Break down staff barriers	→ Lack communication, fear of CEO	2	21.1 and 22.1		✓			Own obs
DF12	Limited number of social events	DP9	Break down staff barriers	→ Lack of team-spirit, and intra-organisational bonds between different employee types	2	16.1, 16.2, 16.3, 22.1		✓			Own obs
DF13	Excessive focus on wages by employees	DP1	Create constancy of purpose	→ Employee demotivation, resistance to change and improvement	2	16.1, 18.1, 20.1	✓	✓		2.4.1 cf. 2.6.1	2.5.1
DF14	Alarm bell defining working hours	DP12	Enable workmanship pride	→ Lack of employee dedication	2	16.1 & 18.1		✓			Own obs
DF15	Desire for Jamaa work clothes	DP9	Break down staff barriers	→ Demotivated employees, loss of corporate spirit	1	16.1 and 16.2	✓	✓		3.7.2	

Source: Authors' own creation inspired by Basu 2009; Beckford 2010; Deming 2000; Walton 1989

Note that we shall only go through the first 3 findings here as examples. For the remaining Deming-related findings 4-15, please refer to Appendix 31 on page 271.

The first finding, "Limited direct, daily communication between CEO and non-office staff", meant that there were no institutionalised, scheduled meetings with non-office staff; the communication was very ad hoc. As one respondent added: *"Top management should consult middle management more and they could also consult the non-office staff more."* (Appendix 30, p. 266 – Question 3.7.1). When we split up the questions regarding overall and work-team goals on office and non-office workers, a clear difference was revealed. Office workers were much more aware of both the overall and the team-goals of Jamaa.

Figure 41 – DF1: Comparison of office staff vs. non-office staff knowledge of mission and goals



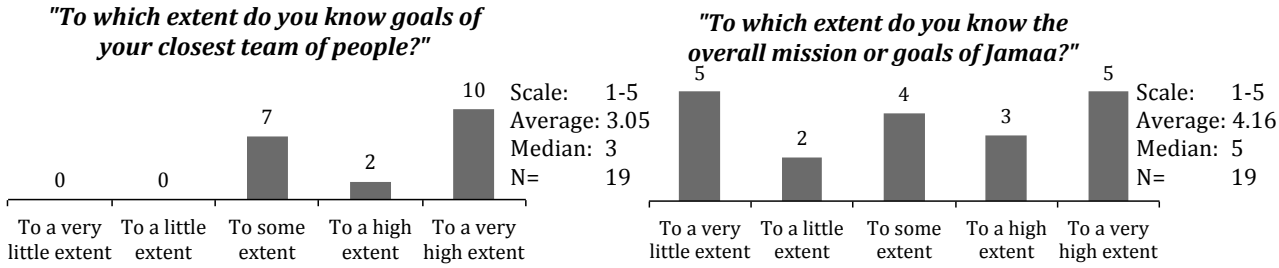
Source: Appendix 30, p. 266 – Question 1.1.1 & 1.2

The situation could be a problem according to three of Deming's points. Point 7, "Drive out fear", as both employees and the CEO admitted that the suboptimal level of communication caused some employees to be afraid to speak up (Employee interviews 2011). Point 8, "Break down staff barriers", as the lack of communication created barriers between departments. Point 12, "Enable workmanship pride", as employees seemingly had not a clear channel of communication in which they could voice frustrations over inefficiencies or suggestions for improvement in their work (Deming 2000, pp.56-65 & 77-85). As such, this finding falls under BSC Measure 21.1, "Employee perception on CEO's communication", a part of BSC Objective 21 "Improve internal communication", see Figure 39 on pages 89-91.

Finding two, "Lack of clear strategy and goals", revealed that most employees were in doubt of the overall strategic goals of Jamaa. The CEO already notified us about this, when the Balanced Scorecard was being made in January, and the empirical findings support this issue.

As the following two figures show, employees were much less knowledgeable about the overall goals of Jamaa, left chart, than their immediate goals, right chart.

Figure 42 – DF2: Employee knowledge of goals of Jamaa vs. goals of team (n=19)

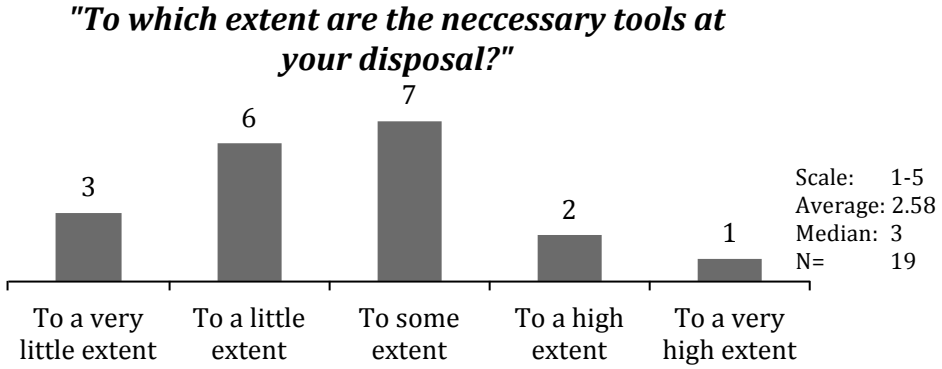


Source: Appendix 30, p. 266 – Question 1.1.1 & 1.2

This was a problem according to three of Deming's ideas. Disease 1, "Lack of constancy of purpose", as the overall purpose of Jamaa was not clearly communicated, Disease 2, "Emphasis on short-term profits", and Obstacle 1, "Neglect of long-range planning and transformation", as the lack of mission statement could attract too much attention to the goals of the individual's department's month-to-month profits rather than the goals of Jamaa as a whole (Deming 2000, pp.98-101 & 126-127). This finding falls under BSC Measures 19.1, 19.2, 20.1, and 20.2, under BSC Objectives 19 "Ensure "Promote organisational culture and values" and 20 "Promote organisational culture and values" respectively, see Figure 39 on pages 89-91.

The third finding, "Employees missing tools", was discovered during the interviews, when several drivers and mechanics especially pointed out that they were missing many crucial tools. There was a general lack of necessary tools, as the following figure also reveals:

Figure 43 – DF3: Employee evaluation whether necessary tools are available



Source: Appendix 30, p. 266 – Question 3.1.1

As one employee also stated: *"We are in need of wrenches, a compressor, spare parts, pumps…"* (Appendix 30, p. 266 – Question 3.1.2). This was a problem according to Deming's point 12, "Remove barriers for workmanship pride". As Deming said *"How can he, [the production worker take pride in his work,] when the machine is out of order, and no one listens to his plea for adjustment?"* (Deming 2000, p.78). This finding falls under BSC Measure 17.1, "Employee perception on proper tools", part of BSC Objective 17 "Ensure proper tools and training", see Figure 39 on pages 89-91.

9.3 17 empirical findings - potential issues according to Lean

9.3.1 Introduction

In this section, we shall present 17 findings that could be considered issues according to our definition and application of Lean to Jamaa. The findings were mainly identified during 9 trip tickets. The trip tickets, alongside the author's observations and talks with employees, as well as notifications from the CEO, formed the empirical basis for 17 Lean-related problems that were identified. An example of a filled out trip ticket, the total raw data, and a summary of the data are available in Appendix 32 to Appendix 34 on page 277-289.

9.3.2 17 findings conflicting with Lean – 3 examples

The following figure shows in the first column the 17 key findings that conflicted with Lean. LF1 refers to "Lean Finding 1" and so forth. The second column clarifies with which revised Lean principle the findings conflicted. The letters WA and LP refer Ohno and Liker's

combined eight sources of waste, WA, and Womack and Jones' five Lean principles, LP, respectively - for more on our adaptation of Lean see Section 7.3.4 on page 79. The third column puts forward the potential consequences of the findings. Using Basu's Nominal Group Technique, in the fourth column the findings are ranked[27] based on the authors' best judgments of how much the finding could be a source of waste or conflict with Lean for Jamaa (Basu 2009, pp.115-116). The fifth column shows the addressed BSC measures, whereas column 6 and 7 show the data source type.

Note, that we shall only go through the first 3 findings here as examples. For the remaining 14 Lean-related findings, please refer to Appendix 35 on page 289.

[27] On the scale, 1 defined as "Potentially very unimportant and very improbable (0-20 % likelihood)" and 5 as "Potentially very important and very probable (80-100 % likelihood)" "to be crucially and decisively impeding for the leanness of Jamaa". The grade was given from an overall evaluation of the finding and the contextual situation of Jamaa and Congo.

Figure 44 – Overview of 17 findings conflicting with Lean

Lean-related finding and number	Potential conflict with following Lean aspect	Potential consequence	Potential importance for leanness of Jamaa	BSC Measure Addres-sed	Data sources: Type of source: Interviews Own obs/talks with employees	Data sources: Type of source: Notified by CEO	Data type and source: Quantitative	Data type and source: Qualitative
LF1 Lack of continuous data collection and analysis	LP5 Perfection	→ Lack of quality assurance	5	11.1	✓			Own obs
LF2 Very small part of total cycle time of trucks is actually spent on the road	LP1 Value	→ Low level of truck efficiency	5	12.4	✓		Append ix 34 on page 292	
LF3 Lack of usage of Value Stream mapping	LP2 Value Stream	→ Non-value adding activities take up resources	5	11.2, 12.1, and 12.4	✓		Append ix 38 on page 297	
LF4 Current head mechanic is not qualified to hold current position	WA1 Defects	→ Wasteful delays due to preventable errors by mechanics	5	12.2 and 12.3		✓		CEO
LF5 Break-downs because mechanic has forgotten to use checklist	WA1 Defects	→ Wasteful delays due to preventable errors by mechanics	5	12.2 and 12.3	✓	✓	Append ix 39 on page 298	CEO
LF6 Total cost of ownership of Iveco fleet higher than Mercedes-Benz	WA1 Defects	→ Low level of truck efficiency	5	12.2-6	✓			CEO
LF7 Limited communication between CEO and drivers on how to	WA5 Transport ation	→ Wasteful delays due to 16 police barriers	4	12.2, 12.3, 12.4, and 21.1	✓			Own obs
LF8 Suppliers often deliver too late	LP3 Flow	→ Inefficient operation flow due to supplier problems	4	7.1 and 12.4		✓		CEO
LF9 No incentive in supplier contracts to encourage suppliers to be on time	LP3 Flow	→ Inefficient operation flow due to supplier problems	4	7.1 and 12.4		✓		CEO
LF10 Under-utilisation of non-office staff	WA4 Non-utilised resources	→ Waste of financial resources	4	18.1-2	✓	✓		Own obs
LF11 Under-utilisation of trucks	WA6 Inventory	→ Waste of financial resources	4	12.4	✓	✓		Own obs
LF12 One driver is known for visiting his girl-friend at the barriers	WA3 Waiting	→ Wasteful delays due to stops at the 16 barriers	3	7.1 and 12.4	✓	✓	Append ix 34 on page 292	
LF13 Ad-hoc, unorganised knowledge on what customers actually want	LP4 Pull	→ Lack of customers pulling instead of Jamaa pushing	3	6.1-7.1	✓			Own obs

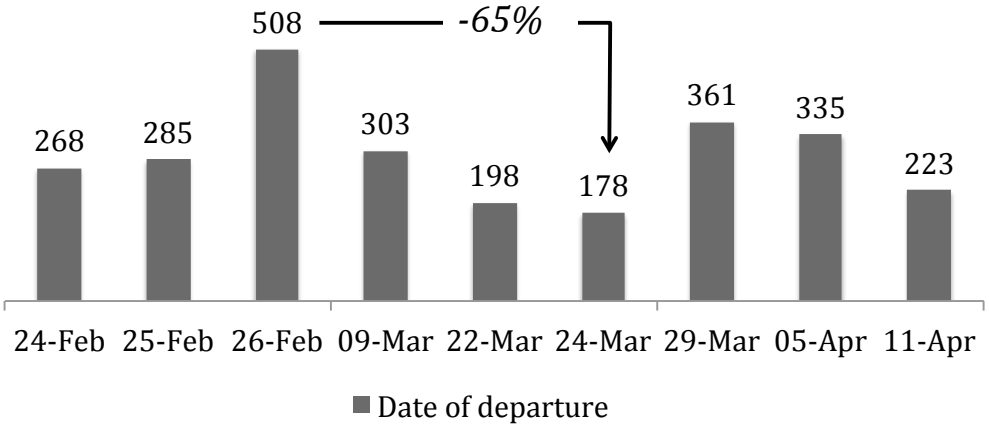
Lean-related finding and number	Potential conflict with following Lean aspect	Potential consequence	Potential importance for leanness of Jamaa	BSC Measure Addres-sed	Data sources: Type of source: Interviews	Own obs/talks with employees	Notified by CEO	Data type and source: Quantitative	Qualitativ
LF14 High frequency and long duration of punctures/delays	WA3 Waiting	→ Waste of time due to punctures and delays	3	12.2, 12.3, 12.4, and 21.1	✓			Append ix 34 on page 292	
LF15 Large differences in loading and unloading times	WA3 Waiting	→ Wasteful delays due to loading and unloading of trucks	3	7.1 and 12.4	✓			Append ix 34 on page 292	
LF16 Problem with river that is often flooded	WA3 Waiting	→ Wasteful delays during transportation	2	7.1 and 12.4	✓		✓	Append ix 34 on page 292	
LF17 Police at 16 barriers cause hour-long delays sometimes	W3 Waiting	→ Wasteful delays due to police at the 16 barriers	1	7.1 and 12.4	✓			Append ix 34 on page 292	

Source: Authors' own creation inspired by Beckford 2010; Liker 2004; Womack & D. T. Jones 2003.

The first finding, "Lack of continuous data collection and analysis", was identified early in the process, as the authors asked the managers what data was available and how they assured continuous quality improvement. There was, however, no formal system or approach for that, which was a severe problem according to Womack's fifth principle, "Perfection", as there should be, as the final step of the Lean improvement cycle, a continuous improvement system in place (Womack & D. T. Jones 2003, pp.90-98). This finding falls under BSC Measure 11.1, "% of completed trip tickets (last 3 months)", which is part of BSC Objective 11 "Stabilise entire value chain", see Figure 39 on pages 89-91.

The second finding was revealed when the durations of the trips were mapped, as there was a difference of upwards 65% between the slowest and the fastest truck, as the following figure shows. The trips are ranked according to total round-trip time in hours.

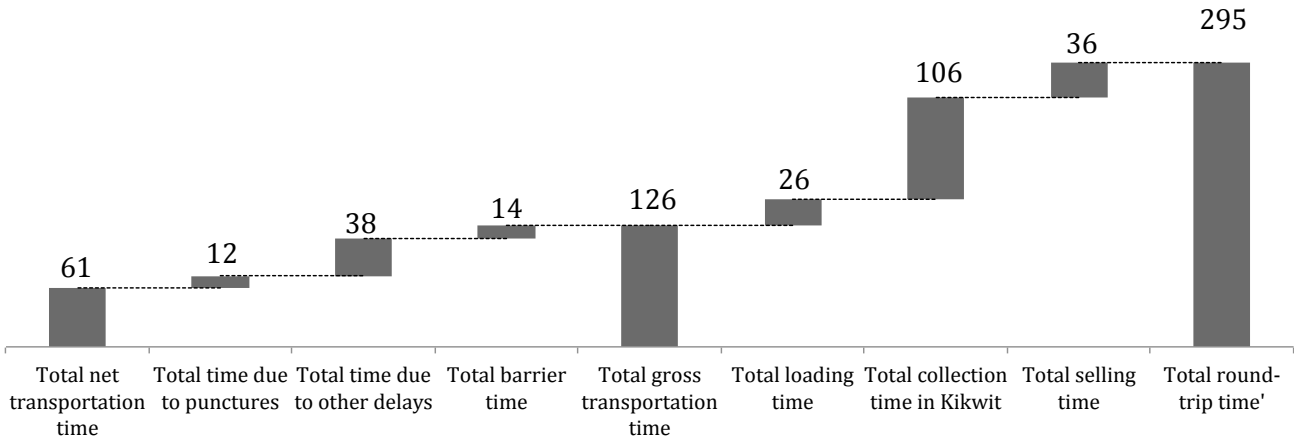
Figure 45 – LF2: Total round-trip time in hours for 9 different trucks in Round 1



Source: Appendix 35, p. 289

In the next figure the average round-trip of the above 9 round-trips is broken down into sub-components. As it shows, only 61 hours is actually spent on driving. Punctures, other delays, and barriers consume a total of 65 hours, that is, a total of 126 hours of gross transportation time, meaning time en route. Finally loading, collection and selling consume 168 hours, which adds up to the total of 295 hours of the average round-trip.

Figure 46 – LF2: Breakdown of 9 trucks' average round-trip in hours



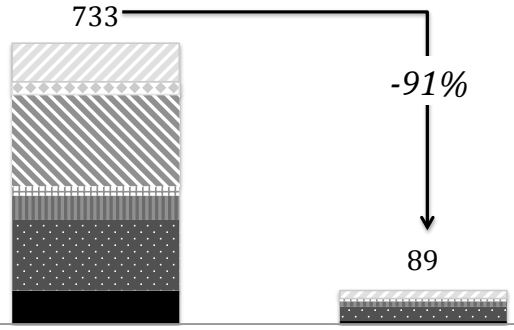
Source: Appendix 34, p. 289

Most surprisingly, a full 106 hours, more than 4 days, is on average spent collecting the goods in the villages around Kikwit.[28] However, when analysing the data even further, it is

[28] Unfortunately, some of this time is actually value adding, when the trucks are actually transporting the villages' goods but no data exist on the actual breakdown.

evident that there are large discrepancies between the worst and best practice[29] within the different sub-components of a round-trip.

Figure 47 – LF2: Breakdown of worst vs. best practices of a round-trip in hours



Total net transportation	101	22
Total time due to punctures	31	0
Total time due to other delays	240	0
Average barrier time	24	7
Average loading time	64	13
Average collection time in Kikwit	184	38
Average selling time	87	7

Source: Appendix 37, p. 294

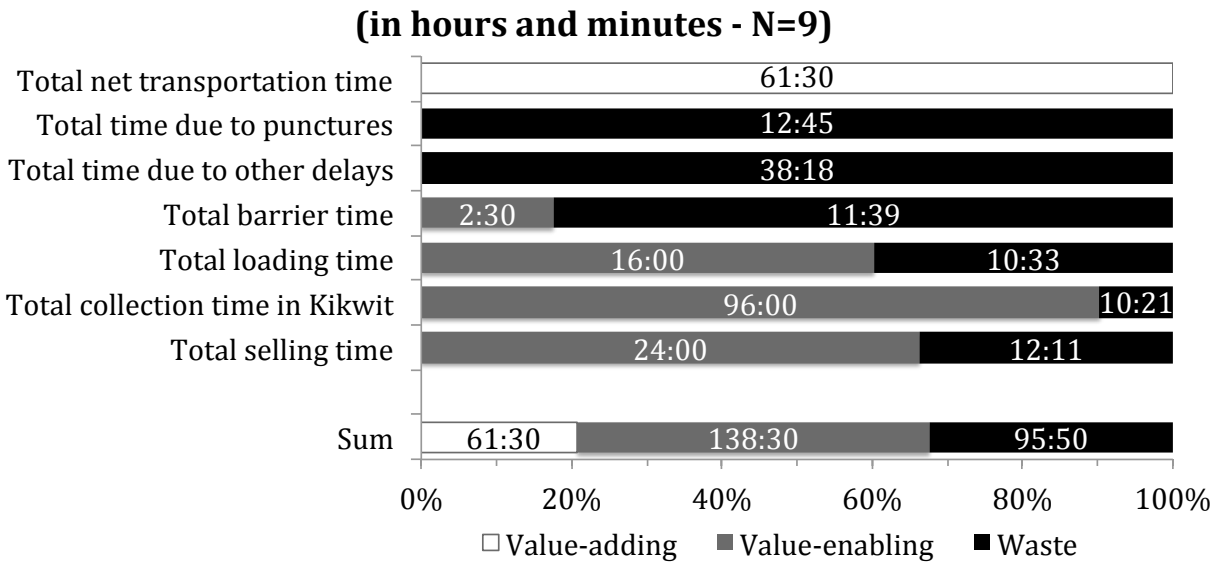
The difference is thus 643 hours or roughly 27 days difference between best and worst-case practice. This circumstance could be an indication that Jamaa does not conduct its business according to what creates value for the customers, so this finding conflicts with the first Lean principle of "Value" (Womack & D. T. Jones 2003, pp.29-36). This finding falls under BSC Measures 12.4, "Decrease % and absolute wasteful time", part of the BSC Objective 12 "Optimise value stream and remove waste", see Figure 39 on pages 89-91.

The third finding, "Lack of usage of value stream mapping", was that no overview existed of its processes and the firm had not yet analysed which parts of its processes that were actually value adding. The situation conflicted severely with Womack and Jones' crucial principle 2, "Value stream" (Womack & D. T. Jones 2003, pp.36-49). Based on an interview

[29] Here worst and best practice are defined as slowest and fastest time within each sub-component ignoring missing data

with the CEO, the sub-components of an average round-trip could be broken into the following sub-components of the following.

Figure 48 - LF3: Breakdown of an average trip into Value-adding, Value-enabling and Waste sub-components



Source: Appendix 38, p. 294

According to our definition, the 61 hours and 30 minutes spent on the actual transportation in the top, white bar is 100% value adding and the only value adding component, as the final, sum bar also shows. According to the summarising bar in the bottom, 95 hours, or more than 4 days of a round-trip were pure waste. As the total daily cost of a truck is on average 254 dollars and assuming 108 annual trips, the above figure meant that there was potentially theoretical savings of (4*254*108)= 108,729 dollars assuming that all waste could be cut away (Shepherd 2011f). This 100,000 USD of waste could be freed up annually theoretically without any negative effects, which conflicts with Womack and Jones' crucial principle 2, "Value stream" (Womack & D. T. Jones 2003, pp.36-49). This finding falls under BSC Measures 11.2 "% of workflows covered by workflow mapping" and 12.4, "Decrease % and absolute wasteful time and", part of BSC Objectives 11 "Stabilise entire value chain" and 12 "Optimise value stream and remove waste", see Figure 39 on pages 89-91.

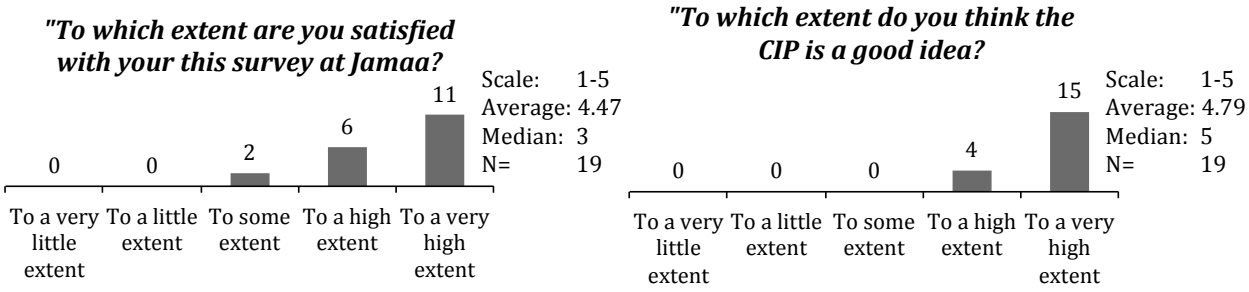
9.4 Additional interesting findings

We will not deal with the following interesting findings directly, but still they are important and will be taken into consideration for the remainder of our thesis. We will only touch upon 3 of them briefly here, for the remaining findings refer to Appendix 41 on page 296.

9.4.1 Positive employee reaction to the interviews and CIP

To create some knowledge about the employees' reaction to the interviews and about their reaction to the whole idea of the CIP, the following two questions were asked.

Figure 49 – Employee reaction to the interviews and CIP



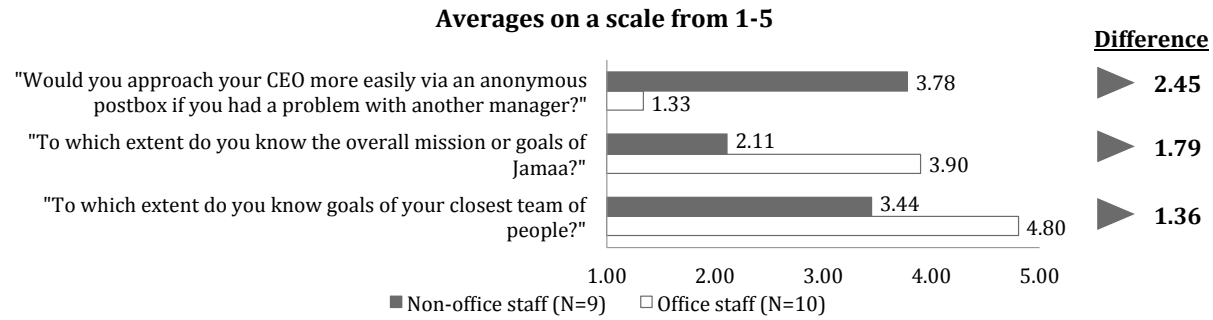
Source: Appendix 30, p. 266 – Question 6.1.1 & 6.2

The authors are aware that these questions will be biased due to the author's presence during the interviews, but even taking this bias into consideration, these questions did indicate appreciation of the questionnaire and the CIP.

9.4.2 Differences between office and non-office staff

Finally, the authors would like to mention that a slight bias was discovered in the interviews. In general, the office staff answered in a somewhat more positive manner than the non-office staff. The following figure shows the most relevant questions in which the office and non-office staff differed.

Figure 50 –Most relevant differences in office and non-office staff average answers



[30]*Source: Appendix 30, p. 266 – Question 5.4, 1.1.1 & 1.2 respectively*

The first question could indicate that office staff was already comfortable at approaching the CEO when experiencing problems, and that non-office staff feared the CEO somewhat; that is, an indication of Deming's point 8, "Drive out fear" (Deming 2000, pp.59-62). The second and third questions were already mentioned under Deming-related finding 1. This bias was not deal with dealt with it explicitly, but indirectly; for instance via Deming-related finding 1 on page 95.

9.4.3 Village interviews

The lack of even the simplest necessities in rural became apparent during two village interviews the author conducted in the Dumi area, 100 km from Kinshasa. The villagers were in lack of work, education, basic health care, potable water, transportation, and food. Both villages stated that they did not want anything for free, but wanted to earn their living (Village interviews in Bwe and Munkoro 2011). For our cultural and general understanding of this thesis, the trip was highly valuable, also to modify and adapt our ideas and suggestions to the situation of Congo rather than enforcing established management thinking directly in Congo. For more on the village interviews, see Section iii of Appendix 41 on page 296.

9.5 Chapter conclusion

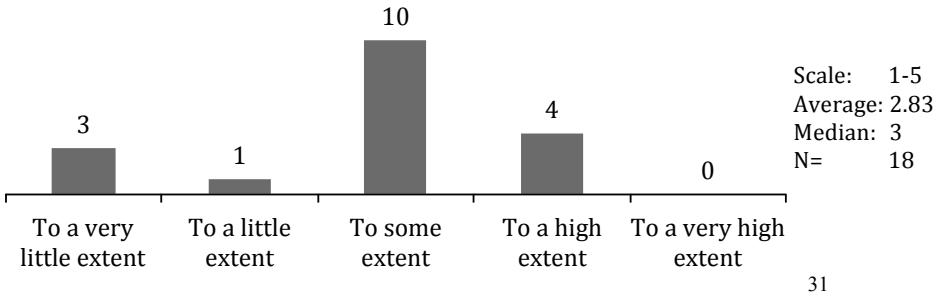
All the above-mentioned findings have proven that there are several interesting issues to deal with in Jamaa and many areas to improve, which was also revealed in the following

[30] In the first question, Office staff N=9, as the CEO did not participate.

question, in which we asked the employees to compare the current situation with a hypothetical "ideal" situation:

Figure 51 – Room for improvement in Jamaa

"To which extent are things in Jamaa optimal?"



[31]

Source: Appendix 30, p. 266 – Question 2.5.1

In the next chapter we will propose Deming- and Lean-inspired initiatives to solve the Deming- and Lean-related findings of this chapter.

[31] Here N=18, as one employee answered "Don't know".

10. Proposing initiatives for 15 Deming and 17 Lean findings

10.1 Chapter introduction

Based on the previous analysis, we presented the combined 32 findings to CEO Ryan Shepherd. After a long discussion with the CEO, we decided to drop 7 of the findings, which we shall discuss. Next, we shall turn to the theories of Deming and Lean to propose initiatives to the reduced portfolio of 25 potentially problematic findings and their corresponding initiatives in an overview figure, and thereafter discuss the individual initiatives, and their theoretical basis.

10.2 Slimming the gross portfolios of Deming- and Lean-related findings

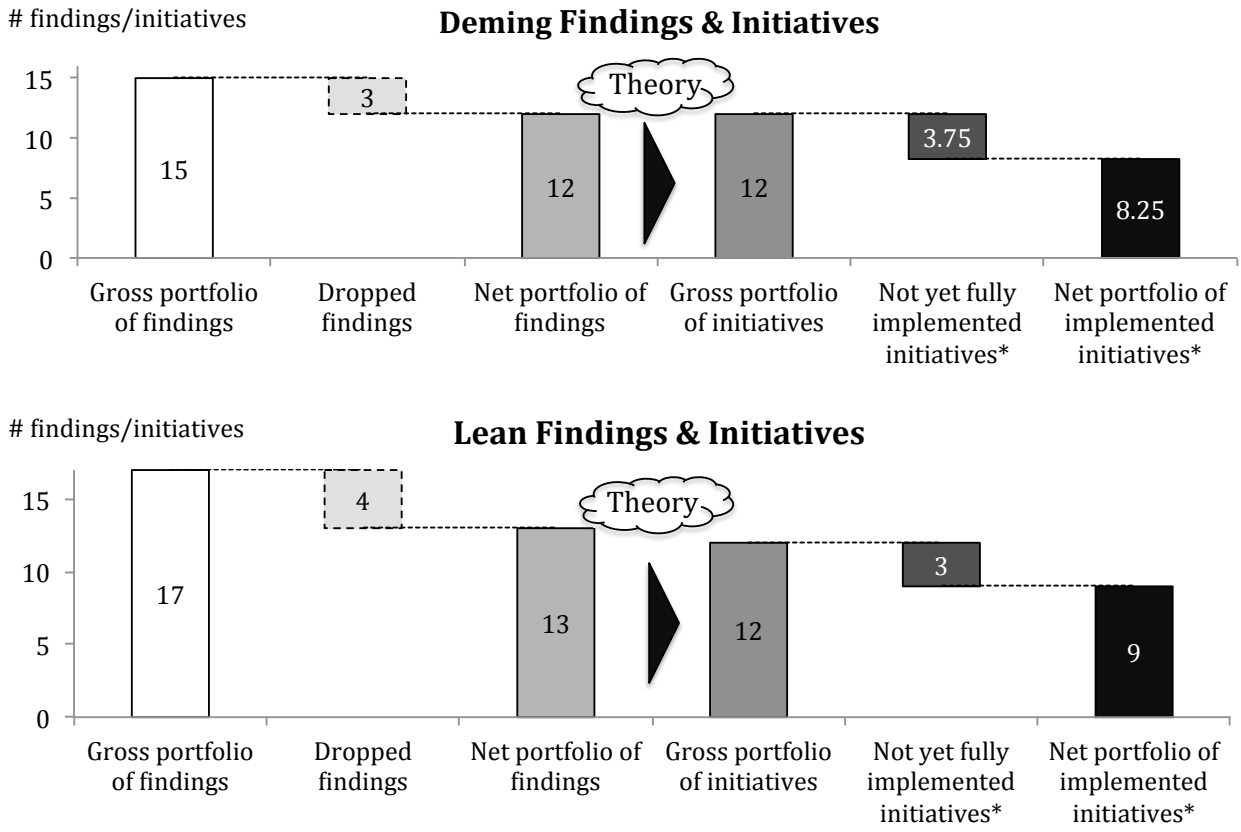
10.2.1 Overview and introduction

We consulted CEO Ryan Shepherd to get his feedback on the initial 15 Deming-related and 17 Lean-related findings. We agreed on, after healthy discussions, to abandon 3 Deming-related and 4 Lean-related findings, for more on this please refer Appendix 42 on page 299. These findings were dropped, not for theoretical reasons, but for practical reasons, following our action-based Research methodology, see page 317.

For the remaining 25 net findings, we came up with theoretically based initiatives, which were strongly inspired by the Deming or Lean aspect(s) (Deming 2000; Walton 1989). From these 24[32] gross initiatives, only 8.25 Deming-inspired and 9 Lean-inspired initiatives, measured in initiative equivalents,[33] were implemented before our Round 2 of data collection, giving us the following overview.

[32] There are 13 Lean-related findings, yet only 12 Lean-inspired initiatives, as Lean related-finding 7 and 14 are both covered by Lean-inspired initiative 6, see overview figure page 5.
[33] Equivalent initiatives means that an initiative that is half way implemented account for 0.5 initiative and so forth. For more, see overview figure page 5.

Figure 52 - Going from 15 Deming and 17 Lean findings to 8.25 and 9 implemented initiatives before Round 2



Source: Authors' own creation inspired by Basu 2009; Beckford 2010; Deming 2000; Walton 1989; Womack & D. T. Jones 2003

10.3 Overview of net portfolios of 12 Deming-related and 13 Lean-related findings and their corresponding initiatives

In the figures on page 111 and the following page, the net portfolios of the remaining 12 Deming- and 13 Lean-related findings are presented in the first column. Note that the DF/LF refers to the Deming/Lean-related finding numbers of the Chapter 9 on page 95 and 100 respectively.

In the second column, for each finding, we propose initiatives, called DI/LI referring to Deming and Lean-inspired initiatives, which are further explained in the third column. Issues addressed are then presented in the fourth column.

The fifth column signifies the initiative's implementation status on the cut-off day for Round 2 - 25/04/2011 - which was chosen after a talk to the CEO as a sufficient amount of initiatives were implemented by this date. In the column, a white circle signals an unimplemented initiative and a black circle signifies a fully implemented initiative. The implementation phase ran two weeks from 11/04/2011 to 25/04/2011[34]. For practical reasons, we could not wait until all the initiatives were fully implemented, but as can be seen in the fifth column, most of the crucial initiatives were implemented by this date; notable exceptions being DI2, "Create global M&V statement in 2011", LI2, "Measure & improve regularly transportation ratio" and finally LI4, "Hire experienced head mechanic".

Using Basu's Nominal Group Technique, in the sixth column the initiatives are ranked[35] based on the authors' best judgment of how critical the initiative is for the quality improvement or leanness of Jamaa (Basu 2009, pp.115-116).

The seventh column then refers to which BSC measure that the initiative addressed. As shown in Chapter 9, each finding falls under a measure on the BSC, and each initiative thus addresses one or more objectives, which in turn are aligned with the overall organisational strategy.

One issue is implementation; another is whether the effects have been fully realised yet. However, as mentioned, overall we felt that a critical mass of implemented initiatives had been reached, and we chose 25/04/11 as our cut-off date before our Round 2, although the full effects will take several months to be realised.

[34] The trip departing on April 11 was included. During the following two weeks, however, trip 10 and 11, were ignored, as they were in the grey zone of being neither a clear first round nor a second round trip.
[35] On the scale from 1-5, 1 is defined as "Very unimportant and very improbable (0-20% likelihood)" and 5 as "Very important and very probable (80-100% likelihood)" "to be crucially and decisively important to the overall success of either the quality or lean improvement of Jamaa". The grade was given from an overall evaluation of the initiative, the contextual situation of Jamaa and Congo, and the goal of improving quality and increasing efficiency, respectively.

Figure 53 – Overview of 12 Deming-inspired and 12 Lean-inspired initiatives

CIP							
12 Deming-related findings	**12 Deming-inspired Initiatives**		**Practical implications**	**Issue(s) addressed**	**Status 25apr11**	**Critical importance**	**BSC Measure Addressed**
DF1 Limited direct, daily communication between CEO and non-office staff	DI1	Communicate more frequently and organised	CEO/employees should communicate directly & monthly group meetings	Communication problem, eliminate employee frustration	●	5	21.1
DF2 Lack of clear strategy and goals	DI2	Create global M&V and have employee strategy and value sessions	Jamaa will formulate Mission & Vision statement in 2011 conduct recurring strategy and values sessions with employees	Lack of strategy and clear goals	◑	5	19.1, 19.2., 20.1, & 20.2
DF3 Employees missing tools	DI3	Avoid operational obstacles	Buy missing tools	Efficiency, avoid employee frustration	◑	5	17.1
DF4 Lack of long-term development talks between CEO and employees	DI4	Have monthly, individual meetings	CEO will have individual, monthly meetings with employees	Communication problem, employee development	●	4	17.2, 22.1
DF5 Missing CRM for middle managers and sales reps	DI5	Buy and develop new CRM system	Change CRM from online Google Docs to off-line, customised CRM	Missing tool for managers & sales reps	◑	3	17.1
DF6 Language issue	DI6	Initiate language training	Free French and English lessons for employees	Communication problem, incentive	◔	2	21.1
DF7 Need of role-model and leader among employees	DI7	Promote quality champion	Quality champion (Flavie Tshidibi) to help drive CIP	Practical issues, motivation	●	3	16.2
DF8 Lack of employee ideas and decision making	DI8	Establish 2 idea boxes	Employees can put ideas into two idea boxes	Lack of employee ideas & participation	○	3	18.1 & 18.2
DF10 Lack of education, despite strong desire	DI9	Increase on-site employe etraining, and start training program in 2012	Ensure that managers spend more time training employees on-site and develop a training program for its employees	Employee motivation, Lack of education	◔	2	17.2 & 17.3
DF11 CEO and employees eat separately	DI10	Eat lunch with employees	CEO will not work through lunch but eat with employees	Communication problem, fear of CEO	●	2	21.1 & 22.1
DF12 Lack of social events	DI11	Have more social events	Jamaa will have 2 big annual events and 4 smaller events	Employee motivation & team-work building	●	2	16.1, 16.2, 16.3, 22.1
DF15 Desire for Jamaa work clothes	DI12	Buy Jamaa work clothes	Jamaa will buy work clothes for its employees	Employee motivation	●	1	16.1 & 16.2

CIP								
	13 Lean-related findings	12 Lean-inspired initiatives	Practical implications	Issue(s) addressed	Status 25apr11	Critical importance	BSC Measure Addressed
LF1	Lack of continuous data collection and analysis	LI1 Use continuous data analysis	Continued use of Trip tickets will improve Jamaa's quality	Lack of quality assurance	●	5	7.1, 11.1, 12.3
LF2	Very small part of total round-trip time is actually spent on the road	LI2 Measure & improve regularly transportation ratio	Maximising the trucks' transportation time ratio will increase efficiency	Low level of truck efficiency	◑	5	12.3
LF3	Lack of usage of Value Stream Mapping	LI3 Use VSM as key tool	Map current process to find and eliminate non-value adding	Non-value adding efforts	◑	5	11.2, 12.1, 12.3, & 12.4
LF4	Current head mechanic not sufficiently qualified	LI4 Hire experienced head mechanic	A new head mechanic will be added to staff	Wasteful delays during transportation	◑	5	12.2 & 12.3
LF5	Break-downs as mechanic did not use checklist	LI5 Make mechanics use check lists	Head mechanic forgets to use the checklist, the CEO will talk	Wasteful delays during transportation	●	5	12.2 & 12.3
LF7 LF14	Limited CEO/driver communication on how to make trips more efficient High frequency/duration of punctures/delays	LI6 Have brainstorm sessions to improve efficiency	Monthly CEO/driver meetings to find ways to make trips more efficient and avoid delays	Wasteful delays in general	◑	4	12.2, 12.3, 12.4, & 21.1
LF8	Suppliers often deliver too late	LI7 Cooperate closer with suppliers	Closer supplier cooperation and communication	Supplier problems	◑	4	7.1, 12.3 & 12.4
LF9	No timeliness incentive in supplier contracts	LI8 Change supplier contracts	Change the incentive structure in contracts as to punish delays	Supplier problems	○	3	7.1, 12.3 & 12.4
LF12	One driver is known repeated misconducts	LI9 Deal with misconducting driver	Deal with driver known for visiting his girlfriend, change his behaviour	Wasteful delays due to 16 police barriers	●	3	12.3 & 12.4
LF15	Problem with river that is often flooded	LI10 Pay villagers to help with river	Jamaa will pay villagers to help with flooded bridge	Wasteful delays during transportation	●	3	12.3 & 12.4
LF16	Large differences in loading and unloading times	LI11 Hire more loaders, ramps, trolleys	Hire more loaders, get more trolleys and other tools.	Wasteful delays due to loading of trucks	●	3	12.3 & 12.4
LF17	Police at 16 barriers cause hour-long delays sometimes	LI12 Bribe police more at barriers	Tell the drivers to carry more money to bribe police	Wasteful delays due to 16 police barriers	●	1	12.3 & 12.4

Source: Authors' own creation inspired by Basu 2009; Beckford 2010; Deming 2000; Liker 2004; Walton 1989; Womack & D. T. Jones 2003

10.4 Presenting 12 Deming-inspired and 12 Lean-inspired initiatives

10.4.1 Introduction

Here we will present and discuss our 12 Deming-inspired and 12-Lean-inspired initiatives. We shall not repeat the theoretical foundations that identified the issue as a problem for each of the initiatives, as this would repeat the previous chapter.[36] Here we will focus on the potential, *additional* aspects of Deming's management method or Lean that the initiatives may cover, as there are in some cases positive side effects. Also, for each method, we shall only go through the first 3 initiatives here as examples to show the thought process behind the initiatives. For the remaining 9 initiatives of each method, please refer to Appendix 43 on page 301 and Appendix 44 on page 303 respectively.

10.4.2 Discussing the net portfolio of Deming-inspired initiatives – 3 examples

Our first initiative, "Communicate more frequently and organised", was simply to increase the communication between CEO and employee both on a daily basis and via planned, monthly group meetings. If the CEO used these opportunities to communicate the CIP to the employees, the initiative could as a side effect help to "Create constancy of purpose" and "Accomplish the transformation", point 1 and 14 respectively (Deming 2000, pp.24-26 & 86-96). The initiative would also address the apparent communication problem and consequent employee frustrations that the employees voiced during the interviews. The monthly group meetings and more frequent individual talks already took place at the cut-off date. That is, the initiative was considered fully implemented at the cut-off date. Finally, the initiative was considered very important and of at least 80-100% importance to the success of quality improvement at Jamaa, and was therefore rated as a 5.

"Create global M&V statement in 2011", the second initiative, aimed to clarify Jamaa's strategy both internally and externally, as there was a severe, perceived lack of strategy and clear goals among the employees. This initiative also played a crucial role of the BSC, and also found additional theoretical support in point 1 and 2, "Create constancy of purpose" and "Adopt new philosophy", if the Global mission was communicated well to the employees and internalised by them (Walton 1989, pp.54-59). The initiative would address the lack of a clear strategy and goals that the employees revealed in the interviews. While CEO and

[36] For more on the theoretical foundations of the findings and their initiatives please refer to Chapter 9.

middle management are in the process of formulating Mission & Vision, they will only finish later in 2011. Therefore the implementation is only considered halfway complete. It is still acceptable that Jamaa has not come any further, as it is a comprehensive task, which cannot be rushed. The development of an M&V statement is a crucial part of our overall plan for quality improvement and very important and is therefore given a grade of 5.

The third initiative is "Avoid operational obstacles". The mechanics and drivers reported that some tools were missing, and they had to cope with alternative ways to get things repaired resulting in employee frustration. Our proposal is simply to buy these missing tools, as eliminate employee frustration, and is as such based not only on Deming's point 12, "Remove barriers for workmanship pride", but also point 7, "Institute leadership", by making the employees think about their problems and take active leadership to solve them (Walton 1989, pp.69-80 & 80-81). A few tools were still missing at the cut-off date, so therefore the initiative was only 75% implemented. This initiative is also considered very important to the quality improvement of Jamaa, as it deals with both employee satisfaction and as a side effect also efficiency, and is therefore given a grade of 5.

10.4.3 Theoretical discussion of 12 Deming-inspired initiatives

In this section we will discuss our theoretical foundation by comparing all 12 Deming-inspired initiatives to Deming's points, diseases and obstacles.

First of all, we disregard 5 of Deming's 14 points. We found that point 3, 10, and 11 were not relevant for Jamaa at all, since Jamaa does not have mass inspection, slogans, or numerical quotas respectively (Shepherd 2011a). Furthermore, point 4 and 5 will be covered by our Lean-inspired initiatives given our approach of triangulation, meaning that only 9 out of Deming's 14 points are relevant in our case (Basu 2009, pp.232-235; Deming 2000).

This gives us the following overview of our initiatives compared to the theoretical base in Deming's, which tells us that the 12 initiatives are theoretically valid. We shall distinguish between the original problem-identifiers from the previous chapter, and the additional supporting aspects presented in this chapter.

Figure 54 – Theoretical overview of 12 Deming-inspired initiatives

Our 12 Deming-inspired Initiatives	Point 1 - Constancy of purpose	Point 2 - Adopt new philosophy	Point 3 - Stop Mass Inspection	Point 4 - Do not price-select suppliers	Point 5 - Constant improvement	Point 6 - Institute training	Point 7 - Institute Leadership	Point 8 - Drive out fear	Point 9 - Break down staff barriers	Point 10 - Eliminate slogans & targets	Point 11 - Eliminate numerical quotas	Point 12 - Enable workmanship pride	Point 13 - Institute education	Point 14 - Accomplish transformation	Disease 1 - Lack of constancy of purpose	Disease 2 - Emphasising short-term profits	Obstacle 1 - Neglect long-range planning	Obstacle 10 - The unmanned computer	Total - # of aspects covered by initiative X
1. Communicate more frequently and organised	+					✓	✓			✓			+						5
2. Create global M&V statement	+	+													✓	✓	✓		5
3. Avoid operational obstacles					+					✓									2
4. Have individual meetings	+	+			+	+							✓						5
5. Get new CRM system										✓								✓	2
6. Initiate language training						✓	✓						+						3
7. Promote quality champion					+	✓	+												3
8. Establish 2 idea boxes	✓				+	+													3
9. Start training program in 2012				+									✓						2
10. Eat lunch with employees		+				+	✓												3
11. Have more social events							✓												1
12. Buy Jamaa work clothes		+					✓												2
# initiatives covering aspect X	**4**	**4**	**0**	**0**	**0**	**1**	**4**	**6**	**6**	**0**	**0**	**3**	**3**	**1**	**1**	**1**	**1**	**1**	
Aspect relevant in Jamaa?			**N**							**N**	**N**								
Aspect covered by Lean?				**Y**	**Y**														

Legend

✓: Original problem-identifier

\+ : Additional supporting aspects

Source: Authors' own creation inspired by Basu 2009; Beckford 2010; Deming 2000; Walton 1989

Note, that we shall not use all elements of Deming's management method in a rigorist manner, as Deming proposes, for instance by having both management and all staff to understand all points and so forth (Walton 1989, pp.85-86). Instead, we carefully select and adapt the major, important parts, as discussed in the Section 7.3.3 on page 78.

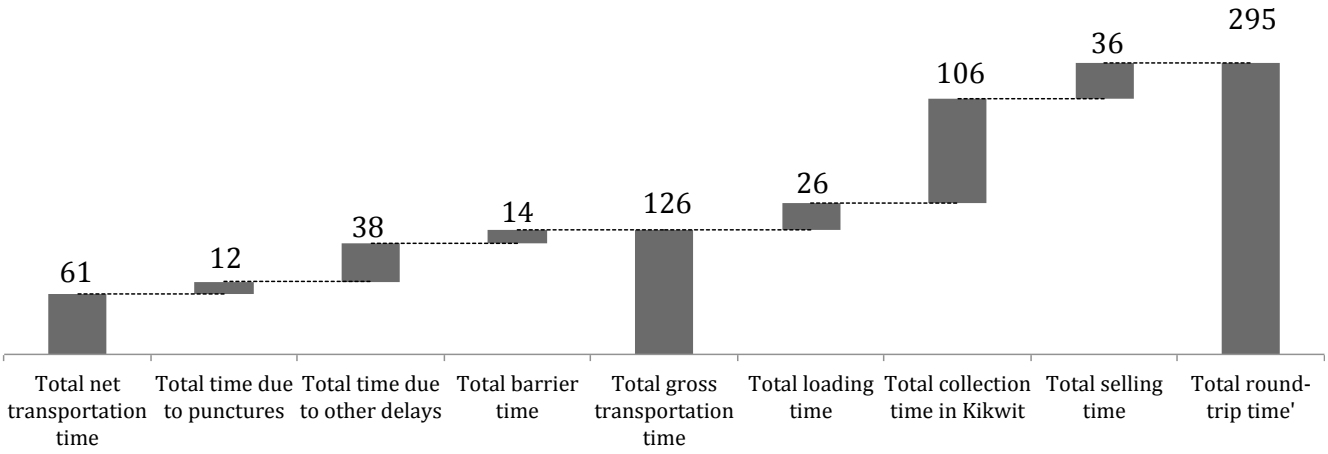
10.4.4 Discussing the net portfolio of Lean-inspired initiatives – 3 examples

The first Lean-related finding, "Lack of continuous data collection and analysis", lead to the Lean-inspired initiative, "Use continuous data analysis". Based on Lean principle no. 5, "Perfection", it simply meant that Jamaa should continue to use our trip tickets and analyse the data in order to keep tracking of large discrepancies so these could be dealt with (Womack & D. T. Jones 2003, pp.90-101). Overall, the initiative addressed the issue of lacking quality assurance in Jamaa, as there was only, sporadic ad-hoc quality control prior to this initiative. Although the authors still needed to inform Jamaa staff on how to analyse

the data going forward, the initiative was considered fully implemented at the cut-off date. It was deemed "very important", a grade of 5 to the leanness of Jamaa, as having continuous, data-driven improvement is fundamental within Lean.

The second Lean-related finding, "Very small part of total round-trip time is actually spent on the road", lead to the Lean-inspired initiative, "Measure & improve regularly transportation ratio". In practical terms, it is related to the previous initiative, but here it is specifically related to maximising the transportation ratio, being actual transportation time divided by total trip ticket in the following graph. In effect, all bars should be minimised, especially the ones to the right of net transportation time.

Figure 55 – LI2: Breakdown of average round-trip into sub-components in hours



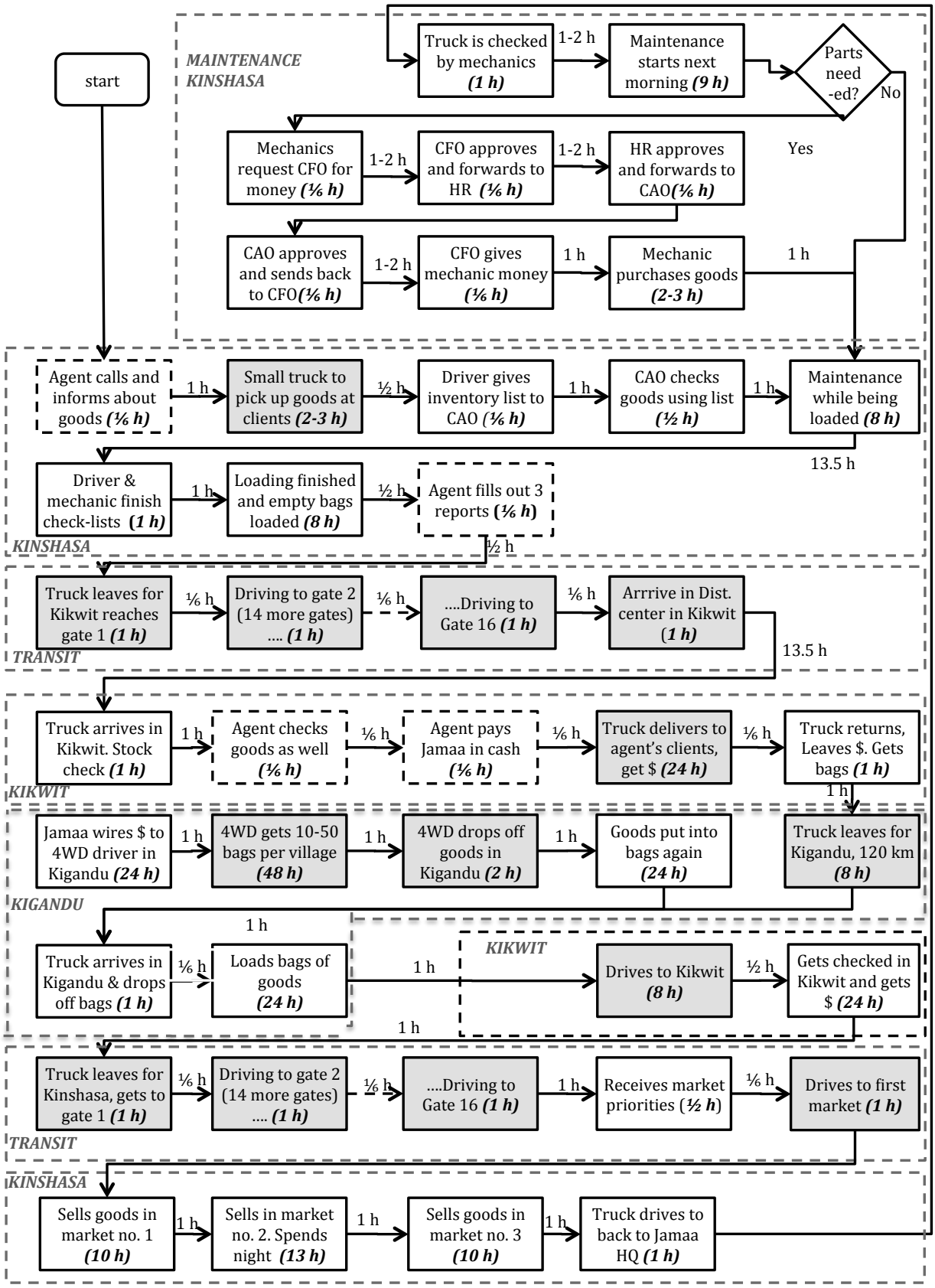
Source: Appendix 51, p. 321

As is evident, only 61 out of an average 295 hours were actually spent driving, roughly 20%. While the finding was theoretically based mainly on Lean principle 1, "Value", the initiative also has elements of waste 5, "Transportation" and Lean principle no. 5, "Perfection" (Beckford 2010, pp.135-38; Womack & D. T. Jones 2003, pp.90-101). The initiative was only considered halfway implemented at the cut-off date. It was deemed "very important", a grade of 5, to the leanness of Jamaa, as cutting away the wasteful transportation time would allow the trucks to add much more value to Jamaa at a lower cost.

The third initiative, "lack of usage of Value Stream Mapping" (VSM), is also related to the previous finding, but distinctly different, as VSM goes much deeper. In practical terms, the initiative "Use VSM as key tool" simply means that Jamaa should map all of its operations-related processes and evaluate which are value-adding, and cut away the non-value adding,

non-necessary parts (Womack & D. T. Jones 2003, pp.29-36). While the finding was based mainly on Lean principle 2, "Value Stream", this initiative would also covers sources of waste mainly 3, 5, and 7, being, "Waiting", "Transportation", and "Motion" (Beckford 2010, pp.135-38). The authors have mapped the major parts of Jamaa's overall transportation process in **Figure 56**, in which value adding activities are grey.

Figure 56 – LI3: Breakdown of average round-trip into sub-components in hours



Source: Muhemedy 2011

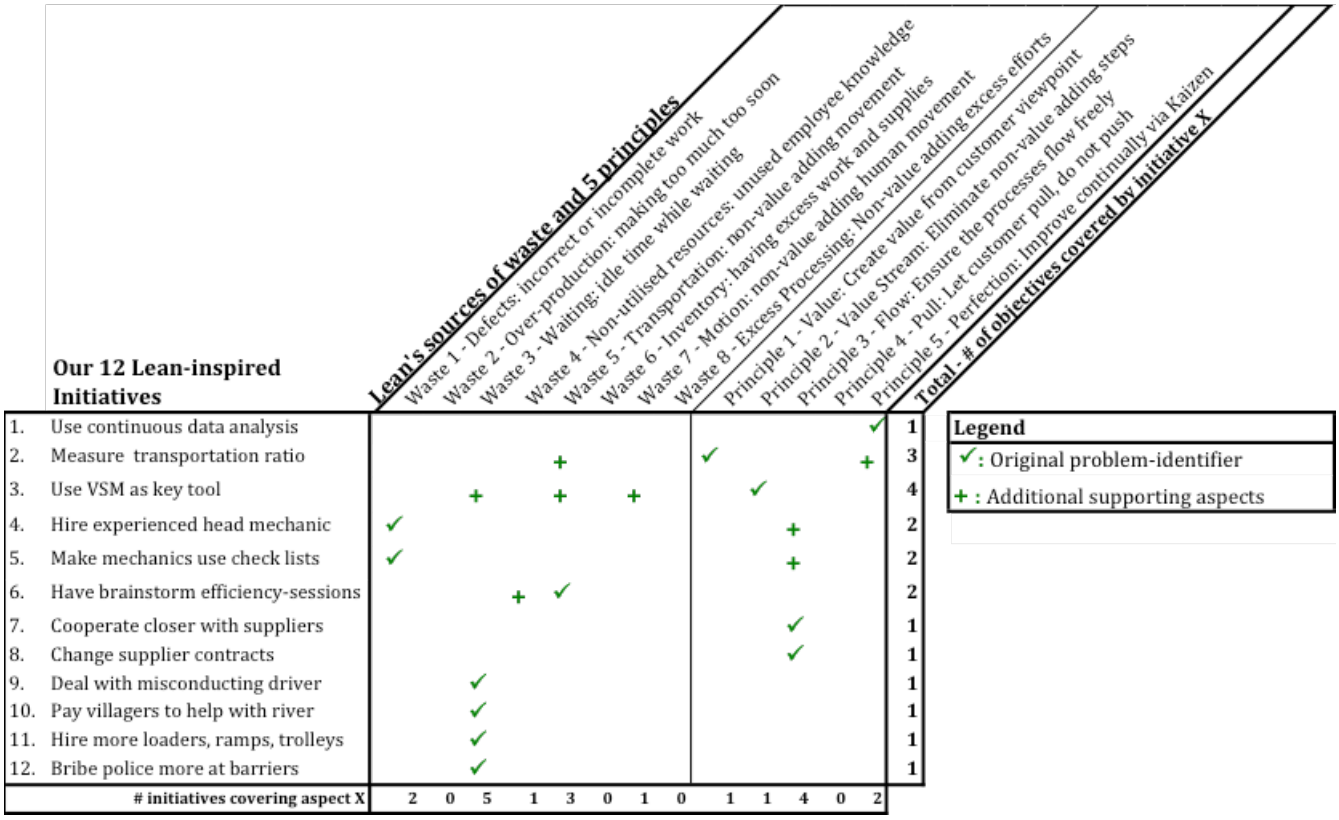
There is a need to map the sub-processes further, and therefore this map does not corresponds 100% with the value map of from the previous chapter, see Section 9.3.2 on page 98. After the time of the mapping, Jamaa decided, independent of the VSM, to change its processes somewhat, so that the large trucks would only travel between Kinshasa and Kikwit. A small truck would go out to the villages of Kingandu around Kikwit and collect goods to the new outpost in Kikwit, instead of having the large trucks doing that. A real usage of VSM has the potential for further improvements. The initiative was considered 75% implemented at the cut-off. It was deemed "very important", a grade of 5, as having a clear mapping and understanding of value- and non-value adding sub-processes is essential within Lean (Womack & D. T. Jones 2003, pp.37-49).

10.4.5 Theoretical discussion of 12 Lean-inspired initiatives

The 12 Lean-inspired initiatives were made based on Ohno and Liker's combined 8 sources of waste as well as Womack and Jones' 5 core, Lean principles. In this section we will discuss our theoretical foundation by comparing our Lean-inspired initiatives to these combined 13 points. As the graphs shows, source of waste 2, 6, and 8 are not covered at all by our initiatives, but this is due to the limitations of our initial findings, in which we did find the above-mentioned sources of waste, although there are arguably present. However, Jamaa can, by pursuing their search for leanness, probably discover and map these sources of waste in future measurement and deal with them then. Critically, Lean principle 4, "Pull", is not covered, as this was not necessary according to the CEO (see Appendix 42 on page 299).

The following overview of our 12 Lean-inspired initiatives show they are theoretically valid, as they have theoretical foundation in at least one of the combined 13 points, see the most-right column9. We shall distinguish between the original problem-identifiers from the previous chapter, and the additional supporting aspects presented in this chapter.

Figure 57 – Theoretical overview of 12 Lean-inspired initiatives



Source: Authors' own creation inspired by Basu 2009; Beckford 2010; Liker 2004; Womack & D. T. Jones 2003

10.5 Chapter conclusion

This chapter showed the process through which the authors determined 12 Deming-inspired and 12 Lean-inspired initiatives and their implementation status, as well as discussing the theoretical basis behind our initiatives. Although neither method was 100% implemented according to theory, Section 7.3.3-7.3.4 on page 78-79, the authors still found that the frameworks were sufficiently implemented and followed in a pragmatic manner that was able to add significant value to Jamaa.

The next chapter analyses the results of the second round of data collection and evaluates the changes between rounds 1 and 2.

11. Evaluation of the CIP and comparison between Rounds 1 & 2

11.1 Chapter introduction

The first round of data collection took place between 21/2 – 11/4 where after the improvement initiatives based on the questionnaires were implemented between 25/2 – 11/4, and the initiatives based on the data from the trip tickets were implemented between 11/4 - 25/4. Thereafter a second round of data collection took place with 4 trip tickets collected between 25/4 – 22/6, and 8 employee interviews carried out between 6/6 – 13/6.

This chapter consists of four sections. The chapter first describes the 24 interesting Deming-related findings made in the second round primarily via 8 personal interviews. Secondly, 4 Lean-related observations are presented which were collected via 4 trip tickets in the second round of data collection. 2 additional interesting observations are also presented. Finally, our complete second round Balanced Scorecard is presented to conclude the CIP.

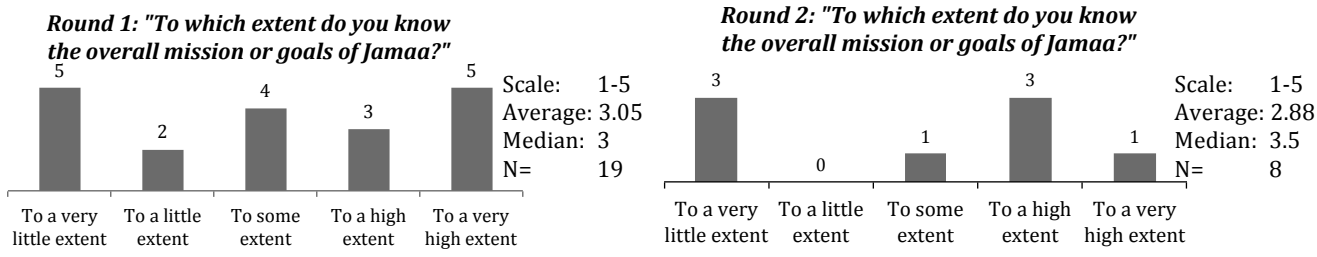
11.2 Deming-related observations

In this section, we present 24 observations that were mainly identified during 8 employee interviews[37], respectively 4 office and 4 non-office staff, in the second round, but also using additional information provided by the CEO. Of the 8 interviews, 3 were made over Skype by the authors and 5 were made by Flavie Tshidibi.

11.2.1 5 comparative observations between round 1 & 2

We compare the first and second round observations. For the first comparison, we present the actual distribution of answers.

Figure 58 – DF2: Employee knowledge of Jamaa's mission and goals – Round 1 & 2



Source: Appendix 30, p. 266 – Question 1.1.1. & Appendix 46, p. 307 - Question 1.1.1

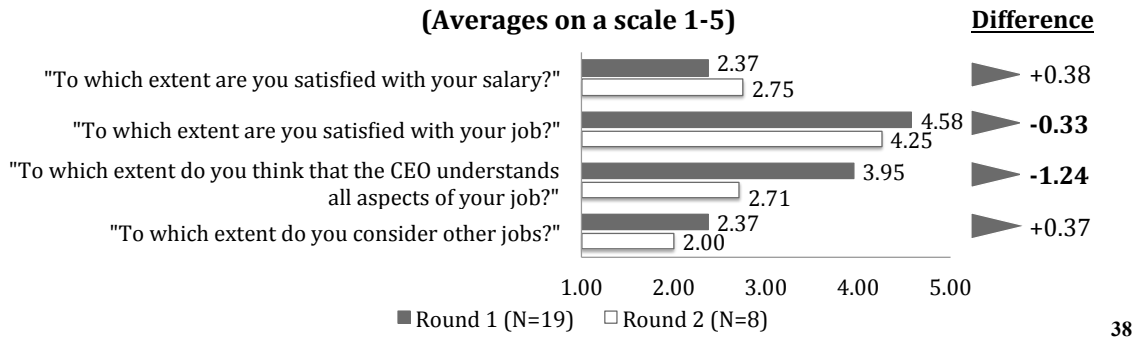
[37]The questionnaire was the same as in Round 1 except of 8 additional questions, see Appendix 45 on page 325.

As the figure above shows, the average of employee knowledge of goals, DF2, is almost the same in the second round falling from 3.05 by 0.17 to 2.88. However, as mentioned previously, it will take a long time to both create and formulate the mission and goals of Jamaa and even more importantly communicate them to employees and make them accept and internalise them. As the CEO says:

> *"I do not think we will see the full effects of this programme for a while. After you two are done, I will continue to implement the initiatives. It will take approximately 3-4 more months before we see tangible results."*
>
> *Source: Appendix 46, p. 307 - Question 7.1*

We will now go through 4 other important observations in which we compare the averages of Round 1 and 2.

Figure 59 – DF1 & DF4: Comparing round 1 and 2



[38]

Source: Appendix 30, p. 266 & Appendix 46, p. 307 – Questions 2.4.1, 2.6.1, 3.5, 6.3 respectively

As the first question above shows, there has been a modest, positive effects on salaries, but this finding seem to stem well with the fact that the CEO has informed us that some employees have been paid more.

Second, job satisfaction has actually dropped somewhat, but this can both be due to our CIP both also due to the "tough love" scheme that the CEO initiated – see 2.3.3 The "Tough Love" strategy from January 201 on page 16. This is a potential source of bias throughout this second round, that the employees might (unfortunately) associate the CIP with the tough love initiative of the CEO. There is little we can do, but we do take this observation into

[38] N=8 for questions 1, 2, and 4 in the table, whereas question 7 has N=7, as the CEO obviously is excluded from the sample.

consideration throughout the thesis. Still, some employees are very satisfied. As one office employee stated:

> *"One of the advantages of Jamaa is its meritocracy, it allows younger people like me to assume great responsibility"* (Appendix 46, p. 307 – Question 2.6.2).

Thirdly, and most dramatically, the extent to which the CEO is perceived to understand the processes, DF1, has dropped remarkably by -1.24. The CEO might not know the processes of the employees sufficiently. As one non-office employee stated:

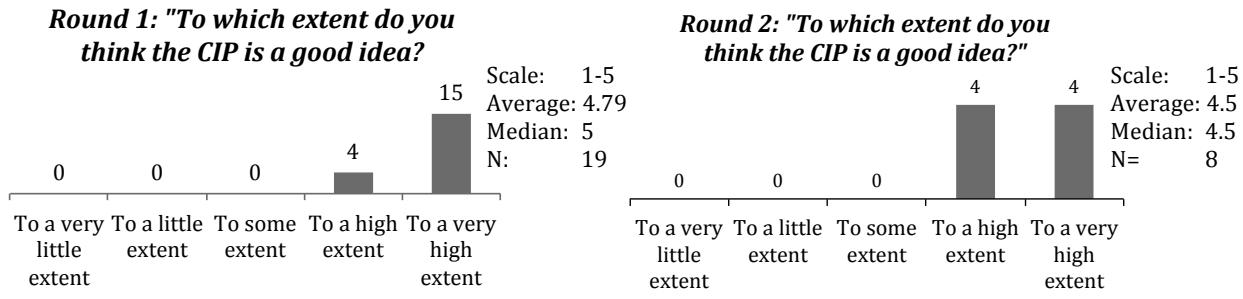
> *"Our managers do not know the aspects of our work. For Trade, it is necessary with somebody who knows it well"* (Appendix 46, p. 307 – Question 7.1).

Finally, the extent to which employees consider other job opportunities, related to DF4, has fallen on the scale, which is positive, as this scale is reversed, meaning that a small number means that employees are less interested in other jobs.

11.2.2 5 observations concerning employee evaluation of CIP's results

In this part, we will focus on the perceptions and outcomes of our CIP, as it is an important aspect of any improvement programme to review itself based upon the perception of the participants.

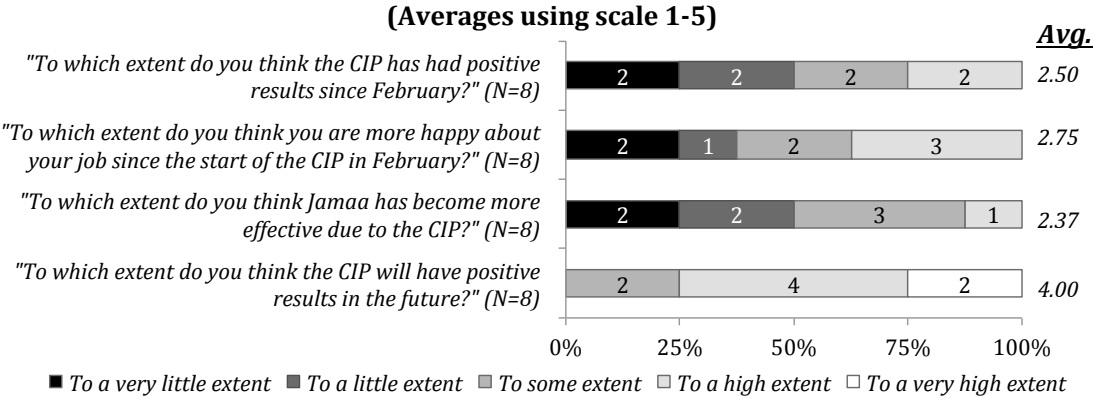
Figure 60 – Appraisal of CIP as a good idea for Jamaa – Round 1 & 2



Source: Appendix 30, p. 266 & Appendix 46, p. 307 - Question 6.2

Although there is a small drop of 0.29 in the average from round 1 to round 2, we still find a very high appraisal rate of the CIP as a good idea. However, when we turn to the actual, realised effects of the CIP the picture is somewhat different.

Figure 61 – Employee evaluation of effects of CIP



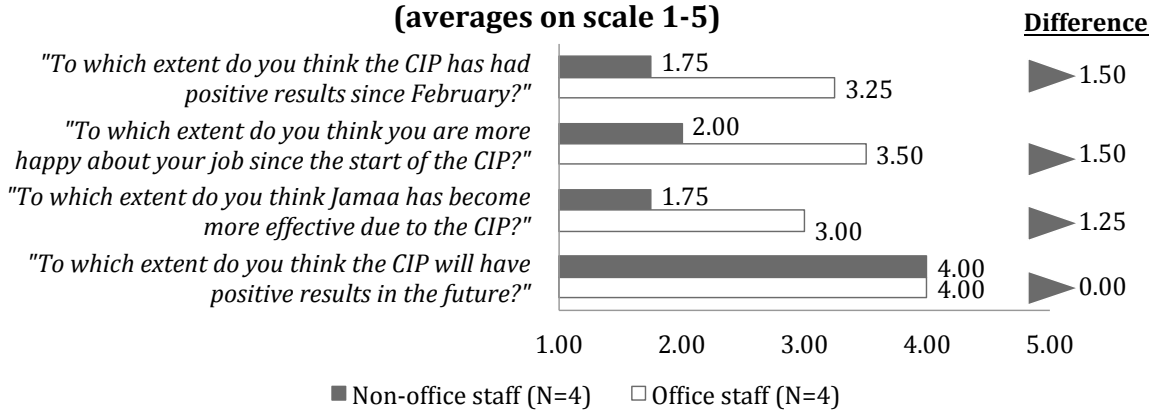
Source: Appendix 46, p. 307 - Question 6.4.1, 6.6.1, 6.7.1 & 6.5.1 respectively

For the first three questions, it is clear that the averages are below 3, that is, below the middle value of "To some extent". As one employee stated: *"We have not yet seen any positive results"* (Appendix 46, p. 307 – Question 6.6.2). Although the average appears negative, we have to bear in mind the scale that the respondents were given. In order to have consistency and not to confuse the employees, we decided to maintain our previously used scale of going from "To a very little extent" to "To a very high extent". Strictly speaking, this scale does not allow for negative answers, so this is problematic. It also implies that even an answer such as "To a little extent" assumes that there have been some positive effects. In conclusion, the first three questions show that there have been some improvements already, albeit modest. However, when we turn to the fourth and final questions, it is clear that there is much higher level of expectations, which is a positive indication that we have the employees' accept and belief in the CIP.

11.2.3 4 observations concerning employee evaluation of CIP - Differences between office and non-office staff

Interestingly, if we take the same four questions of the previous section and split them on non-office and office staff, a significant difference is revealed.

Figure 62 –DF1: Employee evaluation of CIP's effects – Split on office and non-office



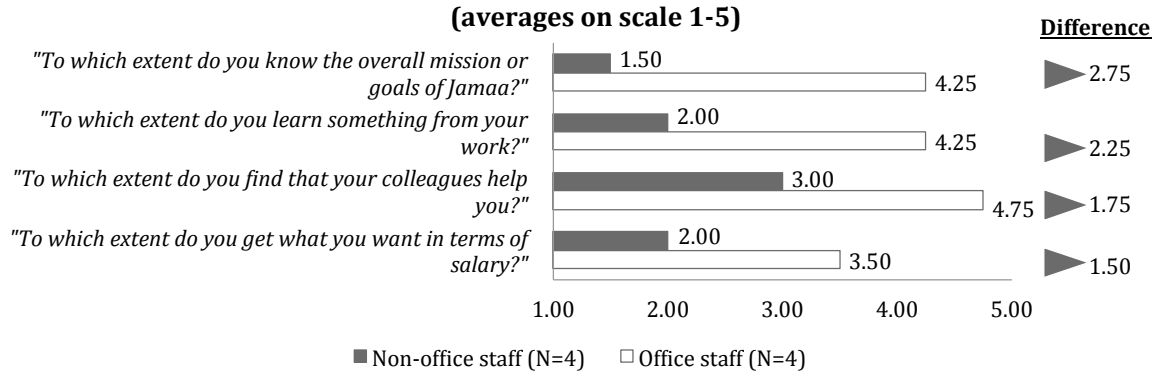
Source: Appendix 46, p. 307 - Question 6.4.1, 6.6.1, 6.7.1 & 6.5.1 respectively

Only in terms of the CIP's future results do the two employee groups answer similarly, otherwise, office-staff answer much more positively by as much a 1.5 points. Management should investigate why non-office staff has apparently benefitted less from the CIP so far, which we try to examine as well via DF1 and DI1, see Section 9.2.2 and 10.4.2 on page 94 and 113.

11.2.4 Differences between office and non-office staff

Finally, the authors would like to mention again the difference between office and non-office staff answers that was discovered in the interviews. The following figure shows the most relevant questions in which the office and non-office staff differed in Round 2.

Figure 63 – Differences between non-office and office staff answers – Round 2



Source: Appendix 46, p. 307 – Question 1.1.1, 2.4.2, 4.3 & 2.4.1 respectively

The first question was already mentioned under Deming-related finding 1, and points out that office staff is still much more informed about the strategy and goals than non-office staff. As one non-office employee stated: *"They have never explained us the mission of Jamaa."* (Appendix 46, p. 307 – Question 1.1.2) Secondly, it seems that non-office staff learn very little in their work compared to office staff, and it also seems that office staff is much more helpful towards each other. Finally, there non-office staff seems to be much dissatisfied with their salaries than office staff, as three non-office staff employees mentioned that *"...salary rises were a great motivation* (Appendix 46, p. 307 – Question 2.5.2). Although there was differences (ranging 0-1.5) in the other questions, they were taken into consideration in our analyses.

11.2.5 6 other messages from employees to CEO

In addition to the above-mentioned, primarily quantitative observations, the observations below show the qualitative observations that were made in the Round 2. As most of these have been dealt with in Chapters 9 and 10 we shall not comment further on them here, but we do notice that they still persist and as such it is important the observations are dealt with by Jamaa in the near future.

Figure 64 – Other messages from employees to CEO – Round 2

Finding identified	Question	Quote	Question number
Missing tools for employee	"What do you need?"	*"Spare tires"* *"Tools, wrenches."* *"A new laptop"* *"More capital"*	3.1.2
Employee suggestions not taken serious by CEO	"Are your suggestions taken seriously by the CEO?"	*"No, often they are not taken seriously"* *"No, we need more vocational training and education"*	3.4.2
Employee obstacles still persist	"What are the biggest obstacles in your daily work?"	*"We often have to leave without bags"* *"The money to purchase village produce is often delayed"* *"The much too frequent punctures"* *"Need for further management education"* *"Improvement of languages"* *"Poor quality of the good we buy in the villages"* *"The fact that some decisions are taken in top"*	3.7.1-3.7.3
Slow response level to employee ideas by CEO	"Does the CEO use your ideas?"	*"Takes too long time from idea inception to realisation"*	5.2.3
Survey should be used actively by CEO	"Are you happy about the survey?"	*"Yes, but I would be happier if the CEO used it to solve our current problems"* *"Yes, this survey enables us to give ideas to management"*	
For CIP to succeed, CEO should listen more to employees	"Do you think the CIP will bring positive results in the future?"	*"Yes, if management takes our suggestions into consideration"* *"Yes, but we should be heard more, as we know what is taking place out on the roads"*	6.5.2

Source: Appendix 46, p. 307

11.3 Lean-related observations

In this section, we shall present 4 Lean-related observations, which were mainly identified during 4 trip tickets in the Round 2. The trip tickets, alongside author Emmet Sharghbin's observations and talks with employees, as well as notifications from the CEO, formed the basis for the 4 Lean-related findings (Appendix 47, p. 312).

11.3.1 LF2: Testing for differences in mean and variance of round-trip times of Round 1 and 2

In this part we test, if the mean and variances of the total round trip times differ between Round 1 and Round 2. For such small sample sizes, we should use non-parametric tests, but as this is not a statistical paper, we refrain from doing so, and instead conduct a 2 sample t-test assuming equal variance. For more on non-parametric tests and our F-test for variance, see Appendix 47 on page 312.

Figure 65 – 2-sample independent T-test: unequal sample size & equal variance

t-Test: Two-Sample Assuming Equal Variances

	Round 1	*Round 2*
Mean	295.85	355.03
Variance	10101.14	5412.23
Standard Deviation	100.50	73.57
Observations	9.00	4.00
Pooled Variance	8822.34	
Hypothesized Mean Difference	0.00	
df	11.00	
t Stat	-1.05	
P(T<=t) one-tail	0.16	
t Critical one-tail	1.80	
P(T<=t) two-tail	0.32	
t Critical two-tail	2.20	

Source: Appendix 51, p. 321

As expected, there is no significant difference in our numbers, but it is alarming that the average has risen from 295.85 to 355.03 hours. The one-tailed p-value of 0.16 is relatively small. However, in our case, given the negative sign of the t-stat, this would actually mean that the Round 2's mean is close of being significantly larger than Round 1, which is exactly the opposite of what we would like to see (Field 2009, pp.316-346). In conclusion, the indications that variance has gone down and the average of trip times gone up are

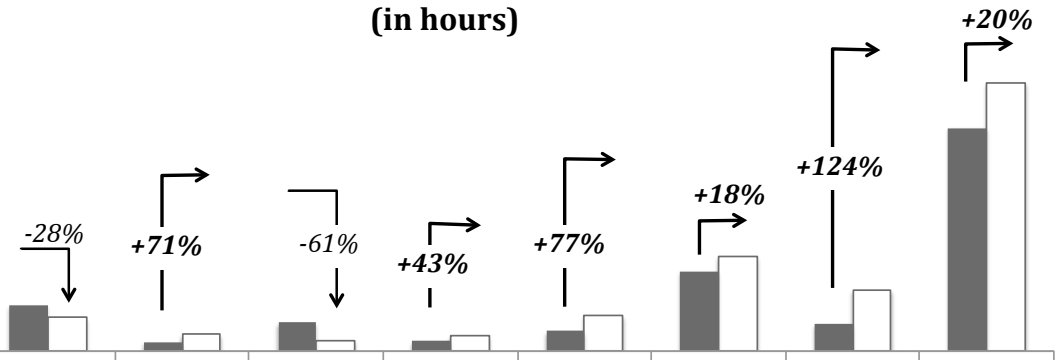
statistically insignificant. We have to bear in mind that we are dealing with very small samples indeed, and small, uncontrollable differences may have caused the trucks of Round 2 to be slower and furthermore sample size is also much smaller in Round 2.

11.3.2 Overview of changes in sub-components

Trying to break down the differences in the average round-trip times from Round 1 to 2, we see it goes from 295 to 355 hours, an increase of 20%, see figure below.

Figure 66 – LF2, LF5, LF15-17: % chg. in average time of sub-components from Round 1 to 2

(in hours)



	Total net transportation	Total time due to punctures	Total time due to other delays	Total barrier time	Total loading time	Total collection time in Kikwit	Total selling time	Total round-trip time
Round 1	61	12	38	14	26	106	36	295
Round 2	44	21	15	20	47	125	81	355

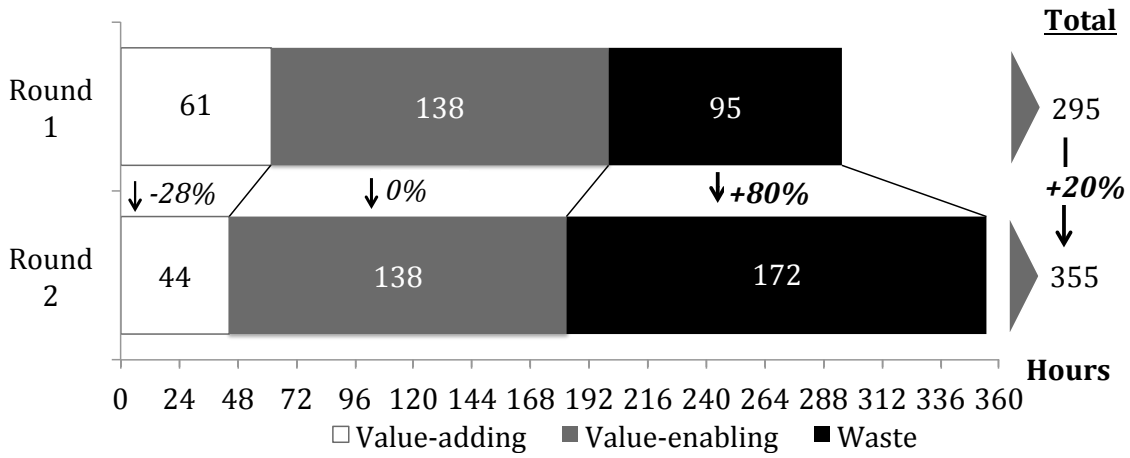
Source: Appendix 51, p. 321

Positively, both net transportation time on the road and other delays have fallen, but all other sub-components have risen resulting in an overall increase of 20% in total round-trip time. One of the reasons is the fact that selling has gone up significantly, as the wet season is over making the small villages accessible again, which in turns means that supply of cassava has gone up, and therefore it takes longer to sell the goods. The end of wet season also explains why the value adding net transportation time has gone down, as roads are better now. The seasonal change may also explain why collection time has gone up, if we assume that the farmers now have alternatives, and therefore may negotiate harder with Jamaa's drivers.

11.3.3 LF3: Drop in Value-adding activities in absolute and relative terms

The following figure compares the value adding, value enabling and wasteful sub-components of the average round-trip in Round 1 to Round 2.

Figure 67 Break-down of an average trip in Round 1 into Value-adding, Value-enabling and Waste sub-component vs. Round 2



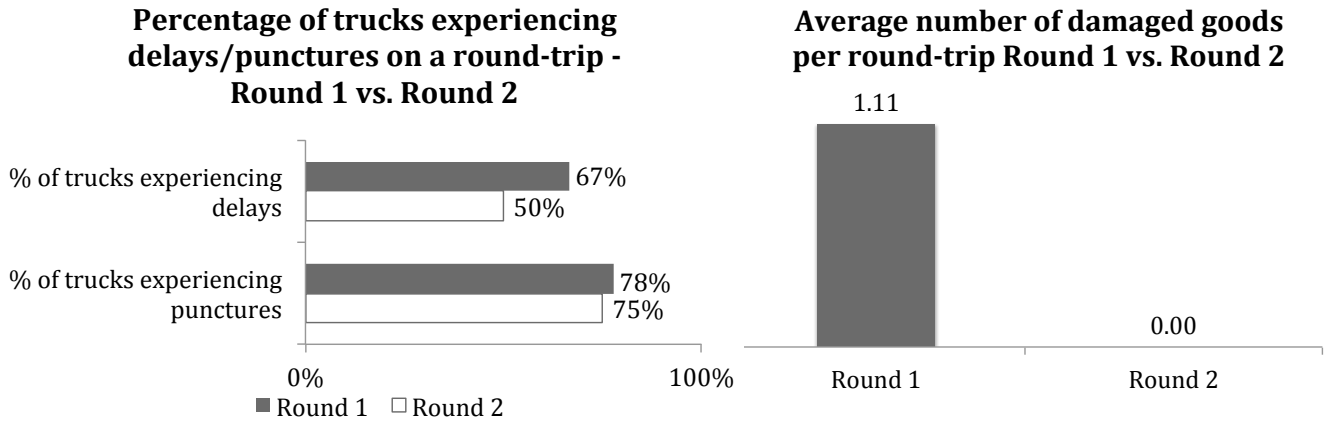
Source: Appendix 38, p. 294 & 0, p. 318

As mentioned before, the 20% increase in total time is unfortunate, but equally bad is the fact, that Waste rises by 80% from 95 hours to 172 hours of total round-trip time. As mentioned a large part of this might be a seasonal effect.

11.3.4 Changes in punctures, delays, and damaged goods

When looking at the percentage of trucks experiencing delays/punctures on a trip, and average number of damaged goods in Round 1 and 2, there are small, insignificant improvements, but again, given our small sample sizes, we cannot rely too heavily on these results, although they may be positive indications.

Figure 68 – LF14: Percentage of trucks experiencing delays/punctures and number of damaged goods drop from Round 1 to 2



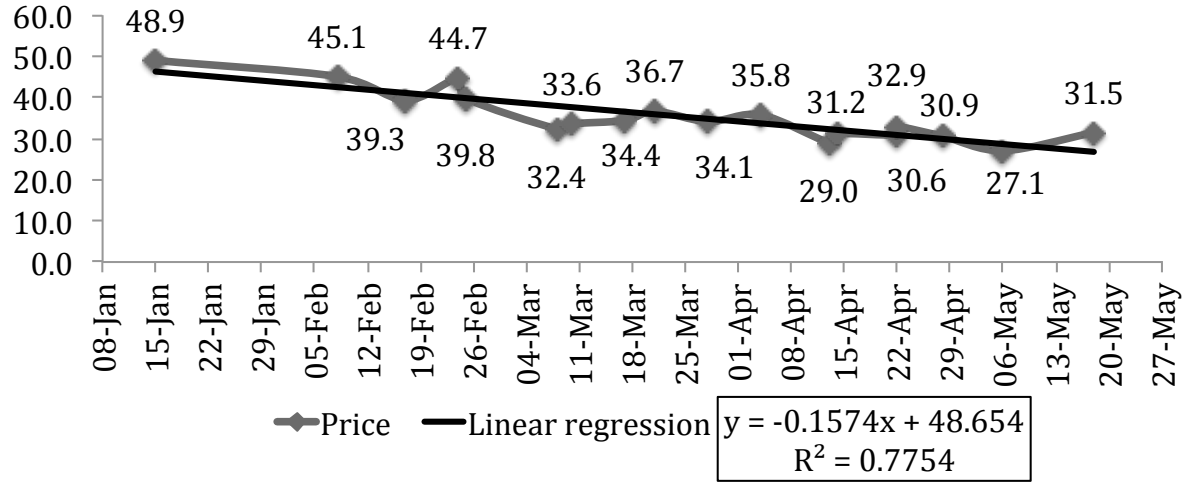
Source: Appendix 50, p. 320

11.4 2 other interesting observations

11.4.1 Falling prices on Jamaa's main good cassava

One of the most frequent goods of Jamaa is cassava, a main staple in the Congolese diet being a cheap source of carbohydrates for the Congolese. The sales prices drop as the weather changes from wet season to dry season over the first five months of the year, as the following figure shows, which is based on financial statement figures.

Figure 69 – Drop in sales price per kilo cassava January-May 2011



Source: Appendix 53, p. 322

The linear regression shows that R^2, the proportion of variability in the data set being accounted for by our statistical model, is 78%, which indicates a fairly good predictive power in our model. It shows that on average, the prices fell by -0.15 dollar on a daily basis, or roughly 1 dollar a week, which corresponds well with prices starting around 49 dollars but falling to around 28 dollars some 20 weeks later. According to the CEO the price will stabilise around 25 dollars because it rises again later in the year. This is an important issue that will affect the profit goal in our BSC, but it is also an issue we cannot address.

For the price modelling, we could have use more advanced statistical models such as autoregressive (AR) models, integrated (I) models, and moving average (MA) models, which, in general, depend linearly on previous data points or autoregressive moving average (ARMA) and autoregressive integrated moving average (ARIMA) models. But as mentioned, this is not a statistical paper, so we will refrain from doing so.

11.5 Conclusive Balanced Scorecard

The following figure shows the progress that the authors measured in the end of July. We present all four parts of our BSC being the Value, Customer, Value Chain, and Leadership & Developmental perspectives, including comments from the CEO in June 2011 (Shepherd 2011e).[39]

Figure 70 – Conclusive BSC

Value Perspective									
Objectives		Measures		Pilot?	Data	R1 Results	Initiative	R2 Results	Change
1	Stay in business	1.1 1.2	Profit (before humanitarian donation) No. of days with negative cash flow (%)	✓ ✓	• Financial data • Financial data	$8,676 ND	N/A N/A	$1,056 ND	↓
2	Continuous employment	2.1 2.2 2.3	No. of staff fired or moved (last 3 months) No. of employees that quit (last 3 months) Employment / screening procedure	✓ ✓ ✗	• Company data • Company data • Manager interview	1 0	N/A N/A	1 0	→ →
3	Increase profitability	3.1 3.2 3.3	Revenue per product COGS margin Profit margin (before hum. donation)	✓ ✓ ✓	• Financial data • Financial data • Financial data	$46.99/bag 82.99% 35.50%	N/A N/A N/A	$30.62/bag 74.66% 2.30%	↓ ↓ ↓
4	Grow business sustainably	4.1 4.2	Total revenue No. of truck trips to villages	✓ ✓	• Financial data • Financial data	$32,847 2	N/A N/A	$48,840 6	↑ ↑
5	Work with society to foster independence	5.1 5.2 5.3	Humanitarian donation (10% of profit) General village satisfaction Income proxies - no. of mobiles, machinery, transport vehicles, tin roofs, villagers with education, clean water etc.	✓ ✗ ✗	• Village questionnaire • Case study	$868	N/A	$106	

[39] ND = No Documentation, AI = Anecdotal Evidence for Improvement based on observations for the CEO; Sur. = Consolidated questionnaire results; TT = Consolidated Trip Ticket Results; All monetary values in USD

11 - Evaluation of the CIP and comparison between Rounds 1 & 2

Value Perspective - Comments			
Objectives		**Measures**	**Comments from CEO**
1	Stay in business	1.1 Profit (before humanitarian donation) 1.2 No. of days with negative cash flow (%)	There are huge seasonal fluctuations in the price of Cassava (main product sold), which means that profits are very unstable
2	Continuous employment	2.1 No. of staff fired or moved (last 3 months) 2.2 No. of employees that quit (last 3 months) 2.3 Employment / screening procedure	R1: 1 staff fired due to stealing R2: 1 staff moved internally
3	Increase profitability	3.1 Revenue per product 3.2 COGS margin 3.3 Profit margin (before hum. donation)	There are huge seasonal fluctuations in the price of Cassava (main product sold), which means that profits are very unstable
4	Grow business sustainably	4.1 Total revenue 4.2 No. of truck trips to villages	Truck have begun leaving on time due to new incentives
5	Work with society to foster independence	5.1 Humanitarian donation (10% of profit) 5.2 General village satisfaction 5.3 Income proxies - no. of mobiles, machinery, transport vehicles, tin roofs, villagers with education, clean water etc.	Local manager is spending much more time in the villages --> improved relationship. Anecdotally, things are definitely improving

Customer Perspective								
Objectives		**Measures**	**Pilot?**	**Data**	**R1 Results**	**Initiative**	**R2 Results**	**Change**
6	Highest quality in the market	6.1 Speed of selling stock 6.2 Customer perception on quality	✓ ✗	• Anecdotal evidence • Customer questionnaire	ND	N/A	AI	↑
7	Unmatched reliability and service	7.1 Actual vs. planned schedule variances 7.2 Customer perception on reliability	✓ ✗	• Anecdotal evidence • Customer questionnaire	ND	LI1-12, esp. 1, 7-9	AI	↑
8	Offer appropriate selection to meet cust. needs	8.1 Average spending per customer 8.2 Customer perception on selection	✗ ✗	• Anecdotal evidence • Customer questionnaire				
9	Increase brand equity	9.1 Brand awareness 9.2 Brand perception	✗ ✗	• Customer questionnaire • Customer questionnaire				
10	New customer satisfaction	10.1 Customer satisfacation new vs. existing	✗	• Customer questionnaire				

Customer Perspective - Comments			
Objectives		**Measures**	**Comments from CEO**
6	Highest quality in the market	6.1 Speed of selling stock 6.2 Customer perception on quality	Speed of sales has increased due to higher quality and packaging, although initiative started prior to the CIP
7	Unmatched reliability and service	7.1 Actual vs. planned schedule variances 7.2 Customer perception on reliability	There is less variance in schedules - trucks are leaving on time due to initiatives and new incentives
8	Offer appropriate selection to meet cust. needs	8.1 Average spending per customer 8.2 Customer perception on selection	
9	Increase brand equity	9.1 Brand awareness 9.2 Brand perception	
10	New customer satisfaction	10.1 Customer satisfacation new vs. existing	

11 - Evaluation of the CIP and comparison between Rounds 1 & 2

Value Chain Perspective								
Objectives	Measures	Pilot?	Data	R1 Results	Initiative	R2 Results	Change
11 Stabilise entire value chain	11.1 % of completed trip tickets (last 3 months) 11.2 % of workflows covered by workflows 11.3 Std.Dev. of truck times	✓ ✓ ✓	• Company data • Company data • Fig. 10 Two-sample	0% 25% 100.5 hours	LI1 N/A LI1, 3	75% 80% 73.6 hours	↑ ↑ ↑
12 Optimise value stream and remove waste	12.1 Avg. no. of goods damaged per trip 12.2 % of trips where truck is delayed 12.3 Average truck time 12.4 Decrease % and absolute wasteful time 12.5 % of trips where truck is punctured 12.6 Increase % and absolute value-adding time 12.7 Fuel and material costs	✓ ✓ ✓ ✓ ✓ ✓ ✗	• TT Q2.4 and 2.5 • TT Calc. + Title • Fig. 10 Two-sample • TT Comparing value add • TT Punctures and delays • TT Comparing value add • Company data	1.11 67% 295 31% (92h) 78% 21 % (62h)	LI3 LI4, 5, 6 LI1-12 LI1-12 LI4, 5, 6 LI2, 3	0.00 50% 355 47% (162h) 75% 13 % (44h)	↑ ↑ ↓ ↓ ↑ ↓
13 Enhance CRM and SRM	13.1 Entries in CRM database 13.2 No. of customer surveys 13.3 No. of customer meetings / calls 13.4 Repurchase rate 13.5 Entries in SRM database	✗ ✗ ✗ ✗ ✗	• New company data • New company data • New company data • New company data • New company data				
14 Work with suppliers improve their processes	14.1 No. of supplier development engagements 14.2 Developments in inputs and outputs of each supplier	✗ ✗	• New company data • New company data				
15 Maintain quality levels for all new processes	15.1 New vs. existing employee survey results 15.2 Performance of new vs. existing drivers 15.3 Comparison of new vs. existing processes	✗ ✗ ✗	• Questionnaires • Trip tickets • New company data				

Value Chain Perspective - Comments		
Objectives	Measures	Comments from CEO
11 Stabilise entire value chain	11.1 % of completed trip tickets (last 3 months) 11.2 % of workflows covered by workflows 11.3 Std.Dev. of truck times	Very relevant measure as it will help to sustain quality, especially when growing. Employees are responding very well to increased documentation of work flows. In the future there will be a separate "procedure documentation and training" department
12 Optimise value stream and remove waste	12.1 Avg. no. of goods damaged per trip 12.2 % of trips where truck is delayed 12.3 Average truck time 12.4 Decrease % and absolute wasteful time 12.5 % of trips where truck is punctured 12.6 Increase % and absolute value-adding time 12.7 Fuel and material costs	This is one of Jamaa's biggest concerns. Unfortunately "damaged goods" or "waste" is rarely reported and it is relatively easy to cover the issues up, thus there is very little data. Would like to increase reporting in the future
13 Enhance CRM and SRM	13.1 Entries in CRM database 13.2 No. of customer surveys 13.3 No. of customer meetings / calls 13.4 Repurchase rate 13.5 Entries in SRM database	
14 Work with suppliers improve their processes	14.1 No. of supplier development engagements 14.2 Developments in inputs and outputs of each supplier	
15 Maintain quality levels for all new processes	15.1 New vs. existing employee survey results 15.2 Performance of new vs. existing drivers 15.3 Comparison of new vs. existing processes	

Leadership & Development Perspective								
Objectives		Measures		Pilot?	Data	R1 Results	Initiative	R2 Results	Change
16	Increase employee satisfaction & engagement	16.1	Employee satisfaction	✓	• Sur. Q2.6.1 • Anecdotal evidence	4.58 ND	DI11, 12	4.25 AI	→ ↑
		16.2	Employee engagement (inverted scale)	✓	• Sur. Q6.3	2.37	DI7, 11, 12	2.00	↑
		16.3	No. of social events held	✓	• Company data		DI11		↑
17	Ensure proper tools and training	17.1	Employee perception on proper tools	✓	• Sur. Q3.1.1	2.58	DI3, 5	3.00	↑
		17.2	Employee perception on proper training	✓	• Sur. Q3.2	3.63	DI4, 9	2.43	↓
		17.3	No. of training hours	✓	• Company data	ND	DI9	AI	↑
		17.4	Budget per employee for training	✗	• Financials				
		17.4	% employees with personal training plans	✗	• Company data				
		17.5	Productivity per employee	✗	• New company data				
18	Focus on leadership and innovation	18.1	Employee perception	✓	• Sur. Q5.2.2	1.53	DI8	1..43	→
		18.2	No. of employee proposals + no. of proposals implemented	✓	• New Company data	0/0	DI8	"some"/0	→
		18.3	No. of of seminars on leadership	✗	• Company data				
		18.4	No. of special initiatives ("leadership week", "best practice week" etc.)	✗	• Company data				
19	Ensure org. alignment	19.1	Employee perception	✓	• Sur. Avg. Q1.1.1 and Q1.2	3.61	DI2	3.32	→
		19.2	No. of strategy sessions held	✓	• Company data	ND	DI2		↑
20	Promote org. culture and values	20.1	Employee perception	✓	• Sur. Q1.1.1	3.05	DI2	2.88	↓
		20.2	No. of values sessions	✓	• Company data	2/month	DI2	2/month	→
		20.3	No. of communication initiatives	✗	• Company data				
21	Improve internal comm.	21.1	Employee perception on CEO's comm.	✓	• Sur. Q5.1	4.22	DI1, 6, 10	4.29	→
		21.2	Manager perception on their communication	✓	• Sur. Q2.12	4.00	LI6	4.00	→
22	Improve internal and external teamwork	22.1	Employee perceptions on teamwork	✓	• Sur. Avg. Q4.1 - Q4.4	4.55	DI4, 10, 11	4.16	→
		22.2	No. of town hall meetings	✓	• Company data	1/month	N/A	1/month	→
		22.3	No. of team meetings	✓	• Company data	1/week	N/A	5/week	↑
		22.4	No. of teambuilding exercises	✗	• Company data				
		22.5	No. of development workshops with key stakeholders	✗	• Company data				

Leadership & Development Perspective - Comments			
Objectives		Measures	Comments from CEO
16	Increase employee satisfaction & engagement	16.1 Employee satisfaction 16.2 Employee engagement (inverted scale) 16.3 No. of social events held	Believes it has gone up - many of the issues identified in R1 have now been addressed. However, it will take a long time to really improve the relationship and trust with employees. Social events have increased
17	Ensure proper tools and training	17.1 Employee perception on proper tools 17.2 Employee perception on proper training 17.3 No. of training hours 17.4 Budget per employee for training 17.4 % employees with personal training plans 17.5 Productivity per employee	Office staff are spending more time on training non-office staff. Furthermore, new budgeting procedure means that local managers increase training if there is enough money. Strategy is working - employees are satisfied and there is an incentive to do well
18	Focus on leadership and innovation	18.1 Employee perception 18.2 No. of employee proposals + no. of proposals implemented 18.3 No. of of seminars on leadership 18.4 No. of special initiatives ("leadership week", "best practice week" etc.)	Idea box has been set up and proposals have been put forward. However, mainly complaints and very few actual suggestions for improvement. People need an incentive to make constructive proposals, e.g. recognition for good suggestions
19	Ensure org. alignment	19.1 Employee perception 19.2 No. of strategy sessions held	A lot of time is spent on values and "ethical training".
20	Promote org. culture and values	20.1 Employee perception 20.2 No. of values sessions 20.3 No. of communication initiatives	A lot of time is spent on "ethical training". However, the core values for Jamaa Trade still need to be defined by the local employees
21	Improve internal comm.	21.1 Employee perception on CEO's comm. 21.2 Manager perception on their communication	CEO has begun eating with the rest of the employees and has made a bigger effort to communicate more
22	Improve internal and external teamwork	22.1 Employee perceptions on teamwork 22.2 No. of town hall meetings 22.3 No. of team meetings 22.4 No. of teambuilding exercises 22.5 No. of development workshops with key stakeholders	Townhall meetings once a month - same as before. However, there is now a bigger focus on planning, and sub-teams meet on a daily basis to plan daily and weekly goals

Source: Authors' own creation adapted from Kaplan & Norton 1992

Sub-conclusion on BSC

We can conclude that the **Value Perspective** has an overall negative trend, as profits have fallen remarkably, but unfortunately there is a very strong seasonal effect as mentioned, which we cannot isolate with the limited data set, meaning that the CIP's isolated effect on profits is unknown.

The **Customer Perspective** has a weak positive trend, as the CEO has told the authors that the firm is experiencing higher quality in the market as well as fewer breakdowns resulting in overall less schedule variances, but this is only supported by anecdotal evidence.

The **Value Chain Perspective** has an positive trend, as the value chain has been stabilised, but unfortunately there are still negative development such as increase in average round-trip time caused by an increase in wasteful time, but again this may be caused by the strong seasonal effect, meaning that the isolated effect of the CIP on the value chain is unknown.[40]

The **Leadership and Development Perspective** shows several positive trends, as employee engagement, tools, training hours, strategy sessions and meetings have gone up, yet perception on training and organisational culture and mission have fallen. Still there is a significant positive overall trend in this area.

There are both negative and positive trends, but overall the changes in the BSC have not been as successful as the authors intended, albeit the two lower perspectives were relative positive. Still, the implementation phase has just begun, and both the authors and the CEO believe that more positive results will emerge in the coming period.

11.6 Chapter conclusion

All the above-mentioned observations have proven that there are several interesting issues to deal with at Jamaa and many areas with potential for further improvement. Overall, the main contributions have been within the Leadership and Development perspective, as this area is often more responsive and easier to impact on a short-term basis. The underlying notion of cause-and-effect within the BSC implies positive changes in the bottom layer will

[40] As a part of objective 11 "Stabilise entire value chain", the authors initially proposed to increase the number of Standard Operating Procedures (SOPs) as a way to ensure service-based and organisational quality. However, we did not propose any initiatives directly to improve this measure, as the CEO has already begun such an initiative (Shepherd 2011a)

result into improvements in the layer above until, eventually, the financial and social goals are positively influenced. The small improvements we have seen especially in the bottom layer can thus be expected to positively influence the subsequent upper layers in the future if Jamaa continues to work on its performance using the CIP.

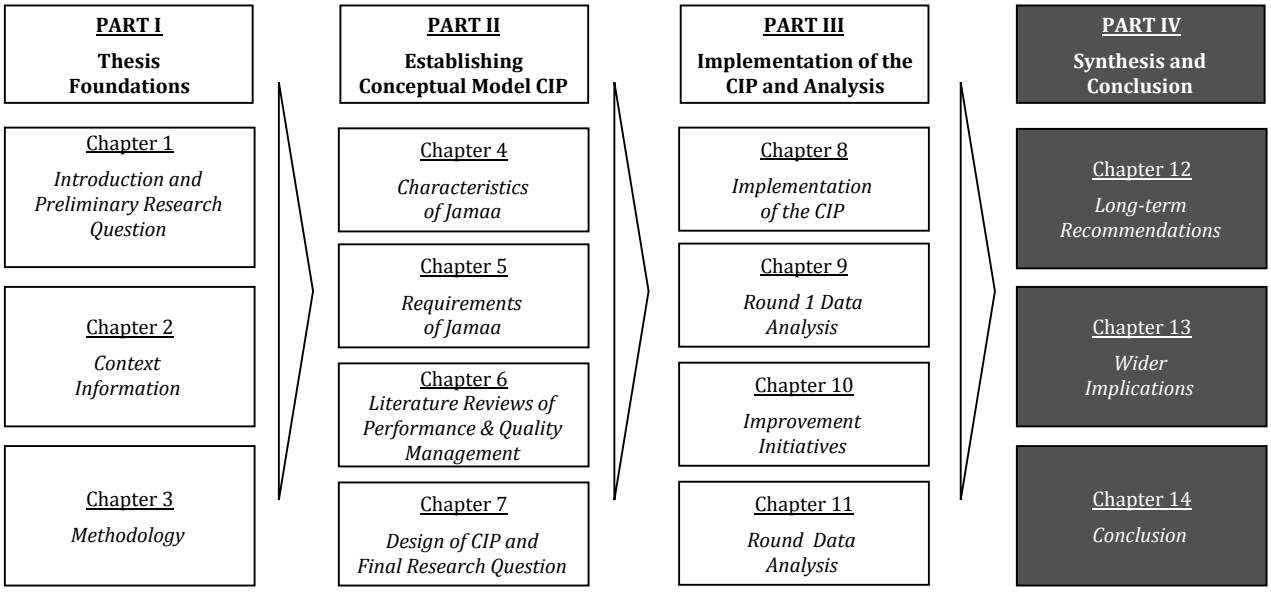
On a more overall level, the authors can think of four hypotheses why the CIP has failed to produce positive results. The first hypothesis is that the very selection of frameworks in the CIP was wrong. The authors' attempt of "adapting" to Congo may have been futile in the sense that they may have selected frameworks that are far too complex, unnecessary, or unsuitable for Jamaa in its current situation. The second hypothesis is that the implementation of the CIP went wrong. The authors had to mainly rely on a few, busy key staff to implement the CIP, as they themselves only were only in Congo for half a month. The successful implementation of such complex frameworks may require a full-time employee or consultant to work on-site. The third hypothesis is that the employees intentionally or unintentionally resisted the change. This could be the case with the drivers, who work more isolated, and with whom the author could not communicate with directly due to the language barrier. Still, based on especially middle and top managers' cooperation in the CIP, this hypothesis is less probable (see Figure 61 on page 124). The fourth hypothesis is that improving performance is a long-term process and that it will take time before positive results are achieved.

Of these 4 hypotheses, the authors believe it is the first and second hypotheses that are most probable. The selection of frameworks may have been wrong, but the authors believe the second hypothesis, wrong implementation, is even more likely. The recommendation for other performance initiatives is therefore to simplify and implement one framework well, and even more importantly to spend as much time as possible with the firm to maximise the probability of successful implementation. Finally, the fourth hypothesis, insufficient time, could also be a contributing factor to the lack of improvement in performance, and performance may improve in late 2011 as predicted by the CEO (Section 11.2.1, p. 121).

Introduction to Part IV – Synthesis and Conclusion

Part IV – Synthesis and Conclusions – has three chapters. Chapter 12 presents long-term recommendations to be implemented by Jamaa. The recommendations are based on the authors' experiences during the implementation of the CIP at Jamaa, the results in the second round of data collection, as well as best practices in academia. Chapter 13 discusses the wider implications of the research, and argues that the thesis contributes to the Balanced Scorecard literature, the Quality Management Literature, the Performance Management Literature, and also holds valuable lessons for foreign-owned firms in Congo. Finally, Chapter 14 concludes the thesis. The full thesis outline is shown below in the figure below.

Figure 71 – Thesis outline



Source: Authors' own creation

"*It is an immutable law in business that words are words,*

explanations are explanations, promises are promises

but only performance is reality."

Harold S. Geneen

12. Future recommendations

12.1 Chapter introduction

This chapter presents future recommendations for Jamaa to be considered after the thesis has been finalised on the 31 July 2011. First, the CIP framework and methodology will be reviewed. Second, Deming and Lean-inspired recommendations are presented based on the analysis of the data collected in the second round of measurement. Third, steps to institutionalise the changes are outlined. Fourth, recommendations based on the missing measures of the BSC are given. Finally, other potential initiatives for the future are considered.

12.2 Recommendations regarding the CIP Framework

The BSC is applied in three main ways in the CIP, and each usage is reviewed in turn below. First, the CIP framework was successfully adopted as the overall framework for measuring and managing performance, including as a graphical representation of the progress on each measure. In the future, is thus recommended that the CIP framework is maintained and developed. In order to maintain the CIP, it is recommended that formal CIP policies, procedures, and processes are established, that data is continuously collected, analysed, and acted on (for example on a quarterly basis), that the overall CIP is reviewed and updated minimum once a year, and that the CIP ceases to be the responsible of one or a few people to instead residing formally within a specialised function within the organisation (Niven 2006).

Second, the BSC and strategy map was successfully applied to translate the overall mission of Jamaa into specific performance measures. In the future, it is crucial that all new initiatives are linked to specific measures, which in turn are linked to one or more objectives. Each objective is then linked to a perspective, which is part of the chosen strategy for achieving the overall mission of the organisation. This will ensure that all new the initiatives contribute to the overall organisational mission of Jamaa.

Third, the CIP framework was used to communicate and cascade the strategy to employees, although the traditional top-down approach was supplemented with a bottom-up focus on continuous improvement. In the future, once employees become more comfortable with pre-determined, individual performance objectives, it is recommended that the CIP framework is

increasingly used to cascade objectives and communicate the organisational strategy. This is especially important when new strategies are implemented and employees must understand and adapt their daily tasks. However, a bottom-up focus on continuous improvement has worked well at Jamaa so far, and it is therefore important that the emphasis on continuous quality improvement is not neglected.

12.3 Recommendations based on the second round of measurement

Besides the implementation of all the initiatives proposed in Chapter 10, we would like to present the most important long-term recommendations to the CEO and executive management team, who will be the primary drivers of the change initiatives. Overall, since the CIP has employee support and trust, the CEO should continue with the initiatives of the programme and try to get some short-term wins especially with non-office staff to maintain support while also working against the long-term goals.

12.3.1 Most important Deming-inspired recommendations

- Communicate frequently with all members of staff in an organised manner
- Continue to work on creating mission statement and communicate it to employees as quickly as possible
- Make a greater effort to understand all process of the employees' work.
- Continue to be in dialogue with the employees regarding the tools they are missing and the obstacles they are facing
- Continue to listen more to the employees' suggestions
- Use the questionnaire actively to solve current problems and solicit employees' ideas

12.3.2 Most important Lean-inspired recommendations

- Implement and ensure that continuous data analysis become a major part of operations
- Measure and improve continuously the transportation ratio and value adding time and cut away waste by actively using VSM as key tool
- Hire an experienced head mechanic to reduce breakdowns of trucks

- Undertake brainstorming sessions to improve efficiency
- Cooperate closer with suppliers

12.4 Institutionalising the changes to ensure continuous improvement

Kotter's 8-step model for change is arguably one of the most famous frameworks for managing change (See Appendix 55 on page 323). Step 8 of the model is to institutionalise the change that has been achieved, and it is crucial that Jamaa anchors the changes in the organisation that have resulted from the CIP. The changes need to be institutionalised, both in respects to the underlying processes and the organisational culture. The underlying processes can be institutionalised within a relatively short timeframe by maintaining the new desired processes and structures that were identified earlier, articulating the link between the new behaviours and corporate success, clearly stating team and individual performance objectives, and adapting the incentive system correspondingly. Changing the organisational culture, on the other hand, can take years to successfully accomplish (Kotter 1995).

12.5 Recommendations regarding missing measures

The missing measures in the CIP, which were not part of the pilot phase, are illustrated in Figure 39 on pages 89-91. Each measure is an important aspect of one of the 22 objectives, and it is therefore crucial that the relevant data is collected, analysed, and acted upon. For example, objective 13 focuses on Customer Relationship Management (CRM) and Supplier Relationship Management (SRM). This objective has 5 measures, which are not currently developed. In the future, it is recommended that CRM and SRM databases are established and that there is a bigger focus on establishing, documenting, and improving relationships with customers and suppliers. This will become increasingly important as the business grows and volumes increase, especially when larger institutional and government entities become customers and suppliers to Jamaa.

Furthermore, achieving a social impact is a key aspect of Jamaa's mission, and a bigger emphasis on measuring and managing social return on investment is thus crucial for Jamaa in the future. Currently, the organisation is focusing on ensuring financial viability. Once the future of the organisation is secure, however, Jamaa can begin focusing more on managing

social returns. Recommendations on how to measure social return on investment is presented in Appendix 56 on page 324.

12.6 Chapter conclusion

This chapter presented future recommendations for Jamaa to be considered after the thesis has been finalised. First, it is recommended that the CIP framework is maintained and reviewed on a regular basis in order to ensure that all initiatives are linked to the overall firm strategy. Second, it is important that the Deming and Lean related findings are addressed through new initiatives. Third, it is important that the changes are institutionalised and that short-term wins are created to maintain momentum. Finally it is recommended that the pilot phase of the CIP is expanded and that the missing measures are addressed in a structured manner. The next chapter analyses the wider implications of the research.

13. Theoretical contributions and implications for foreign-owned firms in Congo

13.1 Chapter introduction

Consistent with action research, see Chapter 3 on page 17, the authors have made both a practical and a theoretical contribution through the work in the thesis. Regarding the practical contribution, the authors created and implemented a framework to improve the performance at Jamaa by identifying relevant performance measures, collecting and analysing data twice, and identifying and implementing different quality initiatives.

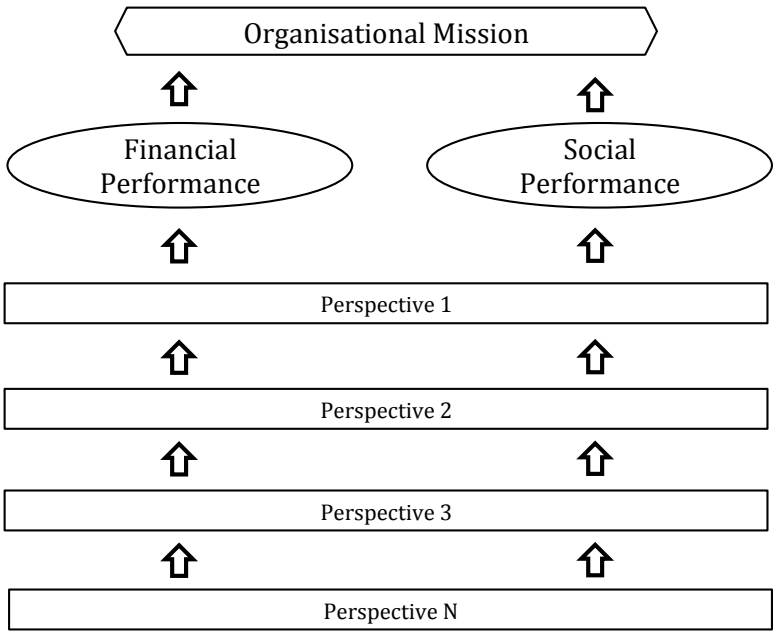
Regarding the theoretical contributions, which we will focus on in this chapter, this thesis creates new knowledge and adds to the management literature in four ways. First, a Balanced Scorecard tailored specifically for social businesses is created. Second, it is shown that Deming and Lean are complementary and not mutually exclusive. Third, we have shown that it is possible to establish and implement the eclectic, tailored approach to performance management CIP. Fourth, the lessons learned from working in Congo are presented. Each of these four key, theoretical contributions will now be reviewed in turn.

13.2 Contributions to the Balanced Scorecard literature

After a review of the literature, it was found that a BSC framework suitable for a social business, which must focus on both financial and social returns concurrently, did not exist. To address this issue, the authors introduced a novel adaptation of the BSC in the CIP, which combines financial and social returns as the top of the strategy map in order to accommodate these dual needs. The CIP is more than a theoretical framework, however. When implementing the CIP in practice, it was found that the new approach work well, and it is indeed possible to focus on both financial and social results all the way through a strategy map. The authors call the new approach a "Social Business Strategy Map", which is illustrated in **Figure 72**.

The Social Business Strategy Map is a recommended approach for social businesses that are looking to implement a BSC, and the CIP implemented at Jamaa offers a detailed case study, which can serve as an inspiration and motivation for other social businesses that are looking to improve their organisational performance.

Figure 72 – Strategy Map for a Social Business BSC (generic framework)



Source: Authors' own creation

13.3 Contributions to the quality management literature

Our literature review of quality management firstly revealed that this field is in constant search for the next "magic wand" of quality management, which will proclaim superiority over preceding models (Basu 2009; Näslund 2008). This thesis contributes to the field by first rethinking the field of available models and suggesting that there is no such thing as universally, superior frameworks, and instead proposes that in theory all models are still usable even in today's world. Academics and practitioners should not see only "obsolete" and "superior", but rather think of frameworks as a toolbox with many tools. Given the organisational, individual, and national culture and contexts, different tools serve different purposes. In this thesis, the authors found the infrequently, if ever, used combination of Deming and Lean to be, in this particular, unique case study, an ideal solution, although for other organisations require different tools and frameworks.

Secondly, this thesis challenges that many of the models, hereunder both Deming and Lean, claim that no implementation of these theories can happen *partially*; it is all or nothing (Deming 2000; Womack & D. T. Jones 2003). Said positively, the gurus might only want their particular philosophy or framework and to gain as much success and popularity, as they

firmly believe in its superiority and therefore want practitioners to succeed in using the framework by using them fully. Another way to look at it could be that these gurus and scholars propose their "philosophies" almost as monotheistic religions from which the practitioner should get all values, beliefs and norms, and no polytheism, or usage of other frameworks, is allowed. Although the authors agree with the gurus and scholars' arguments to some extent, our argument is that there are cases in which it is better to inspired by more than one framework, then implement the most urgent, cost-beneficial and easy-to-implement parts and then strive over a longer time span to implement the philosophies fully, if such an endeavour continues to be beneficial. This case study provides such an example.

13.4 Contributions to the performance management literature

This thesis contributes to the performance management literature in two ways. First, the journey taken in Part II of the thesis to establish the Continuous Improvement Programme (CIP) for Jamaa can be applied by other firms wishing to create a performance management that will fit their specific needs. More specifically, a triple triangulation was utilised, which combined the specific characteristics and local context of Jamaa, its requirements, and a thorough review of the relevant literature. Though more time consuming and complex than utilising an existing management framework in its pure form, it is strongly believed that the creation and implementation of a unique combination of relevant frameworks will have a much larger positive effect on organisational performance.

Second, it was shown how the Balanced Scorecard, Deming, and Lean can be combined and implemented in practice. Although there are numerous cases of hybrid BSCs in the literature and in practice, there are limited, if any, examples of the above combination and especially between the BSC and Deming specifically. As mentioned in Section 13.3, by, it is about applying the right tool(s) to the right organisation in the right way and at the time given the individual, organisational, and national culture and context. In this thesis, the authors found the infrequently used combination of the BSC, Deming and Lean to be the ideal frameworks for the Continuous Improvement Programme at Jamaa, although other tools and frameworks could have been used.

13.5 Contributions to the area of doing business in Congo

Besides the three above-mentioned areas, this thesis also contributes to the area of doing business in the Congo, which was a significant part of our research questions. The intensity and scope of obstacles and issues to conduct business in Congo still surprised the authors. The thesis contributes in 2 critical areas. First, some guidelines to conduct business in Congo are provided. Second, we want to encourage people in the rest of the world to start business in Congo and its surrounding SSA area.

First, based on our own experience, historical and contextual knowledge of Congo especially, some guidelines to conducting business are provided. To provide an overview, we shall present our guidelines based on our own experiences in approachable and simple bullet-points in a prioritised order, shown in **Figure 73**.

We are aware that these findings are primarily based on our own single, in-depth case study, and cannot from a statistical point of view be induced to apply to all of Congo, but given our action-based, case study approach, see Chapter 3 on page 17, we still find that they provide some guidance for foreign business managers in Congo.

Figure 73 – Guidelines for doing business in Congo

1	Forget about how you normally do business
2	Have a lot of patience in everything you do and expect delays
3	Embrace yourself for grossly impeding infrastructure both in terms of roads, internet, and electricity
4	Embrace yourself for the major cultural differences
5	Win trust of local partners, but never lay all your eggs in one basket, as trust can be broken easily, and legal issues can be impossible/time-consuming to resolve via courts
6	Expect high costs despite apparent, wide-spread poverty
7	Embrace yourself for severely impeding legislation and bureaucracy
8	Establish ethical guidelines, but be prepare to be forced to challenged on your disapproval of corruption as accept a certain level of "lubrication", that is, unavoidable
9	Assume that existing knowledge, models, frameworks, and approaches need serious alteration, modifications, and rethinking before they can be applied. Some ideas need to be abandoned altogether
10	Rethinking business and using alternative approach is beneficial given the relatively different and more basic conditions
11	Follow up frequently on people upon which you rely, and anticipate some set-backs, but never give up

Source: Authors' own experiences

Second, based on our experiences, we would like to encourage both entrepreneurs and businesses in the rest of the world to start business in Congo and its surrounding SSA area. Although there are vast difference between the countries in this region, there are still some similarities, which is we believe we can make the induction from Congo to the SSA area, see Appendix 57 on page 325. Foreign aid should in our opinion use more alternatives such the business approach rather than only traditional aid assistance (Bebbington 1997; Easterly 2008; Lancaster 1999; Sullivan 1996). Despite the initial challenges that especially foreign-owned businesses will face, there are significant economic gains to be made in this area, especially within a 10-20 year time frame (Arbache & Page 2010; Broadman 2008; Paulino & Wan 2010). Therefore, entrepreneurship and doing business proposes itself as a cost-efficient, market-driven, job-creating, self-sustainable way to relieve the both the Congolese and other African populations of poverty and aid dependency (Bebbington 1997; Easterly 2008; Lancaster 1999; Sullivan 1996).

13.6 Chapter conclusion

This chapter outlined the theoretical contributions of the thesis. It was shown how the thesis contributes to the BSC literature, the quality management literature, the performance management literature, and to the area of doing business in Congo. The next chapter concludes the thesis.

14. Conclusion

This thesis sought to determine i) which management frameworks should be applied in order to improve the performance of Jamaa Trade, ii) how the frameworks can be implemented, and iii) the theoretical contributions as well as the implications for foreign-owned firms working in Congo.

To answer the first part of the research question, a triple triangulation approach was applied. First, the characteristics of Jamaa were determined by analysing the context, the extent to which Jamaa is a social business, and the unique organisational traits. Second, the requirements of Jamaa were determined by triangulating the implications of the local context, the status as a social business, and the requirements according to the authors and CEO based on the organisational characteristics. Third, the literature within the areas of performance management and quality management was reviewed in order to identify the most ideal framework(s) to improve the performance at Jamaa based on its unique requirements, which resulted in a novel hybrid model consisting of a Social Business Balanced Scorecard, Deming's Management Method, and Lean.

By answering the first part of the research question, the thesis contributed to theory by creating a social business strategy map in order to meet the needs of social businesses wishing to implement a Balanced Scorecard. It was also shown that Deming and Lean are not mutually exclusive but instead can be used in complementary ways in theory and in practice.

To answer the second part of the research question, the triple triangulation approach was then established as a "*Continuous Improvement Programme" (CIP)*. The CIP consists of a tailored framework and a 12-step implementation plan. The first 11 steps of the CIP were implemented in a pilot phase together with the CEO of Jamaa between February and July. The chosen frameworks addressed the seven identified requirements of Jamaa; *strategic alignment, tracking of performance measures*, and *the inclusion of social and financial goals* was covered by a Social Business Balanced Scorecard; *organisational quality* was covered by Deming, *customer-related quality* was covered by Lean, *service-based quality* was covered by both primarily by Lean and supported by Deming, and finally *the local context* was taken into account during the entire implementation plan. Round 1 and 2 data was collected and analysed, in between which improvement initiatives based on Deming and Lean were put in

place. The practical results of the CIP are that small, statistically insignificant improvements were realised in operational performance within the short 6-month period, but more significant improvements were made in the organisational culture of Jamaa. Finally, it was recommended that Jamaa continues with the CIP and institutionalises it within the organisation as the CIP has shown some promising results.

By answering the second part of the research question, this thesis contributes to the performance management literature both by establishing and implementing an eclectic, tailored approach, the CIP, and by triangulating a social BSC with Deming and Lean.

To answer the third part of the research question, the authors examined the wider implications of the research for foreign-owned firms in Congo. First, some guidelines to conduct business in Congo were provided. Second, based on our experiences, we encouraged both entrepreneurs and businesses in the rest of the world to start business in Congo and its surrounding SSA area.

By answering the third part of the research question, this thesis contributes to theory by establishing a framework for foreign-owned firms to do business in Congo by stressing that doing so requires a deep understanding of the local context and business practices. This thesis also provided recommendations to foreign managers working in Congo.

We hope this thesis has inspired the reader, as we recommend more research within the field of performance management in both Congolese and SSA firms, both with regards to the usage of management tools but also their success rate and applicability. This will provide a comprehensive toolbox for firms in Congo and SSA as a way to improve their performance and ultimately the socio-economic conditions of the region.

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16. Appendices

Appendices Chapter 2: Context information

Appendix 1 History of Congo

Congo's history is marred by 3 atrocious periods. First, the horrible, and brutal abuse by its coloniser King Leopold II of Belgium, who acquired the country in 1877 as a private colony under a disguise of benefaction and anthropology. The king practically enslaved the population and used them to exploit the country's wood and rubber resources using barbaric amputations and frequent capital punishment to terrorise and dominate the Congolese population (Hochschild 2006; Deibert 2008, p.64). During his brutal reign and its aftermath, the Congolese population was cut in half, when as much as 10 out the 20 million Congolese died (Hochschild 2006). From 1908 Belgian bureaucrats ran the country until Congo finally gained independence in 1960 (Nzongola-Ntalaja 2002, pp.61-95).

Secondly, after a tumultuous, democratic period from 1960-1965, another tyrant, General Joseph-Désiré Mobutu, seized power via a coup d'état (Deibert 2008, p.64). He ruled until 1997 as an incompetent, harsh, and kleptocratic dictator, crushing all political opposition and letting the fragile Congolese infrastructure, education and health sectors deteriorate drastically (Nzongola-Ntalaja 2002, pp.141-171).

Finally, Mobutu was ousted in 1997 by Laurent Kabila, who invaded the country from the east backed by Rwandan and Ugandan troops, as these countries were hungry for Congo's vast mineral wealth in its Eastern regions (Mària & Lozano 2010, p.103). Kabila did gain power, but his attempt of throwing the foreign armed forces of Rwanda and Uganda out of the country led to the world's most lethal post-WWII conflict; a devastating pan-African conflict from 1997-2004 involving 8 countries in which 5.4 million people died either directly or due to ensuing diseases or hunger (Deibert 2008, p.63). Laurent Kabila himself was assassinated in the midst of the conflict in 2001, and was succeeded by his own son, who quickly negotiated a truce with his enemies. Even today it is a fragile peace that is maintained by 17,000 UN peacekeeping troops in the problematic Eastern regions of Congo where militia wars, violence, and mass-rapes are still rife (Mària & Lozano 2010, p.103).

Appendix 2 Images from the villages around Dumi and from Jamaa










Agenda
JAMAA ENTERPRISES
Agenda
Introduction de Nicolai et de moi-même
Pourquoi Jamaa à besoin d'améliorer la qualité en continu?
Deux outils utilisé avec sucés dans les organisations
Aperçu du projet et un calendrier des 5 phases
La phase actuelle détaillé
Qu'avez vous besoin de faire?
Ce que nous voulons apporter?
Questions et réponses





Appendix 3 About TIFIE Humanitarian

i. About TIFIE

The NGO TIFIE Humanitarian[41] was founded by Robert Workman in 2007 with a worldwide mission of **T**eaching **I**ndividuals and **F**amilies **I**ndependence through **E**nterprise, which is abbreviated into TIFIE. TIFIE believes in using business principles within a humanitarian model to create sustainable change, and is currently active in the US, Samoa, and Congo. To achieve this:

"TIFIE supplies capital, facilitates educations and provides leadership to develop and support sustainable growth enterprises and foster an environment for responsible philanthropy and accountability. This effort creates not only profound immediate impact but also establishes long-term opportunities for growth and prosperity that will ultimately affect individuals and families for generations to come" (Shepherd 2010a).

TIFIE entered Congo in 2007 as an NGO and identified two important needs of the local citizens that were not were not being met - a transport link between the capital city Kinshasa and the surrounding villages, and low-cost, high-quality housing. To meet these demands, TIFIE Trucking and TIFIE Bricks were created, and during the past three years both businesses have reached profitability. Being under the TIFIE umbrella allowed the businesses to expand quickly, but also restricted certain market opportunities. To facilitate the expansion of the business, Jamaa Enterprises was created in 2010 and took over the business activities of the former TIFIE Bricks and TIFIE Trucking entities (TIFIE 2010c).

As a consequence, TIFIE is today focused solely on Humanitarian initiatives in and around Kinshasa, as well as in Samoa. Current projects include supporting schools, orphanages, and youth centres, HIV education, agricultural and farm development projects, clean water facilities, healthcare, infrastructure improvement, and food security. TIFIE receives funding from the profits of Jamaa Enterprises, where 10% of profits are donated each month, and from donations (TIFIE 2011b).

[41] Strictly speaking, a "humanitarian" organisation focuses more on short-term crises such as flooding and refugees, whereas "developmental" organisations work to improve the underlying conditions and society - that is, Jamaa. However, we refer to TIFIE as a humanitarian organisation to use their language.

Examples of Humanitarian projects that TIFIE is engaged in include a 4500 acre farm employing around 200 villagers in Dumi, Congo; a school with over 700 students, a seed multiplication project, a clean water facility, and road improvement programmes in Mosabo, Congo; and an orphanage in Kinshasa (TIFIE 2011b).

Further information on TIFIE Humanitarian and the projects it is engaged in can be found on www.tifie.org.

ii. The TIFIE Development Model

According to Shepherd, CEO of Jamaa Enterprises, the TIFIE Development Model has numerous similarities to the principles advocated by Yunus, the founder of Grameen Bank and recipient of the Noble Peace Prize, but Jamaa is still unique in its own way:

"We use your basic theories in capitalism such as supply and demand, meeting market needs, etc., but we do it with humanitarian purposes. In our organisation we say we have 'Business Minds, Humanitarian Hearts'. There really is not a development theory or model that is exactly like ours that we have found so we are unique and we do things our own way. We believe that an individual's basic needs must be met before they can think about changing their environment so we provide them with jobs that pay many times above the averages. Once their basic needs are met and our businesses grow there are more opportunities for our employees and they (not foreigners) can make the long term sustainable changes in their communities." (Shepherd 2010c).[42]

Shepherd confirms that the long-term goals are to grow the enterprises and build up sustainable and standardised business practices, and thereafter sell the entities to local investors. The proceeds from the sales will then be used to start similar projects in different parts of Congo and ultimately in neighbouring countries as well. Shepherd aims to grow Jamaa Trade to a $10 million USD entity (yearly revenue) and Jamaa Construction to a $20 million business before selling, and estimate that this will take 5-7 years from initiation in

[42] TIFIE acknowledges the revolutionary impact microfinance has had on poverty reduction. One of the key differences between Microfinance and the TIFIE Model is that while Microfinance is focused almost solely upon the entrepreneur, TIFIE recognizes that not everyone can be an entrepreneur and instead focuses on creating larger enterprises that employ hundreds of workers and managers. In order to address the most social objectives, TIFIE feels that both approaches are needed (TIFIE 2010b).

2007. On a macro level, the ultimate goals are to create jobs and foster local economic development, support the creation of local enterprises, and raise the level of awareness and familiarity in regards to money, corruption, and the role of the government. These initiatives will then hopefully translate into a more active civil society that can demand and achieve sustainable political improvements. A related long-term goal is to establish a social venture franchising model where TIFIE is able to provide entrepreneurs with capital, expertise, and contacts, but where the businesses are managed and staffed by locals (Shepherd 2010c).

Appendix 4 Further details on Jamaa Enterprises

i. Company highlights – Jamaa Enterprises

- Formerly TIFIE Bricks and TIFIE Trucking
- Employs over 45 full-time and 130 temporary workers
- Over $1.1 million injected into Kinshasa markets, and over 100 villages
- Pays employees 200-300% more than average wage
- Current Businesses include Trade & Trucking, Bricks & Construction, Solar Energy & Storage

ii. Structure of Jamaa Enterprises

Structure	Société Privée à Responsabilité Limitée (Private Limited Liability Company)
Place of incorporation	Kinshasa, Democratic Republic of Congo
Date of incorporation	September 2010
Legal requirements	Minimum of two shareholders, one of which can be a foreign entity
Ownership structure (February 2011)	88% TIFIE DRC, 4.5% CEO Ryan Shepherd, 4% Bernard Balibuno, 3.5 % Tommy Muhemedy
Transferred assets	• All office employees • All equipment and vehicles from TIFIE Transportation, including 5 transport trucks and 1 cargo hauler • All equipment from TIFIE Construction, including two brick machines, 1 dump truck, 1 fork lift, 1 back hoe, and 1 Tata truck • All Solar Equipment inventory • Ford Everest and two Toyota trucks • Office equipment and furniture



TRACTORS



DUMP TRUCKs



FORK LIFT



NEW BRICK MACHINE



ROLLER



BACKHOE



SOLAR EQUIPMENT

iii. Jamaa Trade

- 17 full-time and 7 temporary employees
- 6 transport vehicles
- 4000 tons of goods transported annually
- Repaid business loan of $110,000
- 2009 Net Profit: $75,000
- Funds the TIFIE Youth Centre in Kinshasa

The growth of any business is directly affected by the organisations ability to change and adapt to the existing market and economic environment. This has been the story for the current Trade business. What started as a shipping business called “TIFIE Trucking” with four employees and one truck has now become, Jamaa Trade. Jamaa Trade now operates with six transport trucks, 17 full-time employees, and 7 hired temporary workers each month. TIFIE trucking originated based on the following market needs:

- Lack of food
- Lack of jobs
- Inefficient distribution system
- Poor infrastructure

- Underdeveloped rural markets

2008-2009 proved to be a great success for TIFIE Trucking. It expanded to three 25 ton transport trucks reaching rural villages where others have rarely gone. Villagers now have affordable access to the markets to buy and sell their goods. During this time TIFIE transported over 4000 metric tons of food into the capital city while injecting over $1.1 million in cash to Kinshasa markets and over 100 villages, affecting over 10,000 people. During this period TIFIE Trucking was able to create a net income close to $75K, donating a portion of their profit to the TIFIE Youth Centre. TIFIE's growth provided jobs to 12 full time employees that were paid 100-200% more than the average wage.

In 2010 TIFIE Trucking became Jamaa Trade. This new structure opened up new business opportunities as well as providing increased incentive to its employees as Jamaa Trade was able to divest a percentage of ownership to its local management.





iv. Jamaa Construction

- Formerly TIFIE Bricks
- 12 full-time and over 100 temporary employees

- Daily brick production increased from 250 to 2500 per day
- 2010, purchased new brick machine, dump truck, and fork lift
- Helped fund and build a school in Mosabo for 700 children

TIFIE Bricks has followed a similar path as TIFIE Trucking. A core business was organised based on market needs and as time progressed it has transformed into an innovative and unique enterprise.

TIFIE Bricks was created based on the following observations of the current market:

- Low-quality building materials
- High cost of building materials
- Unaffordable housing
- Booming urban population
- Lack of experienced builders and labourers
- Lack of jobs

TIFIE searched for a solution to solve these problems and found an innovative new concept, interlocking earth blocks. The typical dwelling in the capital city is a block house made from a mixture of sand and cement. This is the most expensive way to make blocks because of the high cost of raw materials and the intensive labour process involved in laying the mortar to each row of blocks in the walls. TIFIE found an interlocking block solution made of soil, clay, and only a small percentage of cement. Because it is interlocking with a tongue and groove system, it does not require cement or mortar to hold the wall together, decreasing labour cost. Business started in January 2009 with a modest 4000 blocks produced, initially used for internal projects. Over the year the business moved to full production with two crews operating the machine 16 hours a day, producing 30,000 blocks that were sold the last months of the year.

Always looking for innovative solutions, TIFIE identified weaknesses in the bricks, and the decision was made to design a unique interlocking block system, incorporating all the changes needed to make a more efficient and cost effective block. A factory was sourced in China to build the machine and TIFIE worked with partner Goal Zero and their industrial

design team to create a new block, similar to a "Lego" style building system. Material was reduced by 40%, greatly reducing the cost, while still maintaining the strength and quality advantages over competitors.

In 2010 TIFIE Bricks became Jamaa Construction. Jamaa Construction is positioning itself for long term growth and taking the steps to differentiate itself from its competitors. This will ensure on-going wealth creation opportunities resulting in economic growth and change in the DRC.



v. Jamaa Energy

- Business started in August 2010 with first shipment
- Reseller of Goal Zero solar energy products (a partner of TIFIE)
- Enormous market response - selling over $1000 per day
- Huge market needs for lighting, reliable power, communication, refrigeration, and so forth.

Although Jamaa Energy officially began in August 2010, its true beginning was in Congo back in 2008. Inconsistent power in the DRC capital city of Kinshasa and limited access to the national power grid in 95% of the rural areas outside of Kinshasa inspired Robert Workman to create a portable, high quality power system to benefit the lives of the Congolese people. At the same time he wanted to create a business that would generate income to sustain his humanitarian initiatives. Jamaa Energy was born. It will provide portable power and energy to many different markets including; NGO's, schools, hospitals, individual's homes,

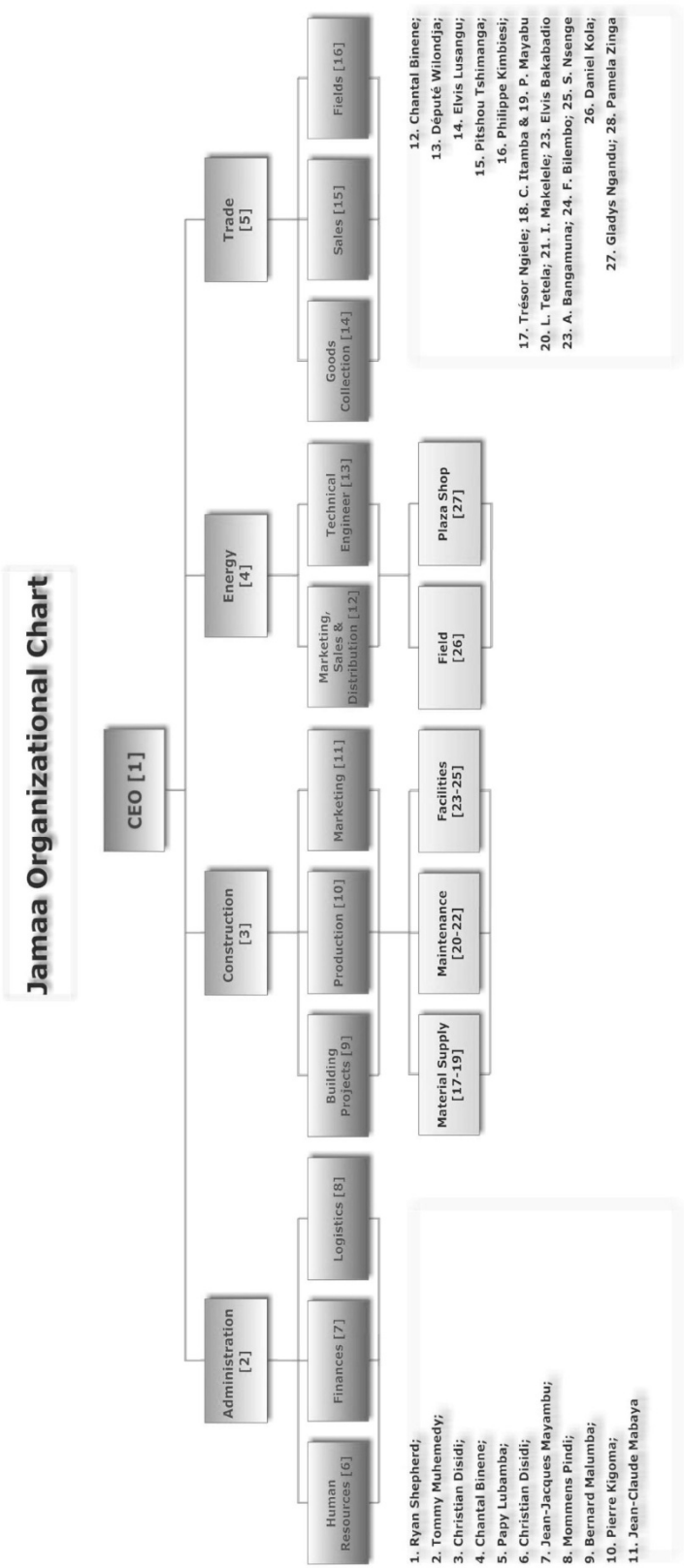
refrigeration, and many more uses that are being discovered each day. Jamaa Energy will also work with the Jamaa Trade division to develop trade routes and sales depots so this invaluable product can be taken to all areas of the DRC.

The market response to the Goal Zero solar products has been overwhelming. After only two weeks of beginning sales, it became necessary to order a second shipment of product into the country. Profits from Jamaa Energy will go to local humanitarian initiatives.



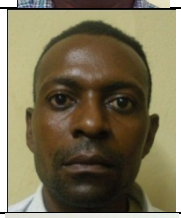
Source: TIFIE 2011b; TIFIE 2010b

vi. Organisational chart and office staff at Jamaa Enterprises (Feb. 2011)

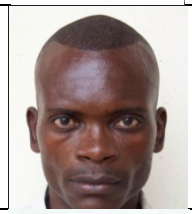


Source: Company Data

vii. Employees at Jamaa Enterprises (Feb. 2011)

N°	Names	Functions	Department	Hire Date	Picture
1.	Antoine Balosa	*Truck Driver*	Construction	8-Oct-11	
2.	Athanase Mbadu	*Truck Driver*	Trade	9-Dec-08	
3.	Bernard Malumba	*Architect*	Construction	29-Mar-10	
4.	Bruno Mampasi	*Sentry*	Trade	1-Jul-08	
5.	Chantal Binene	*Energy Manager*	Energy	2-Aug-10	
6.	Christian Disidi	*Construction Manager*	Construction	2-Apr-11	
7.	Claudine Matoko	*Sales Coordinator*	Trade	1-Jul-08	
8.	Corneille Matoka	*Brick Crew [Inventory Intendant]*	Construction	1-Feb-10	

9.	**Damien Bilo**	***Cleaner***	**Administration**	**30-Mar-10**	
10.	**Daniel Kola**	***Sales Representative***	**Energy**	**2-Oct-07**	
11.	**Damas Ngonzo**	***Driver Helper***	**Trade**	**1-Jul-08**	
12.	**Dakoda Ngumbu**	***Driver Helper***	**Trade**	**1-Jul-08**	
13.	**Député Wilondja**	***Technician***	**Energy**	**8-Mar-10**	
14.	**Elvis Lusangu**	***Outbound Goods Collector***	**Trade**	**8-Oct-07**	
15.	**Flavie Tshidibi**	***Administrative Assistant***	**Administration**	**17-Nov-10**	
16.	**Freddy Kalonji**	***Sales Coordinator***	**Energy**	**21-Feb-11**	

17.	**Gladys Ngandu**	***Sales Agent***	**Energy**	**4-Nov-10**	
18.	**José Mandeke**	***Assistant Field Coordinator***	**Trade**	**4-Sep-09**	
19.	**Jean-Bosco Mulula**	***Driver Helper***	**Trade**	**1-Jul-08**	
20.	**Jean-Claude Kissimbi**	***Mechanic***	**Trade**	**17-02-10**	
21.	**Jean-Claude Mabaya**	***Sales & Marketing Manager***	**Construction**	**20-Jan-09**	
22.	**Jean-Jacques Mayambu**	***Accountant***	**Administration**	**2-Nov-08**	
23.	**Jina Mopende**	***Sales Coordinator***	**Energy**	**24-Sep-10**	
24.	**Lady Kisia**	***Driver Helper***	**Trade**	**1-Jul-08**	

25.	**Liévin Ndiadia**	***Brick Crew [Mechanic]***	**Construction**	**1-Feb-10**	
26.	**Michel Kisidika**	***Driver Helper***	**Trade**	**1-Jul-08**	
27.	**Médard Ngoie**	***Driver***	**Trade**	**25-Jan-10**	
28.	**Mommens Pindi**	***Chief Mechanic***	**Administration**	**2-May-09**	
29.	**Nono Nawenakoko**	***Driver***	**Trade**	**16-Jun-08**	
30.	**Pierre Kigoma**	***Production Manager***	**Construction**	**6-Nov-09**	
31.	**Philippe Kimbiesi**	***Field Coordinator***	**Trade**	**1-Feb-08**	
32.	**Papy Lubamba**	***Trade Manager***	**Trade**	**1-Apr-07**	

33.	**Papy Mayabu**	***Brick Crew [Soil Intendant]***	**Construction**	**1-Feb-10**	
34.	**Pitshou Ntwa**	***Brick Crew [Assistant Production Manager]***	**Construction**		
35.	**Pamela Zinga**	***Sales Agent***	**Energy**	**4-Nov-10**	
36.	**Sam Tshimanga**	***Sales Coordinator***	**Trade**	**13-Apr-09**	
37.	**Simon Nsangi**	***Driver***	**Trade**	**1-Feb-08**	
38.	**Thomas Bizau**	***Brick Crew [Mixture Intendant]***	**Construction**	**1-Feb-10**	
39.	**Tommy Muhemedy**	***Chief Financial Officer***	**Administration**	**16-Jun-09**	
40.	**Trésor Ngiele**	***Brick Crew [Clay Intendant]***	**Construction**	**1-Feb-10**	

Source: Company data

Further information can be found on www.tifie.org

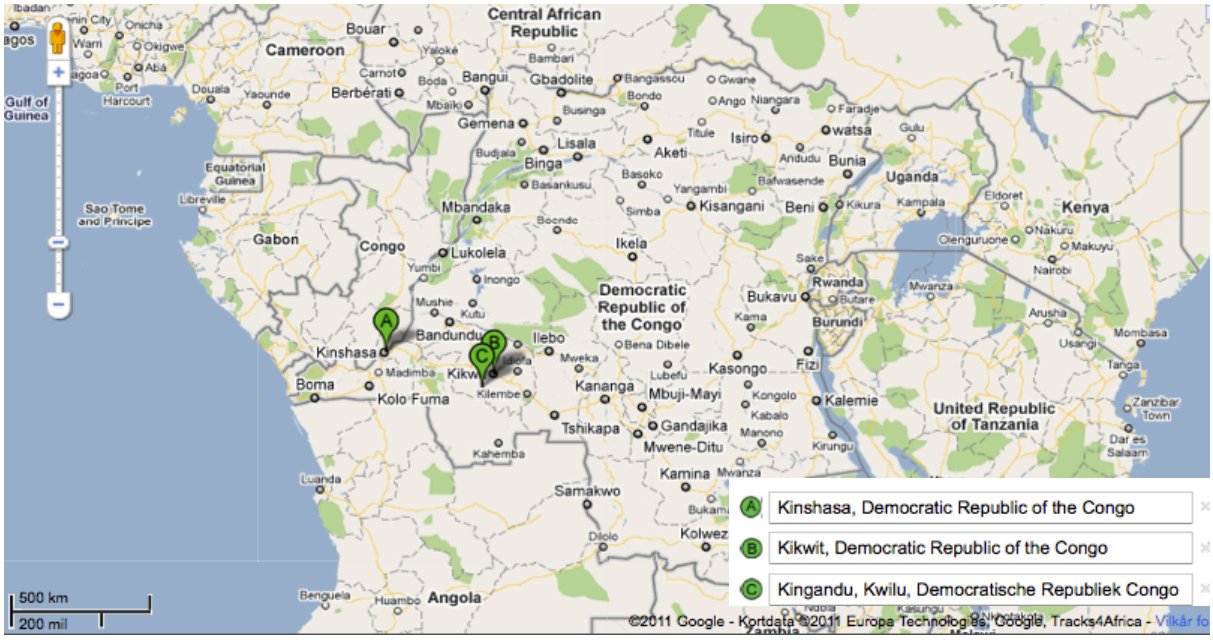
Appendix 5 Geographic location of Jamaa Enterprises in Kinshasa & Kikwit

i. Geographic location of Kinshasa in Africa



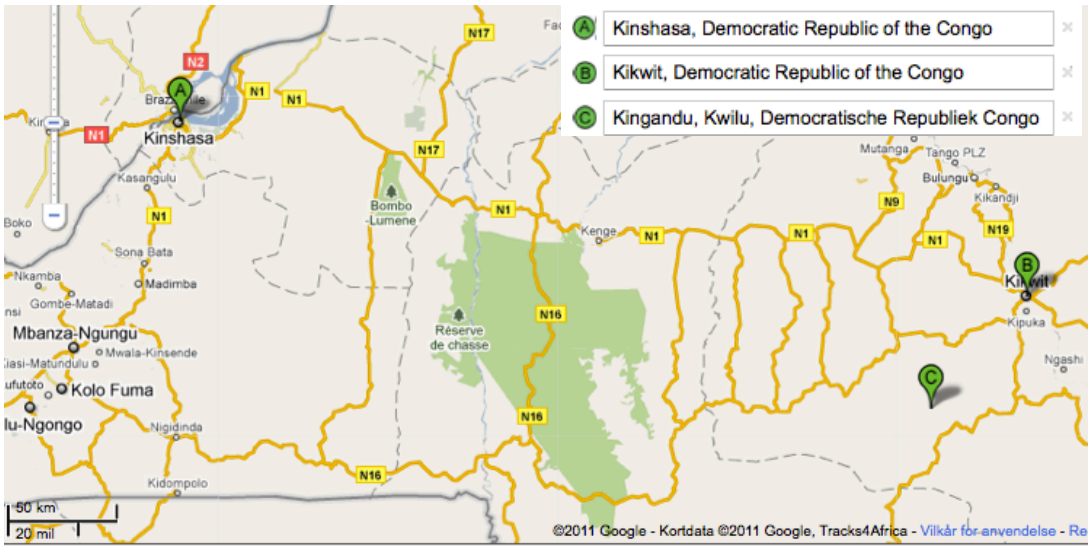
Source: Google Maps

ii. Geographic location of Kinshasa, Kikwit and Kingandu in Congo



Source: Google Maps

viii. Close up of Kinshasa and main road to Kikwit and Kingandu



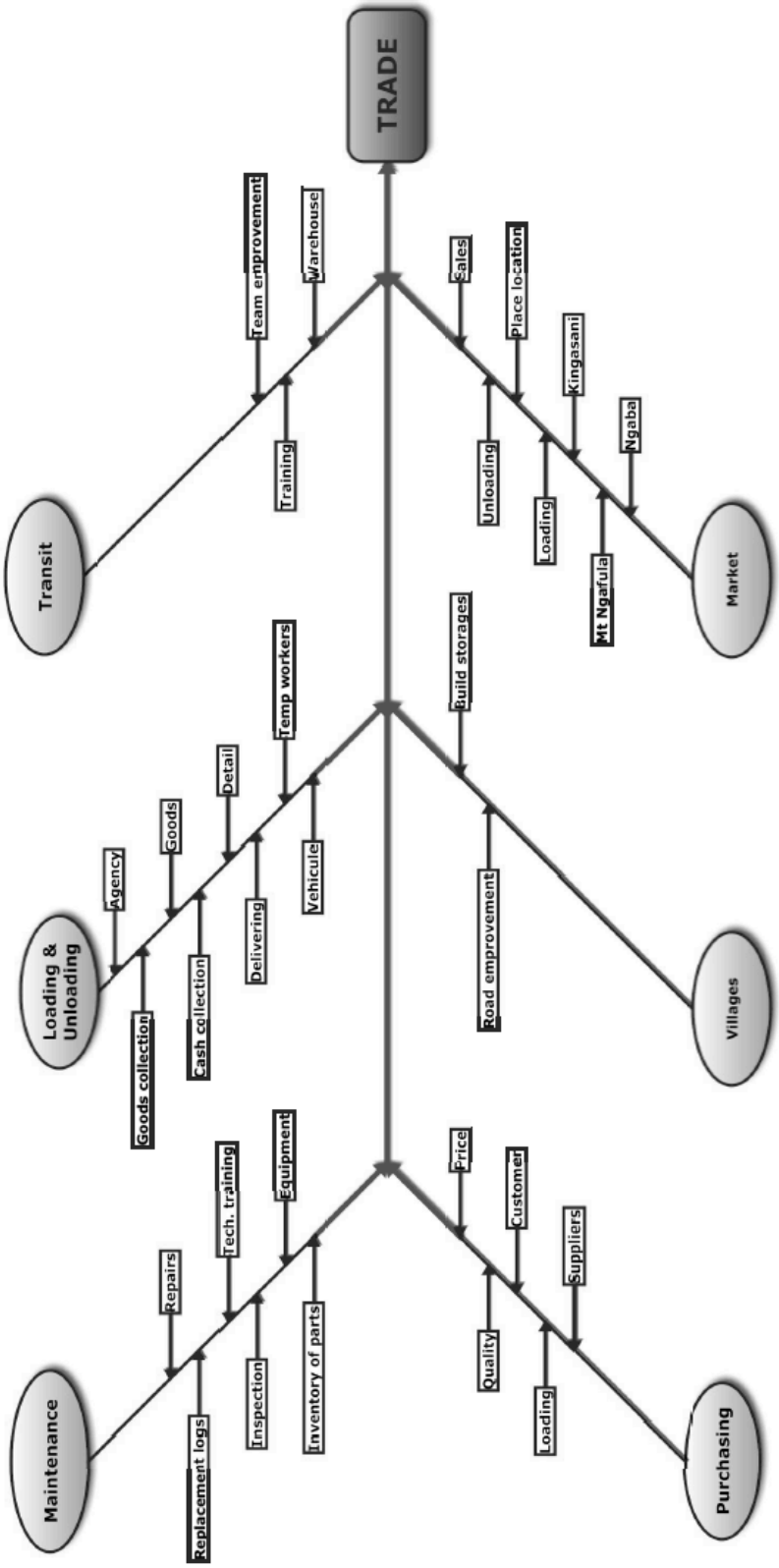
Source: Google Maps

ix. Close-up image of Jamaa and the youth centre they support in Kinshasa



Source: Google Maps

Appendix 6 Fishbone Chart of Jamaa Trade



Source: Company data

Appendices Chapter 4: Characteristics of Jamaa

Appendix 7 Detailed PESTEL Analysis of doing business in Congo

We will here elaborate briefly on the 6 PESTEL segments.

Regarding the political system, it is clear, that Congo's recent war with powerful Rwanda and Uganda amongst others continues to be a source of instability although the relation is improving (Deibert 2008, p.63). The country suffers from widespread corruption, as Congo has been ranked 164th most corrupt country out of 178 (Transparency International 2010). Furthermore, the current situation of its democracy is severely weak placing the country as the 155th most democratic country on EIU's list (Economist Intelligence Unit 2011, p.16).

One positive aspect of Congo's economic situation is that it is expected to show significant economic growth of 6-7 % in the coming years (Economist Intelligence Unit 2011). Unfortunately, the country still has large debt obligations, and is in practice only kept above water by the large, foreign aid upon which the country is very dependent. These circumstances are further deteriorated by a rampant consumer price inflation that reached 45 % in 2009, but is expected drop to 12% in 2012 (Economist Intelligence Unit 2011, p.13).

From a societal perspective the strong population growth and relatively young population are positive trends (CIA 2011c). However, as mentioned, the ethnically torn country is struggling to keep the nation together after years of wars and dictatorship, as often ethnical or tribal relations are considered stronger than that of national identity (Nkongolo-Bakenda in Dana 2007, pp.61-80). Lack of trust is a consequence of these conditions, which can be impeding for any conduct of business (Fafchamps 2003)

Looking at the technological development, the development of the mobile network has been positive while there is still momentous work to be done with the shattered Congolese road and rail network (Foster & Benitez 2011). Similarly, the level of internet subscribers is extremely low at 0.03 users per 100 citizens (Foster & Benitez 2011, p.17).

Environmentally, if one has to bring forward something positive, Congo has one of the smallest CO2 emissions per capita, at a mere 0.44 tonnes/capita compared to US' 18 and UAE's 32 tonnes/capita (International Energy Agency 2010, p.96). However, there is little

political will to protect the environment; examples include planned oil drillings off-shore and in UNESCO protected Virunga national park (Economist Intelligence Unit 2011, p.21).

Finally, the legislative environment of Congo is disastrously complex and slow, which further enables the widespread, rampant corruption. Congo has consistent scored extremely low on the World Banks' annual report of the ease of doing business in different countries, as the country had a 175th place in the 2011 rankings (World Bank 2010, p.157).

Appendix 8 Financials of Jamaa Trade

2009 Trade Actuals

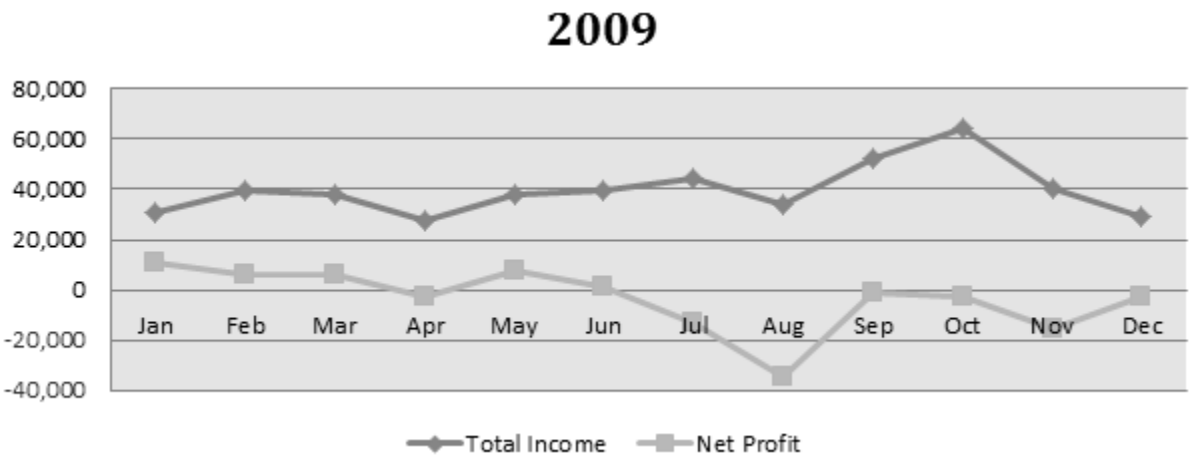
Profit & Loss Summary	Jan	Feb	Mar	Apr	May	Jun
Total Income	30,442	39,731	37,665	27,623	37,767	39,780
Cost of Goods Sold	9,432	15,887	9,600	9,546	18,320	10,021
Gross Profit	21,010	23,844	28,065	18,077	19,447	29,759
Expenses	10,494	17,477	21,957	20,622	11,895	28,659
Net Profit	$10,516	$6,367	$6,108	($2,545)	$7,552	$1,100

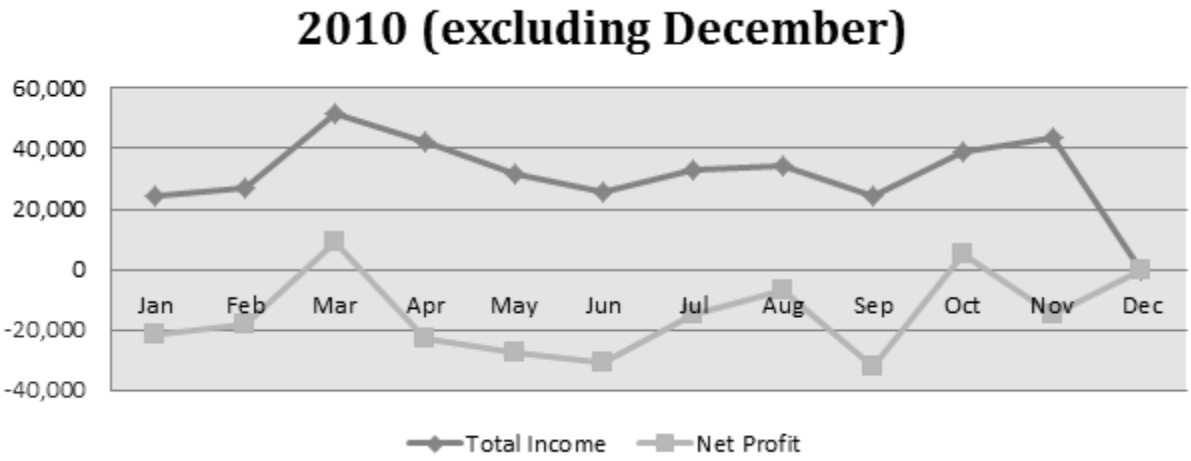
Jul	Aug	Sep	Oct	Nov	Dec	Total
44,422	33,617	52,176	64,688	40,650	29,257	**477,817**
26,269	31,342	19,066	25,999	3,931	0	**179,412**
18,153	2,276	33,110	38,689	36,719	29,257	**298,405**
31,383	36,623	34,366	41,499	52,024	32,357	**339,356**
($13,230)	($34,347)	($1,256)	($2,811)	($15,304)	($3,100)	($40,951)

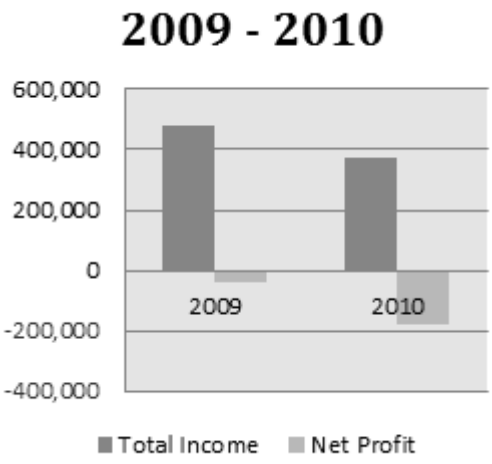
2010 Trade Actuals

Profit & Loss Summary	Jan	Feb	Mar	Apr	May	Jun
Total Income	24,423	27,154	51,368	42,020	31,379	25,354
Cost of Goods Sold	5,699	3,880	3,564	6,177	15,040	4,100
Gross Profit	18,724	23,274	47,804	35,843	16,339	21,254
Expenses	40,513	41,580	38,825	59,128	43,817	52,208
Net Profit	($21,789)	($18,306)	$8,979	($23,285)	($27,478)	($30,954)

Jul	Aug	Sep	Oct	Nov	Dec	Total
33,014	34,474	24,441	38,787	43,427	0	**375,841**
4,899	1,300	17,042	0	0	0	**61,702**
28,114	33,174	7,399	38,787	43,427	0	**314,139**
42,847	40,101	39,708	33,521	58,284	0	**490,531**
($14,733)	($6,927)	($32,309)	$5,266	($14,857)	$0	($176,392)







Source: Company data

Appendix 9 Authors' logbook

i. Date: Summer 2010 introduction

In June 2010, before the summer holiday, we made a tentative agreement to work together on the Master Thesis of our study programme, to be completed by June 2011. We knew that it would be a challenge, however, as we both graduated with a double degree with a Master of Science in Applied Economics and Finance from Copenhagen Business School, as well as a CEMS Master's in International Management. The double degree entailed a full course load of more than 30 ECTS points in addition to our Master thesis during our final semester. Furthermore, we knew that we would not be in the same location for the next 12 months due to Emmet's trip to Asia during the summer and exchange semester in Sydney in the fall 2010, and Nicolai's internship in London during the summer and exchange semester in Paris in the spring 2011. Despite these hurdle, we were confident that we could deliver a strong project together, and at the beginning of September 2010 we began preliminary discussions regarding the thesis.

ii. Date: 1st of September 2010 – 22nd of December 2010

Location: Copenhagen, Denmark and Sydney, Australia

Prior to discussing a topic, we made some overall thesis goals, as well as a thesis timeline. There were three main objectives regarding the thesis: First, we had a desire to become proficient within a new topic area and thus decided to work find a topic with which we had little experience. Second, we wanted to undertake a consulting-like project which entails a close collaboration with a single organisation (as opposed to writing a purely theoretical paper or working with a larger sample of organisations) in order to improve our project management and strategy consulting skills. Third, we wished to work with a non-profit organisation. The reasons for this were two-fold: Before entering the "corporate" world we wanted to make an impact on an organisation working for a social cause, and we also believed that more value and larger improvements could be created by working with a non-profit organisation compared to working with a large publicly-listed corporation.

Regarding the thesis timeline, we were both going to start our professional careers in September and therefore set an overall deadline to complete the thesis by the end of August

2011, with a short-term deadline of confirming the thesis topic, organisation to work with, and academic advisor before the 22nd of December 2010.

Preliminary topic areas included supply chain management, strategic management, business process improvement, scenario planning, and international political economy. After much discussion it was decided to work within the areas of corporate performance management, preferably with an emphasis on operations management. The authors did not have extensive previous experience within the areas and wanted to with quantifiable measures that could be improved by various performance management frameworks and models.

A thesis proposal was sent to 12 different NGOs, including UNICEF Denmark, DANIDA, Red Cross Denmark, Læger Uden Grænser (Médecins Sans Frontieres), Care Denmark, and TIFIE Humanitarian. After an evaluation of the different options available according to the three main criteria of fit with our desired thesis area, perceived support from the organisation, and ability to make an impact in the organisation, it was decided to pursue a collaboration with Jamaa Enterprises, a sub-entity of TIFIE Humanitarian. The initial kick-off meeting (a phone conference) was held with Jamaa CEO Ryan Shepherd and Jamaa COO Dave Erickson on the 9th of November 2011.[43] Once the organisation was in place, a more specific thesis proposal was sent to a short-list of academic advisors, and we were fortunate enough to enlist the support of Kim Sundtoft Hald, who agreed to be our academic advisor for the thesis. Kim was our first priority as his areas of expertise within, among other areas, operations management, supply chain management, and performance measurement, fit our thesis goals extremely well. A kick-off meeting with Kim was held on the 15th of December on at Copenhagen Business School. All three goals of finalising the topic, organisation, and academic advisor were thus achieved prior to the Christmas holidays as planned.

iii. Date: 3rd of January – 16th of February 2011

Location: Copenhagen, Denmark and Paris, France

At the beginning of January there was a 10-day period where we were both in Copenhagen at the same time, and we profited from the period together by having further meetings with Kim and telephone conferences with Ryan. There was a primary focus on gathering and analysing secondary data from Jamaa in order to fully understand the operations of the

[43] Emmet met Ryan while on exchange in Hong Kong in the fall of 2008 and has maintained contact since then

company. We collaborated closely with Ryan in order to map the organisational requirements and determine the optimal way in which we could add value for Jamaa. Furthermore, we worked closely with Kim in order to narrow the focus academically and establish the theoretical angle to our thesis.

On the 15th of January Nicolai flew to Paris for his exchange semester, where he would stay until the middle of June. Ryan had recently moved to Paris with his family from the United States in order to be able to fly to Kinshasa on a bi-monthly basis, and Nicolai was therefore able to meet with Paris in person during the exchange semester instead of relying solely on phone conferences. This greatly facilitated the collaboration on a professional and personal level. Numerous meetings were held with Ryan in Paris, while Emmet was responsible for the meetings with Kim in Copenhagen.

In order to have the best foundation to add value for Jamaa, it was decided that the authors would make a trip to Kinshasa, both to collect data for the first round of measurement, but also to see the actual operations first-hand and meet the local employees. Due to university commitments Nicolai was not able to go to Kinshasa, but Emmet planned a 10-day trip to Kinshasa at the end of February. It was planned that Emmet would leave 3 days earlier and fly via Paris so that we could have 3 days to work on the thesis together.

Prior to Emmet's arrival in Paris, we had three main goals: To have the proper project kick-off meeting with Ryan, create a BSC and strategy map for Jamaa Trade, and finalise the measures and data collection methods we would utilise during the first round of data collection (to be initiated and carried out by Emmet in Kinshasa). During an intense 2-week process with frequent meetings and phone conferences and a great deal of input from all parties involved, the three goals were achieved. The next steps were to go from the conceptual, planning phase of determining the measures and data collection techniques at a high level, to creating the actual documents and procedures that would help execute the project. This would be done during Emmet's stay in Paris prior to the trip to Kinshasa.

iv. Date: 17-20th of February 2011

Location: Paris, France

Upon Emmet's arrival in Paris, we both worked non-stop on having the documents ready for the coming weeks in Congo. Our approach was to first identify the tasks needed to be done, then to split up the work into divisible parts on our to-do list, and then share the workload while discussing and helping each other out whenever necessary.

We wanted the questionnaires to follow best practice and theory within the field, so prior to formulating the interviews, we did a thorough literature review on surveys and how to create surveys using mainly McConnell and other sources (McConnell 2003; Saari & Judge 2004). Having the appropriate theoretical foundation, we then finished the drafts of all the questionnaires and trip tickets, which we then discussed with Ryan Shepherd to get his input, and make them as relevant and useful as possible. Ideally, we would have used him and the employees more in the process, but this was not possible due to the distance. Then the final versions were translated into French using local French language students as translators, and a long, intense work-weekend was over. Emmet next flew to Congo.

v. Date: 21st of February - 2nd of March 2011

Location: Kinshasa, Congo

Arriving to Congo was a big shock, even though Emmet Sharghbin has travelled extensively in Asia and Latin-America and had tried to mentally prepare himself for the encounter. The severe lack of infrastructure and the seemingly, chaotic, unorganised, and slow work attitude at the airport workers was shocking and lead to almost 2 hours waiting time to get the luggage delivered. More than 20 people were responsible for delivering the luggage, yet it felt like nobody did anything. The normally 30 minute drive home from the airport also took more than 2 hours due to the chaos caused by a tipped truck and the consequent lack of queuing, as few stuck to normal traffic rules. It was an indicative sign of some of the clashes there would between the authors' predominantly Western backgrounds and the local Congolese culture.

The first day started with a kick-off meeting where more than 30 employees were gather in the firm's meeting room. It was the first time the workers attended a large meeting like this, as most communication so far had gone through middle managers except for the occasional, sporadic meeting between the CEO and the workers outside. The meeting surpassed expectations, and there was some excitement in the audience, notably a few managers, who

gave the initiative a warm welcome, thanking Emmet, and encouraging co-workers to feel like a team and improve. Curiously, 9 of 10 comments came from managers, and this was indicative of the fear that most of the employees had for the managers, which was one of many reasons behind the suboptimal level of communication.

After the first meeting Emmet held 2 pilot interviews with employees revising the questions after both interviews. The interviews revealed several truths that we had enquired about, where Ryan unknowingly had given incorrect answer. For example, we were told that everyone spoke French, however, the meetings revealed that few speak French beyond a very basic level, even though the employees had said to Ryan they did. Consequently, all interviews with workers except a few had to be done in Lingala. Emmet also found out, that few, if any, workers "pondered" about things at the job, for instance how to improve and so forth, they just work to get by giving their work a very transactional nature in which they offer their work efforts in exchange for money. The transactional nature was further deteriorated a few stories during the interviews about how previous colleagues had been stealing. On a more positive note, the employees seemed to have such a good team-spirit that they stopped to help each other, no matter what, which could of course also be a source of delay and inefficiency, Emmet noted.

Second day continued with 5 more interviews in which the lack of communication was further exemplified by two stories about how top management only communicated via middle managers and vice versa, and, unfortunately, a few examples of middle managers not passing on information.

Third day continued with some more interviews, but the highlight of the day was the one-on-one interview with the sole agent of Jamaa, Wase. The agent interview revealed a very bad and neglected relationship in which Wase clearly felt unimportant and ridiculed, as there had been several instances of delayed goods and goods missing. Fortunately, based on my findings the CEO immediately prioritised the crucial contact with Wase higher by moving the communication from the Sales manager Pitshou to the CEO Tommy.

Day four was spent on a long day-trip to the nearby villages in Dumi, seeing the cassava fields, and experiencing the village life of urban Congo. This was the part of the trip that made the deepest impact on Emmet. The poverty and lack of nearly every public good that

Danes take for granted was rather shocking. There was no electricity, no water, no food, and the inhabitants, notably the children, were malnourished, and everything was dominated by the rampant smell of faeces. Surprisingly, the villagers did appreciate the efforts of Jamaa/Tifie, but at the same time felt badly treated and demanded more wages and more work for all, arguing that Jamaa/Tifie should have employed more of them, and paid higher wages, a recurring theme in Emmets interactions with the Congolese. Still, the villagers made clear they would prefer to work for things, rather than having things handed to them.

Day five, Friday, the remaining interviews were conducted with middle and top management. Middle management acknowledged the communication problems, and knew it was a big issue, whereas top management, consisting of the two Americans, was largely unaware of the issue. When confronted with the problem, and several other problematic issues, such as the lack of communication and for example, top management having working lunches, rather than eating together with the employees, top management admitted they were unaware of the issues, but were grateful for our work, and promised to try to change immediately. As a part of the discussions the preliminary initiative proposals were discussed.

In the weekend, Saturday and Sunday, all the gathered information was structured and organised more clearly, and analysed thoroughly. The analyses and initiatives were then discussed via Skype with Nicolai and Ryan, and agreed upon. Furthermore, there was enough time for a bit of sightseeing Sunday afternoon which was stopped due to the assassination attempt on president Kabila.

Monday, day eight, and first day without the two American top managers, the change in the atmosphere was dramatic as everyone suddenly relaxed much more, and ate for at least 1 hour to 1.5 hours, compared to the standard 0.5 hour lunch while the Americans were there. The rest of the day was spent on translating the documents as well as the final presentation into French and Lingala, and discussing the issues of the analyses with primarily the middle managers.

Tuesday, day nine, was the day of the big final presentation in which all the findings from the interviews, questionnaires, and analyses were put forward at a grand meeting again attended by every employee with the Deputy CEO Tommy present. The 11 initiatives were also presented and discussed. The most interesting result of the survey was the employees'

dissatisfaction with their salaries. In general, the employees put forward many, many, many demands, such as taxi service to their homes, higher wages, a month of bonus payment for Christmas , and so forth There was much more a self-centred focus on getting as much as possible as quickly as possible, rather than improving the firm, improving profits, so that the firm would have the money to pay the employees. There were some positive aspects as well, as the initiative of education and increased meetings and communication was welcomed whole-heartedly.

Overall impressions

- The organisation is very hierarchical
    - Senior management does not always consult middle management on decisions
    - Middle management does not consult employees on decisions
    - A strong culture of "management by fear"
    - Employees and managers sit at separate tables during lunch
    - Employees are afraid to speak up and make suggestions for improvements
- Employees are very short-term oriented
    - Contracts are all short-term – this does not give security to the employees
    - Survival and securing sufficient food for the family is a real day-to-day problem
    - Planning for the future and saving money is not widespread
    - Stealing from the company is relatively common
- Good team spirit among employees
    - Very supportive and they help each other when there are problems
- Wages are openly discussed among employees
- Employees have a different approach to time
    - Team meetings and lunch can drag on for hours
    - Employees are rarely stressed or in a hurry
- Employees have a low performance orientation
    - If employees do not finish the work they were supposed to do on a day, the mentality is that it is ok to finish it tomorrow
- There is a low focus on continuous improvement and quality

  - Employees are not encouraged to give suggestions or make improvements
  - Employees do not expect to do more than their daily, physical work
- Employees are not proud of working for Jamaa
  - Employees do not have proper work clothes
  - There is no shared organisational vision among employees
- All employees are eager to improve and learn
  - There is an "expectation" that Jamaa provides more training, also in terms of language (English and French)
- Extremely low level of technology

vi. Date: 3rd of March – 31st of July

Location: Copenhagen, Denmark and Paris, France

During the trip to Kinshasa, Emmet was able to carry out 21 employee and manager surveys, the village survey, the agent survey, and initiate the process for collecting trip tickets. The data collected in Kinshasa was analysed with local managers and improvement initiatives were presented during the final presentation in Kinshasa. After the trip, we analysed the collected data in more detail and further refined the initiatives with Kim and Ryan. We began implementing some of the Deming-related initiatives at the beginning of March as we had sufficient data from the employee and manager questionnaires and wanted to have the longest possible implementation phase before the second round of data collection.

At the same time, we waited for the trip ticket data to be collected and sent via email by Flavie Tshidibi, the newly appointed "Quality Champion" at the local Jamaa operations in Kinshasa. The trip tickets took significantly longer to collect than originally planned, and this delayed the thesis by approximately a month. However, we managed to get 9 trip tickets for the first round of data analysis, which were analysed in more detail with the existing data.

The surveys and trip tickets yielded numerous interesting insights which were discussed in further detail with Kim and Ryan. Kim guided us academically and helped us with the more technical tasks of analysing the data, creating value stream maps, and implementing the BSC and strategy map. Furthermore, Kim helped ensure that we maintained a consistent theoretical approach to our performance initiatives. Close contact was also maintained with

Ryan to brainstorm initiatives and determine whether the proposals would work at Jamaa (based on the unique organisational characteristics and requirements, as well as the local context). Ryan furthermore greatly helped us implement the initiatives during his trips to Kinshasa, which sped up the implementation process and ensured that the initiatives were implemented successfully.

The first round of data collection and analysis was completed in the middle of April and the remaining initiatives were implemented on Monday the 18th of April. Due to time constraints we only had a 2 week implementation period before beginning the trip ticket data collection at the end of April (it took us 5 weeks to receive 5 more trip tickets), although X% of the initiatives had been implemented prior to undertaking the second round of analysis. Furthermore, the initiatives were continuously implemented throughout the months of May as well, while the trip tickets were being collected. The employee and manager questionnaires were collected at the beginning of June, 2 months after first round of questionnaire data collection, and a total of 8 responses were collected.

After the second round of data collection had been finalised, the data was analysed and long-term recommendations were put forward. Thereafter the wider implications of our research were highlighted, more specifically the dual focus of implications for firms doing business in Congo and implementing a balanced scorecard in a social business. The last few weeks of the thesis were spent tying up loose ends, consolidating the work, and finalising the overall conclusion.

Emmet and Nicolai

Appendix 10 Definition of a social problem

i. Which social problems need to be addressed?

In order to understand the underlying motivations for the existence of social businesses, this section provides an overview of the types of social problems that need to be addressed. Numerous typologies exist, and the three examples below provide an overview of the most pressing social issues faced by the world today. First, in 1923 Hart conducted a preliminary study of social problems in order to provide a more accurate definition of the term. Hart

writes that *"an inductive study of the topics covered in leading books and articles discussing social problems suggests their clarification under four heads – economic, health, political, and educational problems."* A total of 51 critical sub-questions under the four main headings were identified, and a definition of social problems following those in the above list emerges from a study of them: *"A social problem is a problem which actually or potentially affects large numbers of people in a common way so that it may best be solved by some measure or measures applied to the problem as a whole rather than by dealing with each individual as an isolated case, or which requires concerted or organized human action"* (Hart 1923). Although many of the issues highlighted by Hart are still relevant today, the list is not fully comprehensive as it leaves out problems such as climate change and malnutrition.

Second, the United Nations Millennium Development Goals (MDGs), adopted at the UN Millennium Summit in New York in September 2000, are eight international development goals to be achieved by 2015. The MDGs were supported by all 192 members of the UN, as well as numerous international organisations. The MDGs are as follows:

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

Each goal includes additional sub-goals, as well as more specific quantitative and qualitative targets to be achieved by 2015 (UN 2000).

Third, Lomborg highlights nine key social problems that the world needs to address: climate change, communicable diseases, civil wars, education, poor governance and corruption, hunger and malnutrition, population and migration, access to water, and subsidies and trade barriers (Lomborg 2006).

Even the above classifications, however, leave out problems such as access to technology, drug abuse, eating disorders, slavery, human trafficking, abuse, and suicide. In order to be

more inclusive, this thesis therefore takes as its point of departure a broad definition of social problems, as discussed in the next section.

ii. Definition of a social problem

There is not one general definition of a social problem but many approaches exist. Mills argues that a social problem is not a unique personal problem experienced alone. Rather, a social problem is a problem experienced by a number of people due to societal conditions. Thus a personal problem (e.g. lack of health care) can be a social problem if it is caused by the underlying social conditions and experienced by a large number of people at the same time (C. W. Mills 1959). Fuller and Myers provide a much cited designation based on seven propositions, highlighting the importance of both subjective and objective elements in the definition (Fuller & Myers 1941, pp.320-321). Crone builds on these definitions and specifies that social problems can be local, societal, and global in nature. Crone thus states that *"A social problem exists when people subjectively perceive and have empirical evidence to show that societal conditions combine at a local, societal, or global level to cause personal problems"* (Crone 2010, p.2). Crone's definition is broad enough to include a wide range of social problems, including the examples listed above, and is therefore used to define "social problems" in this thesis.

Appendix 11 Introduction to social entrepreneurship

Although the use of the terms such as "social enterprises", "social entrepreneurship", and "social business" is a relatively recent phenomenon, the concept of using business methods to tackle social problems has been going on for centuries. For example, early Catholic monasteries in the United Kingdom earned profits in order to sustain the livelihood of large numbers of people who worked on their farms and industries (Price 2008). However, due to intensifying demands in the public sector for increased effectiveness, as well as a backlash against the growing concentration of wealth in the private sector, social entrepreneurship is becoming increasingly important as a method for dealing with complex social needs (Sherril Johnson 2000).

A common definition of a "social entrepreneurship" does not exist, and it is important to bear in mind that the term is not a legal concept. When segmenting social initiatives according to the degree of profit orientation, there are many definitions ranging from an

exclusive focus on social goals and not-for-profit status (Dees et al. 2002) to profit-maximising firms that pursue clear social goals as well (Peredo & McLean 2006). There is a large grey area and a number of different concepts can be found along the continuum, as illustrated in **Figure 74**.

Figure 74- The range of social entrepreneurship

	Place of Social Goals	Role of Commercial Exchange	Example
Social goals are very important ↑	Enterprise goals are exclusively social	No commerical exchange	NGOs
	Enterprise goals are exclusively social	Some commerical exchange, any profits directly to social benefit ('integrated') or in support of enterprise ('complementary')	Grameen Bank ('integrated'); Bangladesh Rural Advancement Committee ('complementary')
	Enterprise goals are chiefly social, but not exclusively	Commercial exchange, profits in part to benefit entrepreneur and/or supporters	Missouri Home Care; Ciudad Salud
	Social goals are prominent among other goals of the enterprise	Commercial exchange; profit-making to entrepreneur & others is strong objective	Ben & Jerry's
Social goals are less important ↓	Social goals are among the goals of the enterprise, but subordinate to others	Commercial exchange; profit-making to entrepreneur & others is promient or prime objective	Cause-branding'; Social-objectivities undertaken by corporations such as banks

Source: Adopted from Peredo & McLean 2006

The most important criteria is the notion of addressing social needs, yet there is a no precise way of fixing a threshold for social objectives or impact below which an organisation would no longer qualify as being "social". Thus as long as an organisation has made a firm commitment to meet social objectives, regardless of whether these objectives are of primary or secondary importance compared with other organisational objectives, it can be classified as "social". Given this definition, Peredo and McLean offer an "obvious" piece of advice – anyone using the concept of social entrepreneurship must make it clear what meaning is attached to the term and the implications thereof (Peredo & McLean 2006).[44]

[44] For extensive discussion on social entrepreneurship and social enterprise, see Bornstein & Davis 2010, Borzaga & Defourny 2004, Johnson 2000, Osberg & Martin 2007, and Peredo & McLean 2006.

Appendices Chapter 5: Requirements of Jamaa

Appendix 12 Detailed analysis of consequences of the context on business in Congo

We will here elaborate on the 6 PESTEL elements and their consequences for doing business, see Figure 17 on page 40.

With regards to politics, given the instability and fragility of Congolese politics, establishing long-term relations to public officials may be necessary and potentially very helpful. Ideally, Jamaa should furthermore have a clear plan on how to handle sudden political changes and have contingency plans in case of uprisings and revolts. Next, corruption is rife, as Congo is the 164th country out of 178 on Transparency International's Corruption Perceptions index (Transparency International 2010). For foreign firms such as Jamaa to be successful, firm owners need to understand the context of corruption in these countries and accept that many things will be different. Ideally, Jamaa should furthermore have clear guidelines on how to handle requests for bribery, and make clear if the firm is willing to accept "lubrication".

The economic development of Congo may be poor in its current state, but the outlook is relatively positive, despite the potential dangers from hyperinflation, so there is a large probability of increased market demand in general (Simon Johnson et al. 2007, p.1). Second, given the large unemployment rate, it will be relatively easy to find especially low skilled workers, but not as cheap as in Asia (OECD & AfDB 2010, pp.272-273).

With regards to social issues, the Congolese culture has a strong degree of collectivism and high power distance in between people (Brooks 2003, pp.270-273). Especially foreign managers need to understand and respect the collectivistic culture by trying to include more people into the decision-making processes and obtain consensus for major issues. It also means that individual bonuses could cause unhealthy competition. The high power distance also means that the foreign managers should try to break down barriers and presenting himself at par with the employees, although he should not risk losing his authority by appearing "too soft". Furthermore, employees might not contribute with ideas themselves individually, but may tend to try to gain broad acceptance in the group before presenting ideas, which could be impeding for the improvement processes in the organisation (Brooks

2003, pp.270-273). The many wars and ensuing instability has also lead to a lack of trust, which, in combination with weak legal enforcement, means that Jamaa should take extra caution in business deals. Also, higher education is still largely unavailable, and therefore, Jamaa should expect that well-educated employees will be hard to attract and keep. Jamaa should ideally be flexible enough to endure large employee churn, but also make sure that initiatives and programmes are explained well to all parts of the organisation in order to get all employees on board and aligned.

With regards to Congo's "technological" environment, infrastructure has suffered seriously due to corruption and wars and this naturally affects Jamaa's capabilities in terms of transportation to Kikwit but also in terms of internet connectivity. Jamaa is already much aware of the situation and does its best to compensate for this deficiency in Congo, for instance by paying themselves for road improvements to some of the isolated villages and for an expensive, yet necessary satellite internet connection. Still, Jamaa is much dependent on what the Congo government achieves in terms of infrastructure improvements, but except for making their voice heard in the government there is not much to do for Jamaa.

Environmental aspects are ignored as they have little impact for Jamaa.

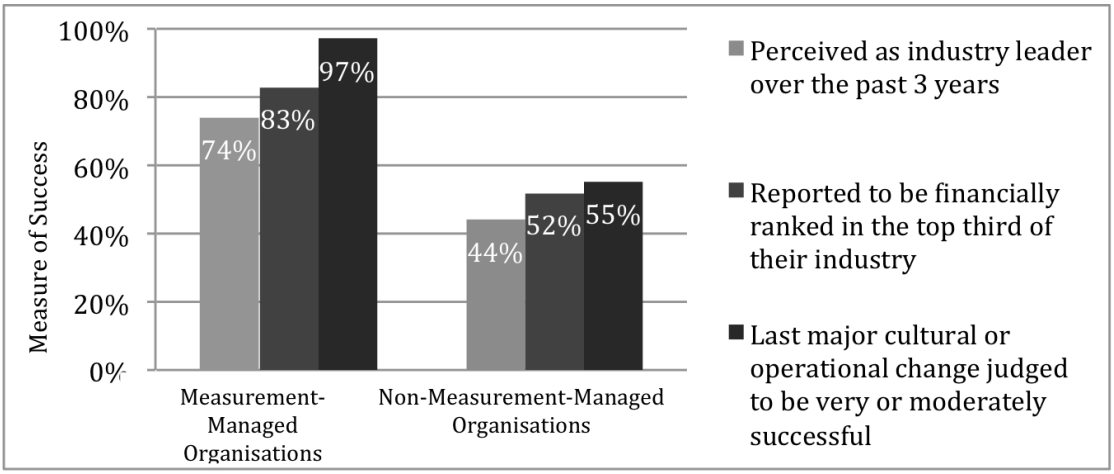
In terms of business legislation, Congo is one of the worst countries, being 175th on World Bank's Doing Business report (World Bank 2011). One way to counter this would be to hire local experts and rely on them to deal with legal complications.

Appendices Chapter 6: Literature review

Appendix 13 The value of using PMA

Research indicates that organisations that use PMA systems perform better than organisations that do not. For example, Lingle and Schiemann studied 122 firms and showed "measurement managed organizations" were perceived to be industry leaders, reported better financial results, and were better at implementing change than "non-measurement managed organisations" (Lingle & Schiemann 1996).

Figure 75 – The value of being a "Measurement-Managed Organisation"



Source: Lingle & Schiemann 1996

Furthermore, a survey of 780 CEOs and CFOs from the 5000 largest organisations in the US showed that senior executives from companies with formal PMA systems perceived that they made better decisions, improved communication, and were superior at execution than companies without formal PMA systems (Marr 2004). However, it should be noted that some firms choose specifically not to employ PMA systems due to a perceived low return on investment given the implementation effort required (Speckbacher et al. 2003), especially small-medium sized enterprises (SMEs) (Davig et al. 2004). Furthermore, research has indicated that there are positive and as well as negative effects of implementing PMA systems . Nonetheless, most research show that PMA systems are becoming increasingly widespread among organisations – research has shown that 30-60% of organisations renewed their PMA systems between 1995 and 2000 (Frigo & Krumwiede 1999) and that by

2004, 85% of organisations will have PMA initiatives in place (A. D. Neely 2008). Furthermore, it has been shown that the benefits of PMA systems generally outweigh their costs (Michael Kennerley et al. 2004; Marr 2004).

Figure 76 - The pros and cons of using PMA systems

Top Positive Effects of PMA Systems	Top Negative Effects of PMA Systems
1. Focus people's attention on what is important to the company	1. Time consuming
2. Propel business improvement	2. Demands considerable financial investment
3. Improve customer satisfaction	3. Bureaucratic - too many measures make PMA systems bureaucratic
4. Increase productivity	4. Over-complicated measures - dificult to understand and manage
5. Align organisational performance with strategic objectives	5. Misleading prioritisation - 'red' measures can divert attention from most critical measures
6. Improve people satisfaction	6. Mechanistic - can discourage entrepreneurial intuition
7. Align people behaviours towards continuous improvement Improve company reputation	7. Monotonous - managers have to continuously refresh the way in which performance is reviewed

Source: Authors' own creation adapted from Martinez 2005

Regarding uses for PMA, a review of the literature by Cranfield shows that there are a large number of reasons for managing performance, including strategy formulation, strategy implementation and execution, challenging assumptions, monitoring current position and providing feedback, benchmarking, complying with non-negotiable parameters, internal and external communication, learning and improvement, and aiding the decision-making process. These roles can be classified into three main groups – strategic (strategic implementation and monitoring), communication (checking, compliance, providing direction, and providing feedback), and motivational (evaluating and rewarding behaviour, and encouraging learning and continuous improvement). All three sub-groups have been stressed as important in the literature (Cranfield 2004).

Regarding PME, it is clearly an essential aspect of PMA, hence the often cited homilies *"you can't manage what you can't measure"* (Andy Neely 2005) and *"tell me how you will measure me and I'll tell you how I will behave"* (Davig et al. 2004). Lebas states five reasons for PME (Lebas 1995) while Behn mentions eight (Behn 2003). Both authors, however, take a broad view of PME and their reasons overlap heavily with the reasons for performing PMA as

stated by Cranfield. All in all, it is clear from the literature that PMA (and PME) are crucial elements in improving the performance of the organisation, with performance defined as the successful implementation of actions in order to reach the objectives and targets previously set by the management team.

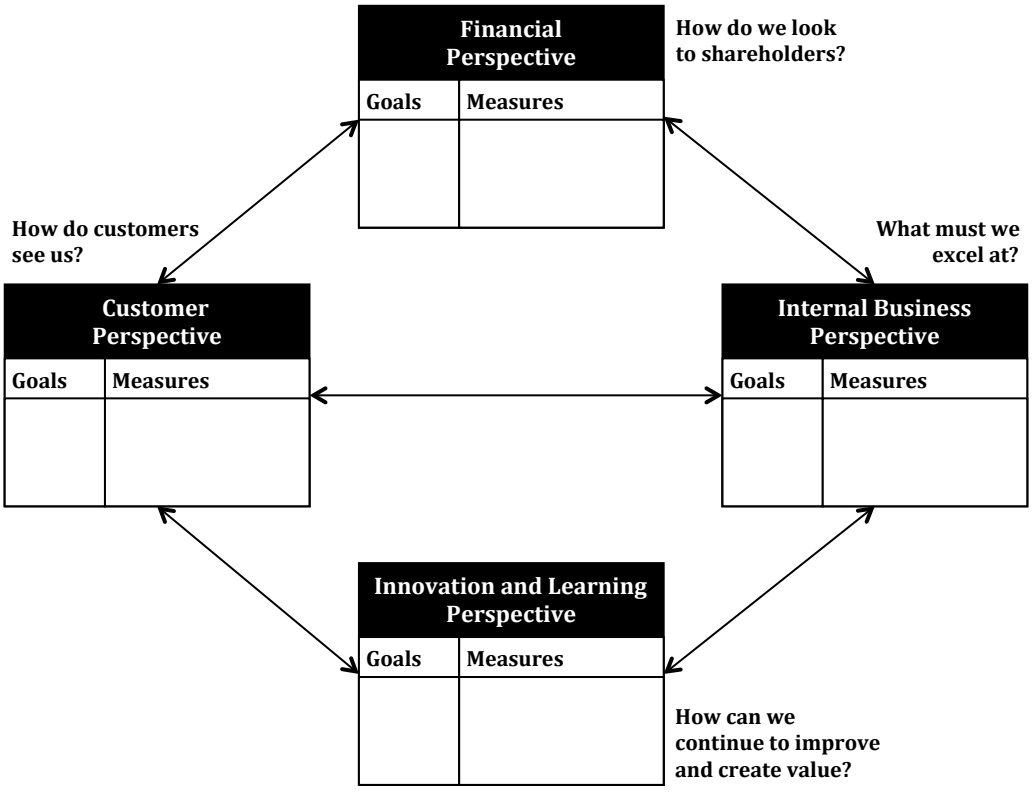
Appendix 14 The Balanced Scorecard

This appendix presents the BSC in more detail, delineating three different "generations" of scorecards (Cobbold & G. Lawrie 2002). The section furthermore highlights some of the criticism levied at the framework, presents an overview of some of the different scorecards in use today, and comments on potential future directions.

16.1.1.1 1st Generation Balanced Scorecard

The concept of the BSC first appeared in the 1992 Harvard Business Review article *"The Balanced Scorecard - Measures that Drive Performance".* The article was a response to existing performance measures, most of which were financial, which were deemed inadequate for modern corporations. Instead, the authors propose a new method for measuring performance, the BSC, which gives managers a balanced and comprehensive overview of the performance of the organisation based on four key perspectives – financial, customer, internal business, and innovation and learning (**Figure 21**). The BSC thus encourages the use of supplementary measures in addition to traditional financial measures, while providing a framework that is structured and that minimises information overload. This allows executives to see beyond accounting measures and identify the specific causes of their financial results, including whether success in one area has been achieved at the expense of another. According to the authors, *"By combining the financial, customer, internal process and innovation, and organizational learning perspectives, the balanced scorecard helps managers understand, at least implicitly, many interrelationships. This understanding can help managers transcend traditional notions about functional barriers and ultimately lead to improved decision making and problem solving"* (Kaplan & Norton 1992).

Figure 77 – The Balanced Scorecard



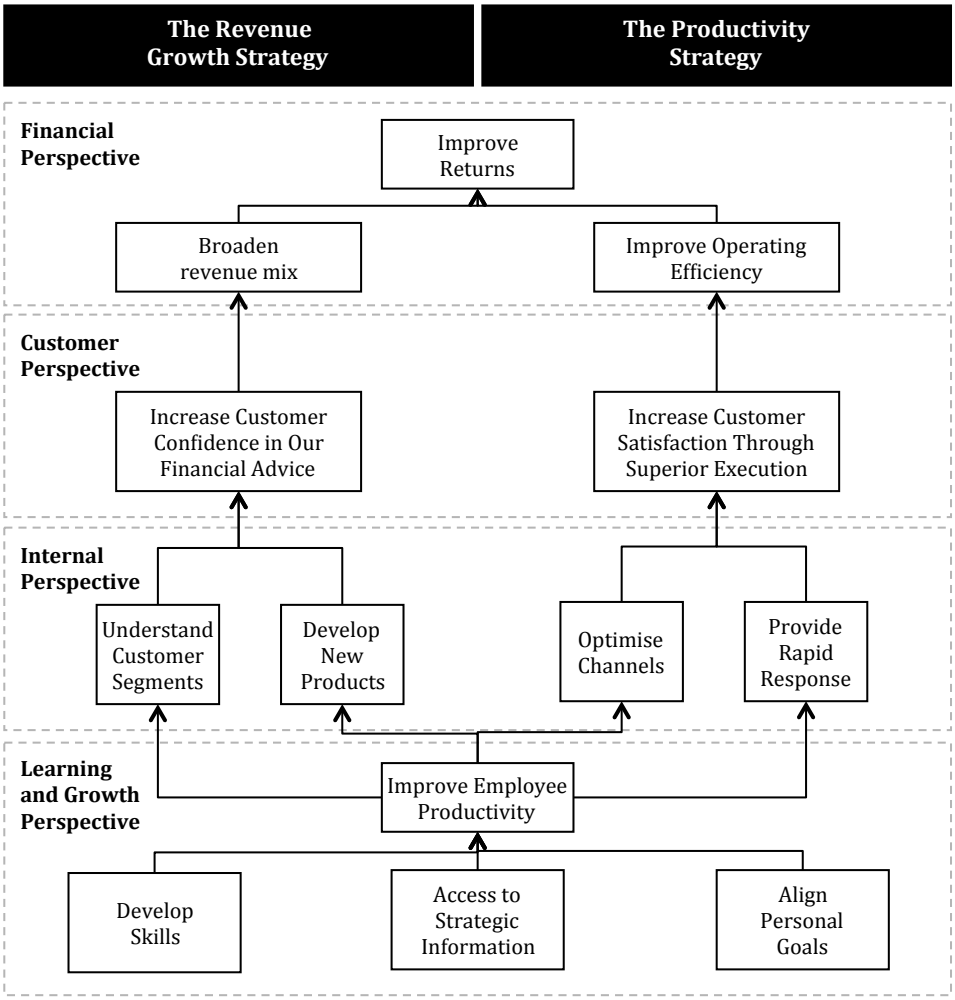
Source: Adapted from Kaplan & Norton 1992

16.1.1.2 2nd Generation Balanced Scorecard

Since its inception in 1992, the BSC has been further developed by both the original authors and by practitioners and scholars alike. The original BSC as presented in Figure 21 was mainly a reporting framework that helped translate an organisation's strategy into quantifiable objectives through a "handful of measures" (typically 3-5) within in of the four perspectives. However, while Kaplan and Norton acknowledged the importance of linking the four perspectives, no advice was given on how to go about this task – *"Even an excellent set of balanced scorecard measures does not guarantee a winning strategy. The balanced scorecard can only translate a company's strategy into specific measurable objectives. A failure to convert improved operational performance, as measured in the scorecard, into improved financial performance should send executives back to their drawing boards to rethink the company's strategy or its implementation plans"* (Kaplan & Norton 1992).

In their 1996 book *"The Balanced Scorecard: Translating Strategy into Action",* Kaplan and Norton expanded on the original BSC article, moving the framework from PME to a more comprehensive PMA system. With the introduction of a strategic linkage model called a "Strategy Map", users of the BSC were now able to formulate cause-and-effect relationships between the different perspectives and link all initiatives to the financial results and illustrate the linkages graphically. This was done by formulating and linking 5-6 specific strategic objectives within each. The book also focused on identifying the underlying performance drivers through lead and lag indicators in order to have a clear link between specific initiatives and the performance of each. By correctly identifying the underlying performance drivers and the causal relationships between each perspective, the BSC now enabled a closer alignment between the financial performance of the firm and the day-to-day work. Furthermore, the authors emphasised the importance of ensuring strategic alignment by using the BSC, both vertically (for example between business units and individual teams) and horizontally (for example in regards to resource allocation, compensation, and budgeting) (Kaplan & Norton 1996). As a consequence, the sum of the above changes enabled the BSC *"to evolve from an improved measurement system to a core management system"* (Cobbold & G. Lawrie 2002).

Figure 78 – Sample Strategy Map and performance drivers



Strategic Objectives	Strategic Measurements	
	Core Outcomes (Lag)	Performance Drivers (Lead)
Financial		
F1 - Meet Shareholder Expectations	Return-on-Equity	
F2 - Improve Operating Performance	Combined Ratio	
F3 - Achieve Profitable Growth	Business Mix	
F4 - Reduce Shareholder Risk	Catastrophic Losses	
Customer		
C1 - Improve Agency Performance	Acquisition/Retention (vs. plan)	Agency Performance (vs. plan)
C2 - Satisfy Target Policyholders	Acquisition/Retention (by segment)	Policyholder Satisfaction Survey
Internal		
I1 - Develop Target Markets	Business Mix (by segment)	Business Development (vs. plan)
I2 - Underwrite Profitably	Loss Ratio	Underwriting Quality Audit
I3 - Align Claims with Business	Claims Frequency Claims Severity	Claims Quality Audit
I4 - Improve Productivity	Expense Ratio	Headcount Movement Managed Spending Movement
Learning		
L1 - Upgrade Staff Competencies	Staff Productivity	Staff Development (vs. plan)
L2 - Access to Strategic Information		Strategic I/T Availability (vs. plan)

Source: Adapted from Kaplan & Norton 1996

16.1.1.3 3rd Generation Balanced Scorecard

The BSC continues to evolve and is currently in its "3rd generation" according to some scholars. Modern BSC frameworks have a higher degree on adaptability (in order to fit a wider audience) and often provide more details on actual implementation. Furthermore, modern BSCs use "destination statements" in order to include the desired future state of the organisation as a result of the BSC, as well as more flexible and practical strategic linkage models (Cobbold & G. Lawrie 2002).

For example, Niven states that the BSC is *a "communication tool, measurement system, and a strategic management system"* and offers much more detailed implementation framework than the original BSC book from 1996. Niven introduces the concept of "objective statements" which are used to clarify with precision what is meant by the objectives within each perspective. In addition, Niven also shows how to customise strategy maps so that they can be used as *"powerful communication tools"* in order to convey the strategy to the whole

organisation. For a detailed overview of a step-by-step implementation of a BSC, refer to Niven 2006.

Niven focuses heavily on *"telling your strategic story through cause and effect"* and states that *"what really separates the Balanced Scorecard from other performance management systems is the notion of cause and effect"* (Niven 2006). However, Niven acknowledges that correctly identifying cause-and-effect relationships is a challenge, stating that even the best strategy (with implicit cause and effect relationships) is simply a hypothesis developed by its authors. The BSC is thus first and foremost a tool for translating a mission into strategy and communicating that strategy successfully to employees. While the creation of cause-and-effect relationships is a challenge for any organisation, the BSC contributes by making the assumptions explicit and allows for a systematic testing of the assumptions inherent in the strategy, thereby leading to continuous improvement (Niven 2006).

Kaplan and Norton have also made further advances to the BSC Framework. The main developments include the publication of "Strategy Maps", which explains in detail how to design and customise a strategy map in order to convert intangible assets into tangible value (Kaplan & Norton 2004) and "Alignment", which describes how to use the BSC in order to ensure internal strategic alignment and create corporate synergies (Kaplan & Norton 2006).

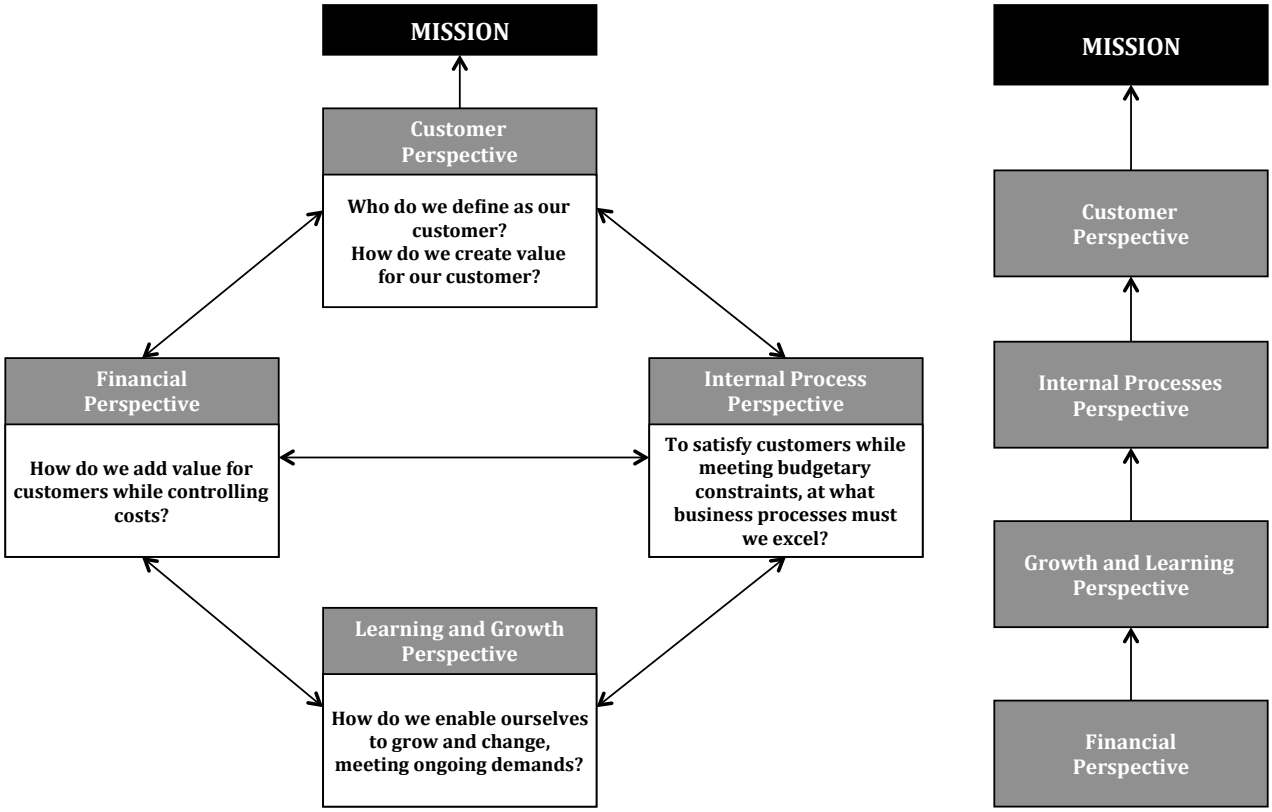
16.1.1.4 Different types of Balanced Scorecards

Numerous types of BSC have emerged in recent years that underline the flexibility of the framework. The BSC is currently utilised globally in both the profit and not-for-profit sectors across a wide array of industries and for organisations of many different sizes. For example, the BSC has been used in manufacturing (Dabhilakar & Bengtsson 2004), electronics (Sim & Koh 2001), healthcare (Aidemark 2004), hospitals (Baraldi 2004), Fortune 500 companies within, among other industries, oil exploration, telecommunications, agriculture, and logistics (Kaplan & Norton 2000), in SMEs (Andersen 2001), in universities (Kaplan & Norton 2000), and in government and non-profit agencies (Niven 2008).

Figure 22 shows an adapted BSC for governments and non-profit agencies. As can be seen from the diagram, the financial perspective is at the bottom of the strategy map and is seen as an the means to delivering on the mission and is not an end in itself. This model of delivering social value relies on a constant stream of funding and typically does not have a

revenue generate aspect to it. It should be noted that a BSC for a social business that includes both social and financial goals does not exist in the literature, to the best of the authors' knowledge after a thorough literature review.

Figure 79 - Balanced Scorecard and Strategy Map for non-profits



Source: Adapted from Niven 2008

16.1.1.5 Criticisms of the Balanced Scorecard

Despite its popularity, the BSC has also received criticism from a variety of sources. Most of the criticism has come from the academic community which has questioned the robustness of the work by Kaplan and Norton. For example, Norreklit levies two main points of criticism on the BSC. First, it is stated that there are not always cause-and-effect relationships between some of the suggested areas of measurement. Second, Norreklit questions the validity of BSC as a strategic control model that is able to handle the problem of strategy implementation (Norreklit 2003). Norreklit has also highlighted the lack of citations as a flaw (Norreklit 2000).

Another point of criticism is the amount of resources required to successfully implement a BSC. Most PMA systems have both advantages and disadvantages. Regarding the BSC, the data collection and analysis process required is problematic for many (especially smaller) organisations. An empirical study showed that *"although small business managers support the need for decisions based on data, many feel that the resources spent collecting data exceed the benefits"* (Davig et al. 2004). An important issue when deciding whether to implement a BSC is thus making a detailed cost-benefit analysis in order to determine whether the BSC will add value to the organisation (Mooraj et al. 1999).

Furthermore the BSC framework has been likened to the *"tip of an iceberg"* that requires significant underlying processes and resources in order to be successful. Although Schneiderman believes that *"a good scorecard can be the single most important management tool"* (Schneiderman 1999, p.7) for organisations, he states following six reasons for why many scorecards fail:

1. The independent (that is, non-financial) variables on the scorecard are incorrectly identified as the primary drivers of future stakeholder satisfaction
2. The metrics are poorly defined
3. Improvement goals are negotiated rather than based on stakeholder requirements, fundamental process limits, and improvement process capabilities
4. There is no deployment system that breaks high level goals down to the sub-process level where actual improvement activities reside
5. A scientific problem-solving and improvement method is not utilised
6. There is not and cannot be a quantitative linkage between non-financial and expected financial results (Schneiderman 1999)

Organisations that choose to implement the BSC should thus not view it as a panacea but instead acknowledge that it is it to a large extent a conceptual framework and more of a "shell". The BSC relies on accurately identifying and testing cause-and-effect relationships among performance drivers and identifying correct measures that can drive improvements. Furthermore, the BSC does not provide suggestions on how to improve the measures (Schneiderman 1999).

16.1.1.6 Future directions

The BSC has been widely adopted among organisations of man different types and sizes, and most empirical studies have shown that firms adopting the BSC did better than companies that did not. However, the BSC is as much a concept as it is an exact framework, and most companies adapt their scorecards to better fit their particular needs. For example, user may add extra dimensions to the BSC framework in order to take into account the human resource perspective, supplier relations, or the impact on the environment (Davig et al. 2004). Many hybrids versions also exist - it has been shown that only 14% of companies that use the BSC use it alone, and most organisations choose to combine the BSC with other methodologies (Marr 2004). For example, some organisations choose to combine the BSC and the Economic Value Added (EVA) approach (Gavin Lawrie 2006) or the BSC with Results-Based Management (G. Lawrie et al. 2005). Furthermore, as Bhuiyan states, hybrid model triangulating Lean and other quality frameworks with Balanced Scorecards are becoming increasingly prominent (Bhuiyan & Baghel 2005).

Based on the above discussions, it is reasonable to assume that more organisations will choose to implement tailored versions of a BSC in the future. It is thus likely that the BSC framework will continue to be developed and improved as more organisations adopt it and more empirical evidence is gathered that tests its effectiveness.

Appendix 15 Generic BSC and Strategy Map implementation

What is a Balanced Scorecard?

The Balanced Scorecard is a carefully selected set of quantifiable measures from an organisation's strategy. The measures selected for the Scorecard represent a tool for leaders to use in communication to employees and external stakeholders the outcomes and performance drivers by which the organisation will achieve its mission and strategic objectives. The framework enforces a discipline around strategy implementation by challenging executives to carefully translate their strategies into objectives, measures, targets, and initiatives in four balanced perspectives: Customer, Internal Processes, Learning and Growth, and Financial.

What can a Balanced Scorecard be used for?

The Balanced Scorecard was initially created as a performance measurement tool that went beyond poor financial metrics. With the inclusion of strategy maps, corporate vision, mission and value statements, as well as a cascading of corporate objectives down to individual employee KPIs, a Balanced Scorecard has evolved into a performance measurement system, communication tool, and strategic management system. Strategy Maps make explicit what an organisation must do well in each of the four perspectives in order to successfully execute its strategy. Furthermore, by linking the Balanced Scorecard to key management processes, such as budgeting, compensation, and alignment, it helps overcome barriers to implementing strategy.

How do I implement a Balanced Scorecard?

Planning phase

1. Develop a guiding rationale for our Balanced Scorecard
2. Determine the appropriate organisational unit for implementation (for example pilot vs. corporate)
3. Secure executive sponsorship
4. Form and train your balanced scorecard team
5. Formulate your implementation plan
6. Develop a communication strategy and plan

Development phase

1. Gather and distribute background material
2. Provide Balanced Scorecard education
3. Develop or confirm mission, values, vision, and strategy
4. Conduct executive interviews
5. Develop strategy map, including 4-5 objectives within each perspective, through an executive management workshop and employee feedback
6. Develop performance measures through an executive management workshop and employee feedback
7. Establish targets and prioritise initiatives
8. Gather data for your first Balanced Scorecard report
9. Hold your first Balanced Scorecard meeting
10. Develop an on-going implementation plan

Getting from Step 1 of the Preparation phase to step 10 of the Development phase can typically takes anywhere between 4-12 months depending on, among other factors, organisational readiness, executive commitment, organisational size and complexity, and organisational resources.

The next steps are then to continually optimise existing processes - either through business process re-engineering (to support the strategy) or incremental improvements in existing processes.

Strategy Map

What is a Strategy Map?

A Strategy Map is a one-page graphical representation of what the organisation must do well in each of the four perspectives [of the Balanced Scorecard] in order to successfully execute its strategy. "What you must do well" is answered in the form of objectives - concise statements typically beginning with a verb appearing in each of the perspectives. Strategy Maps are comprised of objectives and serve as a powerful communication tool for all of a company's many stakeholders.

Why do you need a Strategy Map?

It is estimated that fewer than 10 percent of organisations are able to execute their strategies. One of the reasons is that few employees deep down in the company know what the overall strategy of the corporation is. A Strategy Map serves as a communication and alignment tool that translates abstract strategies into crystal-clear objectives for each individual employee, bringing potential issues and problems into focus and acting as an early-warning mitigation system for the strategy.

How do you create a Strategy Map?

1. Choose the right perspectives for your organisation (part of overall BSC process)

a. These may not necessarily be the generic perspectives of the Balanced Scorecard

2. Gather and review background information

a. Look for data within each of the perspectives, for example; Financial, Customer, Employee Learning and Growth, Internal Processes, and Mission, Values, Vision, and Strategy

b. Sources include annual reports, mission statements, values, vision, strategic plans, project plans, previous consulting studies, performance reports, competitor data, organisational histories, analyst reports, trade journals and news articles, and benchmarking reports.

3. Set up an effective filing/storage system for the data

4. Conduct interviews to gather executive input

a. Prepare meeting, including sending executive background material on BSC/Strategy Maps

b. Elements to include in meeting: Purpose of meeting & BSC/SM, mission/vision/strategy/values of organisation, existing performance measurement system, existing targets, envisioned new measures and targets, and potential implementation issues

5. Develop objectives for each perspective

a. Ideally done in a dedicated meeting with the executive management team

b. Assumes that there is alignment on mission, vision, values, and strategy

c. Financial Perspective: For example revenue growth, increase productivity (cost/asset utilisation)

d. Customer Perspective: Who are target customers, What do they expect from us, and What is value proposition for serving them? For example Operational Excellence (price, selection, convenience, zero defects, growth), Product Leadership (innovation, functionality, communication and driving adoption of new products), Customer Intimacy (customer knowledge, solutions offered, penetration, customer data, culture of driving customer success, relationships for the long-term)

e. Internal Process Perspective: For example Operations Management Processes, Customer Management Processes, Innovation Processes, Regulatory and Social Processes

f. Learning and Growth Perspective: For example Human capital - aligning people with strategy, Information Capital - Aligning information with strategy, and Organisational Capital - aligning organisational structure with strategy

g. Remember the cause-and-effect dynamic between each perspective. The most important link is between internal processes (internal, intangible perspective) to customer (external, tangible perspective).

6. Develop a shared understanding of the strategic objectives

a. After the strategy map has been created with strategic objectives within each perspective, use Objective Statements to further clarify each initiative

b. Objective Statements are succinct statements that clarify with precision what is meant by the objective, why it is important, how it links in the chain of cause and effect, and how it will be accomplished.

c. For example a financial objective could be "increase utilisation of existing assets"

d. The objective statement would add further details to the financial objective so that it is clear 1 month after the initial meeting what was meant by the objective.

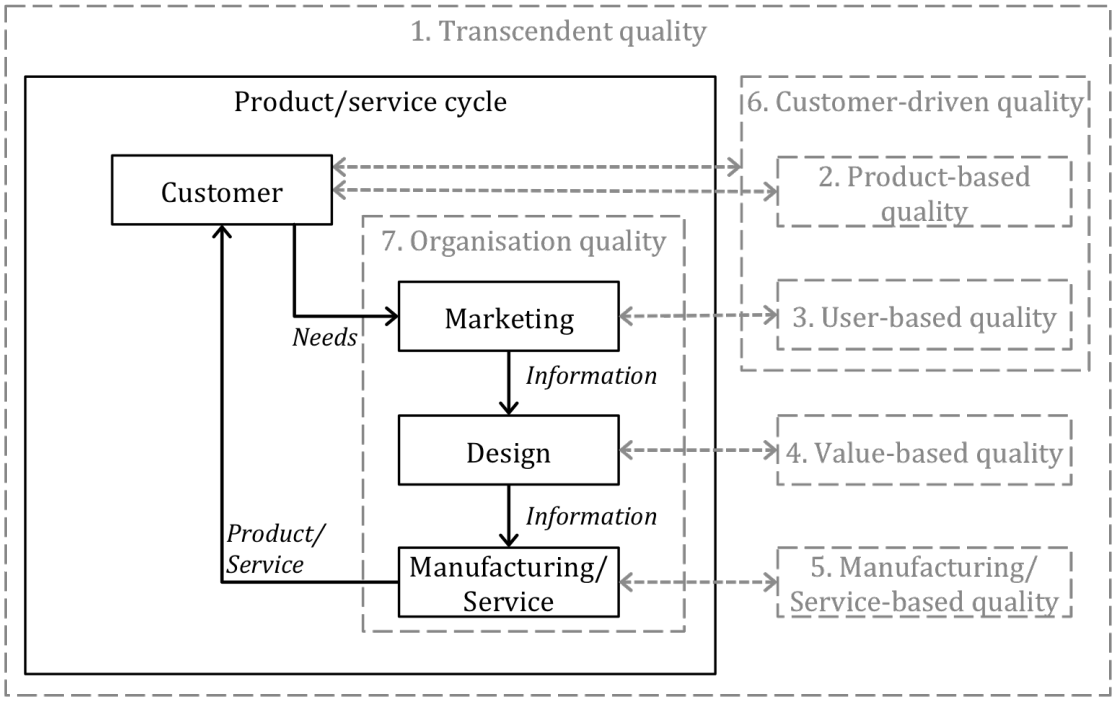
7. Customise the strategy map

a. Create a strategy map that works for your particular organisation, both in regards to content and form. This will increase acceptance and understanding among non-executives

b. Try to limit the number of objectives to under 15 in total

Source: Adapted from Niven 2006.

Appendix 16 Overview of the seven perspectives on quality



Source: Authors own creation inspired by Basu 2009, p.7; Evans 2005, p.15; Garvin 1984

We shall first elaborate on Garvin's five original perspectives on quality. First, the "Transcendent perspective" has a holistic view in which quality cannot be precisely defined; you know high quality when you see it. This approach is of little practical usage for managers. In the second perspective, "Product-based quality", the idea is that the product characteristics, for example engine size for cars, define quality, and the assumption is commonly that the higher the price, the higher the quality and it is as such directly related to the customer. The problematic issue is that a high-quality product does not necessarily need to be expensive. Thirdly, the "User-based perspective" is related to marketing and defines each individual user's needs and therefore defines quality as fitness for intended use. Fourthly, the "Value-based perspective" is related to the design process of a firm and suggests that the most important thing is to have a product or service which is comparatively "cheap" given its "objective" level of quality, meaning it mainly compares the output with competitors' output. Fifthly, the "Manufacturing/ service-based quality" perspective proposes that specifications and standard procedures should be meant; hence it focuses on process conformity to specifications by reducing or eliminating variance and discrepancies (Evans 2005, pp.12-16; Garvin 1984).

Sixth, Evans proposes "Customer-driven quality" which is very much based on product- and user-based approaches, and looks at both external customers and "internal" customers, that is, co-workers. The perspective regards all "customers" in an interdependent system rather than traditional functional divisions (Evans 2005, pp.16-17). Finally, Basu criticises Gavin and others for missing "Organisation quality" in their quality definitions, as he regards it as a key element of any definition of quality (Basu 2009, p.7).

Appendix 17 Individual quality frameworks

i. Industrial Engineering

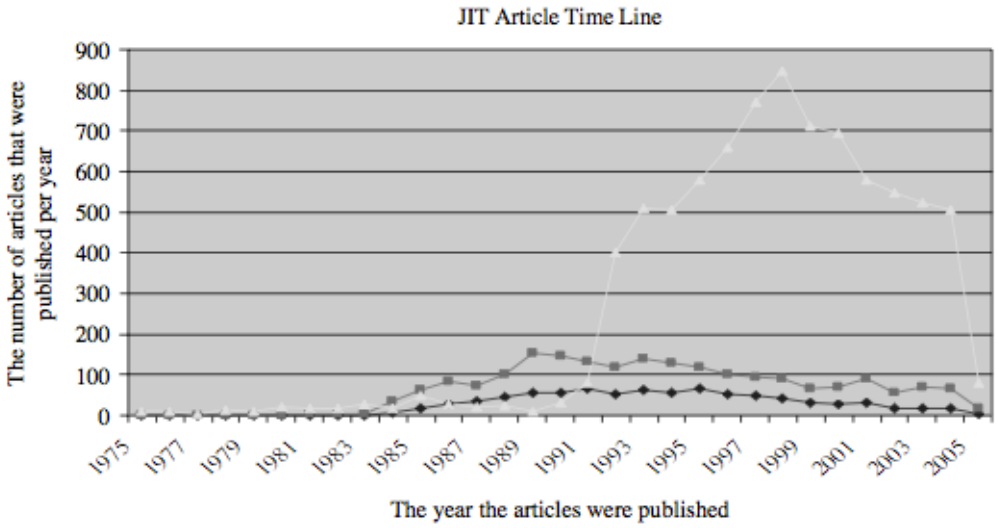
Industrial Engineering covers a movement for increasing productivity that was ideologically initiated with Adam Smith in 1776, but was more formalised by Frederick Taylor in his 1911 book "Scientific Management" (Basu 2009, p.12; Kennedy 2010; Taylor 1913). Within this kind of quality initiative, labourers are assumed to know nothing, and needs management to analyse and structure their work for them; a top-down approach in its perhaps purest form (Brooks 2003, pp.125-126). Needless to say, Taylorism has received much criticism for its alienating effect on workers, notably from potentially left-wing orientated scholars and practitioners (Montmollin 1975; Lawrence 2010). With the complexity of work tasks in the Western world today, it is obvious that the methodology is by far obsolete, as it ignores the individual human characteristics; a key elements of the opposing human relations school (Brooks 2003, pp.126-127). Still, Taylorism is arguably one of the reasons behind some of the massive, economic growth of the period in the Western world, and therefore the authors believe, that some elements of Industrial Engineering could possibly still be used by manufacturing plants in the most underdeveloped countries in combination with other more human relations concepts (Brooks 2003, pp.125-128).

ii. TQM

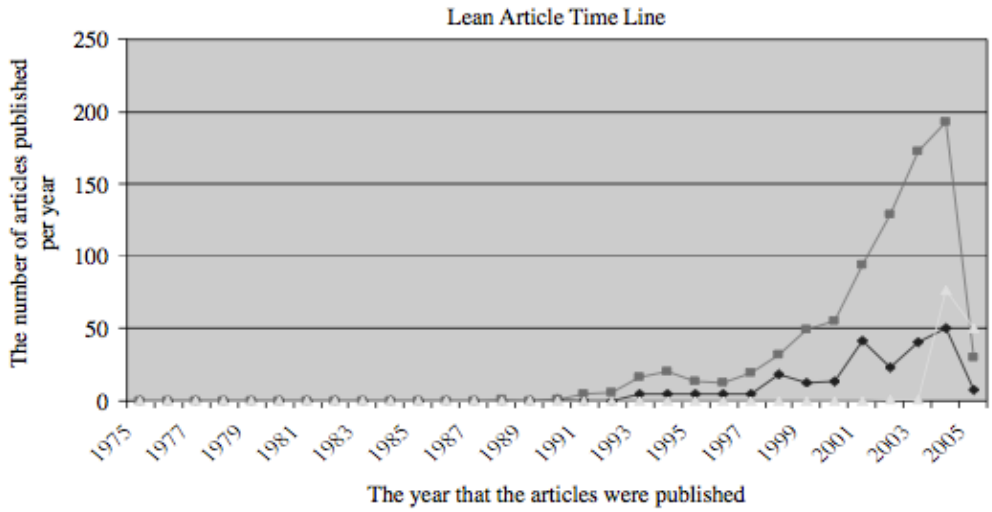
Based upon the work of the quality gurus, Total Quality Management (TQM) emerged in initially in Japan in the 1970's based on the work of the American gurus Deming and Juran in particular (Basu 2009, p.14). Compared to the earlier frameworks of quality gurus, the adjective "Total" indicated the movement away from a production-focus to a more holistic,

integrative, company-wide[45] focus (Evans 2005, p.10). TQM can be regarded as a business philosophy encompassing 7 principles, namely; Customer focus, Leadership involvement, Continuous Improvement, Employee empowerment, Quality Assurance, Supplier Partnerships and Strategic Quality Plan. What TQM adds to Deming's method is to organise and institutionalise many of Deming's idea into a more applicable framework (Bozarth 2006, p.77), as well as further developing the ideas and adding new ones, for instance putting Supplier Partnerships as a strategic priority (Bozarth 2006, p.78), and producing according to both external and internal customers' definitions and needs (Flood 1993, p.48). As Basu points out, another addition was perhaps the psychological aspect of stepping away from an individual "guru" to the more generalised, popular three-letter abbreviation TQM (Basu 2009, p.14). The TQM hype of the 1970's-80's peaked around 1990, and especially by the early 1990's many stories of TQM failures caught the media, and TQM lost the attention of practitioners (Evans 2005, pp.10-11). Simultaneously, TQM received several, devoted critics from the earlier, anecdotal (M. Brown 1994) to the academically more well-founded researchers (Wayhan & Balderson 2007) to mention a few. As Näslund points out, TQM, as a framework, had perhaps just hit the end of its life-cycle in the early 90's, as it was to a large extent replaced by Six Sigma, which we shall discuss in the next section (Näslund 2008, p.276).

Figure 80 - Life-cycle patterns of TQM and Six Sigma – Academic articles timeline



[45] Scholars and practitioners do disagree on the "span" of TQM as for example Evans claims that TQM often just focuses on a single process than Six Sigma. Still TQM is acknowledged as wider spanning than the gurus (Evans 2005, p.134).



Source: Näslund 2008, p.277

iii. Six Sigma

Six Sigma has its origin in American Motorola's triangulation of the quality framework with hard-core statistics, and was later perfected by General Electric (Basu 2009, p.15). Näslund argues that Six Sigma is a repackaged version of TQM (Näslund 2008, p.269). The authors have, however, found 4 significant differences, namely Six Sigma is even more cross-functional[46], has more advanced statistical tools, entails company training of *specific*[47] quality champions (green/black belts , and so forth), and focuses intensely on the profitability of both the Six Sigma initiatives and the quality champions (Basu 2009, p.14; Evans 2005, p.134). In that sense, we agree with for instance Tjahjono in arguing that Six Sigma is an extension and significantly different from TQM (Tjahjono et al. 2010, p.227). The superficially similar characteristics are still inherently different though; for instance, Six Sigma's DMAIC cycle still differs from Deming/TQM's PDCA cycles (Basu 2009, p.177).

Within the Six Sigma framework, process variance is reduced by having tolerance limits 6 Sigmas, standard deviations, on each side of the mean, that is 3.4 defects ppm (Basu 2009, p.15; Bozarth 2006, p.90). Six Sigma provides the organisation with a quantifiable goal and purpose for continuous improvement of its processes, although the goal may be hard, if not impossible, to reach (Bozarth 2006, pp.90-91). The main strengths of Six Sigma is that it continuously checks profitability of initiatives and champions and that it is better at

[46] The practitioner Jacowski points out that TQM focuses on the unrelated, individual processes of the entire business, whereas Six Sigma focuses on the entire business from a single business process' point of view (Jacowski 2007).
[47] Training of *specific*[47] quality champions rather than relying on general employee empowerment (Evans 2005, p.134)

providing measurable results, especially in the shorter term. This comes at a price, as Six Sigma requires relatively advanced data management and analysis as well as a relatively expensive training of Green/black belts plus an increased probability of the need of hiring expensive consultants, in particular in the early stages. Its top-down approach with the education of only a few, select experts may also backfire in collectivistic firm/country cultures. The authors' see its applicability mainly for relatively large manufacturing firms, although service firms are using it increasingly. Regardless, the organisation has to have a rather advanced data management collection and analysis system, or at least the resources to implement such a system.

iv. JIT

Just-in-time, or JIT, is another Japanese framework, was developed around 1960 by Taiichi Ohno, a Toyota engineer, and later developed into the famous Toyota Production System (Basu 2009, p.25; Beckford 2010, p.130). Ohno was very much inspired by Scientific management and Taylorism, as he identify 7 sources of waste, or *mudas*, being Excess production, Waiting, Movement or transportation, Unnecessary motion, Non-essential process, Inventory, and Defects (Beckford 2010, pp.130-131). Ohno also saw top management as being responsible for eliminating waste among their employees via a top-down approach (Beckford 2010, p.131). What is crucial in Ohno's work is the complete and utter reversal of traditional Western management thinking, as Ohno proposed a "demand-pull" approach to business rather than the traditional "production-push" approach (Basu 2009, p.26; Bozarth 2006, pp.495-502). This would be achieved via *kanban systems,* simple signals in the production that would "pull" demand from the final step in the production and backwards (Bozarth 2006, p.496). So on the bright side, JIT is relatively simple, and applicable for most manufacturing firms, that needs to rethink their production and adapt to our increasingly "mass customization" world (Beckford 2010, p.133; Pine 1999). However, it is cultural heritage from a post-war Japan is evident in its very top-down approach, which further assumes that workers will gladly "economise" themselves away (Beckford 2010, pp.133-134) Furthermore it does not offer a full methodology on how to implement JIT (Beckford 2010, p.138). Today, JIT seems most suitable for hard-core fans with JIT experience, wanting a simple way to rethink their manufacturing, and cannot be bothered with all elements of Lean.

v. ISO (EFQM)

So far, Europe has not contributed as such to this literature review, as all frameworks have been of Japanese or American of origin. The International Organization for Standardization, founded in 1946, put forward in 1987 a comprehensive list of quality system standards with European origin, and today, several ISO systems exist, for instance ISO 9001 for design and production, ISO 9004 for quality management systems and so forth (Basu 2009, p.226; Evans 2005, p.128). The concept of ISO is to develop a documentation framework in the organisation in order to standardise processes and make them consistent. Alternatives exists, most notably the European Foundation of Quality Management (EFQM) (Basu 2009, p.230). On the positive, ISO ensures some level of quality in the organisation, and provides an objective, internationally applicable framework to improve quality and can be used in coexistence or as a part of TQM and Six Sigma initiatives (Basu 2009, pp.228-231). Critics argue that the ISO are too bureaucratic, tries to use a dubious "one-size-fits-all" approach, and relies on external assessors disabling employees to truly self-assess (Basu 2009, pp.228-231). Its obvious use is in large, complex organisation with the resources and need to truly standardise processes across the organisation.

vi. Business Process Reengineering

Business Process Reengineering (BPR) in its current form was popularised by Hammer and Champy in 1993 based on earlier work by Harrington in 1987, but BPR actually has traces back to the 1940's (Beckford 2010, p.203; Hammer & Champy 2003). BPR is different from the previous frameworks as it stresses make fundamental changes in the processes of the organisation in a *dramatic and radical* way that will lead to improvements in the performance (Beckford 2010, pp.206-207). BPR is a one-time, top-down driven approach which takes a clean slate as its starting point, and not the existing processes as TQM and Six Sigma does (Basu 2009, p.24). On the positive side, at least theoretically, BPR may revolutionise the processes and offer significant changes rather than the smaller, incremental changes of for example TQM. However, in practice, few firms have had success with BPR, as more that 50% of BPR efforts fail (Basu 2009, p.24; Beckford 2010, pp.203-210). Based on that, BPR is only suitable for organisations experienced with change management and radical changes, who are in dire need of exactly dramatic, radical changes in their organisations (Kedar et al. 2008, pp.728-730).

Appendix 18 Discussion of ranking of 2nd-10th most ideal quality frameworks

Quality framework	Theoretical fit	Organisational quality	Service-based quality	Customer-related quality	Practical fit	Company desire	Ease of implementation	Potential financial payoff	Cost of implementation*	Risk*	Total
Deming & Lean	**5**	**5**	**5**		**5**	**3**	**5**	**3**	**4**		**4.4**
Deming	5	3	3		5	4	3	4	4		**3.9**
TQM	4	4	4		4	3	4	3	4		**3.8**
Lean	4	5	5		3	3	4	3	3		**3.8**
JIT	3	4	4		2	2	3	4	3		**3.1**
Taylorism	1	5	1		1	4	2	5	1		**2.5**
BPR	1	2	3		2	3	5	3	1		**2.5**
Six Sigma	3	4	1		1	1	4	2	2		**2.3**
Lean Sigma	3	5	1		2	1	5	1	1		**1.8**
ISO	1	3	1		1	1	2	1	4		**1.8** [48]

Source: Authors' adaptation based on literature review

Below, an explanation for the quality frameworks' ranking is given. Note that we only here only discuss the 2nd-10th best frameworks. Deming & Lean was discussed in Section 6.3.4 on page 69.

Beginning from the second best; Deming's management method fit well with the organisation in theory and in what Jamaa wanted. It would be more costly to implement that Taylorism, but also bore much less organisational risk, as it did not risk alienating employees.

TQM fit a little less with the organisation, as Jamaa was not ready for the comprehensive scope of TQM and the technical focus of TQM. It also fit less with what the CEO wanted.

[48] * = Notice that for the latter two parameters, "Cost of implementation" and "Risk", in the scale is reversed, so that a 5 means low costs/risk and high attractiveness and so forth, so a high level of risk would be a 1.

Implementation would be more less challenging than Deming & Lean albeit the potential payoff was lower as well.

Lean's focus on efficiency was attractive, but for the CEO it was far from sufficient, as he found it to focus too much on operational issues alone. A full 100 % Lean implementation would also take more time to be realised due to renewal of supplier contracts and so forth.

Taylorism would theoretically fit well, as Jamaa was a relatively simple organisation. However, the top-down approach was not at all what the company wanted, as Jamaa wanted to include its employees. This made Taylorism risky, as it could backfire and cause employees to quit, leaving the organisation in chaos.

JIT was arguably very similar to Lean as the two expressions were used in similar manners. Still in discussions with the CEO, JIT was not an attractive framework from his perspective, as he felt it would be a wrong impression to give the employees given their level of English, as the connotations of being Lean were arguably better than just being Just-in-time. The CEO also felt that framework was obsolete, and would therefore much more welcome a Lean framework. Finally, the perceived potential payoff was lower as well.

BPR was also an unattractive option, as it did not fit theoretically with the firm or with the company desire. It would be comparably easier to implement, and could in theory bring dramatically improved financial payoff, but was still a very unattractive option.

Six Sigma did not fit at all with Jamaa, as Jamaa did not have the organisational capabilities to implement Six Sigma, making it a costly and risky operation, although it could bring large benefits if it could be implemented and followed. Next,

Lean Sigma, having an even higher level of complexity than Six Sigma, was a poor match for Jamaa at its current level of development, making it a very unattractive initiative in our view.

Finally, the standardisation of an ISO certification could benefit Jamaa, but Jamaa was in no position to incorporate the heavy documentation of an ISO certification in its current state, as it simply lacked the human and financial resources for it and had no wish to be certified. It would not give Jamaa much, if any, competitive advantage to be certified, as this was not the norm in DRC. Jamaa's customer would simply not care to pay extra for the certification.

Appendices Chapter 8: Implementing the CIP at Jamaa

Appendix 19 Implementation of CIP at Jamaa

Note that only the formal meetings are listed below – much of the day-to-day correspondence has been omitted. The implementation was done in close cooperation with the senior management team at Jamaa Trade, especially CEO Ryan Shepherd.

i. Step 1: Preliminary contact, November 2010

The initial contact with Jamaa Trade was made in early November 2010 where the authors enquired about a potential collaboration on their Master Thesis under the broad topic of business process improvement. A formal project proposal was sent to the CEO where the authors promised to "deliver tangible value to [the] organisation". After an introduction meeting where further information was exchanged it was agreed by both parties to collaborate on the project (Shepherd 2010a).

ii. Step 2: Project kick-off meeting and data collection, December 2010

Shortly thereafter the project kick-off meeting took place. The main goal of the meeting was to determine the specific needs of Jamaa Enterprises, establish the scope of the project, and gather further information. There were two main conclusions. First, there was (and still is) a huge need to increase the quality of all aspects of work at Jamaa Enterprises, and the cost of quality was therefore not an issue. Second, the focus should be limited to Jamaa Trade as the business unit was the one struggling the most in terms of performance and quality. Furthermore, the size of Jamaa Trade (400,000 USD annual revenue, 17 full-time and 7 temporary workers) was deemed an optimal fit for our thesis given the time available (Shepherd 2010b). After the meeting, a data request list was sent by the authors to the CEO, and the data was received shortly thereafter.

iii. Step 2 cont.: Process mapping & data analysis, Dec. 2010 – Jan. 2011

For the next 2 months the authors began documenting the processes at Jamaa Trade and collecting more detailed information on the organisation (Shepherd 2011b). After a thorough analysis of the data and further interviews with the CEO, a preliminary approach to improving organisation performance at Jamaa Trade was outlined, as described in detail

in Chapter 5. See Chapter 2 Section 4 for an overview of the current operations of Jamaa Trade prior to our intervention.

iv. Step 3: CIP kick-off meeting with CEO of Jamaa Trade, 29 January 2011

At the end of January the new performance management approach was presented to the CEO, with a thorough introduction of all the performance management tools therein. The meeting had three main elements to it. First, the performance management approach was accepted by the CEO and further refined together. More information was gathered regarding the existing performance measurement system, the existing employee contracts and incentive system, and the feasibility of implementing the new programme. Furthermore, it was decided during the meeting that the programme should be called the Continuous Improvement Programme (CIP).

Second, more details were presented on the local context and the local operations. It was crucial that the authors understood the underlying mentality of the local employees and the precise details of the challenges faced by the organisation, and a significant amount of time was a dedicated to interviewing the CEO about his experiences in order to supplement theoretical literature about doing business in Congo with practical insight. Third, preliminary discussions regarding a balanced scorecard and strategy map implementation for Jamaa Trade took place. The main focus was on discussing the overall mission, vision, values, goals, and strategy of Jamaa Trade (Shepherd 2011c). Each element would be prepared in more detail by the CEO for the next meeting.

v. Steps 4-6: Initial Balanced Scorecard and Strategy Map, 4 Feb. 2011

The overall goal of the meeting on February 4th was to make an initial draft of a BSC and Strategy Map for Jamaa Enterprises. This was done in four steps, as described in more detail below (Shepherd 2011i).

Mission, values, vision, and strategy of Jamaa

The CEO stated during the meeting that he spends significant time at the beginning of any new venture on determining the mission, vision, and values of the entity. For example, Tifie Humanitarian has a clear mission statement, as described in Chapter 2. Jamaa Trade, however, was set up in September 2010 and is currently focusing on ensuring financial

viability, and it is therefore still using the mission statement of Jamaa. The CEO stated that once the future of the organisation [Jamaa Trade] has been secured, a precise mission, values, and vision statement would be created driven primarily by the local managers and employees. Regarding the strategy, Jamaa Trade has a very clear method of identifying and fulfilling unmet market demands through business means. Jamaa Trade often operates in areas where there are no other credible competitors, and the organisation therefore has a unique value-adding proposition.

Overall organisational objective

The next step was to translate the mission, values, vision, and strategy into an overall organisation objective. Unlike traditional profit-maximising businesses or NGOs, Jamaa Trade has a dual focus on both profits and social impact due to its business philosophy. However, the CEO made it clear that at this point in time, ensuring financial viability is the overarching organisational objective. Only once the future of the organisation is secure can it begin focusing on measuring and maximising social impact. This is not to say that the organisation is not focusing on meeting social needs – it is clear that Jamaa Trade is having a positive social impact merely be operating on the market and that a significant market would be (re)created if the organisation were to go out of business. Furthermore, the CEO stated that there is ample anecdotal evidence of the positive impact that the organisation is having in terms of providing jobs and improving the lives of a large number of villagers. However, accurately measuring and maximising social impact will only be done once the organisation is consistently profitable on a month-to-month basis.

Regarding the financial objectives, the CEO estimates that a monthly revenue of 60,000 USD is the minimum scale necessary for short-term survival, and a specific goal is to have 80,000 USD in revenue per month by July 2011 (the highest ever monthly revenue by Jamaa Trade was 64,500 USD in October 2009. This translates into approximately an average of 3 trucks making 3 trips per month (9 trips per month). Currently there are five truck trips on average per month. However, as outlined in section 5, a previous attempt at cascading objectives down the organisation did not work, and the short-term strategy is thus to have a bottoms-up focus on quality and continuous improvement. The CEO thus stated that a more formal cascading of objectives, as in a traditional BSC, can perhaps be implemented at a later stage once the organisation is ready.

The four perspectives

After identifying the overall goal of the organisation, it is necessary to determine which perspectives are relevant for the organisation to reach its goals. Given Jamaa's unique context and business model, the perspectives within a generic strategy map were deemed to be not fully applicable. Furthermore, we wanted to include the three aspects of quality as defined in section 6.3.1 on page 57 in the perspectives. Therefore, in collaboration with the CEO, the following four perspectives were chosen:

- Value Perspective – Jamaa has a need to look beyond financial results and meeting shareholder requirements, and it was therefore decided to call this the "Value Perspective" to symbolise a broader definition of creating value in society

- Customer Perspective (address "customer-related quality") – Similar to a traditional BSC with a strong focus on meeting customer needs in a consistent and reliable manner

- Value Stream Perspective (addresses "service-based quality") – While a traditional BSC primarily focuses on internal processes, it is important for Jamaa to focus on the whole supply chain, including the suppliers of its suppliers. This is in order to not only improve the quality and reliability of supplies, but also to take a broader societal perspective and ensure that all suppliers get a fair price for their goods and have the means to develop their businesses.

- Leadership and Development Perspective (addresses "organisational quality") – This perspective is similar to a traditional BSC and has seven main focus areas – employee satisfaction, having the right physical equipment and tools available, ensuring organisational alignment (vertically and horizontally), fostering a leadership mentality at all levels of the organisation, promoting the organisational culture and values, improving internal communication, and fostering internal and external team-work.

Translate strategy into objectives for each perspective

Once the four perspectives had been identified, a top-down approach was taken in order to identify cause-and-effect relationships among each perspective and determine the specific objectives that had to be met in order to meet the overall organisational goal. Broadly speaking, the meeting revolved around the questions "How will we achieve the visions and strategy discussed" and "What does Jamaa Trade need to fulfil in each perspective in order to attain the objectives in the perspective above?" However, as opposed to a theoretical balanced scorecard, the process with Jamaa did not entail a pure top-down cascading due to the previous unsuccessful attempt at a top-down cascade and the relatively low organisational maturity at Jamaa. Instead, in order to create more relevant objectives, the top-down approach was supplemented with a bottom-up focus on ensuring continuous improvement within each of the discrete workflows of each individual employee and team. Deming and Lean were used extensively to guide the discussion and identify relevant performance objectives within each of the bottom three perspectives, which in turn were based on the three aspects of quality identified earlier.

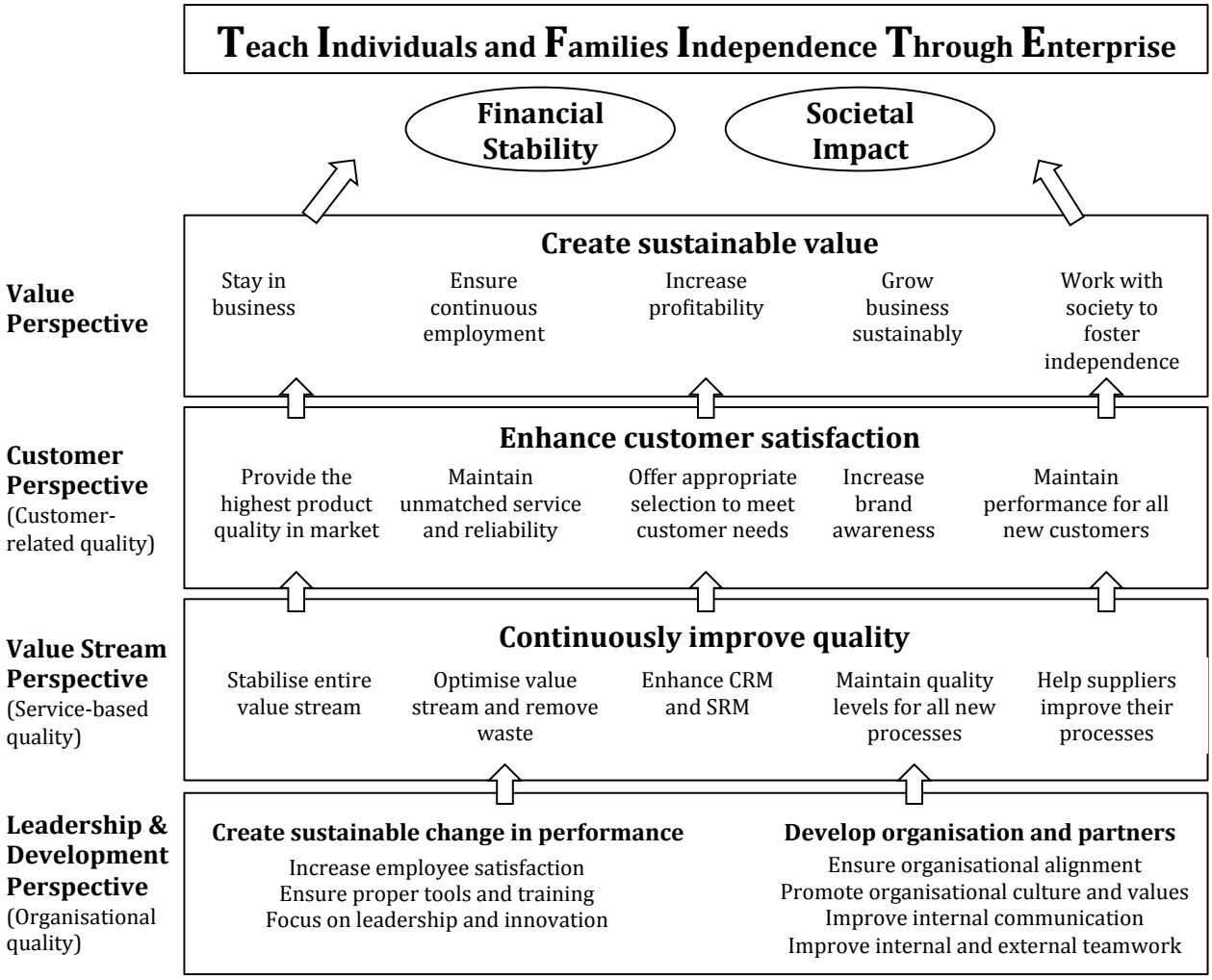
The meeting resulted in the creation of a strategy map for Jamaa Trade with objectives in each perspective, as illustrated in Figure 38 (Shepherd 2011i). The strategy map included a total of 22 objectives, five in the top three perspectives and seven in the leadership and development perspective. With 22 objectives for Jamaa, the CEO and the authors felt that the current and future strategy of Jamaa was comprehensively mapped. Although some of the measures would only be addressed in the long-run, that is, after the thesis had been handed in, it was important to include them in order to guide the longer-term future strategic direction.

It should be noted that there is no "correct" total number of objectives to be included in a strategy map, although certain best practices do exist. For example, Kaplan and Norton write that the exact number of measures is not the key issue; what is important is whether the measures are *strategic* and fall under a *single* strategy. According to Kaplan and Norton, 10 independent measures can be too many while 25 coherent measures can be too few (Kaplan & Norton 1996).

The strategy map had three main strategies to it. First, there is a "financial stability" strategy that focuses on staying in business in the short run and improving profitability in the long run. Second, there is a growth strategy that seeks to increase revenue through scaling the

existing processes and move into new product and geographic areas. Third, there is a societal impact strategy that focuses not only on making an impact by fulfilling a market demand (which Jamaa does merely be being in business) but also to work with society and foster independence. Although there is not a one-to-one match for each strategy between each perspective, the financial stability strategy is approximately on the left hand side of the strategy map, the growth strategy is in the middle, and the societal impact strategy is on the right hand side.

Figure 81 – Strategy Map for Jamaa Trade



Source: Authors' own creation

After the meeting, both parties further worked on the formulation of the Strategy Map, which would be finalised at the next meeting. More specifically, "objective statements" were to be created for each objective in order to created shared understanding across the

organisation. An ideal objective statement should be succinct, clarify with precision what is meant by the objective, why it is important, how it links to the rest of the perspectives, and how it will be accomplished (Niven 2006).

vi. Planning of trip to Kinshasa, 15 Feb. 2011

The next meeting had a dual objective of finalising the strategy map and planning author Emmet Sharghbin's trip to Kinshasa at the end of February. First, the objective statements were finalised. Please see Appendix 20 on page 232 for further details on the objective statements (Shepherd 2011g). Second, the authors' trip to Kinshasa was discussed. The main element of the trip would be to meet the local employees, present the project, and begin collecting data. It was agreed at the end of the meeting that performance measures and data requirements would be prepared by the authors and presented to the CEO at the next meeting (Shepherd 2011g).

vii. Steps 7-8: Finalisation of measures and data collection, 18 Feb. 2011

The next step of the CIP at Jamaa involved translating the objectives into performance measures and setting up a process for collecting data. As stated earlier, Jamaa's strategy map includes a comprehensive set of measures that cover both short-term and long-term goals. Many of the objectives will therefore only be addressed after the pilot phase of the CIP. Furthermore, due to the lack of performance measurement at Jamaa prior to the CIP, explicit targets for the measures were not created. Instead, the first data measurement period would act as a baseline for future target setting.

First, measures based primarily on Deming and Lean within each objective were presented to the CEO and further refined together. As stated in Chapter 6, the BSC part of the CIP provides the overall structure for performance management, but does not provide specific measures or initiatives to improve the performance on each objective. Therefore, Deming and Lean were used to identify more accurate performance measures within each of the bottom three perspectives, which in turn were based on the three aspects of quality identified earlier. Second, the scope of the pilot phase was determined. Third, a data collection process that covered each measure within each objective was discussed, including the amount of data needed per method. At the time of the meeting, a large portion of the required data was not being collected in a structured or consistent manner. Furthermore,

there is a very low degree of information technology usage at Jamaa and in the villages. The proposed data collection process therefore had to be extremely pragmatic and simple and relied heavily on manual data collection.

It was agreed that eight different data collection methods would be used to cover all measures during the pilot phase: "trip tickets" to be filled out by the truck drivers on their trips, questionnaire for non-office staff done during an interview, manager questionnaire for office staff done during an interview, customer questionnaire in the markets, agent questionnaire, village questionnaire, new and existing company data, and interviews with the CEO. The amount of data collected would be determined by the resources and time frame available. The actual trip tickets and questionnaires can be seen in from Appendix 21 to Appendix 29 on page 237-265.

The data collection methods and questions in the questionnaires were influenced by Deming and Lean, as the theories formed the backdrop of the performance measures we were trying to improve. Furthermore, general best practices regarding customer and employee questionnaires and were taken into account (McConnell 2003), as well as theories regarding measuring social return on investment for the village questionnaire (Nicholls et al. 2009).

Note that Step 8, "set targets", was skipped as data does not exist on the performance measures, and targets will therefore only be determined after collecting data.

Appendix 20 Objective Statements for Strategy Map

The goal of the objective statements was to clearly clarify what is meant by the objective, why it is important, how it links to the rest of the perspectives, and how it will be accomplished in a concise way (Shepherd 2011g).

i. Value perspective – Create sustainable value

1. **Stay in business** – Overarching and fundamental goal for any business and a key focus area of the Deming Management Method. Only once a business is financially viable can it begin to focus on other areas, such as growth and societal impact. To be accomplished by creating local ownership and responsibility through "tough love strategy" (described in Section 2.3.3 on page 16).

2. **Ensure continuous employment** – Guaranteeing employees that as long as they perform well they will keep their jobs, either at Jamaa Trade or at another Jamaa entity. First part of "doing good" and creating a societal impact is the internal creation of jobs and paying adequate wages. If employees know that they are guaranteed a job if they perform well, it should lead to more long-term thinking and improved financial performance.

3. **Increase profitability** – Improving the profit margin of the business, that is, profit earned on each dollar of revenue. This is done by increasing utilisation of current assets (for example fewer breakdowns in the trucks), increasing revenue per good sold (for example through increased quality and choice), and by decreasing costs (for example by removing waste in the operational processes and having fewer lost items).

4. **Grow business sustainably** – Once financial viability has been achieved, the business will be able to expand into new geographic areas and new business areas as there is huge potential in the surrounding regions of Kinshasa (for example Bas-Congo). Growing the business will lead to increased employment job creation and greater societal impact through the direct provision of the services. However, it is important that the business grows from a position of strength and that growth does not lead to decreased quality or profitability.

5. **Work with society to foster independence** – TIFIE has an overall mission of teaching individuals and families independence so that the individual and families are not reliant on outside entities for survival. Jamaa therefore seeks to engage with the local communities that it does business with and provide them with the capital, skills, and support necessary for them to break the poverty cycle. Furthermore, Jamaa uses a portion of its profits to support purely humanitarian needs.

ii. <u>Customer perspective – enhance customer satisfaction</u>

6. **Provide the highest quality in the market** – Jamaa aims to provide the highest quality of goods (primarily cassava) in the market place. The quality of cassava varies widely depending on how it is grown, harvested, and prepared. Jamaa therefore works closely with the local villagers and also has its own farm to ensure that the

cassava meets the requirements of the final customers. By improving the quality of the final goods, Jamaa is able to increase profitability, improve customer satisfaction, and pay its suppliers higher prices for the goods.

7. **Maintain unmatched reliability and service** – Oftentimes there are truck breakdowns or other obstacles to transporting the goods between Kinshasa and the villages and back, which leads to dissatisfied customers and lost time. By improving reliability and service Jamaa will be able to make a higher number of truck trips per month while providing customers with better service.

8. **Offer appropriate selection to meet customer needs** – After staple foods (such as cassava) have been secured, customers in both the villages and in Kinshasa start demanding a more varied selection of final goods. Offering an appropriate selection to meet customer needs will lead to more business between the villages and the cities, improved customer satisfaction, and higher profitability. To cater to this need, increased dialogue in a structured manner between Jamaa and the final customers is needed.

9. **Increase brand awareness** – Jamaa has a goal of improving its brand and being known as a reliable supplier of high quality goods. This will be done primarily through cost efficient means, such as simple banners and stalls in the market and word-of-mouth. Furthermore, it is important that employees are representative of Jamaa at all times.

10. **Maintain performance levels for all new customers** – Once the business grows, it is crucial that all new customers and geographic areas receive the same high quality goods and level of service as existing areas. This will be done by growing from a position of strength, adequately training all new employees, and ensuring consistent and structured processes.

iii. <u>Value stream perspective – focus on continuously improving quality</u>

11. **Stabilise entire value stream** – The entire value stream, from initial procurement (including the suppliers of the suppliers) to the final customers, must be understood by all and stabilised so that all processes are done in a logical and consistent manner.

Only once the processes are repeatable and predictable can Jamaa begin to optimise them. This will be done by mapping the entire value stream and creating standard operating procedures for all relevant areas.

12. **Optimise value stream and remove waste** – Once the entire value stream has been mapped and stabilised, the optimisation process can begin. By increasing productivity and removing waste, Jamaa will be able to increase profitability and overall financial results and societal impact. This will be done through the Deming management method (to improve quality) and tools within the lean framework.

13. **Enhance CRM and SRM** – A natural part of improving the entire value is focusing on customer relationship management and supplier relationship management. First, CRM allows Jamaa to better cater to individual needs and improve customer satisfaction. Second, SRM allows Jamaa to work more closely together with suppliers in order to procure the products it needs more efficiently.

14. **Help suppliers improve their processes** – The next step of SRM is to help suppliers improve their underlying processes so that they can increase the quality of their products while decreasing costs. This will lead to higher profitability for the suppliers, increased customer satisfaction, and ultimately higher profitability for Jamaa.

15. **Maintain quality levels for all new processes** – In order to support the objective of growing maintaining customer satisfaction levels for all new customers and growing the business sustainability, it is crucial that all new processes maintain the same high quality as existing processes. This will be done by providing adequate training and tools for all employees, utilising standard operating procedures, and ensuring the business only grows from a position of strength.

iv. <u>Leadership & development perspective – create a sustainable change in performance, and develop organisation and partners</u>

16. **Increase employee satisfaction** – Employee satisfaction is a fundamental element of improving the quality of the organisation. This will be done by engaging in a closer dialogue with the employees and addressing their concerns whenever possible.

17. **Ensure proper tools and training** – Oftentimes when quality levels are low, it is because employees do not have the required skills or tools at their disposal. Jamaa will therefore work more closely with employees to determine and address their specific needs for each job function.

18. **Focus on leadership and innovation** – Leadership and innovation are not should not be confined to specific levels or areas of the organisation. Instead, employees at all level of the organisation will be encouraged to be proactive, to make suggestions, and put forth any ideas which could lead to improved organisational performance.

19. **Ensure organisational alignment** – All organisations need to be aligned vertically and horizontally in order to meet the goals of the organisation, and this holds true for Jamaa as well. This objective will be achieved through a balanced scorecard and an increased focus on communication.

20. **Promote organisational culture and values** – Once the financial viability of Jamaa has been secured, the CEO will work with the local managers and employees to define and document the desired organisational culture and values. This will lead to more alignment and better organisational performance. By allowing the employees to own the process it will also increase morale and employee satisfaction.

21. **Improve internal communication** – It is crucial that barriers are broken down both horizontally and vertically internally in the organisation. All employees must be able to raise issues and speak up, regardless of their relative "level" in the organisation. Furthermore, employees must be encouraged to share best practices and collaborate across teams and departments.

22. **Improve internal and external teamwork** – Finally, it is important that Jamaa focuses on improving teamwork among individual employees, among teams within Jamaa, and among its network of external stakeholders. This is crucial to improve performance and foster long-term relationships.

Appendix 21 Overview of data collection methods

The eight data collection methods used are shown below. Note that the trip tickets and all questionnaires were created in French by the authors in order for them to be used in Kinshasa, although English versions are provided below. Note also that the answer spaces in the questionnaires provided below have been reduced in order to save space.

The eight data collection:

1. Trip tickets
2. Employee questionnaire
3. Manager questionnaire
4. Customer questionnaire
5. Agent questionnaire
6. Village questionnaire and case study
7. New and existing company data
8. Interviews with CEO

Appendix 22 Trip Tickets

Jamaa Trade - Ticket de Voyage

Summary

1. Outbound Performance from Kinshasa
2. Performance in Kikwit
3. Inbound Performance to Kinshasa
4. Performance in the markets in Kinshasa
5. Performance in Kinshasa

1. Outbound Performance from Kinshasa

General Information

G1	**Names**	Surname	First name
G1.1	**Name of Driver**		
		Surname	First name
G1.2	**Name of Driver's Assistant**		
		Surname	First name
G1.3	**Name of Driver's Assistant**		
		Date	Time
G2	**On which date did you leave the maintenance garage?**		
G3	**License plate**		

G4 **Was maintenance and repair carried out on the vehicle before the voyage?**
Please tick the correct box

Yes ☐ No ☐

1.1 **What were the main items that you loaded in Kinshasa (type and quantity)?**

Type	Quantity

1.2 **After receiving the goods, was there a "products recieved" sign-off?**
Please tick the correct box

Yes ☐ No ☐

1.3 **What was the total amount of time it took to load the items in Kinshasa?**

Hours ☐ *Minutes* ☐

1.4 **How many people were there to help load the goods in Kinshasa?**

Number ☐

1.5 **What time did you leave Kinshasa?**

Time ☐

2. Performance in Kikwit

2.1 When did you arrive in Kikwit?

Date	Time

2.2 How long did it take to unload the items in Kikwit?

Hours _____ *Minutes* _____

2.3 How many people were there to help unload the goods in Kikwit

Number _____

2.4 How many products were damaged during the transport?

Type	Quantity	Reason

2.5 How many of the products got lost during the transpot?

Type	Quantity	Reason

2.6 How many breakdowns did you have, and how many could have been prevented through maintainance work prrior to your trip?

Date	Time	Duration of delay in hours	Preventable? (Yes/No)

2.7 Did you experience any other delays in your trip? If so, which types and for how long?

Date	Time	Duration of delay in hours	Type

2.8 For each barrier on your route, please note the date, time, duration and the type of barrier

Date	Time	Duration of delay in hours	Type

3. Inbound Performance to Kinshasa

3.1 From which location did you leave to drive to Kinshasa?

Address

3.2 When did you leave the last location?

Date	Time

3.3 When did you arrive in Kinshasa?

Date	Time

3.4 How long did it take to unload the goods?

Hours *Minutes*

3.5 How many people were there to help unload the goods in Kikwit

Number

3.6 How many products were damaged during the transport?

Type	Quantity	Reason

3.7 How many of the products got lost during the transpot?

Type	Quantity	Reason

3.8 How many breakdowns did you have, and how many could have been prevented through maintainance work prrior to your trip?

Date	Time	Duration of delay in hours	Preventable? (Yes/No)

3.9

Did you experience any other delays in your trip? If so, which types and for how long?

Date	Time	Duration of delay in hours	Type

3.10

For each barrier on your route, please note the date, time, duration and the type of barrier

Date	Time	Duration of delay in hours	Type

---

4. Performance in the markets in Kinshasa

First market

4.1 **What is the name of the first market?**

Name

4.2 **When did you arrive at the first market?**

Date	Time

4.3 **How long did it take to unload the goods in the market?**

Hours *Minutes*

4.4 **How many bags did you sell?**

Type	Quantity	Price

4.5

How many days do you think it is going to take the sellers to sell the products they have purchased from you?

Days *Half days*

4.6 **What time did you leave this market?**

Date	Time

Second market, if necessary

4.7 What is the name of the second market?

Nom

4.8 When did you arrive at the second market?

Date	Time

4.9 How long did it take to unload the goods in the market?

Hours *Minutes*

4.11 How many bags did you sell? (deposé)

Type	Quantity	Price

4.12

How many days do you think it is going to take the sellers to sell the products they have purchased from you?

Days *Half days*

4.13 What time did you leave this market?

Date	Time

Third market - if necessary

4.14 What is the name of the third market?

Nom

4.15 When did you arrive at the third market?

Date	Time

4.16 How long did it take to unload the goods in the market?

Hours *Minutes*

4.17 How many bags did you sell? (deposé)

Type	Quantity	Price

4.18

How many days do you think it is going to take the sellers to sell the products they have purchased from you?

Days | | *Half days* | |

4.19 What time did you leave this market?

Date	Time

5. Performance in Kinshasa

5.1 When did you return to Kingabwa?

Date	Time

5.2 How long did it take to go to Kingabwa from the last market?

Hours | | *Minutes* | |

The trip ticket is now complete, thank you for your time and contributions!

Appendix 23 Employee questionnaire

Employee Survey - Jamaa

The purpose of this employee survey is to identify the issues that could be improved in Jamaa. All your answers will be treated 100% anonymously, so please try to answer the questions as honestly and accurately as possible and feel free to add as many comments as possible, as your answer will make an important contribution to us.
In the future, the ambition is to have quarterly employee surveys, as we in Jamaa will do our very best to improve your job satisfaction. Have a great day and enjoy the survey!

1 The Goal of Jamaa

1.1.1 Do you know the overall goal of Jamaa Enterprises?

Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

Please feel free to add any additional comments

1.1.2 **Comments:**

1.2 Do you know the goal of your team?

Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

1.3 Do you feel your daily work contributes to Jamaa's overall goal?

Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

1.4 Connaissez vouz l'abbreviation de TIFIE?

Please tick the correct box

1 - Oui	2 - Non	6 - Ne saît pas
☐	☐	☐

2 Your job satisfaction

2.1 Do you know when you have done a good job?

Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

2.2 Do you feel that your job actually makes a difference with regards to the quality of Jamaa's final product or services?

Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

2.3 How important are the following factors in general for you in a job?

Please tick the correct boxes, one per sub-question

	1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
2.3.1 Financial compensation	☐	☐	☐	☐	☐	☐
2.3.2 Professional Development	☐	☐	☐	☐	☐	☐
2.3.3 Social relationships with your colleagues	☐	☐	☐	☐	☐	☐

2.4 Do you feel get what you want from your job in Jamaa?

Please tick the correct boxes, one per sub-question

	1 - Très faiblement	2 - Faiblement	3 - Dans une certaine mesure	4 - Largement	5 - Très largement	6 - Ne saît pas
2.4.1 Financial compensation	☐	☐	☐	☐	☐	☐
2.4.2 Professional Development	☐	☐	☐	☐	☐	☐
2.4.3 Social relationships with your colleagues	☐	☐	☐	☐	☐	☐

2.5.1 What motivates you to do a good job?

Please feel free to add any additional comments

Comments:

2.5.2 In your opinion, is there a motivation to do a good job at work at Jamaa?

Please feel free to add any additional comments

Comments:

2.6.1 Are you satisfied to work for Jamaa?

Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

2.6.2 Why/Why not?

Please feel free to add any additional comments

Comments:

2.7 Are you proud to work for Jamaa?

Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

3 Job requirements

3.1.1 Do you feel that you have the tools (including computers and software) to do your job?

Please tick the correct box

1 - Non jamais	2 - Presque jamais	3 - De temps en temps	4 - Presque toujours	5 - Toujours	6 - Don't know
☐	☐	☐	☐	☐	☐

3.1.2 If not, which tools do you need (including computers and software)?

Please feel free to add any additional comments

Comments:

3.2 Do you feel you have received the appropriate training from Jamaa to do your job?

Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

3.3 From who have you mainly received your job training?
Please tick the correct box

1 - Colleague	2 - Manager / CEO	3 - No one	6 - Don't know
☐	☐	☐	☐

3.4.1 Do you feel that your ideas to improve your job or Jamaa are taken seriously by your manager / CEO?
Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

3.4.2 *Please feel free to add any additional comments*

Comments:

3.5 Do you feel that your manager / CEO understands the processes and aspects of your work?
Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

3.6 Is the quality of what you do in your current job function close to the optimal level of quality that you can imagine if you had the all the proper tools and training?
Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

3.7

What are the biggest obstacles preventing you from doing your job even better?
Please feel free to add any additional comments

Comments:

4 Teamwork

4.1 Do you communicate well with colleagues?
Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

4.2 In general, do you feel that your colleagues will try to help you if you have problems?
Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

4.3 In general, do you feel that your colleagues and you share the best way to do things with one another?
Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

4.4 Do you feel that Jamaa has good team-spirit and team-work?
Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

5 Communication with managers

5.1
Do you feel that your manager / CEO communicates sufficiently with you?
Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

5.2.1 Would you tell your manager / CEO if something in Jamaa could be improved?

Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

5.2.2 Have you ever shared an idea for improvement with your manager?
Please tick the correct box

1 - Yes	2 - No	6 - Don't know
☐	☐	☐

If yes, did the manager use your idea? Why/Why not?

5.2.3 *Please feel free to add any additional comments*

Comments:

5.3 Would you tell your manager / CEO if you had a problem with a colleague or another manager?

Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

5.4 If there was a box where you could post anonymous comments and suggestions, would it be easier for you to tell the CEO if you had a problem with a colleague or manager?

Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

5.5 Can you approach your manager / CEO with regards to the following issues?

Please tick the correct boxes, one per sub-question

	1 - Oui	2 - Non	6 - Ne saît pas
5.5.1 Compensation	☐	☐	☐
5.5.2 Personal Problems	☐	☐	☐

5.6

	1 - Oui	2 - Non	6 - Ne saît pas
5.6.1.1 Colleagues or other managers stealing	☐	☐	☐

5.6.2 Can you approach your manager / CEO with regards to the following issues?

5.6.2.1 Colleagues or Managers intimidating you or others in the workplace	☐	☐	☐
5.6.2.2 Employees intentionally not working	☐	☐	☐

5.6.2.3 *Please feel free to add any additional comments*

Comments:

5.6.3.1

If you answered "no" to any of the above mentioned questions, would you do it if you could do it anonymously to a post-box?

Please tick the correct box

1 - Yes	2 - No	6 - Don't know
☐	☐	☐

5.6.4.1 Are there any other things you feel you cannot talk with your manager about?

1 - Yes	2 - No	6 - Don't know/Not Applicable
☐	☐	☐

Please feel free to add any additional comments

5.6.4.2

Comments:

6 General Questions

6.1.1 Are you happy that Jamaa is doing an employee satisfaction survey?

Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

6.1.2 *Please feel free to add any additional comments*

Comments:

6.2

Do you feel that the Continuous Improvement Program that Jamaa is trying to do is a good idea?

Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

6.3 Do you sometimes look for alternative job opportunities?
Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

7 General Information

7.1 How old are you?
Please tick the correct box

1 - 0-24 years	2 - 25-29 years	3 - 30-34 years	4 - 35-39 years
☐	☐	☐	☐

5-40-44	6 - 45-49 years	50-54 years	8- 55 years or more
☐	☐	☐	☐

7.2 What is your gender?
Please tick the correct box

1 - Female	2 - Male
☐	☐

7.3 To which functional area do you belong?
Please tick the correct box

1 - Driver	2 - Sales person in the market	3 - Purchasing agent	4 - Supervisor of products sold to clients from the villages	5 - Manager	6- Mechanic	7- Loader	y
☐	☐	☐	☐	☐	☐	☐	☐

7.4 Which province from Congo are you from?
Please tick the correct box

1-Bandundu	2-Bas-Congo	3-Équateur	4-Kasai-Occidental
☐	☐	☐	☐

5-Kasai-Oriental	6-Katanga	7-Kinshasa	8-Maniema
☐	☐	☐	☐

9-Nord-Kivu	10-Orientale	11-Sud-Kivu	12-Other?	Which?
☐	☐	☐	☐	_____

7.5 Which languages do you speak?
Please tick the correct box

1 - English	2 - French	3 - Swahili	4 - Lingala	5 - Kikongo (Kituba)	6 - Tshiluba
☐	☐	☐	☐	☐	☐

,

7.6 How many years have you worked for Jamaa/TIFIE?
Please write the number

7.7 How many years have you worked within your functional area?
Please write the number

7.8 How many years of formal education do you have?
Please write the number

7.9 How many years of training within your functional area do you have?
Please write the number

7.10 Where do you see yourself in 5 years?
Please feel free to add any additional comments

Comments:

7.11 Est-ce que vous avez des nouveaux Comments a ajouter?
Please feel free to add any additional comments

Comments:

The survey is now finished, and we thank you for your time and valuable contributions!

Appendix 24 Manager questionnaire

The survey was the same as the employee survey, with 5 additional questions in section 2:

2.8 Approximately how much of your time do you spend coaching and developing your team, either individually or as a group?

Please tick the correct box

1 - 0-10%	2 - 10-20%	3 - 20-30%	4 - 30-40%	5 -40-50%	6 - +50%
☐	☐	☐	☐	☐	☐

2.9 Approximately how much of your time do you spend out in the field working together with your team?

Please tick the correct box

1 - 0-10%	2 - 10-20%	3 - 20-30%	4 - 30-40%	5 -40-50%	6 - +50%
☐	☐	☐	☐	☐	☐

2.10 How many times per week do you meet with your team to review progress address any problems, and set goals for the short-term future?

Please tick the correct box

1 - 0 fois/semaine	2 - 1 fois/semaine	3 - 2 fois/semaine	4 - 3 fois/semaine	5 - 4 fois/semaine ou plus	6-Ne sait pas
☐	☐	☐	☐	☐	☐

2.11 How often do you meet with each employee individually for development talks per month?

Please tick the correct box

1 - 0 fois/mois	2 - 1 fois/mois	3 - 2 fois/mois	4 - 3 fois/mois	5 - 4 fois/mois ou plus	6-Ne sait pas
☐	☐	☐	☐	☐	☐

2.12 Is the communication with your employees efficient and effective?

Please tick the correct box

1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
☐	☐	☐	☐	☐	☐

Appendix 25 Customer questionnaire

Customer 1

Bag codes, quantity, and purchasing price

Pack code	Quantity	Price / pack
Pack code	Quantity	Price / pack
Pack code	Quantity	Price / pack

1 What is your name?

2 Which products did you buy today?

Goods (weight per pack)

Quantity (no. of packs)

3 What was the purchasing price?

Price per pack

4 What is your perception of the quality of the products that you bought today

Please tick the correct box

4.1	1 - Very poor	2 - Poor	3 - Average	4 - Good	5 - Very good	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any addtional comments below

4.2 Comments:

5 **How often do you purchase goods from Jamaa?**
Please tick the correct box

5.1	1 - This is my first time	2 - Rarely	3 - Sometimes	4 - Almost every time	5 - Everytime Jamaa is in	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any addtional comments below

5.2 **Comments:**

6 **What proportion of you total needs in the market is covered by Jamaa?**
Please tick the correct box

6.1	1 - 0-20%	2 - 21 - 40%	3 - 41 - 60%	4 - 61 - 80%	5 - 81 - 100%	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any addtional comments below

6.2 **Comments:**

7 **What influences your purchasing decision?**
Please tick the correct box

7.1	1 - Quality of the products	2 - The way the products	3 - The way the products	4 - Reliability of supplier	5 - Ability of supplier to	6 - Other
	☐	☐	☐	☐	☐	☐

Please feel free to add any addtional comments below

7.2 **Comments:**

8 **How satisfied are you with Jamaa's products in general**
Please tick the correct box

8.1	1 - Very dissatisfied	2 - Dissatisfied	3 - Neither satisfied or	4 - Satisfied	5 - Very satisfied	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any addtional comments below

8.2 **Comments:**

9 **How satisfied are you with Jamaa's reliability?**
Please tick the correct box

9.1	1 - Very dissatisfied	2 - Dissatisfied	3 - Neither satisfied or	4 - Satisfied	5 - Very satisfied	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any addtional comments below

9.2 **Comments:**

10 **How well does Jamaa understand your needs?**
Please tick the correct box

10.1	1 - To a very small extent	2 - To a small extent	3 - Somewhat	4 - To a great extent	5 - To a very great extent	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any addtional comments below

10.2 **Comments:**

11.1 **How satisfied are you with Jamaa's selection of products?**
Please tick the correct box

11.2	1 - Very dissatisfied	2 - Dissatisfied	3 - Neither satisfied or	4 - Satisfied	5 - Very satisfied	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any addtional comments below

11.3 **Comments:**

12.1 **What do you think about Jamaa's prices compare to its quality?**
Please tick the correct box

12.2	1 - The prices are much too	2 - The prices are too high	3 - The prices are fair	4 - The products are	5 - The products are	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any addtional comments below

12.3 **Comments:**

13.1 **How many other suppliers do you have for the products that Jamaa provides?**

Please tick the correct box

1 - No other suppliers	2 - 1 supplier	3 - 2 suppliers	4 - 3 suppliers	5 - 4 or more suppliers	6 - Don't know
☐	☐	☐	☐	☐	☐

Please feel free to add any addtional comments below

13.2 **Comments:**

14.1 **How does the quality of Jamaa's products compare to the quality of other suppliers?**

Please tick the correct box

1 - Much lower quality	2 - Lower quality	3 - Equal quality	4 - Higher quality	5 - Much higher	6 - Don't know or Not
☐	☐	☐	☐	☐	☐

Please feel free to add any addtional comments below

14.2 **Comments:**

15.1 **How does the value for money of Jamaa's products compare to your other suppliers**

Please tick the correct box

1 - Much lower value	2 - Lower value for	3 - Equal value for	4 - Highr value for	5 - Much	6 - Don't know
☐	☐	☐	☐	☐	☐

Please feel free to add any addtional comments below

15.2 **Comments:**

16.1 **What is good about Jamaa?**

17.1 **What could Jamaa do better?**

18.1 **What other needs to you have that Jamaa does not currently fulfil?**

Appendix 26 Agent questionnaire

Agent Satisfaction Survey - Jamaa Trade

1	**Name**	
2	**Company / Agency**	
3	**Date**	

4 Are you satisfied with the overall service of Jamaa?
Please tick the correct box

4.1	1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any additional comments

4.2 Comments:

5 Are you satisfied with the reliability of Jamaa?
Please tick the correct box

5.1	1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any additional comments

5.2 Comments:

6 How well does Jamaa understand your needs?
Please tick the correct box

6.1	1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any additional comments

6.2 **Comments:**

7 **How well does Jamaa take care of your goods during the transportation?**
Please tick the correct box

7.1	1 - To a very small extent	2 - To a small extent	3 - To a certain extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any additional comments

7.2 **Comments:**

8 **What do you think about Jamaa's prices compared to its level of service?**
Please tick the correct box

8.1	1 - The prices are much too high	2 - The prices are too high	3 - The prices are fair	4 - The service is good value for money	5 - The service is very good value for money	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any additional comments

8.2 **Comments:**

9 **How many other suppliers do you have for the services that Jamaa also supplies?**
Please tick the correct box

9.1	1 - No other suppliers	2 - 1 supplier	3 - 2 suppliers	4 - 3 suppliers	5 - 4 or more suppliers	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any additional comments

9.2 **Comments:**

10 **What proportion of your total transportation needs are filled by Jamaa (proportion of goods transported)?**
Please tick the correct box

10.1	1 - 0-20%	2 - 21-40%	3 - 41-60%	4 - 61-80%	5 - 81-100%	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any additional comments

10.2 **Comments:**

11 **How does the prices of Jamaa compare to your other suppliers?**
Please tick the correct box

11.1	1- Jamaa is much more expensive	2 - Jamaa is more expensive	3 - The prices are the same	4 - Jamaa is less expensive	5 - Jamaa is much less expensive	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any additional comments

11.2 **Comments:**

12 **How does the level of service of Jamaa compare to your other suppliers?**
Please tick the correct box

12.1	1- Service of Jamaa is much lower	2 - Service of Jamaa is lower	3 - The level of service is the same	4 - The service of Jamaa is higher	5 - The service of Jamaa is much higher	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any additional comments

12.2 **Comments:**

13 **How does the value for money of Jamaa's service compare to your other suppliers?**
Please tick the correct box

13.1	1- Much lower value for money	2 - Lower value for money	3 - The same value for money	4 - Higher value for money	5 - Much higher value for money	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any additional comments

13.2 **Comments:**

14 **What are the most important factors when choosing a supplier to transport goods?**
Please tick the correct boxes

14.1	1 - Price	2 - Level of service (e.g. in regards to lost/damaged goods)	3 - Reliability (time schedule)	4 - Ability to plan ahead and publish delivery schedule in advance	6 - Other
	☐	☐	☐	☐	☐

If you ticked "6 - Other", please specify which other factors are important when choosing a supplier

14.2

15 **What is good about Jamaa in your opinion?**

16 **Is there anything Jamaa could do to improve it's quality or service?**

17 **If Jamaa does not improve, will you remain loyal to Jamaa?**

18 **What other needs to you have that Jamaa does not currently fulfil?**

The survey is now finished, and we thank you for your time and your valuables contributions!

Appendix 27 Village questionnaire and case study

Social Return on Investment

1	**Your name**	
2	**Village**	
3	**Date**	

4 How many villagers live in the village?

Number

5 How many huts are there in the village?

Number

6 To what extent have your living conditions improved since Jamaa began working with you?

Please tick the correct box

6.1	1 - To a very small extent	2 - To a small extent	3 - To some extent	4 - To a large extent	5 - To a very large extent	6 - Don't know
	☐	☐	☐	☐	☐	☐

Please feel free to add any addtional comments below

6.2 Comments:

7 How many of the villagers have a job?

7.1 Number

7.2 **Has the number of villagers who have a job increased in the past year?**

If yes, by how many percent (approximately)?

1 - 0%	2 - 1-25%	3 - 26-50%	4 - 41-60%	5 - 75% or more	6 - Don't know
☐	☐	☐	☐	☐	☐

8 **How many mobile phones are there in the village (approximately)?**

8.1 Number

8.2 **Has the number of mobile phones increased in the past year?**

If yes, by how many percent (approximately)?

1 - 0%	2 - 1-25%	3 - 26-50%	4 - 41-60%	5 - 75% or more	6 - Don't know
☐	☐	☐	☐	☐	☐

9 **How many televisions are there in the village (approximately)?**

9.1 Number

9.2 **Has the number of televisions increased in the past year?**

If yes, by how many percent (approximately)?

1 - 0%	2 - 1-25%	3 - 26-50%	4 - 41-60%	5 - 75% or more	6 - Don't know
☐	☐	☐	☐	☐	☐

10 **How many transportation vehicles are there in the village (approximately)?**

10.1 Number

10.2 **Has the number of transportation vehicles increased in the past year?**

If yes, by how many percent (approximately)?

1 - 0%	2 - 1-25%	3 - 26-50%	4 - 41-60%	5 - 75% or more	6 - Don't know
☐	☐	☐	☐	☐	☐

11 **How many of the cabins have a tin roof?**

11.1 Number

11.2 **Has the number of tin roofs increased in the past year?**

If yes, by how many percent (approximately)?

1 - 0%	2 - 1-25%	3 - 26-50%	4 - 41-60%	5 - 75% or more	6 - Don't know
☐	☐	☐	☐	☐	☐

12 **Has Jamaa taught new skills and competenciesto the villages?**

If yes, which skills and competencies and how?

Comments:

13 **What can Jamaa do in order to better teach new skills and competencies**

Comments:

14 **What is good about Jamaa?**

Comments:

15 **What could Jamaa do to improve?**

Comments:

16 **What other needs do you have that Jamaa does not correctly address?**

Comments:

Thank you for your time and contributions!

Appendix 28 New and existing company data

Existing financial data includes financial reports broken by business entity on a monthly basis and operational reports broken down by truck trip. New company data was also compiled to the extent possible by local managers and the CEO, and was supplemented by interviews with the CEO as well as the authors' own observations.

Appendix 29 Interviews with CEO

The final data collection method was formal interviews and informal dialogues with the CEO on a regular basis. The interviews were used as a supplement to the existing data as well as for anecdotal evidence regarding issues where it was not possible to compile quantitative data.

Appendices Chapter 9: Empirical findings - Round 1

Appendix 30 Data from all 19 initial employee interviews

	1.1.1 Connaissez vous le mission global ou les objectives de Jamaa Entreprises?	1.1.2 Commentaires:	1.2 Connaissez vous le but de votre equipe ?	1.3 Est-ce que vous croyez que votre contribution quotidienne fait une difference pour l'obtenu des objectives de Jamaa?	1.4 Connaissez vouz l'abbreviation de TIFIE?	2.1 Savez-vous quand vous avez fait un bon travail?	2.2 Pensez-vous que votre travail contribue à la qualité des produits et services de Jamaa?	2.3.1 Veuillez attribuer l'importance des facteurs suivant quand vous choissisez un travail en general? La Salaire	2.3.2 Veuillez attribuer l'importance des facteurs suivant quand vous choissisez un travail en general? Si vous allez apprendre qqc.	2.3.3 Veuillez attribuer l'importance des facteurs suivant quand vous choissisez un travail en general? L'ambiance des employés	2.4.1 Obtenez-vous ce que vous voulez de votre travail à Jamaa? En terme de la salaire	2.4.2 Obtenez-vous ce que vous voulez de votre travail à Jamaa? Si vous apprendez qqc.	2.5.1 Qu'est-ce qu'il vous motive pour faire extra-ordinairement bien au travail?	2.5.2 A votre avis, est-ce que il y a un motive en Jamaa pour travailler extra-ordinairement dur?
Employee 1	3	Nous travaillons avec le trade et avec construction	5	4	2	5	5	4	4	5	3	1	Quand il quitte sa maison, il sais il va travaille bien	Non,Quand il travaille dure, Il a un sentiment dans soi-meme et de colleagues et de managers.
Employee 2	1	Nous travaillons avec le trade et avec construction.	3	4	2	3	2	3	5	5	1	4	La grand raison c'est son salaire, c'est tout.	Oui, Il aime pas reste toute tranquille, c'est frustrée, il se sent malade
Employee 3	5	Nous continuons avec le meme but comme a Tifie, changer DRC	3	2	2	5	4	2	5	4	2	5	Faire un bon travail pour que la societe pour faire un bon beneficie.	Oui, mais que c'est dans soi-meme.
Employee 4	1	Nous travaillons pour Jamaa exists	3	5	2	5	1	1	4	5	2	1	Un sentiment de avoir fait un bon travail soi-meme	Oui, mais que c'est dans soi-meme.
Employee 5	3		5	4	2	5	4	3	4	5	3	5	La croissance des activites de Jamaa	Oui, tres largement
Employee 6	3	Qualité et la production	3	4	2	4	5	1	5	5	1	2	1er: La salaire. 2ie On a besoin d'un travail	Oui, mais il y a bcp. Des grands obstacles.
Employee 7	1		3	3	2	5	5	4	4	5	1	4	1er: La volonté du travail.	Non, les conveyeurs travaillent assez dur comme les autres, mais receivent 1/4 de leurs salaires
Employee 8	1		3	5	2	5	5	5	5	5	2	4	Le souci de travail et de societe, et en general pour le pays	
Employee 9	2		3	4	2	5	5	3	5	5	3	4	Frais de voyage	Non, les conveyeurs travaillent assez dur comme les autres, mais receivent 1/4 de leurs salaires
Employee 10	3	Savais a tifie mais pas a jamaa	5	5	1	5	4	3	5	5	3	3	L'attente des objectives	Oui, parce que la politique est qu'on insiste et encourage de travailler dure et prendre d'initiatives
Employee 11	2	Nous travaillons avec le trade et avec construction.	5	5	2	4	5	5	5	5	4	4	Jamaa est mon toute, sans Jamaa j'ai rien	Non, pas actuellement, avec Tifie c'etait juste un ONG, peut-etre ca sera mieux.
Employee 12	1		4	5	2	4	5	5	5	5	2	5	Avoir un poste comme manager	Oui, tres largement
Employee 13	4		5	4	1	5	4	4	5	5	4	4	1er: le souci de savoir-faire, l'avancement de RDC	Oui, largement
Employee 14	5		5	4	1	4	4	4	5	4	3	4	Le changement de l'equipe, leurs vies et la société.	Oui, pour changer la vie, et rendre les gens autonomes.
Employee 15	5		5	4	1	5	3	3	5	5	3	4	Qu'on fait du bien, et La collaboration entre les managers	Oui, il y en a.
Employee 16	5		5	5	1	5	5	2	4	4	3	5	Faire du bien ici, on a eu des progres, ca me motive	Non, maintenant pas.
Employee 17	5		5	4	1	3	5	4	5	5	3	5	J'ai une personalité competitive	Ca depend, c'est une de notre probleme.
Employee 18	4		5	4	1	4	5	3	4	3	1	3	1. L'apprentisage, ca me developpe.	Non, Faiblement.
Employee 19	4		4	4	1	4	4	4	5	5	1	5	1. Le developpement de Jamaa 2. L'atmosphere de travail	Oui, La motive c'est que Jamaa est encore jeune est peut se developper.

	3.4.2 Commentaires:	3.5 Est-ce que vous sentez que votre directeur comprend completement les processus et tous les aspects de votre travail?	3.6 Si vous comparez une situation optimale situation avec la situation a Jamaa, est- que on est proche de la situation optimale?	3.7.1 Que sont les plus grands obstacles pour l'amélioration de votre travail et votre qualité de travail en general? Donnez-nous les trois plus importants - 1	3.7.2 Que sont les plus grands obstacles pour l'amélioration de votre travail et votre qualité de travail en general? Donnez-nous les trois plus importants - 2	3.7.3 Que sont les plus grands obstacles pour l'amélioration de votre travail et votre qualité de travail en general? Donnez-nous les trois plus importants - 3	4.1 Est-ce que vous vous entendez bien avec vos collègues du travail?
Employee 1		5	3	Parfois quand mes colleagues nettoyer les camions il font tomber des pieces. 1. Compresseur, 2. Bouteille bonbon oxygen pour souder 3. Poste a souder	Des fois quand on se concentre, mes colleagues me derangent	Quand il manque des pieces ca prends 3 heures (Process; Document to Flavie, then Disidi, then JeanJaques(CFO) then Tommy (CEO) then CFO again!)	5
Employee 2		2	1	Les pannes!	Les manques des pieces d'echange	La communication entre Papi/Pichou et Wase (Wase est pas bien paye, et il prends les clients et les donne aux autres gens, qui lui paie plus en commission)	5
Employee 3	Les suggestions sont rarement prises en consideration	2	1	Il me mange pneus de reserves et accouplements	Par fois, quand ils partent pour Kikwit, c'est sans sacs, et ils doivent attendre long-temps pour charger les maniok.	Pas suffisament frais de voyage dans les cas ou le voyage est plus long	5
Employee 4		4	1	Il manque des cles pour reparer des pannes!	On change Kikwit qui devient une centre de distribution, et les grand vehicules marchent que entre ici et Kikwit. Il l'a recommandé, mais on avait pas la confiance aux gens.	Vendez que les Maniok des cote est ici a Kinshasa, les du cote ouest il faut vendre a Kikwit	5
Employee 5		5	3	Internet	Le volume de travail, il y a trop de gens qui demandent son service. Il se sent coincé		5
Employee 6		2	4	Pieces d'echanger pour les vehicules + ca prend 2-3 heures pour aller ici avec des 3 differentes bus, et ca coute 10 dollar/jour	Il faut ajouter plusieurs marches, par example, les bateaux pour aller a l'est, ou une usine de sacs!	Les clients veulent pas attendre 2-3 jours pour que les camions sont rempli, il y a autre entreprises qui partent le meme jour	4
Employee 7		5	3	Outils manquent: Demontes, compresseur, Manometre, pneu reserves, chambre a l'air reserve, baches nouveaux	On change souvent par example les pneus panné avec des bons pneus d'autres problems, on change pas la cause de la problem, on le pousser aux autres.	Il faut avoir plusieurs des sites a Kikwit.	5
Employee 8		4	3	2-3 centre ou on achete les achats, maintenant il y a qu'une centre distribution, les rotations ne sont pas regulieres.			3
Employee 9		5	6	La rotation des camions est terrible			5
Employee 10	Si on a une idée, on partage, et le direction ecoute a moi	5	3	Le direction doit consulter le middle management, et ils peuvent consulter les employes	Les camions, certains decisions sont prises consultent pas toujours les gens d'abord, par example, la camion rouge.	Pour la brique, on avait une machine tres mauvaise.	5
Employee 11		5	2	1. Les vehicules vieux, il faut donner des formations aux conducteurs comme proteger les camions. 3. Des fois quand on travaille jusqu'au 20-21 h,	1. Les cles 2. Le compresseur 3. Pieces de rechanges (4. Pompe à gressage) 1. Il manque des vetements, il manque un bureau et un ordinateur. il nous manque de transport, et on travaille pour rien.	2. Le probleme est les contracts de durations de 2 ans, c'est trop court, on a pas envie de donner 100% a Jamaa. Pire avec le conveyeurs	5
Employee 12		3	3	Parler plus avec mon manager.	Connaissance les machines et ameliorer les machines, on a pas un production industriel. Il veut bien fabriquer les machines.		5
Employee 13		5	4	La communication est pas tres fluide, et il y en a pas assez.	On traite pas les retards de traitement des dossiers etc. avec l'urgence necessaire, des fois.		5
Employee 14		5	4	Probleme culture et probleme de mentalite			5
Employee 15		3	3	Les processus sont pas bien, il manque des procedures (pour realiser qqc.	Il manque une systeme pour les idees des employeés.		5
Employee 16	Il communique suffisament avec moi, quand il pense pas mes idees sont bons	5	4	Avoir suffisament de temps	Il manque d'experiences dans TOUTES les aspects de Jamaa.		3
Employee 17		3	3	1. La culture et mentalite congolaise	2. Employés avec experiences (Congolais qui etaitent en exile ont commencé a retourner, ils travaillent bien, il faut "tapper" le marché d'expats	3. Des fois quand on travaille jusqu'au 20-21 h, il nous manque de transport, et on travaille pour rien.	3
Employee 18		4	3	1. La motivation de persons en terme. Autre elements sont par exemples, des contrats	2. Il faut pas focuser a manioc, il faut ovrir pour par exemple une marché a Kikwit et a Kinshasa, on peut vendre des arrachides (peanuts).		5
Employee 19	sauf que il y a certains decisions qui sont pris sans le middle management.	3	3	1. Le manque que le direction prend les idees serieux	2. Un bonne politique de la salaire, il y a pas d'harmonie entre les salaires, il y a de chef qui gagne moins que vous, ca decourage certains persons.	3. Les equipes mechaniens sont formidables, mais ce encore plus les conducteurs qui manquent des pneus reserves et des cles.	4

	4.2 Pensez vous que vos collègues vous aideront dans votre travail?	4.3 Pensez vous que vous et vos collègues partagent les meilleurs techniques de travail ?	4.4. Est-ce que vous pensez que Jamaa a un bon esprit d'équipe et travail d'équipe?	5.1 Est-ce que vous pensez que votre directeur communique parfaitment avec vous?	5.2.1 Le diriez vous a votre directeur si vous aviez une bonne idée pour améliorer Jamaa?	5.2.2 Avez-vous donné une idee au directeur?	5.2.3 Si oui, est-ce que le directeur utilisait votre idée, pourquoi/pourquoi pas?	5.3 le diriez vous à votre directeur si vous aviez un problème serieux avec un autre manager?	5.4 Si il y avait une boîte pour déposer des commentaires anonymes, le diriez vous plus facilement à votre PDG si vous aviez un problème avec un autre manager?	5.5.1 Est-ce que vous pensez que vous pouvez discuter les sujets suivant avec votre directeur? La salaire	5.5.2 Est-ce que vous pensez que vous pouvez discuter les sujets suivant avec votre directeur? Problèmes Personnels	5.6.1 Est-ce que vous pensez que vous pouvez discuter les sujets suivant avec votre directeur? Le vol par des collègues ou des managers
Employee 1	5	5	5	5	2	2		5	4	2	1	1
Employee 2	5	5	5	5	5	2		3	4	1	1	1
Employee 3	5	5	5	5	5	1		5	1	1	1	1
Employee 4	5	5	5	2	2	1	Souvent les employes sont alles au PDG, et apres le manager et devenu en colere.	5	5	2	1	1
Employee 5	5	5	4	5	5	1		4		1	1	1
Employee 6	4	5	4	5	5	1	Il ne l'utilisait pas. Il etait en commande, et le manager lui donnait de bons raisons.	4	5	1	1	2
Employee 7	5	5	5	5	4	2		1	3	1	1	1
Employee 8	5	5	3	5	5	2		5	5	1	1	1
Employee 9	5	5	5	3	5	1	C'etait pas un bonne idée.	6	6	1	1	1
Employee 10	4	5	5	3	5	1		5	2	2	1	1
Employee 11	5	5	5	5	5	1	Il l'utilisait.	5	1	2	1	1
Employee 12	5	5	5	3	4	1	Oui	5	1	1	1	1
Employee 13	4	5	3	5	4	2		5	1	2	2	1
Employee 14	3	4	5	5	5	1		5	1	1	1	1
Employee 15	4	3	4	3	5	1	Non, Par exemple, des fois le direction font des direction sans argumenter et ecouter aux employes.	5	1	2	1	1
Employee 16	3	4	5	4	5	1		5	1	1	1	1
Employee 17	5	3	4	3	3	6		5	1	1	2	2
Employee 18	4	5	3	4	4	1	Oui, des fois oui, des fois non. Il montrent bien pourquoi pas.	1	3	1	1	1
Employee 19	5	5	4	4	4	1	Il m'a pas entendu	4	1	1	1	1

	5.6.2 Est-ce que vous pensez que vous pouvez discuter les sujets suivant avec votre directeur? l'intimidation par des collègues ou des managers dans le cadre du travail	5.6.2 Est-ce que vous pensez que vous pouvez discuter les sujets suivant avec votre directeur? Des collègues évitant le travail	5.6.2 Commentaires:	5.6.3 Si vous avez répondu 'non' a une des 3 questions avant, le feriez vous si vous aviez une boîte à commentaires anonyme?	5.6.4 Il y a-t-il d'autres choses dont vous ne pouvez pas parler avec votre directeur?	5.6.4 Commentaires:	6.1.1 Est-ce que vous êtes content du sondage sur la satisfaction des employés de Jamaa?	6.1.2 Si vous souhaiter ajouter d'autres commentaires veuillez le faire ci-dessous	6.2 Pensez-vous que le Programme de l'Amélioration continue de Qualité (PACQ) de Jamaa est une bonne idée?	6.3 Considerez-vous d'autres opportunités d'emplois actuellement?	7.1 Quel age avez vous?	7.2 Quel est votre sexe?	7.3 Quel est votre catégorie d'emplois?	7.4 De quelle province êtes vous du Congo?	7.5.1 Quelles langues parlez vous très bien?Anglais
Employee 1	1	1	(after having approached le voleur)	N/A	2		5	(way to communicate anonywith directeur)	5	5	5	2	6	2	2
Employee 2	1	1	(after having approached le voleur)	N/A	1	Oui, mais il veut pas le dire	5	(way to communicate anonymously with directeur, way to improve things)	4	1	7	2	1	1	2
Employee 3	1	1		N/A	1	Oui, mais il veut pas le dire	5		5	1	8	2	1	1	2
Employee 4	1	1		N/A	2		5		4	5	7	2	1	1	2
Employee 5	1	1		N/A	2		5		5	1	4	2	5	1	2
Employee 6	1	1		1	2		5		5	2	5	2	1	1	2
Employee 7	1	1			1		5		4	1	3	2	7	1	2
Employee 8	1	1			1		5		5	5	1	2	7	1	2
Employee 9	6	1	2				5		5	1	4	2	7	1	2
Employee 10		1	(after having approached le voleur)	2			3	On a pas beaucoup de temps	5	2	2	2	5	2	1
Employee 11	2	1		2	2	Non, notre directeur est cool.	4		5	1	2	2	6	2	2
Employee 12	1	1			2		4		4	4	4	2	5	8	2
Employee 13	1	1	(after having approached le voleur)		1	Oui, de trucs de sa vie privée.	5		5	3	2	1	8	5	1
Employee 14	1	1			2		4		5	4	4	2	5	4	1
Employee 15	1	1			2		3		5	1	3	2	5	5	2
Employee 16	1	1			2		5		5	1	3	2	5	12	1
Employee 17	2	1		1	2		4		5	1	4	2	5	12	1
Employee 18	1	2		1	2		4		5	2	4	2	8	4	2
Employee 19	1	1			2		4		5	4	4	2	5	5	2

	7.5.2Quelles langues parlez vous très bien?Francais	7.5.3 Quelles langues parlez vous très bien ? Swahili	7.5.4 Quelles langues parlez vous très bien? Lingala	7.5.5 Quelles langues parlez vous très bien?Kikongo	7.5.6Quelles langues parlez vous très bien?Tshiluba	7.6 Combien des ans du travail pour Jamaa/Tifie?	7.7 Combien des ans du travail dans votre metier?	7.8 Combien des ans d'éducation formelle dans la systeme d'ecole avez-vous eu?	7.9 Combien des ans d'éducation specialisée a votre metier avez-vous eu?	7.10 Qu'est que c'est ce que vous vous imaginez que vous ferez dans 5 ans?	7.11 Est-ce que vous avez des nouveaux commentaires a ajouter?
Employee 1	2	1	1	1	2	2	23	7	0	Il veut continue travailler dans le transport, mais veut bien avoir sa propre entreprise. Comme ca, , il peut trainer les gens.	
Employee 2	2	2	1	1	2	3	34	6	3	Il veut continue travailler dans le transport, mais dans sa propre entreprise.Pour etre responsible, et pour donner ses enfants qqc.	
Employee 3	2	1	1	1	2	4	41	8	2	“Se reposer, garder sa ferme”	
Employee 4	2	2	1	1	2	5	33	9	3	Continuer dans le transport, mais veut bien avoir sa propre entreprise, pour etre independent et travailler encore mieux..	
Employee 5	1	2	1	1	2	3	8	15	2	Le systeme de travail ici lui inspire beaucoup, mais si non, il veut bien aussi devenir un entrepreneur	Pour ameliorer la qualite, il faut avoir plus de formation ici a Jamaa, pour comprendre le objective et situation complexe.
Employee 6	1	2	1	1	2	4	19	9	0	Il voudrait bien travaille a l'interieure, il faut se reveiller a 4-5 heure ici.	Il veut bien que ses entretiens vont etre utilisé, pas comme Ryan avait parlé avec lui. Il manque des mechaniens ici, on a besoin de 4.
Employee 7	2	2	1	1	2	1	1	15	0	Il veut bien continuer ici et devenir mechanien	
Employee 8	2	2	1	1	2	1	4	11	0	Il voudrait bien devenir chaffeur	Il veut pas que le sondages arret aux questions, il veut qu'on va utiliser les reponses.
Employee 9	2	2	1	1	2	3	1	12	3	Il veut bien continuer ici et devenir mechanien et chaffeur	
Employee 10	1	2	1	2	2	3	4	17	0	Avoir sa propre entreprise.	
Employee 11	1	2	1	2	2	4	8	12	2	Je m'imagine que je vais continuer travailler pour Jamaa, je suis tres content.	
Employee 12	1	1	1	2	2	3	5	12	3	Createur des machines, dans ma propre societé.	
Employee 13	1	1	1	2	1	1	3	17	0	J'aimerais avoir un bon formation de managementm, et diriger une grande entreprises ou ONG	Il faut faire attention au communication entre travailleur et manager, il faut leve la peur dans les travailleurs. Bcp. des travailleurs se complainent sur les salaries. Il y a des employés qui sont venus parce que TIFIE etait un ONG, maintenant ils veulent bien plus d'argent. Il y a de gens qui pensent il gagnent pas assez par rapport de leurs travail
Employee 14	1	1	1	2	1	3	10	17	0	Creer ma propre business	Changer la culture est difficule. Les gens preferent travailler avec les gens de la meme province comme eux, il faut changer ce croi. Oui, les travailleurs ont peur les managers, ils continuent a lui appeller "Chef, ou manager". Inititatives: faire de rendez-vous a et audehors du travail.
Employee 15	1	1	1	1	2	4	3	13	0	Etre dans Jamaa et assiste aider Jamaa a developper, grandir avec Jamaa	
Employee 16	1	2	2	2	2	1	1	17	0	1. Expanding jamaa and/or 2. Running my own consulting related to Jamaa, helping firms entering Africa	Il faut etre honnete ici, etre adaptee a culture de jamaa. Avoir integrité
Employee 17	2	2	2	2	2	2	12	21	0	Je m'imagine que Tifie sera dans plusieurs pays, et je vais faciliter ce progres.	
Employee 18	1	2	1	2	1	2	3	16	0	J'aimerais bien faire de trucs politiques.	Pour maximiser les benificies, il faut avoir des bons vehicules et bons travailleur. Il faut avoir des bons vehicules et bons salaries pour motiver les employés. Plus de regulierement surtout pour les produits Kikwit --> Kinshasa.
Employee 19	1	1	1	2	1	3	10	15	0	Je voudrais bien ma deuxieme cycle a l'universite. Je travaille trop pour le pouvoir faire maintenant.	Je voudrais bien avoir les sondages chaque 6 mois. La langue pose de problemes

Appendix 31 Deming-related Findings 4-15

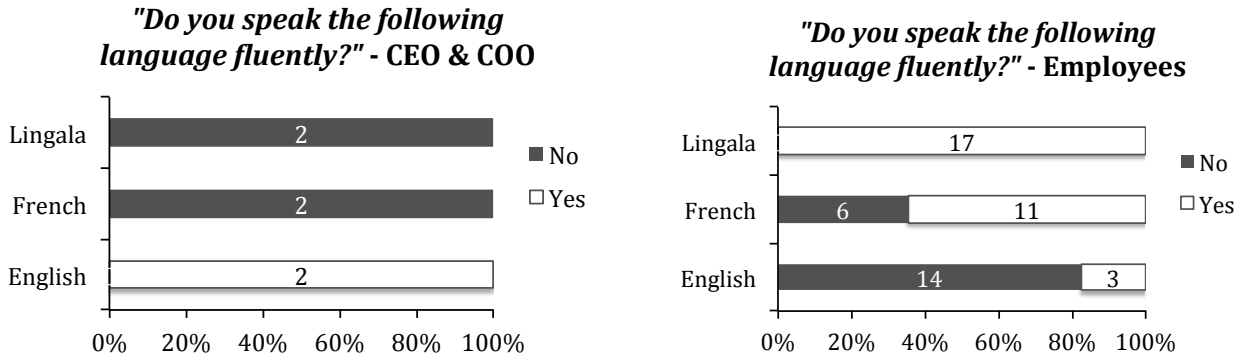
The fourth finding, "Lack of long-term development talks between CEO and employees", was also discovered during the interviews. Although the CEO claimed to have individual conversations with each employee more than four times a month (Appendix 30, p. 266 – Question 2.11), he also admitted that there were little focus on the long-term development of the individual employee, and furthermore, that many employees were afraid to talk due cultural traits of high power distance in Congo. This was a problem according to Deming's point 13, "Institute program of education and self-improvement", as it is hard, if not impossible, to identify the employees' ideas for further education and self-improvement, if the issue is not discussed (Deming 2000, p.86).

The fifth finding, "Missing CRM for middle managers and sales representatives", refers to the fact that Jamaa used an internet-based solution, namely Google Docs, in which a large Excel spreadsheet functioned as the firm's CRM system. An internet-based CRM-system was highly problematic given Jamaa's unreliable, yet expensive satellite internet connection (Appendix 30, p. 266 – Question 3.1.2). The finding conflicted with Deming's point 12, "Remove barriers for workmanship pride", as it was a source of frustration for sales representatives that they could not always access an updated version of the Excel spreadsheet (Deming 2000, p.78). It was also a problem according to Deming's obstacle 10, "The unmanned computer", in which Deming warns against relying too much on computers (Deming 2000, p.139). This idea, probably more obsolete in 2011 than in the 1950-80's when Deming conceived most of his ideas, still has some relevance in Jamaa's case. It shows that Jamaa has relied on technology without adapting it to the context of Jamaa.

The sixth finding, "Language issue", was discovered in the beginning of the stay in Congo, as the American CEO, being a native English-speaker still learning French, believed that everyone spoke French fluently. Yet for the interviews in French, the author still required assistance from a French-Lingala translator, Flavie Tshidibi, as some of the workers had an easier time understanding the questions in their native Lingala rather than in French. As the following figure shows, the American CEO and COO did not speak French fluently, but neither did 6 of the drivers and their assistants, see second bar of both charts. The situation meant that the CEO, not being fluent in French, had to communicate with workers who themselves did not speak French fluently, which was problematic. At the same time, the CEO

and COO did not speak Lingala, whereas most of the employees did not speak English fluently either.

Figure 82 – DF6: Proficiency of languages in Jamaa – Employees (N=17) vs. CEO & COO (N=2)



Source: Appendix 30, p. 266 –Questions 7.5.1, 7.5.2 & 7.5.4

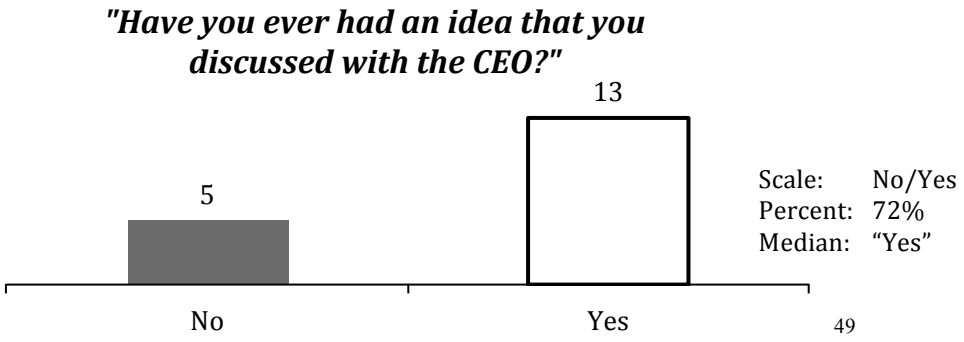
The situation was a problem according to two of Deming's points, point 8, "Drive out fear", as the workers were afraid to be honest about the situation, but also point 9, "Break down staff barriers", as the language issue was impeding for communication especially between the CEO and COO on one hand and the drivers and their assistants on the other (Deming 2000, pp.59-65).

The seventh finding, "Need of an energetic, passionate role model and leader among the employees", was a general observation, but also discovered during the interviews, as some employees had not really any ideas on how to improve neither their own work nor Jamaa. One possibly cause could be, according to the CEO, that they were afraid to contribute with ideas that might risk having them fired. This was an issue according to Deming's point 8, "Drive out fear", as such fearful employees would not deliver performance above the required (Deming 2000, pp.59-62). A role-model could mitigate this effect.

The eighth finding, "Lack of employee ideas and decision making", was evident during the interviews as some employees stated that the salary was their sole motivation to work (Appendix 30, p. 266 – Question 2.5.1). As one employee noticed *"We miss a system for employees to come up with ideas"* (Appendix 30, p. 266 – Question 3.7.2). This finding was a problem according to Deming's point 1, "Create constancy of purpose". The point has exactly

employee innovation as one of its main components, and therefore it was problematic that the employees did not contribute much to firm innovation (Deming 2000, pp.24-26). The following figure also indicates that not all employees had come up with ideas despite that employees had worked for Jamaa for 2.74 years on average (Appendix 30, p. 266 – Question 7.6).

Figure 83 – DF8: Employee idea creation (N=18)



Source: Appendix 30, p. 266 – Question 5.2.2

The ninth finding, "Unfulfilled desire for long-term contracts", was mentioned by a few employees who believed that Jamaa did not offer much incentive for employees to work extra hard for the firm, as they had very little job security *"...I work a lot while earning very little, and yet I have no contract"* (Appendix 30, p. 266 – Question 2.6.2). According to Deming's disease 4, "Mobility of top management", it is problematic if especially key, senior employees leave the firm, so long-term contracts could be a way to incentivise them to stay (Deming 2000, pp.120-121).

The tenth finding, "Lack of education, despite strong desire", was evident on several occasions. Due to Congo's history, general level of education has suffered (Shapiro 2001). More education is a trade-off between costs on one side and employee development and retention on the other. There was identified a strong desire for more education, as the employees proposed more education in several questions.

[49] Although N=19 for all other questions, here, the CEO was ignored, making N=18.

Figure 84 – DF10: Quotations indicating strong desire for more education

Quote	Question number
"[I need]…more education, finance, materials." *"[I need]…education to show drivers how to protect the trucks."* *"[I need]…education for the mechanics"*	3.1.2
""[I would want]..more general education"	3.7.1
"I'd like to have a good management education *"I'd like to have more education"*	7.1
"To improve quality, it is necessary to have more education here at Jamaa"	7.11

Source: Appendix 30, p. 266 – Questions 3.1.2, 3.7.1, 7.1 & 7.11

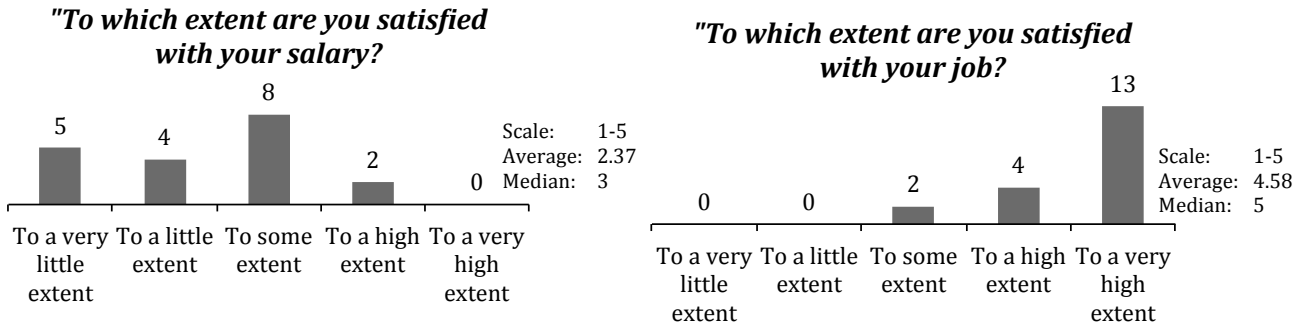
The situation is a problem according to Deming's point 13, "Institute program of education", as Deming talks about precisely have a broad programme for further education (Deming 2000, p.86; Walton 1989, pp.82-83).

The eleventh finding, "CEO and employees eating separately", was observed every day, while the CEO was in Congo. The CEO works half the time from France, and half the time from Congo. The author observed that unintentionally this made the CEO work non-stop within working hours in his own office in Congo, communicating mainly with middle managers, which would then communicate to the workers. The situation was a problem based on Deming's point 9, "Break down staff barriers", as this, to some extent, contributed to create a barrier between the CEO and the employees (Deming 2000, pp.62-65).

The twelfth finding, "Limited social events", was discovered during a talk with the firm CEO, where employee benefits were discussed. In Western corporate culture, a certain level of social events are expected, both as a way of remunerating employees, but certainly also as a way to create crucial informal bonds in organisations. The CEO, albeit being used to such things in the US, had adapted to local customs, where such events are not prevalent, and therefore there were only very few social events. However, the authors still believe this could have positive effects for Jamaa. The situation could be considered a problem based on Deming's point 9, "Break down staff barriers", as the limited number of events may contribute to create barriers between the CEO and the employees and thereby impede team-work (Deming 2000, pp.62-65).

The thirteenth finding, "Excessive focus on salaries by employees", was that some employees were focused first and foremost on their salaries, despite the recent, recurring losses in Jamaa. Given Congo's recent history, a desire for individual, financial security made sense. Still, some employees regarded their job in a purely transactional way, which could be a big hindrance for the intended transformation. For instance, to the question *"What motivates you to do well at work?",* one employee answered *"First of all the salary"* (Appendix 30, p. 266 – Question 2.5.1). Paradoxically, employees were very dissatisfied with salaries, while being very satisfied with their job in general, as the following figures show:

Figure 85 – DF13: Paradox of salary dissatisfaction and job satisfaction (N=19)



Source: Appendix 30, p. 266 – Questions 2.4.1 & 2.6.1

This is a problem based on an interpretation of Deming's point 1, "Create constancy of purpose", in the sense, that the CEO needs to communicate that the sole purpose of the firm is not just to make money but to stay in business, and analogously, employees should not at present focus solely on wages, but also on Jamaa staying in business and growing, and thereafter share the wealth (Deming 2000, pp.24-26; Walton 1989, p.34).

The fourteenth finding, "Alarm bell defining working hours" refers to the issue that a loud alarm bell signalled both the start and end of the workday. The author observed that this meant that most people were out of the office by 16:30, and potentially this could mean that some employees felt that the bell meant they should go home, even if something important was still required to be finished. Some employees did frequently work over-time, but there was no clear way in which over-time was handled. So far, employees were not directly compensated for this neither in terms of extra payment nor subsequent time off. This was potentially a problem according to Deming's point 12, "Enable workmanship pride", as the

unclear rules for over-time work may create a barrier for employees to do what they believe would serve Jamaa best and instead they might simply adhere to the work hours of the alarm bell (Deming 2000, pp.77-85).

The fifteenth, and final finding, "Desire for Jamaa work clothes", originated mainly from the workers side, particularly the mechanics, as their work was more physical and dirty in its nature. For example one mechanic said, *"I need work clothing"* (Appendix 30, p. 266 – Question 3.7.2). The employees were supposed to provide their own clothing, but especially in poor Congo free employee clothing could be a well-appreciated employee benefit and a way to brand Jamaa for the employees and in Congo in general at a relatively low cost, while hopefully also adding to the team spirit of the employees. The lack of work clothes could be considered a problem according to Deming's point 9, "Break down staff barriers", if the lack of work clothes contributed to decrease team feeling and identification with Jamaa and if it thereby impeded teamwork (Deming 2000, pp.62-65).

Appendix 32 Example of an actual trip ticket filled out on April 24, 2011.

Jamaa Trade - Ticket de Voyage

Sommaire

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1. Performance en sortant de Kinshasa	1
2. Performance en arrivant à Kikwit	2
3. Performance lors du voyage vers Kinshasa	4
4. Performance en arrivant aux marchés de Kinshasa	5
5. En retournant à Kingabwa	7

1. Performance en partant de Kinshasa (Kolongwa na Kinshasa)

Informations Générales

G1 Les noms

	Nom (Kombo ya mboka)	Prénom (kombo ya ndaku)
G1.1 Chauffeur (Mokumbi)	NGOIE Kabulo	Médard
G1.2 Convoyeur 1	Mukuta	Jean Bosco
G1.3 Convoyeur 2	Ndungi	Trésor

G2 Plaque d'immatriculation: Nº 1492 AB/01

G3 Est-ce que le véhicule a été contrôlé avant votre voyage? (Babongisaki mutuka liboso okende?)

Oui [✓] Non [ ]

G4 A quelle heure avez-vous quitté le garage?(Olongwaki heure nini?)

Date	Heure
Le 11/04/2011	de 08H00 à 22H30

1,1 Quels sont les produits que vous avez emmenés? (Biloko nini okendeki na yango?)

Type (Kombo ya biloko)	Quantité
Ballot d'usage	78 sacs
¢ Divers	55
Ciments	50 Sacs
Pièces Corrière	90

1,2 Avez-vous signé un accusé de réception? (Tango ozuaki biloko, bapesaki yo mukanda ya ko signer?)

Oui [✓] Non [ ]

1,3 Combien de temps avez-vous mis pour charger à Kinshasa? Osalaki tango boni pona ko matisa biloko na mutuka na Kinshasa?

Heures: 08H00 à 22H30 Minutes: [ ]

1,4 Combien d'employés ont participé au chargement à Kinshasa? (Batu boni ba matisaki biloko na mutuka na Kinshasa?)

Nombre: 6 Personnes

1,5 A quelle heure avez-vous quitté Kinshasa? (Olongwaki Kinshasa na ngonga nini?)

Heure: 23H30

Page 1 of 7

2. Performance en arrivant à Kikwit (Kokoma na Kikwit)

2,1 **Quand êtes-vous arrivé à Kikwit? (Okomaki Kikwit mokolo nini?)**

Date (mokolo)	Heure (ngonga)
Le 12/04/2011	19 H 58'

2,2 **Combien de temps a-t-il fallu pour décharger? (osalaki tango boni pona kokitisa bilko na mutuka?)**

Heures Une journée' *Minutes*

2,3 **Combien de personnes vous ont aidé à décharger? (Batu boni ba sungaki yo pona kokitisa biloko?)**

Nombre (ya batu) 6 Personnes

2,4 **Combien d'articles ont été endommagés en route? (Biloko boni ebebaki na nzela?)**

Kombo	Quantité (motuya)	Pona nini?

2,5 **Combien d'articles ont été perdus en route? (Biloko boni ebungaki na nzela?)**

Kombo	Quantité (motuya)	Pna nini?

2,6 **S'il y a eu des pannes, mentionner leur durée et dites si elles sont dues au contrôle technique. (Soki ozuaki panne, esalaki tango boni? Ewutaki na kozanga contrôle technique?)**

Date (mokolo)	Heure (ngonga)	Tango boni?	Ewuti na contrôle technique?
Le 12/04/2011	07 H 45'	60 Minutes	Non
			~~Crevesson~~
			~~du Pneu~~
			~~Avant~~

2,7 **Avez-vous eu d'autres facteurs de retard lors du voyage? Si oui, de quel type et pour combien de temps? Eloko mosusu epesaki yo retard? Ezalaki nini pe esalaki tango boni?**

Date (mokolo)	Heure (ngonga)	Esalaki tango boni?	Type (Eloko nini?)
Le 12/04/2011	07 H 45'	60 Minutes	Crévesson
			du Pneu
			Avant

ngonga na kombo ya barrière)

Date	Heure d'arrivée	Heure de départ (barrière)	Type
Le 12/04/2011	00h 21'	00H 36'	Pont Nselé
Le 12/04/2011	00h 49'	00h 43'	Nselé Bamboo
" " "	01h 07'	01h 09'	Mekao
" " "	02h 21'	02h 21'	Dumie
" " "	03h 04'	03h 05'	MBakana
Le 12/04/2011	04h 00'	04h 09'	Mungata
" " "	05h 13'	05h 13'	Kabuba
" " "	05h 40'	05h 50'	Kwango
" " "	06h 37'	06h 38'	Bukanga-Longo
Le 12/04/2011	09h 45'	10 h 12'	Kenge
" " "	11h 50'	11h 52'	316 Km
" " "	12h 57'	14h 45'	Dépôt Masa m
" " "	15h 25'	15h 26'	Mazi
Le 12/04/2011	17h 33'	17h 55'	Kazaï
" " "	19h 38'	19h 39'	Pont Kwenge
" " "	19h 50'	19H58	K'kwit 3.
Le 12/04/2011	19h 58'	19H58'	Dépôt K.K.I.
			Fin

3,1 De quel lieu êts-vous parti en direction de Kinshasa? (Mboka nini ya suka owutaki mpona kozonga Kinshasa?)

Adresse Secteur Kingandu Village Kasenga

3,2 A quelle heure avez-vous quitté ce dernier lieu? Olongwaki mboka yango na nganga nini?

Date (mokolo)	Heure (ngonga)
Le 16/04/2011	19H00'

3,3 A quelle heure êtes-vous arrivés à Kinshasa? (Okomaki Kinshasa na ngonga nini?)

Date(mokolo)	Heure (ngonga)
Le 20/04/2011	06H45'

3,4 Comien de temps a-t-il fallu pour décharger? (Bosalaki tango boni pona kokitisa biloko?)

Heures 5H du temps *Minutes* 35'

3,5 Combien de personnes ont participé au déchargement? (Batu boni bakitisaki biloko?)

Nombre de personnes 12 Personnes

3,6 Combien d'articles ont été endommagés en route? (Biloko boni ebebaki na nzela?)

Type (kombo ya biloko)	Quantité (motuya)	Pona nini?

3,7 Combien d'articles ont été perdus lors du voyage? (Biloko boni ebungaki na nzela?)

Type (kombo ya biloko)	Quantité (motuya)	Pona nini?

3,8 S'il ya eu panne, mentionner la durée et dites si elle a été due au contrôle technique, (Soki ozuaki panne, esalaki tango boni? Ewutaki na kozanga contrôle technique?)

Date (mokolo)	Heure (ngonga)	Ezuaki tango boni?	Ewutaki na contrôle technique?
Le 19/04/2011	15H25'	21H13'	NON

3,9 Un autre facteur de retard? Lequel et combien de temps a-t-il duré? (Eloko mosusu epesaki yo retard? Ezalaki nini pe esalaki tango boni?)

Date (mokolo)	Heure (ngonga)	Esalaki tango boni?	Type (kombo eloko yango)
19/04/2011	15H25'	6H du temp	Croisement du Pneu à Bukanga-Longo

3,10 Pona barrière nionso, koma mokolo, ngonga na kombo ya barrière

Date (mokolo)	Heure ngonga)	esalaki tango boni	Type (kombo ya barrière)
Le 18/04/2011	13H45'	14H08'	K.K.T. 3
" " "	15H15'	15H24'	Pont Kwenge
" " "	17H30'	17H45'	KASAÏ
" " "	20H31	20H34'	Masi-Manimba
18/04/2011	22H00'	08H30'	Masamuna
Le 19/04/2011	10H45'	10H17'	31 Km
" " "	11H00'	13H55'	Kenge
" " "	15H25'	15H25'	Bukanga-Longo
" " "	23H00'	23H45'	Pont Kwango
Le 20/04/2011	00H20'	00H20'	Kabuba
" " "	01H01'	01H27'	Mongata
" " "	01H31'	01H36'	MBankana
" " "	02H24'	02H40'	Dumi
Le 20/04/2011	04H14'	04H13'	Mekao
" " "	04H50'	04H51'	Nsele Bamb.
" " "	05H01'	05H06'	Pont-Nsele
Fin	Arrivé'	a Kin 6H45'	

Marché n°1 (Wenze ya liboso)

4,1 Nom (Kombo ya wenze ya liboso)

Nom Marché - Mongo Fula

4,2 A quelle heure êtes-vous arrivé au premier marché?(Okomaki na wenze ya liboso na ngonga nini?)

Date (mokolo)	Heure (ngonga)
Le 20/04/2011	06 H 45'

4,3 Combien de temps avez-vous mis pour décharger? (Osalaki tango boni pona kokitisa biloko?)

Heures 5 H de temps *Minutes* 35'

4,4 Combien de sacs avez-vous laissés au premier marché? (Otikaki saki boni na wenze ya liboso?)

Type (kombo ya biloko)	Quantité	Prix (Talo)
Sacs Futu	100 Sacs	33.000 F.C

4,5 Combien de jours faut-il à vos acheteurs pour revendre les produits que vous leur vendez? (Ekoki kozua mikolo boni po ba clients na bino ba teka biloko nionso basombaki epayi na bino?)

Jours *Demi-jours*

4,6 A quelle heure avez-vous quitté ce marché? (Olongwaki wenze na ngonga nini?)

Date	Heure
Le 20/04/2011	11 H 25'

Marché n°2 (Wenze ya mibale)

4,7 Nom (Kombo ya wenze ya mibale)

Nom Marché C/ N'Gaba

4,8 A quelle heure êtes-vous arrivé au 2ème marché? (Okomaki na wenze ya mibale na ngonga nini?)

Date	Heure
Le 20/04/2011	12 H 00'

4,9 Combien de temps a-t-il fallu pour décharger? (Osalaki tango boni pona kokitisa biloko?)

Heures 5 H de temps *Minutes* 30'

4,11 Combien de sacs avez-vous laissés au 2ème marché? (Otikaki saki boni na wenze ya miobale?)

Type (kombo)	Quantité	Prix (talo)
Sacs Futu	70 Sacs	?

4,12 combien de jours faut-il à vos acheteurs pour revendre les produits que vous leur vendez? (Ekoki kozua mikolo boni po ba clients na bino ba teka biloko nionso basombaki epayi na bino?)

Jours | *Demi-jours*

4,13 A quelle heure avez-vous quitté ce marché? (Olongwaki na wenze oyo na ngonga nini?)

Date	Heure
Le 20/04/2011	17H05

Marché n°3 (Wenze ya misatu (soki ezali))

4,14 Nom (Kombo ya wenze)

Nom : Marché : Kingasani

4,15 A quelle heure êtes-vous arrivé au 3ème marché? (Okomaki na wenze ya misatu na ngonga nini?)

Date	Heure
Le 20/04/2011	19H58

4,16 Combien de temps a-t-il fallu pour décharger? (Bosalaki tango boni pona kokitisa biloko?)

Heures | *Minutes*

4,17 Combien de sacs avez-vous laissés au 3ème marché? (Botikaki saki boni?)

Type	Quantité	Prix
Sacs Fufu	70 sacs	

4,18 Combien de jours faut-il à vos acheteurs pour revendre les produits que vous leur vendez?Ekoki kozua mikolo boni po ba clients na bino ba teka biloko nionso basombaki epayi na bino?

Jours | *Demi-jours*

4,19 A quelle heure avez-vous quitté ce marché? (Olongwaki na wenze oyo na ngonga nini?)

Date	Heure
Le 21/04/2011	15H00

5. Retour à Kingabwa (Na nzela ya kozonga na Kingabwa)

5,1 A quelle heure êtes-vous rentré à Kingabwa? (Ozongaki kingabwa na ngonga nini?)

Date	Heure
Le 20/04/2011	15H45

5,2 Combien de temps avez-vous mis depuis le dernier marché jusqu'à Kingabwa (Osalaki tango boni kowuta wenze ya suka kino na Kingabwa?)

Heures : ~~0 H de temps~~ | *Minutes* : 45

Ce ticket de voyage est maintenant fini, nous vous remercions pour votre temps et vos contributions!

Appendix 33 Raw data from all initial 9 trip tickets

Trip departure date	1 Driver	1 Assistant 1	1 Assistant 2	1 License Plate	1 Vehicule has been checked?	1 Start time
24-Feb	Nsangi Simon	Papy Mutumosi	Serge Kuingu	578701	Yes	24/02/2011 10:30
25-Feb	Medand Ngoie Kabulo	Jean Bosco Tsangu Mukula	Tresor Ndungi	1492AB01	Yes	25/02/2011 14:00
26-Feb	Daniel Matwa	Laddy Kisia	Aime Kingumi	8849AC01	Yes	26/02/2011 12:20
09-Mar	Medand Ngoie Kabulo	Jean Bosco Tsangu Mukula	Tresor Ndungi	1492AB01	Yes	09/03/2011 23:09
22-Mar	Daniel Matwa	Laddy Kisia	Aime Kingumi	8849AC01	Yes	22/03/2011 11:17
24-Mar	Medand Ngoie Kabulo	Jean Bosco Tsangu Mukula	Tresor Ndungi	1492AB01	Yes	24/03/2011 16:00
29-Mar	Athanase Mbadu-Kitambala	Papy Nawenakoko	Matshouda Kisidika	8187AC01	Yes	29/03/2011 15:14
05-Apr	Daniel Matwa	Laddy Kisia	Aime Kingumi	8849AC01	yes	05/04/2011 14:40
11-Apr	Medand Ngoie Kabulo	Jean Bosco Tsangu Mukula	Tresor Ndungi	1492AB01	Yes	11/04/2011 08:00

Trip departure date	1 Type1	1 Quantity1	1 Type2	1 Quantity2	1 Type3	1 Quantity3	1 Type4	1 Quantity4	1 Signed receipt?	1 Time to load (hours)	1 #of loaders	1 Time leaving Kinshasa
24-Feb	Futs Essence	64	Carton Wisky	100					No	10:30	4	24/02/2011 21:00
25-Feb	Cartons Texas	400	Savon	1400	Colis beches	300	biscuits	1250	NA	8:55	9	25/02/2011 22:55
26-Feb	NA								No	10:00	4	26/02/2011 22:20
09-Mar	Soap Cartons	3000	Futs du Gagoirs (litres)	1250					Yes	48:00	6	11/03/2011 23:09
22-Mar	DIVERS								No	12:10	7	22/03/2011 23:27
24-Mar	Baba ya Tombola	175	Juttes de sacs vides	28					Yes	12:00	6	25/03/2011 02:00
29-Mar	Carburant	240	Sacs sel	412	Balles usage	52	Divers	52	Yes	6:32	6	29/03/2011 21:46
05-Apr	Divers								Yes	8:00	6	05/04/2011 22:40
11-Apr	Ballot d'usage	78	Divers	55	Ciments	50	Pieces comiere	90	yes	15:30	6	11/04/2011 23:30

Trip departure date	2 Lost_Type1	2 Lost_Quantity1	2 Lost_Reason1	2 Lost_Type2	2 Lost_Quantity2	2 Lost_Reason2	2 Lost_Type3	2 Lost_Quantity3	2 Lost_Reason3	2 Lost_Type4	2 Lost_Quantity4	2 Lost_Reason4	2 Lost_total	2 Punc_Date1	2 Punc_dura1	2 Punc_evit1	2 Punc_Date2	2 Punc_dura2	2 Punc_evit2	2 Punc_Date3	2 Punc_dura3	2 Punc_evit3	2 Punc_Date4	2 Punc_dura4	2 Punc_evit4	2 Punc_Total
24-Feb													0													0:00
25-Feb													0													0:00
26-Feb													0	27/02/2011 13:27	24:06	non										24:06
09-Mar													0													0:00
22-Mar													0	23/03/2011 15:28	2:00	non										2:00
24-Mar													0	25/03/2011 03:00	NA	non										0:00
29-Mar													0	30/03/2011 07:49	2:25	yes	30/03/2011 21:10	0.08	Yes							4:19
05-Apr													0	06/04/2011 21:30	4:22	non	07/04/2011 22:03	0.5	non							16:19
11-Apr													0	12/04/2011 07:45	1:00	non										1:00

Trip departure date	2 delay_Date1	2 delay_Time1	2 delay_dura1	2 delay_type1	2 delay_Date2	2 delay_Time2	2 delay_dura2	2 delay_type2	2 delay_Date3	2 delay_Time3	2 delay_dura3	2 delay_type3	2 delay_Date4	2 delay_Time4	2 delay_dura4	2 delay_type4	2 Delay_total
24-Feb	25/02/2011	12:00	3:00	No fuel?													3:00
25-Feb																	0:00
26-Feb	01/03/2011	00:00	240:00	Panne de recepteur d'embroyope xt butée													240:00
09-Mar	14/03/2011		24:00	Peite de batterie	39156		48:00	Assmissement de la route durant									72:00
22-Mar																	0:00
24-Mar	25/03/2011		24:00	Prise d'aire													24:00
29-Mar																	0:00
05-Apr	06/04/2011	07:42	4:22	Support des filtres													4:22
11-Apr																	0:00

Trip departure date	2 barr_Date1	2 barr_dura1	2 barr_type1	2 barr_Date2	2 barr_dura2	2 barr_type2	2 barr_Date3	2 barr_dura3	2 barr_type3	2 barr_Date4	2 barr_dura4	2 barr_type4	2 barr_Date5	2 barr_dura5	2 barr_type5
24-Feb		0:30	Pont Nsele		0:01	Nsele-Bambou		0:01	Menkao		2:00	Dumi		3:00	Mbakana
25-Feb	25/02/2011 23:54	0:14	Pont Nsele	26/02/2011 00:30	0:08	Nsele-Bambou	26/02/2011 00:55	0:03	Menkao	26/02/2011 02:15	0:03	Dumi	26/02/2011 04:00	0:05	Mbakana
26-Feb	27/02/2011 22:51	0:08	Pont Nsele				26/02/2011 23:08	0:03	Menkao	27/02/2011 01:10	0:05	Dumi	27/02/2011 01:45	0:05	Mbakana
09-Mar	12/03/2011 00:25	3:17	Pont Nsele	12/03/2011 03:53	0:01	Nsele-Bambou	12/03/2011 04:33	0:15	Menkao	12/03/2011 06:02	0:01	Dumi	12/03/2011 06:40	0:05	Mbakana
22-Mar	22/03/2011 23:42	1:33	Pont Nsele	23/03/2011 01:21	0:11	Nsele-Bambou	23/03/2011 02:10	0:02	Menkao	23/03/2011 03:03	0:12	Dumi	23/03/2011 03:42	0:03	Mbakana
24-Mar	25/03/2011 02:00	0:09	Pont Nsele	25/03/2011 02:40	0:01	Nsele-Bambou	25/03/2011 03:00	0:05	Menkao	25/03/2011 04:19	0:01	Dumi	25/03/2011 05:08	0:39	Mbakana
29-Mar	29/03/2011 22:35	1:55	Pont Nsele												
05-Apr	05/04/2011 23:15	6:19	Pont Nsele	06/04/2011 05:43	0:17	Nsele-Bambou	06/04/2011 07:03	0:09	Menkao	06/04/2011 19:34	0:15	Dumi	06/04/2011 20:29	0:01	Mbakana
11-Apr	12/04/2011 00:21	0:15	Pont Nsele	12/04/2011 00:41	0:02	Nsele-Bambou	12/04/2011 01:07	0:02	Menkao	12/04/2011 02:21	0:01	Dumi	12/04/2011 03:04	0:01	Mbakana

Trip departure date	2 barr_Date6	2 barr_dura6	2 barr_type6	2 barr_Date7	2 barr_dura7	2 barr_type7	2 barr_Date8	2 barr_dura8	2 barr_type8	2 barr_Date9	2 barr_dura9	2 barr_type9	2 barr_Date10	2 barr_dura10	2 barr_type10
24-Feb		0:01	Mongata		0:01	Kabuba		3:00	Pont Kwango		0:01	N.C. Lonzo		2:00	Kenge
25-Feb	26/02/2011 04:45	0:07	Mongata				26/03/2011 05:30	2:00	Pont Kwango	26/02/2011 08:30	0:02	Bukanga-Rongo	26/02/2011 09:35	0:45	Kenge
26-Feb							27/02/2011 02:10	0:37	Pont Kwango	27/02/2011 03:06	0:03	N.C. Lonzo	27/02/2011 06:01	0:15	Kenge
09-Mar	12/03/2011 07:25	0:25	Mongata	12/03/2011 08:35	0:01	Kabuba	12/03/2011 09:15	0:20	Pont Kwango	12/03/2011 10:40	0:01	Bukanga-Rongo	12/03/2011 12:03	1:32	Kenge
22-Mar	23/03/2011 03:52	0:01	Mungata	23/03/2011 04:25	0:01	Kabuba	23/03/2011 04:40	0:52	Pont Kwango	23/03/2011 06:00	0:01	N.C. Lonzo	23/03/2011 09:22	0:51	Kenge
24-Mar	25/03/2011 07:00	0:05	Mongata	25/03/2011 07:29	0:01	Kabuba	25/03/2011 07:45	1:20	Pont Kwango	25/03/2011 10:17	0:01	Bukanga-Rongo	25/03/2011 11:57	1:12	Kenge
29-Mar							30/03/2011 05:30	0:50	Pont Kwango				30/03/2011 10:05	1:01	Kenge
05-Apr	06/04/2011 20:57	0:01	Mongata	06/04/2011 21:18	0:02	Kabuba	06/04/2011 22:00	1:00	Pont Kwango	07/04/2011 09:21	0:14	N.C. Lonzo	07/04/2011 10:50	1:22	Kenge
11-Apr	12/04/2011 04:00	0:02	Mungata	12/04/2011 05:13	0:01	Kabuba	12/04/2011 05:40	0:10	Pont Kwango	12/04/2011 06:37	0:01	Bukanga-Rongo	12/04/2011 09:45	0:27	Kenge

Trip departure date	2 barr_Date11	2 barr_dura11	2 barr_type11	2 barr_Date12	2 barr_dura12	2 barr_type12	2 barr_Date13	2 barr_dura13	2 barr_type13	2 barr_Date14	2 barr_dura14	2 barr_type14	2 barr_Date15	2 barr_dura15	2 barr_type15
24-Feb		0:01	316 km		0:01	Depot-Masa-Muna		0:01	Masi-Manimba		0:01	Kasai		0:01	Kwenge
25-Feb	26/02/2011 12:01	0:04	316 km	26/02/2011 12:58	1:24	Depot-Masa-Muna	26/02/2011 15:28	0:02	Masi-Manimba	26/02/2011 18:10	0:02	Kasai	26/02/2011 20:40	2:01	Pont-Kurengo
26-Feb	27/02/2011 08:00	0:02	316 km	27/02/2011 09:20	0:02	Depot-Masa-Muna	27/02/2011 09:54	0:05	Masi-Manimba	27/02/2011 13:27	0:03	Kasai			
09-Mar	12/03/2011 15:25	0:03	316 km	12/03/2011 16:48	0:52	Depot-Masa-Muna	12/03/2011 18:45	0:01	Masi-Manimba	12/03/2011 22:48	0:10	Kasai	13/03/2011 05:00	0:12	Pont-Kurengo
22-Mar	23/03/2011 12:30	0:03	316 km	23/03/2011 14:08	0:02	Depot-Masa-Muna	23/03/2011 15:10	0:03	Masi-Manimba	23/03/2011 18:30	0:02	Kasai	23/03/2011 20:00	0:03	Kwenge
24-Mar	25/03/2011 14:22	0:03	316 km	25/03/2011 15:22	1:07	Depot-Masa-Muna	25/03/2011 17:40	0:05	Masi-Manimba	25/03/2011 22:35	0:01	Kasai	26/03/2011 00:20	0:05	Pont-Kurengo
29-Mar										31/03/2011 05:17	0:09	Kasai	31/03/2011 06:22	0:09	Pont-Kurengo
05-Apr	07/04/2011 12:20	0:20	316 km	07/04/2011 15:29	0:02	Depot-Masa-Muna	07/04/2011 16:50	0:02	Masi-Manimba	07/04/2011 19:48	0:02	Kasai	07/04/2011 21:51	0:01	Kwenge
11-Apr	12/04/2011 11:50	0:02	316 km	12/04/2011 12:57	2:48	Depot-Masa-Muna	12/04/2011 15:25	0:01	Masi-Manimba	12/04/2011 17:33	0:22	Kasai	12/04/2011 19:38	0:01	Pont-Kurengo

Trip departure date	2 barr_Date16	2 barr_dura16	2 barr_type16	2 barr_Date17	2 barr_dura17	2 barr_type17	2 barr_Date18	2 barr_dura18	2 barr_type18	2 barr_avg	3 Last place in Kikwit	3 Departure time in Kikwit	3 Arrival time in Kins	3 Travel time (calculated)	3 Unloading time	3 # of unloaders
24-Feb		3:00	Kikwit-3							0:51	Kakobola	05/03/2011 20:00	06/03/2011 22:50	36:00	36:00	4
25-Feb	26/02/2011 21:00	0:45	Kikwit-3							0:31	Village Fumu Njoko	04/03/2011 21:30	07/03/2011 04:58	72:00	72:00	NA
26-Feb										0:08	Kikwit	15/03/2011 20:30	16/03/2011 23:21	96:00	96:00	4
09-Mar	13/03/2011 05:40	0:08	Kikwit-3							0:27	Village Fumu Njoko	18/03/2011 19:20	21/03/2011 04:35	16:55	16:55	6
22-Mar	23/03/2011 22:33	0:31	Kikwit							0:16	Kanga Nzadi	27/03/2011 12:35	29/03/2011 21:28			NA
24-Mar	26/03/2011 01:20	0:10	Kikwit-3							0:19	Kikwit Ville Basse	29/03/2011 15:50	31/03/2011 04:00	24:00	24:00	6
29-Mar	31/03/2011 07:20	0:50	Kikwit-3							0:49	Kakobola	06/04/2011 12:42	09/04/2011 22:42			
05-Apr	08/04/2011 08:57	0:48	Kikwit							0:40	Kanga Nzadi	14/04/2011 16:27	18/04/2011 07:43	8:21	8:21	6
11-Apr	12/04/2011 19:50	0:02	Kikwit	12/04/2011 19:58	0:01	Depot K.K.T.				0:15	Kingandu Kasengi	16/04/2011 09:00	20/04/2011 06:45	5:35	5:35	12

Trip departure date	3 Dam_Type1	3 Dam_Quantity1	3 Dam_Reason1	3 Dam_Type2	3 Dam_Quantity2	3 Dam_Reason2	3 Dam_Type3	3 Dam_Quantity3	3 Dam_Reason3	3 Dam_Type4	3 Dam_Quantity4	3 Dam_Reason4	3 Dam_total	3 Lost_Type1	3 Lost_Quantity1	3 Lost_Reason1	3 Lost_Type2	3 Lost_Quantity2	3 Lost_Reason2	3 Lost_Type3	3 Lost_Quantity3	3 Lost_Reason3	3 Lost_Type4	3 Lost_Quantity4	3 Lost_Reason4	3 Lost_total
24-Feb	Whiskey (bottles)	4	Mayambula										4													0
25-Feb													0													0
26-Feb													0													0
09-Mar													0													0
22-Mar													0													0
24-Mar													0													0
29-Mar													0													0
05-Apr													0													0
11-Apr													0													0

Trip departure date	3 Punc_Date1	3 Punc_dura1	3 Punc_evit1	3 Punc_Date2	3 Punc_dura2	3 Punc_evit2	3 Punc_Date3	3 Punc_dura3	3 Punc_evit3	3 Punc_Date4	3 Punc_dura4	3 Punc_evit4	3 Punc_Total
24-Feb													0:00
25-Feb	05/03/2011 12:30	2:30	Oui (chauffage moteur)										2:30
26-Feb	16/03/2011 00:03	1:03	Panne Technique Prise d'air	16/03/2011 15:20	1:03								2:06
09-Mar													0:00
22-Mar													0:00
24-Mar	29/03/2011 18:55	24:00	NON										24:00
29-Mar	06/04/2011 20:10	18:00	Fuitee compression										18:00
05-Apr	16/04/2011 00:00	4:06	non	16/04/2011 07:35	5:16	non	16/04/2011 15:30	2:02	non	17/04/2011 00:45	3:17	non	14:41
11-Apr	19/04/2011 15:25	5:48	non										5:48

Trip departure date	3 delay_Date1	3 delay_dura1	3 delay_type1	3 delay_Date2	3 delay_dura2	3 delay_type2	3 delay_Date3	3 delay_dura3	3 delay_type3	3 delay_Date4	3 delay_dura4	3 delay_type4	3 Delay_total	3 barr_Date1	3 barr_dura1	3 barr_type1	3 barr_Date2	3 barr_dura2	3 barr_type2	3 barr_Date3	3 barr_dura3	3 barr_type3
24-Feb													0:00		3:00	Kikwit 3		0:01	Pont Kwenga		0:01	Kasai
25-Feb													0:00	05/03/2011 19:16	0:05	Kikwit 3	05/03/2011 20:30	0:02	Pont Kwenga	05/03/2011 22:20	0:15	Kasai
26-Feb													0:00	15/03/2011 21:49	1:21	Kikwit 3	15/03/2011 22:52	0:10	Pont Kwenga	16/03/2011 01:35	0:26	Kasai
09-Mar													0:00	19/03/2011 18:45	0:21	Kikwit 3	19/03/2011 19:50	0:33	Pont Kwenga	19/03/2011 22:52	0:01	Kasai
22-Mar	28/03/2011 07:19	0.06	Prise d'air										1:26	28/03/2011 18:07	0:50	Kikwit 3	28/03/2011 19:40	0:02	Pont Kwenga	28/03/2011 21:40	0:01	Kasai
24-Mar													0:00	29/03/2011 15:20	0:30	Kikwit 3	29/03/2011 16:38	0:01	Pont Kwenga	29/03/2011 20:38	0:01	Kasai
29-Mar													0:00									
05-Apr													0:00	15/04/2011 18:00	1:15	Kikwit 3	15/04/2011 20:00	0:02	Pont Kwenga	15/04/2011 22:25	0:02	Kasai
11-Apr													0:00	18/04/2011 18:45	0:23	Kikwit 3	18/04/2011 15:15	0:09	Pont Kwenga	18/04/2011 20:31	0:03	Kasai

Trip departure date	3 barr_Date4	3 barr_dura4	3 barr_type4	3 barr_Date5	3 barr_dura5	3 barr_type5	3 barr_Date6	3 barr_dura6	3 barr_type6	3 barr_Date7	3 barr_dura7	3 barr_type7	3 barr_Date8	3 barr_dura8	3 barr_type8
24-Feb		0:01	Masi-Mamimba		0:01	Masa-Muna-Depo		0:01	316 km		7:00	Kenge+Tshikapa		0:01	M.C.Lonzo
25-Feb	06/03/2011 02:25	0:20	Masi-Mamimba	06/03/2011 03:55	4:00	Masa-Muna-Depo	06/03/2011 10:30	0:05	316 km	06/03/2011 12:30	2:30	Kenge	06/03/2011 16:51	0:01	Bukanga-Pongo
26-Feb	16/03/2011 04:20	0:02	Masi-Mamimba	16/03/2011 06:41	0:02	Masa-Muna-Depo	16/03/2011 07:33	0:05	316 km	16/03/2011 09:28	1:38	Kenge	16/03/2011 11:00	0:02	M.C.Lonzo
09-Mar	20/03/2011 02:10	0:01	Masi-Mamimba	20/03/2011 03:18	2:12	Masa-Muna-Depo	20/03/2011 06:42	0:03	316 km	20/03/2011 09:45	0:30	Kenge	20/03/2011 12:15	0:01	Bukanga-Pongo
22-Mar	29/03/2011 00:27	0:02	Masi-Mamimba	NA	NA	Masa-Muna-Depo	29/03/2011 06:37	0:01	316 km	29/03/2011 09:00	0:23	Kenge	29/03/2011 11:44	0:01	M.C.Lonzo
24-Mar	30/03/2011 02:47	0:01	Masi-Mamimba	30/03/2011 05:00	7:00	Masa-Muna-Depo	30/03/2011 13:05	0:05	316 km	30/03/2011 16:01	0:36	Kenge	30/03/2011 18:05	0:01	Bukanga-Pongo
29-Mar															
05-Apr	16/04/2011 05:17	0:01	Masi-Mamimba	16/04/2011 07:33	0:01	Masa-Muna-Depo	16/04/2011 14:40	0:02	316 km	16/04/2011 20:16	0:05	Kenge	16/04/2011 23:04	0:02	M.C.Lonzo
11-Apr	18/04/2011 20:31	0:03	Masi-Mamimba	18/04/2011 22:00	10:30	Masa-Muna-Depo	19/04/2011 10:15	0:02	316 km	19/04/2011 11:00	2:55	Kenge	19/04/2011 15:25	0:01	Bukanga-Pongo

Trip departure date	3 barr_Date9	3 barr_dura9	3 barr_type9	3 barr_Date10	3 barr_dura10	3 barr_type10	3 barr_Date11	3 barr_dura11	3 barr_type11	3 barr_Date12	3 barr_dura12	3 barr_type12	3 barr_Date13	3 barr_dura13	3 barr_type13	3 barr_Date14	3 barr_dura14	3 barr_type14
24-Feb		0:01	Pont Kwango		0:01	Kabuba		1:00	Mungata		2:00	Mbakana		0:01	Dumi		0:01	Menkao
25-Feb	06/03/2011 18:23	0:52	Pont Kwango	06/03/2011 19:39	0:03	Kabuba	06/03/2011 20:24	0:02	Mungata	06/03/2011 21:58	0:03	Mbakana	06/03/2011 22:15	0:03	Dumi	07/03/2011 00:49	0:20	Menkao
26-Feb	16/03/2011 14:45	0:30	Pont Kwango	16/03/2011 15:17	0:01	Kabuba				16/03/2011 17:00	1:40	Mbakana	16/03/2011 18:28	0:32	Dumi	16/03/2011 21:42	0:01	Menkao
09-Mar	20/03/2011 14:00	6:00	Pont Kwango	20/03/2011 20:38	0:04	Kabuba	20/03/2011 21:33	0:02	Mungata	20/03/2011 22:15	0:02	Mbakana	20/03/2011 22:47	0:02	Dumi	21/03/2011 01:42	0:24	Menkao
22-Mar	29/03/2011 13:02	0:55	Pont Kwango	29/03/2011 14:37	0:01	Kabuba	29/03/2011 14:58	0:29	Mungata	29/03/2011 15:57	0:15	Mbakana	29/03/2011 17:10	0:03	Dumi	29/03/2011 18:52	0:21	Menkao
24-Mar	30/03/2011 19:30	0:15	Pont Kwango	30/03/2011 20:10	0:01	Kabuba	30/03/2011 21:05	0:05	Mungata	30/03/2011 22:20	0:03	Mbakana	30/03/2011 22:59	0:06	Dumi	31/03/2011 01:20	0:05	Menkao
29-Mar																		
05-Apr	17/04/2011 00:45	0:07	Pont Kwango	17/04/2011 16:29	0:01	Kabuba	17/04/2011 17:01	0:01	Mungata	17/04/2011 17:15	0:03	Mbakana	17/04/2011 18:42	0:03	Dumi	18/04/2011 02:20	0:01	Menkao
11-Apr	19/04/2011 23:00	0:45	Pont Kwango	20/04/2011 00:20	0:01	Kabuba	20/04/2011 01:01	0:26	Mungata	20/04/2011 01:31	0:05	Mbakana	20/04/2011 02:24	0:16	Dumi	20/04/2011 04:11	0:02	Menkao

Trip departure date	3 barr_Date15	3 barr_dura15	3 barr_type15	3 barr_Date16	3 barr_dura16	3 barr_type16	3 barr_Date17	3 barr_dura17	3 barr_type17	3 barr_Date18	3 barr_dura18	3 barr_type18	3 barr_avg	4 Mar1 Name	4 Mar1 Arrival date
24-Feb		0:01	Nsele Bambou		0:20	Pont Nsele							0:50	Mont Ngafula	07/03/2011 08:00
25-Feb	07/03/2011 01:45	1:00	Nsele Bambou	07/03/2011 03:02	1:00	Pont Nsele							0:40	Ngaba Lobo	07/03/2011 04:58
26-Feb	16/03/2011 00:00	0:31	Nsele Bambou										0:30	Mobutu/ Kimbanseke	17/03/2011 06:32
09-Mar	21/03/2011 03:10	0:05	Nsele Bambou	21/03/2011 03:30	0:20	Pont Nsele	21/03/2011 04:35	2:25	Mareke Ngaba				0:46	Mareke Ngaba	21/03/2011 04:35
22-Mar	29/03/2011 19:45	0:30	Nsele Bambou	29/03/2011 20:31	0:15	Pont Nsele							0:15	Kingasani w Basoko	29/03/2011 21:28
24-Mar	31/03/2011 01:54	0:01	Nsele Bambou	31/03/2011 02:00	0:01	Pont Nsele	31/03/2011 04:00	0:01	Kim Deloan				0:31	Mareke Ngaba	31/03/2011 04:00
29-Mar													N/A	Kingasani w Basoko	11/04/2011 08:00
05-Apr	18/04/2011 03:05	0:02	Nsele Bambou	18/04/2011 06:30	0:13	Pont Nsele							0:07	Kingasani w Basoko	18/04/2011 07:47
11-Apr	20/04/2011 04:40	0:01	Nsele Bambou	20/04/2011 05:01	0:05	Pont Nsele							0:59	Mont Ngafula	20/04/2011 06:45

Trip departure date	4 Mar1 Time to unload	4 Mar1 Type1	4 Mar1 Quantity1	4 Mar1 Price1	4 Mar1 Type2	4 Mar1 Quantity2	4 Mar1 Price2	4 Mar1 Type3	4 Mar1 Quantity3	4 Mar1 Price3	4 Mar1 Type4	4 Mar1 Quantity4	4 Mar1 Price4	4 Mar3 Total quantity	4 Mar1 Total Sales in CDF	4 Mar1 Buyer's reselling time	4 Mar1 Leaving market
24-Feb	15:00	Fufu (sacs)	100	43,000										100	4,300,000	24:00	07/03/2011 15:00
25-Feb	48:00	Fufu (sacs)	56	41,000	Fufu (sacs)	84	39,800							140	5,639,200	NA	09/03/2011 05:30
26-Feb	48:00													0	0	48:00	19/03/2011 15:15
09-Mar	24:00	Fufu (sacs)	92	35,000										92	3,220,000	24:00	22/03/2011 05:30
22-Mar	8:10	Fufu (sacs)	170	35,000										170	5,950,000	24:00	30/03/2011 14:53
24-Mar	24:00	Fufu (sacs)	160	36,700										160	5,872,000	NA	31/03/2011 16:30
29-Mar		Fufu	29	34,000	Fufu	5	33,000	Fufu	27	32,000	Fufu	57	32,000	118	3,839,000	NA	
05-Apr	8:00	Fufu	90	33,000										90	2,970,000	NA	18/04/2011 14:42
11-Apr	5:35	Fufu	100	33,000										100	3,300,000	NA	20/04/2011 11:25

Trip departure date	4 Mar2 Name	4 Mar2 Arrival date	4 Mar2 Time to unload	4 Mar2 Type1	4 Mar2 Quantity1	4 Mar2 Price1	4 Mar2 Type2	4 Mar2 Quantity2	4 Mar2 Price2	4 Mar2 Type3	4 Mar2 Quantity3	4 Mar2 Price3	4 Mar2 Type4	4 Mar2 Quantity4	4 Mar2 Price4	4 Mar3 Total quantity	4 Mar2 Total Sales in CDF	4 Mar2 Buyer's reselling time	4 Mar2 Leaving market
24-Feb																0	0		
25-Feb	Marche Kingasmi Av. Basoko	09/03/2011 05:55	4:30	Fufu (sacs)	100	38000										100	###	48:00	09/03/2011 10:30
26-Feb																0			
09-Mar	Monga Fula	21/03/2011 13:00	13:58	Fufu (sacs)	50	32400										50	###	12:00	21/03/2011 13:58
22-Mar	Mont Ngafula	30/03/2011 15:16	1:10	Fufu (sacs)	50	36700										50	###	NA	NA
24-Mar	Ngaba Av. Lobo	31/03/2011 18:30	12:00	Fufu (sacs)	80	36700										80	###	NA	01/04/2011 16:00
29-Mar				Fufu	53	31000										53	###	NA	
05-Apr	Mont Ngafula	19/04/2011 07:00	2:37	Fufu	80	33000										80	###	NA	
11-Apr	Ngaba Av. Lobo	20/04/2011 12:00	5:30	Fufu	70	33000										70	###	NA	20/04/2011 17:05

Trip departure date	4 Mar3 Name	4 Mar3 Arrival date	4 Mar3 Time to unload	4 Mar3 Type1	4 Mar3 Quantity1	4 Mar3 Price1	4 Mar3 Type2	4 Mar3 Quantity2	4 Mar3 Price2	4 Mar3 Type3	4 Mar3 Quantity3	4 Mar3 Price3	4 Mar3 Type4	4 Mar3 Quantity4	4 Mar3 Price4	4 Mar3 Total quantity	4 Mar3 Total sales in CDF	4 Mar3 Buyer's reselling time	4 Mar3 Leaving market
24-Feb																0	0		
25-Feb																0	0		
26-Feb																0			
09-Mar	Kingasami Av. Basoko	22/03/2011 06:58	11:58	Fufu	100	35,000										100	###	N/A	22/03/2011 11:58
22-Mar																0	0		na
24-Mar																0	0		
29-Mar																0	0		13/04/2011 14:40
05-Apr	Ngaba	19/04/2011 10:13		Fufu	55	34,000										55	###		19/04/2011 11:53
11-Apr	Kingasami	20/04/2011 19:58		Fufu	70	33,000										70	###		

Trip departure date	5 Total sales in CDF	5 Total sales in CDF	5 Total sales in USD assuing 1000 CDF = 1USD	5 Arrival date in Kingabwa	5 Time last market-Kingabwa
24-Feb	100	4,300,000	4,300	07/03/2011 15:00	1:30
25-Feb	240	9,439,200	9,439	09/03/2011 11:10	0:40
26-Feb			0	19/03/2011 16:42	1:27
09-Mar	242	8,340,000	8,340	22/03/2011 15:00	3:00
22-Mar	220	7,785,000	7,785	30/03/2011 17:20	1:31
24-Mar	240	8,808,000	8,808	01/04/2011 00:00	0:50
29-Mar	171	5,482,000	5,482	13/04/2011 17:10	2:30
05-Apr	225	7,480,000	7,480	19/04/2011 14:25	1:28
11-Apr	240	7,920,000	7,920	20/04/2011 15:00	0:45

Appendix 34 Breakdown of total round-trip times into sub-components and averages – Round

		TOTALS (in hours)							
Trip departure date		Total net transportation	Total time due to punctures	Total time due to other delays	Total barrier time	Total loading time	Total collection time in Kikwit	Total selling time	Total round-trip time
24-Feb		25	0	3	24	17	184	14	268
25-Feb		58	2	0	18	18	133	53	285
26-Feb		23	26	240	7	18	129	63	508
09-Mar		70	0	72	20	64	44	31	303
22-Mar		71	2	1	7	22	74	18	198
24-Mar		22	24	24	13	36	38	19	178
29-Mar		92	22	0	4	13	140	87	361
05-Apr		101	31	4	11	8	150	29	335
11-Apr		88	6	0	19	39	61	7	223
		AVERAGES FOR ROUND 1 (in hours)							
Round 1		61	12	38	14	26	106	36	295

Appendix 35 Lean-related Findings 4-17

Finding four, "Current head mechanic is not qualified to hold current position", was a notification on behalf of the CEO. The former head mechanic had to stop due to illness, and therefore one of the mechanics was promoted to head mechanic despite not having the qualifications to hold the position, which in return meant, that some necessary maintenance was not done to its former standards, which was at least some of the reason behind truck breakdowns on the road. In this sense, by not fulfilling his mechanical obligations and passing on not optimally repaired trucks to the drivers, the mechanic can be regarded as delivering "defect" trucks, and as such this finding clashes with Ohno source of waste, "Defects" (Beckford 2010, pp.130-132).

Finding five, "Break-downs because mechanic has forgotten to use checklist", was also a notification on behalf of the CEO, but was also confirmed on a trip ticket as a truck broke down, as the mechanic had forgotten to check all components. Arguably, this was related to the previous finding four, but we still distinguish, as the solution to this problem, making the mechanic remember the checklist, was much more simple and short-term, whereas the prior finding would either require additional education or an additional head mechanic.

Nevertheless, this issue of forgetting the checklist was a problem according to Ohno's source of waste, "Defects" (Beckford 2010, pp.130-132).

The sixth finding was "Total cost of ownership of Iveco fleet higher than Mercedes-Benz ". A mechanic stated that, despite the higher purchase costs of Mercedes-Benz trucks, the total costs of ownership would be lower, as they firmly believed that the Mercedes-Benz trucks would have fewer breakdowns. In this sense, they claimed that currently, the trucks were simply defect too much of the time compared to the allegedly "superior" machinery of Mercedes-Benz. This could potentially be considered a problem according to the source of waste, "Defects" (Beckford 2010, pp.130-132).

The seventh finding, "Limited communication between CEO and drivers on how to make trips more efficient", was observed by the author, as the CEO worked mainly from within his office while he was there, and talked to drivers relatively infrequently. Furthermore, there were no scheduled meetings between drivers and CEO to talk about in groups how to improve the trips, and possibly share short cuts, best practices and so forth; here the firm relied on efficient word of mouth. This could potentially be a source of the type of waste, "Transportation", meaning that drivers might be driving excess, non-value adding miles (Beckford 2010, pp.128-32).

Finding eight and nine were both notifications by the CEO, being respectively, "Suppliers often deliver too late", as well as, "No incentive in supplier contracts to encourage suppliers to be on time". We distinguish between the two, as the prior can be improved quickly by meeting the suppliers and discussing the issue with them in depth, whereas the second issue would require long renegotiations of the supplier's contracts. Both issues could be considered problems according to Lean principle 3, "Flow", as the suppliers' behaviour could be very disruptive for the overall flow of Jamaa (Womack & D. T. Jones 2003, p.52)

Finding ten and eleven, "Under-utilisation of employees" and "Under-utilisation of trucks" refer to the fact that the author observed and confirmed during the trip tickets that the trucks were running infrequently and unevenly spread over the month, leaving both drivers and trucks idle for some periods. This flexibility in the demand was unfortunate for Jamaa as a substantial part of the employees at Jamaa were permanent hires, which was problematic, as salary expenditures remained the same. Furthermore the employees' creativity could be

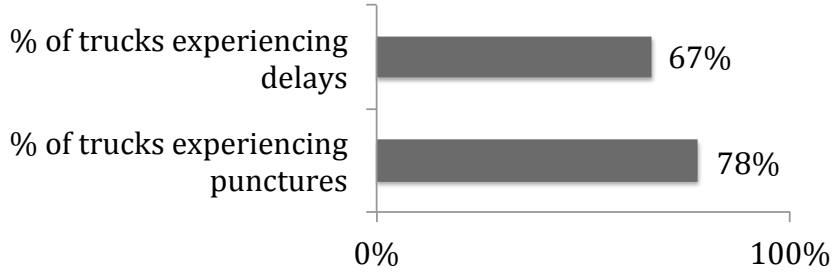
more optimally used as the DF8, "Missing employees ideas" also showed. This finding is an issue according to Liker's eighth source of waste, "Non-utilisation of employees" (Liker 2004). With regards to the trucks, the situation was also problematic, if Jamaa had 5 trucks but could in theory do with 4 or even perhaps 3 trucks in an optimal state. In this sense, we can interpret the sources of waste, being manufacturing-based and here applying them to services, and regard the idle trucks as "excess inventory or raw materials" that are not fully used and wasting capital, and therefore this finding was a clash with Ohno's source of waste, "Inventory" (Beckford 2010, pp.128-132).

The twelfth finding, "One driver is known for visiting his girl-friend at the barriers" was discovered when one of the trucks spent abnormally long time at certain police barriers. When the authors confronted the CEO with the information, he admitted he had heard some rumours about it, and furthermore the driver had been underperforming for an extended period, and other rumours of malpractice also fluctuates. This circumstance was a problem according to Lean as it clashed with Ohno's source of waste, "Waiting", as it was suboptimal, to say the least, that the trucks, goods, and the customers were forced to wait, because of a driver's personal matters (Beckford 2010, pp.128-32).

The thirteenth finding, "Ad-hoc, unorganised knowledge on what customers actually want", was found when the authors asked if how Jamaa knew what products its customers demanded. It was discovered that Jamaa did not let its market customers in Kinshasa *pull* the products Jamaa purchased in Kikwit; Jamaa rather *pushed* the products it thought its customers wanted. This finding clashed directly with Womack and Jones' fourth principle of "Pull", as they prescribe the exact opposite, that the firm's value chain is reversed to cater to what the customers want, not what the producer wants to sell (Womack & D. T. Jones 2003, pp.67-89). Still, this was rated of low importance, as there was little Jamaa could or wanted to do to transform its value chain.

Finding fourteen was "High frequency and long duration of punctures/delays". As the following figures shows, 67 % of the trucks were experiencing at least one puncture per round-trip and 78 % experienced at least one puncture.

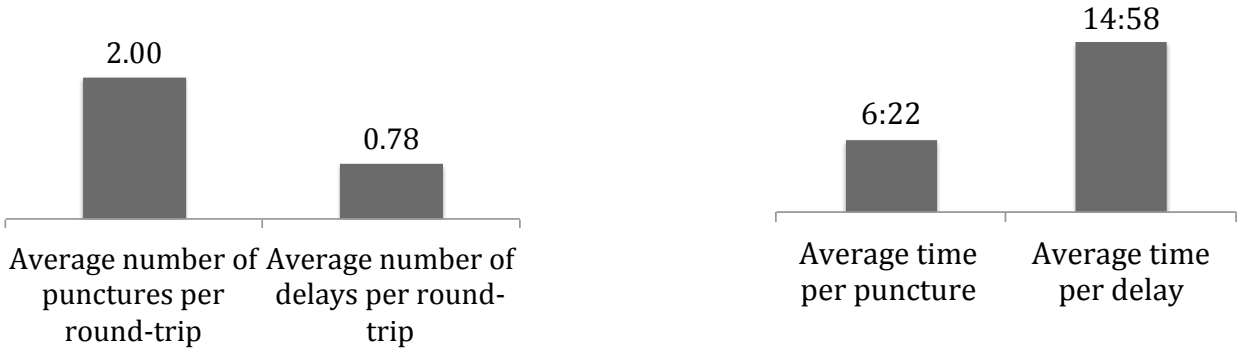
Figure 86 – LF14: Percentage of trucks experiencing delays/puncture on a round-trip



Source: Appendix 39, p. 295

Looking at averages, a truck incurred on average 2 punctures and 0.78 delays per round-trip, which in return took respectively 6 hours and 22 minutes per puncture and 14 hours and 58 minutes per other type of delay on average.

Figure 87 – LF14: Average number of puncture/delays per round-trip and time wasted per puncture/delay in hours



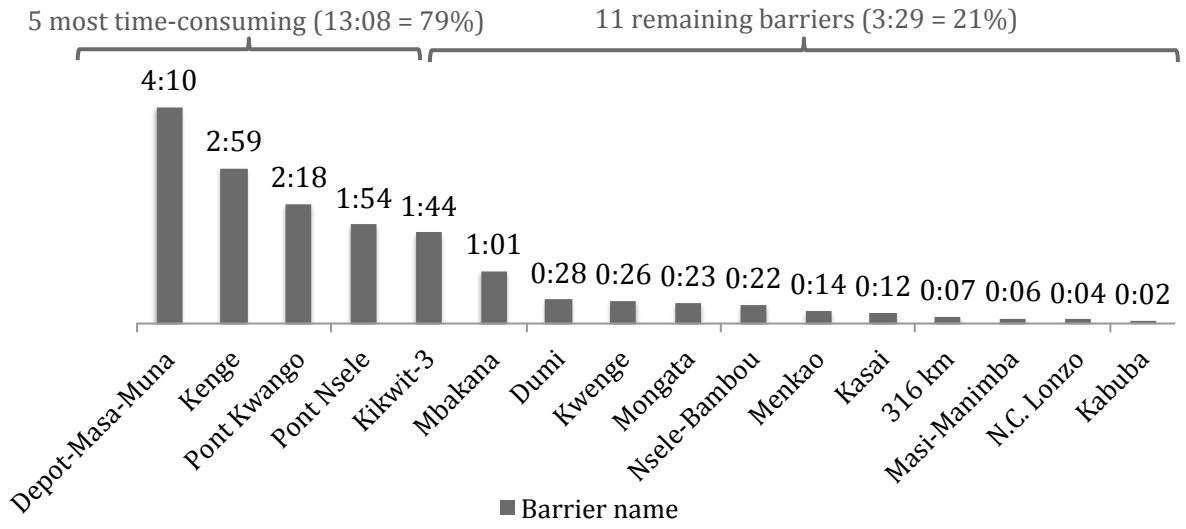
Source: Appendix 39, p. 295

Such a high number of punctures needs to be investigated, and could potentially be reduced both in frequency and durations.

Finding fifteen, "Large differences in loading and unloading times", sixteen, "Problem with river that is often flooded", and finding seventeen "Police at 16 barriers cause hour-long delays sometimes" are problematic as the are causes of non-value adding waste, in the sense that they force the trucks to stand by idly. This is a waste according to Ohno's source of waste, "Waiting" (Beckford 2010, pp.128-32). Still we rate them as relatively low, as it is

hard to improve these easily, and they occupy a relatively small amount of time in an average round trip, see Figure 46 on page 102. The large loading times are most often directly related to late deliveries by suppliers, but also with insufficient number of hired loaders and lack of loading tools. Only better infrastructure in terms of a bridge could fully eliminate the problem of the flooded river. Finally, the hassle with the village police at the barriers is to a large problem a nation-wide problem with underpaid village officers trying to earn a little extra on the side. As the following graph also displays, there were large differences between the individual barriers.

Figure 88 – LF15: Average barrier time per barrier on a round-trip in hours and minutes



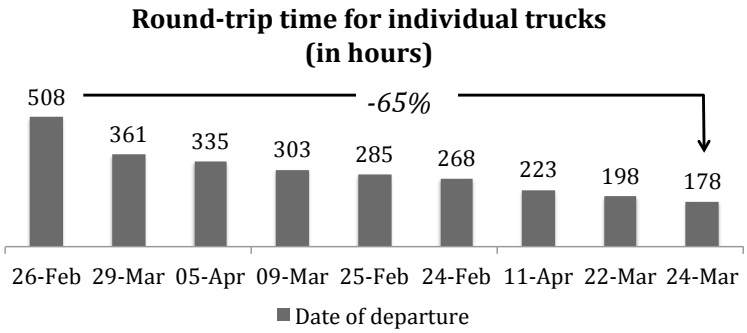
Source: Appendix 40, p. 295

Especially the 5 most time-consuming barriers to the left actually account for 13 hours and 8 minutes on average for a truck, or 79 % of the average total time a truck spends on barriers. This needed to be investigated, as there could be a huge potential for improvements with finding seventeen "Police at 16 barriers cause hour-long delays sometimes"

Jamaa can try to ease the negative effects of finding 15, 16, and 17 although an optimal situation is hard to obtain.

Appendix 36 Data: bar chart showing trip-times for individual trip times

DATA SORTING FOR BAR CHART - Round 1					
Date	Total calc2	Date of depart	Date of depart	Max/Min	Difference
24-Feb	268:30	26-Feb	508	508	-65%
25-Feb	285:10	29-Mar	361		
26-Feb	508:22	05-Apr	335		
09-Mar	303:51	09-Mar	303		
22-Mar	198:03	25-Feb	285		
24-Mar	178:00	24-Feb	268		
29-Mar	361:56	11-Apr	223		
05-Apr	335:45	22-Mar	198		
11-Apr	223:00	24-Mar	178	178	



Appendix 37 Data behind worst and best practice calculations from R 1

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	Max/min sub-component time Round 1 (in hours)							
	Total net transportation	Total time due to punctures	Total time due to other delays	Total barrier time	Total loading time	Total collection time in Kikwit	Total selling time	Total round-trip time
Max	101	31	240	24	64	184	87	733
Min	22	0	0	7	13	38	7	89
% difference	-78%	-100%	-100%	-71%	-79%	-79%	-91%	-88%

For the smallest total barrier and loading times, actually the second shortest time have been selected, as there was data missing from the shortest times.

Appendix 38 Data behind value add in Round 1

	Decision how to distribute the total			Do not change
Sub-component (in hours:minutes)	Value-adding	Value-enabling	Waste	Total
Total net transportation time	61:30	0:00	0:00	61:30
Total time due to punctures	0:00	0:00	12:45	12:45
Total time due to other delays	0:00	0:00	38:18	38:18
Total barrier time	0:00	2:30	11:39	14:09
Total loading time	0:00	10:00	16:33	26:33
Total collection time in Kikwit	0:00	96:00	10:21	106:21
Total selling time	0:00	24:00	12:11	36:11
Sum	61:30	132:30	101:50	295:50

Appendix 39 Data from punctures and delays

PUNCTURES AND DELAYS				
	Average per puncture	Average per delay	% of trucks experiencing punctures	% of trucks experiencing delays
24-Feb	0	1	0	1
25-Feb	1	0	1	0
26-Feb	3	1	1	1
09-Mar	0	2	0	1
22-Mar	1	1	1	1
24-Mar	2	1	1	1
29-Mar	3	0	1	0
05-Apr	6	1	1	1
11-Apr	2	0	1	0

	Average per puncture	Average per delay	% of trucks experiencing punctures	% of trucks experiencing delays
Round1	2.00	0.78	78%	67%

	Total number of punctures'	Total number of delays	Average time per puncture	Average time per delay
Round 1	18	7	6:22	14:58

Appendix 40 Data sorting for barrier durations

Sorted Descending	Going to Kikwit	Sorted Descending	Going to Kinshasa	Sorted Descending	Total	
Pont Nsele	1:35	Depot-Masa-Muna	3:23	Depot-Masa-Muna	4:10	
Pont Kwango	1:07	Kenge	1:57	Kenge	2:59	
Kenge	1:02	Pont Kwango	1:10	Pont Kwango	2:18	
Depot-Masa-Muna	0:47	Kikwit-3	0:58	Pont Nsele	1:54	
Kikwit-3	0:46	Mbakana	0:31	Kikwit-3	1:44	
Mbakana	0:29	Pont Nsele	0:19	Mbakana	1:01	
Dumi	0:19	Mongata	0:17	Dumi	0:28	
Kwenge	0:19	Nsele-Bambou	0:16	Kwenge	0:26	
Mongata	0:06	Menkao	0:09	Mongata	0:23	
Nsele-Bambou	0:05	Dumi	0:08	Nsele-Bambou	0:22	
Kasai	0:05	Kwenge	0:07	Menkao	0:14	
Menkao	0:05	Kasai	0:06	Kasai	0:12	
316 km	0:04	Masi-Manimba	0:03	316 km	0:07	
N.C. Lonzo	0:03	316 km	0:03	Masi-Manimba	0:06	
Masi-Manimba	0:02	Kabuba	0:01	N.C. Lonzo	0:04	
Kabuba	0:01	N.C. Lonzo	0:01	Kabuba	0:02	
Sum	7:02		9:35		16:38	OK

Total of top 5 vs. Rest	Hours	Days
Top-5 longest duration barriers	13:08	0.55
Remaining 11 barriers	3:29	0.15

Appendix 41 Other interesting findings

i. Employee motivation – Helping Congo

Some comments revealed that the employees had very different motivations behind their work, which were different than what the authors would anticipate Westerners would answer. For example, the question, *"What motivates you to do extra-ordinarily well at work?"* received the following, very different answers:

Figure 89 – Different motivations behind work

Quote	Question number
"First of all, the salary." *"Jamaa is my everything, without Jamaa I would have nothing."* *"Avancement of the society"* *"We are here to help the Congolese population"* *"Jamaa has the ambition to grow and we will grow with Jamaa* *"Pleasure of working"* *"It is a firm that will eradicate poverty in Congo"*	2.5.1

Source: Appendix 30, p. 266 – Question 2.5.1

The advancement of the Congolese population was a clear motivational factor, which could be interpreted as an indication of the collectivistic culture, as mentioned in Section 4.2 on page 33 but this passion is also likely to be driven by the recent, devastating wars.

ii. 1 agent interview – Dissatisfied agent relationship

The first type of "customers" in Jamaa's value chain is the agent in Kinshasa finding suppliers who want to send goods to Kikwit, and we analysed this relation via an agent interview. As Jamaa has a single agent, Wase Engo, it was only possible to do one interview.

Wase Engo was asked to represent the opinion of not only him, but also the suppliers of goods, which the firm deals with on behalf of Jamaa. A brief summary is of the interview is provided in French here.

i. *Faiblement satisfait.*

ii. Jamaa n'est pas suffisamment disponible. Perte des clients.

iii. Jamaa communique pas suffisamment.

iv. Par rapport à vos autres fournisseurs, Jamaa a un service égal.

v. Je suis pas satisfait, et j'ai beaucoup des truc a demander, un primé pour encourage, de sacs de foufou toutes, les petits trucs pour moi motiver. Un contrat pour me garantir plus!

vi. Jamaa doit motiver sa propre équipe interne. Les véhicules n'arrivent pas à temps. Les marchandises sont prises par nos concurrents.

The main conclusion was that they were dissatisfied with Jamaa. As the agent said:

"Jamaa is neither as reliable nor available for business as previously which causes us to lose clients… Jamaa needs to motivate their employees. Trucks do not arrive on time. Our goods are being taken by competitors".

Some problems clearly existed between Jamaa and its agent, which would be confirmed later on during our analysis of the trip tickets and discussions with the CEO. Interestingly, the agent also asked for Jamaa to give him "something extra" to encourage him; we interpret this as an indication of that corruption is an integral part of doing business in Congo (Appendix 41, p. 296). As the CEO planned to start working directly with the customers instead of the agent, the authors were requested not to deal further with this issue.

iii. 2 village interviews – Lack of basic necessities

The intention was also to conduct interviews with the next 3 groups of customers of in Jamaa's value chain; the interim customers in Kikwit, the supplier villages around Kikwit, and the end-customers in Kinshasa. For the two groups in Kikwit, there was no truck leaving during the first part of the author's stay, and furthermore, due to the unreliability of the trucks, the author would risk missing his return flight by going meaning that the author could not, in effect, travel to Kikwit. For all of the three groups of stakeholders, the CEO felt strongly that sufficient information was gathered continuously, as the drivers asked these customers the relevant questions every time they interacted. Therefore, all parties agreed to

not conduct these additional interviews, meaning that we, as researchers, could not have done anything more given the circumstances (Shepherd 2011d).

As a substitute for the missed trip to Kikwit, 700 km away from Kinshasa, the author travelled to the villages of the relatively close by Dumi area, being a 100 km away. The idea was mainly to interview and investigate these villages as a proxy for the villages in Kikwit to better understand the context of rural Congo. Here, we will mainly summarise the findings, which are available below:

Village	Bwe	Munkoro
Date	24/02/2011	24/02/2011
Est-ce que les conditions de vie sont amélioré depuis Tifie commencait la ferme? Escelle 1-5	Très largement (5)	Très faiblement (1)
Combien de villageois habitent dans le village?	500	150
Combien de villageois ont un travail?	4	1
Il y a combien de téléphones mobiles dans le village ?	30	6
Que sont vos autres exigences auquel Jamaa ne répond pas?	On veut bien etre offert des travaux plus longtemps, pour toute le mois.	1. L'emploi, 2. Education 3. santé 4. D'eau potable. 5. Transport entre d'ici et la bonne route. 6.Une supermarche avec savon, sardines, sel, pratiquement tout.
Qu'est-ce que Jamaa peut faire pour mieux enseigner de nouvelles compétences aux villageois?	Le niveau d'instruction est tres faibles, il faut apprendre Francais d'abord et apres des trucs des agriculture. Il eux manque une centre d'education. Il veut pas que c'est graduit, payer c'est okay. Les sujet, les langues, le mechanique, l'agriculture.	Ca serait une centre de formations, ils preferent que ca sera payé

The interviews showed conflicting levels of satisfaction, ranging from very dissatisfied to very satisfied. However, the main revelations came in terms of their living conditions. The first village had 500 villagers living in 50 huts, an average of 10 people per hut, which normally consisted of a single, small room. Furthermore, they did have up to 30 mobiles, but no means to charge them (Village interviews in Bwe and Munkoro 2011).

Appendices Chapter 10: Proposing initiatives for 15 Deming and 17 Lean findings

Appendix 42 7 dropped initiatives - 3 Deming-related and 4 Lean-related

We will here present 7 dropped initiatives, first 3 Deming-related and hereafter 4 Lean-related.

First, "Unfulfilled desire for long-term employee contracts" stemmed from several of the employees expressing a strong desire to get long-term contracts, as the increased job security would be highly incentivising; our Deming finding 9. This would be in good accordance with the for instance Deming's point 14 "Investing in the long-term education of employees", and long-term contracts would precisely tie them to the firm (Walton 1989, p.36). However, the CEO argued heavily against this idea, as the conglomerate nature of his firm required the flexibility of employees to work in different division according to fluctuating demand. Furthermore, the CEO also needs to have the flexibility in overall work force size, as demand can change significantly according to variations in demand (Shepherd 2011a). Taking the volatile nature of the business into consideration, we agreed to drop this idea, until a more steady cash flow at Jamaa had been secured.

Secondly, our Deming-related finding 13 was "Excessive focus on wages by employees" despite Jamaa's recurring deficits. According to Deming, we would have liked to have an initiative that make the employees more focused on the overall purpose of Jamaa to stay in business and provide jobs, that is, Deming's point 1, "Create constancy of purpose" (Walton 1989, pp.55-57). However, again here the CEO disagreed with of us, as he pointed out, that one of his personal goals was also to make his employees affluent as well, contingent on consistency in their work and profits in Jamaa (Shepherd 2011a).

Thirdly, our Deming-related finding 14 was "Alarm bell setting work hours". The authors themselves suggested that the laud alarm clock ringing every day at 16:30 to signal the end of the workday should be stopped; our Deming finding 14. The authors felt that the alarm reinforced the feeling that work was just about working a specified number of hours to get paid rather than letting the employees decide when it would be better for them to stay 1-2 hours extra, in return for some hours off some other day, in the case that the work situation was very urgent. Doing so would fit great with Deming's point 12, "Removing barriers to

pride of workmanship (Walton 1989, pp.80-81). However, the CEO felt, that this had now been a tradition, and removing this alarm would also mean that the morning 8:00 alarm and lunch alarms at 12:30-13:00 would have to be removed, possibly leading to too much counter-productive socialising around the beginning of the day and lunch (Shepherd 2011a). This idea was therefore also abandoned, as the third Deming finding.

Our Lean-related finding 6, was "Total cost of ownership of Iveco fleet higher than Mercedes-Benz". The mechanics believed the Total Cost of Ownership of the comparatively cheaper Iveco fleet of Jamaa-trucks was in fact higher than the TCO of higher quality trucks such as Mercedes-Benz in particular (REFER TO chap 7). Still, the CEO was first of all not convinced by this argument, but even more crucial, cash-strapped Jamaa did not have the required free cash at all to make such large capital expenditures in Mercedes-Benz trucks in Jamaa's current state, so therefore the idea had to be abandoned (Shepherd 2011a).

Secondly, our Lean-related findings 10 and 11, "Under-utilisation of employees" and "Under-utilisation of trucks", are somewhat similar and will be dealt with here. As mentioned, the employees' creativity was not fully exploited, but this was already discovered by several Deming-related findings, so we ignore the finding here, as we try to separate the two methods so Deming deals mainly with non-operational issues and Lean with operational issue, although it is impossible to separate the two completely. In addition, as the trip tickets revealed, employees were left idle as trucks departed very sporadically and were almost never all in usage. However, as the CEO informed, there was nothing much that could be done differently, as Jamaa need this potentially wasteful extra capacity due to the frequent breakdowns and recurring, long repair periods, so therefore we had to ignore this finding for now.

Finally, our Lean-related finding 13 was "Ad-hoc, unorganised knowledge on what customers actually want". Jamaa used a push approach rather than a pull approach to its customers, which was problematic according to Lean theory, as Jamaa believed they already did provide the goods that the customers wanted, and was not keen on investing additional time into a mapping of customers' potential desires. Therefore, this issue also had to be dropped.

Appendix 43 Deming-inspired initiatives number 4-12

We shall here mention the 9 Deming initiatives that were not mentioned in the thesis.

The fourth initiative, "Have monthly, individual meetings", also focuses on the communication deficiencies of Jamaa, as the CEO was unaware of many of the long-term development issues that the employees raised. Therefore, the CEO agreed to have individuals meetings with the employees every month, which is also taking place. This initiative is crucial, as hopefully the time alone with the CEO should also help the CEO to "Create constancy of purpose", "Adopt the philosophy" and "Institute leadership" into the employees, point 1, 2, and 7 respectively. Most importantly, it should also "Drive out fear", point 8, as the employees become more comfortable with giving ideas and asking the CEO questions (Walton 1989, pp.54-87). The initiative was fully implemented at the cut-off date.

"Buy and develop new CRM system", the fifth initiative, dealt with the fact that several employees revealed that the existing solution was an Internet-based Google Docs-solution; a bad idea given the highly unstable Congolese internet. Jamaa was having the solution being customised for them in the States around the cut-off date, but this will take some time, as they are only halfway through the process.

Our sixth suggestion, "Initiate language training", was to institutionalise language training once a week, initially in French, and possibly later on in English. There was a clear misconception between the CEO and the employees with regards to the employees' French levels. The CEO, not being a native French speaker either, was under the impression that all employees spoke French well, however, during the 20 interviews, several employees were found not to speak French well, which is why a translator in the national language of Lingala was required. This must have impeded communication between, in particular, the CEO and the employees, and therefore we suggested this initiative to address the communication problem and hopefully break down staff barriers but also to motivate the employees by offering education, thus finding theoretical support in Deming's point 9 and 13 (Walton 1989, pp.65-66 & 73-74). The department needed to pay for the training themselves, so at the time around the cut-off date the initiative was on hold until the department had money for it. A person responsible for the language programme had been assigned, but so far there had been no excess funding available for the programme, so it was only 25% implemented.

"Promote quality champion", the seventh initiative, was simply the announcement of office administrator Flavie Tshidibi's status of "Champion of Quality" to help drive the process forward and set an example of leadership, being based on Deming's point seven, "Institute leadership" (Walton 1989, pp.69-70). The practical side of this idea was also to have a responsible for the CIP's practicalities. The announcement was made already during the author's stay in Congo, and has been backed up afterwards, and was therefore considered 100% fully implemented.

To counter the lack of employee ideas and suggestions, the eighth initiative, "Establish 2 idea boxes", was supposed to encourage such behaviour. The concept of an idea box, was a physical box where employees could, anonymously if they wanted, give ideas to top management, and the best ideas would be rewarded, hopefully inspiring to a more innovative work culture and employee leadership, point 7, and a way to drive out fear of proposing ideas, point 8, (Walton 1989, pp.69-73). However, the idea had not been implemented, as the idea was not that well received, but as it may not have worked in practice anyway, the authors believed that it did not have any major consequence for the overall CIP.

The ninth initiative, "Start training programme in 2012", was directly based on Deming's point 7 and 13, "Institute training" and "Institute education" (Deming 2000, pp.52-54 & 86) Jamaa would develop both a vocational and more academic training programme for its employees during 2011-12, as education would improve efficiency in Jamaa, and could also serve as a motivation factor for employees. The first steps had been taken, for example starting to find relevant courses, but there was still a long way to go, as one could expect with such a wide-ranging, and relatively expensive initiative.

The tenth Deming initiative, "Eat lunch with employees", addressed the fact that the CEO and deputy CEO were working through lunch with the best of intentions to work hard, but overlooked how this could be misinterpreted and also the unique, informal forum for communication that lunches provide. Given Congo's high power distance, this idea was also based on Deming's point 8, "Drive out down fear" (Brooks 2003, pp.270-274; Walton 1989, pp.71-72), and was fully implemented at the cut-off date, as habits had been changed.

The eleventh initiative, "Have more social events", put forward that Jamaa will have 2 big annual events and 4 smaller events, as the firm only have had very few events. The idea is to increase the work spirit and informal relations of Jamaa so as to both motivate employees and increase efficiency, based on Deming's point nine, "Breaking down staff barriers" (Walton 1989, pp.73-74).

The twelfth initiative, "Buy Jamaa work clothes", was simply the idea that Jamaa would buy work clothes for its employees, as several employees requested this during the interviews. In addition to supporting employee motivation, this also corresponds well with Deming's point 2, "Adopt the new philosophy", as it would be a symbolic, physical way to do so, and point 9, "Break down staff barriers", as it ideally would instil a feeling of loyalty to Jamaa and in that way indirectly break down team barriers (Deming 2000, pp.26-28 & 62-65).

Appendix 44 Lean-inspired initiatives number 4-12

We shall here mention the 9 Lean initiatives that were not mentioned in the thesis.

The fourth and fifth initiatives, "Hire experienced head mechanic" and "Make mechanics use check-list" dealt with having the mechanics sending out defect trucks, which could be regarded as the source of waste "Defects", but was also based on the principle out "Flow", as having major delays on repair times interrupted the whole flow of the transportation process (Womack & D. T. Jones 2003, pp.50-66). The hiring of a new head mechanic was only halfway implemented, as no direct replacement had yet been found, but Jamaa was in the process of finding one, and had also supplemented by hiring external mechanics to assist occasionally, and therefore the initiative was considered halfway implemented on the cut-off date. In contrast, the new system of checklists had been fully implemented.

The sixth initiative, "Have brainstorm session with drivers to improve efficiency", was as such based on source of waste 5, "Transportation", as a solution to findings 7 of limited direct communication between CEO and drivers but also to finding 14, which revealed the frequent and time-consuming punctures and delays. The initiative however, also found support in Liker's eighth source of waste, "Non-utilisation of human capacity" (Liker 2004).

At the cut-off date, there had been some meetings, although it had not yet been institutionalised which was why we it was deemed to be 75 % implemented.

The seventh and eighth initiatives, “Cooperate closer with suppliers” and “Change supplier contracts”, were both based on Lean principle 3, “Flow”, as to ensure a smooth operational flow (Womack & D. T. Jones 2003, pp.50-66). The CEO had tried to cooperate closer with suppliers, but only with limited success, as they seemed unwilling to compromise on their desires and wishes, so therefore this initiative was deemed to only be halfway implemented. Furthermore, the suppliers were completely unwilling to change the incentive structure of the contract, meaning that the eighth initiative was not implemented at all.

The initiative 9-12, “Deal with misconducting driver”, “Pay villagers to help with river”, “Hire more loaders, ramps, trolleys”, and “Bribe police more at barriers” were all based on source of waste 3, “Waiting”, and were all fully implemented at the cut-off date (Beckford 2010, pp.135-138). Starting with the driver; he had been given a second chance, and worked less time in the field, which had improved his performance. Next, the villagers in the problematic river-village had been employed as a temporary solution, which had solved the problem, although Jamaa is still looking to fix the non-functioning bridge in the longer run. Third and fourth, more loaders, ramps, and trolleys had been hired, and large bribes were given to the police as drivers had been given higher allowances to both hire more people, get more equipment, and bribe the police more frequently.

Appendices Chapter 11: Evaluation of the CIP and comparison between Rounds 1 & 2

Appendix 45 Example of 8 additional questions in Round 2

Sondage des employés - Jamaa

Le but de ce sondage est d'identifier les aspects que nous pourrons améliorer à Jamaa.

Toutes vos réponses seront traité anonymement. S'il vous plaît essayer de répondre aux questions le plus honnêtement et précisément possible. Vos réponses sont importantes pour notre amélioration. Dans l'avenir, notre but est de faire des sondages trimestriel pour améliorer vos conditions de travail. Bonne journée a vous et merci d'avoir complété le sondage.

6 Questions Générales

6.4.1 Est-ce que vous pensez que le Programme de l'Amélioration continue de Qualité (PACQ) de Jamaa a eu des resultats positifs depuis fevrier 2011?

Veuillez cocher la bonne case

1 - Très faiblement	2 - Faiblement	3 - Dans une certaine mesure	4 - Largement	5 - Très largement	6 - Ne saît pas
☐	☐	☐	☐	☐	☐

6.4.2 *Si vous souhaiter ajouter d'autres commentaires veuillez le faire ci-dessous*

Commentaires:

6.5.1 Est-ce que vous pensez que le Programme de l'Amélioration continue de Qualité (PACQ) de Jamaa va apporter des resultats positifs au futur?

Veuillez cocher la bonne case

1 - Très faiblement	2 - Faiblement	3 - Dans une certaine mesure	4 - Largement	5 - Très largement	6 - Ne saît pas
☐	☐	☐	☐	☐	☐

6.5.2 *Si vous souhaiter ajouter d'autres commentaires veuillez le faire ci-dessous*

Commentaires:

6.6.1 Est-ce que vous pensez que vous etes plus content de votre travail depuis le Programme de l'Amélioration continue de Qualité (PACQ) de Jamaa?
Veuillez cocher la bonne case

1 - Très faiblement	2 - Faiblement	3 - Dans une certaine mesure	4 - Largement	5 - Très largement	6 - Ne saît pas
☐	☐	☐	☐	☐	☐

6.6.2 *Si vous souhaiter ajouter d'autres commentaires veuillez le faire ci-dessous*

Commentaires:

6.7.1 Est-ce que vous pensez que vous etes ou Jamaa est plus effectif a cause le Programme de l'Amélioration continue de Qualité (PACQ) de Jamaa?
Veuillez cocher la bonne case

1 - Très faiblement	2 - Faiblement	3 - Dans une certaine mesure	4 - Largement	5 - Très largement	6 - Ne saît pas
☐	☐	☐	☐	☐	☐

6.7.2 *Si vous souhaiter ajouter d'autres commentaires veuillez le faire ci-dessous*

Commentaires:

Appendix 46 Data from all 8 employee interviews in Round 2

Interviewee	Responsabilité de Flavie, Emmet ou Nicolai?	Non-office staff?	1.1.1 Connaissez vous la mission globale ou les objectifs de Jamaa Entreprises?	1.1.2 Commentaires:	1.2 Connaissez vous le but de votre equipe à Jamaa?	1.3 Est-ce que vous croyez que votre contribution quotidienne fait une difference pour l'obtention des objectifs de Jamaa?	2.1 Savez-vous quand vous avez fait un bon travail?	2.2 Est-ce que vous pensez que votre travail contribue à la qualité des produits et services de Jamaa?	2.3.1 Veuillez attribuer l'importance des facteurs suivants quand vous choisissez un travail en général? Le Salaire	2.3.2 Veuillez attribuer l'importance des facteurs suivants quand vous choisissez un travail en general? Si vous allez apprendre qqc.	2.3.3 Veuillez attribuer l'importance des facteurs suivants quand vous choisissez un travail en général? L'ambiance des employés	2.4.1 Obtenez-vous ce que vous voulez de votre travail à Jamaa? En terme de salaire	2.4.2 Obtenez-vous ce que vous voulez de votre travail à Jamaa? Si vous apprennez qqc.	2.5.1 Qu'est-ce qui vous motive pour faire extra-ordinairement bien le travail?	2.5.2 A votre avis, est-ce que il y a une motivation à Jamaa pour travailler extra-ordinairement dur?	2.6.1 Etes vous satisfait de travailler pour Jamaa?
Employee 1	F	Y	1	On ne nous a jamais expliqué la mission de Jamaa	2	5	4	5	4	5	4	1	3	l'amour du travail	un bon salaire et les primes peuvent me motiver à bien faire mon travail	5
Employee 2	F	Y	1	aucun	2	3	4	6	4	2	3	2	1	l'amour du travail qui représente beaucoup pour moi	l'augmentation du salaire est une grande motivation	2
Employee 3	F	Y	3	Jamaa est dans le business, donc l'objectif principal est de devenir plus grand par la réalisation des bénéfices	5	5	5	5	4	4	3	3	2	c'est le souci de bien faire mon travail qui me motive	l'augmentation de salaire peut motiver à bien travailler	4
Employee 4	F	Y	1	Jamaa est là pour faire de l'argent	3	5	5	5	5	3	2	2	2	c'est d'abord le souci de ma vie qui dépend de montravail et ensuite, un bon salaire me motiverait d'avantage	l'augmentation de salaire est une grande motivation	5
Employee 5	F	N	4	Comme entreprise commerciale, Jamaa doit générer des recettes en maximisant les profits et minimiser les dépenses	5	5	5	5	4	5	4	3	5	L'apprentissage et l'ambiance dans mon équipe de travail	J'apprends et je suis à l'aise avec mon équipe	4
Employee 6	E	N	4		5	5	5	5	5	5	4	4	4	La confiance, le style de notre travail, la consideration.	Oui	5
Employee 7	E	N	4		3	5	5	5	3	5	4	3	4	C'est disposer de tous les moyens don't j'ai besoin pour la réalisation des projets ambititeux sceptibles d'apporter une croissance rapide à l'entreprise.	Oui, ce sont notamment toutes les opportunités à venir qui s'ouvrent progressivement à nous au fur et à mesure. Cela nous pousse à tenir bon et travailler dur.	4
Employee 8	N	N	5	5	5	5	5	5	4	5	4	4	4	"The people I work with. My work directly affects the income and lives of people who have not previously had work. The better I work the better the results for them. Also a good financial incentive to work hard."	5	5

Interviewee	2.6.2 Pourquoi/pourquoi pas?	2.7 Est-ce que vous êtes fier de travailler pour Jamaa?	2.8 Seulement pour les managers - Environ lequel pourcentage de votre temps, utilisez-vous avec votre equipe?	2.9 Seulement pour les managers - Environ lequel pourcentage de votre temps, utilisez-vous a developper et motiver votre equipe en groupe et individuellement?	2.10 Seulement pour les managers - Combien des fois par semaines avez-vous des rendez-vous avec votre equipe pour evaluer le progres, discuter les problemes, et discuter les buts de la semaine?	2.11 Seulement pour les managers - Combien des fois par mois avez-vous des rendez-vous individuel avec les employés pour discuter et faciliter leur progrès de développement?	2.12 Seulement pour les managers - Est-ce que le niveau de votre communication avec vos employés est très bien?	3.1.1 Est-ce que vous pensez que tous les outils nécessaires pour faire un bon travail sont mis à votre disposition?	3.1.2 Quels sont les outils dont vous avez besoin?	3.2 Pensez vous que Jamaa vous a perfectionné adéquatement pour votre travail?	3.3 Qui a contribué le plus à votre perfectionnement ici?	3.4.1 Est-ce que vous croyez que vos idées d'améliorer votre travail seront prises au serieux par les directeurs?	3.4.2 Commentaires:
Employee 1	Parce que je suis content de la manière de travailler de Jamaa	5						2	Clés, cric	3	3	2	Nos propositions ne sont pas souvent prises en considération
Employee 2	Notre travail n'est pas bien rémunéré, vu les difficultés que nous rencontrons	3						3	Pneu de réserve, chambre à air	1	3	3	Les idées sont soumises à l'appréciation de la hiérarchie qui peut approuver ou non
Employee 3	J'aime travailler pour Jamaa, et c'est le salaire qui pose un peu problème	3						3	Le crédit pour communiquer avec mes clients	1	3	4	Je pense que le directeur va m'écouter parce que dernièrement j'ai proposé un marché et il a été approuvé parce que c'était une bonne idée
Employee 4	Nous sommes bien traités, même si le problème de salaire persiste et nous avons l'espoir que Jamaa aura un avenir meilleur	4						2	Pneus de réserve et chambre à air, bâche, les outils pour démonter les pneus	4	1	4	Je collabore déjà très bien avec les directeurs, je pense que si j'ai une bonne idée, ils vont la prendre au sérieux
Employee 5	Parce que je veux aider Jamaa à réaliser ses objectifs	5						2	Pièces de rechange, Laptop,	3	2	5	aucun
Employee 6		5						5	2	2	1	2	
Employee 7	Un des avantages que Jamaa aura toujours sur les autres compagnies est l'opportunité est offerte à tous de prouver de quoi il est capable, indépendamment de son âge. Cela a permis à beaucoup de jeunes comme moi d'assumer de hautes responsabilités.	5	4	3	4	3	4	3	Outre les équipements, Jamaa a besoin d'un investissement en capital frais.	3	2	3	Un besoin réel en formation est ressenti pour développer mes performances. La société devrait encourager des stages ou autres cours locaux ou même à l'étranger en vue de maintenir un niveau toujours élévé pour le senior management.
Employee 8		5	6	4	4	3	3	4		N/A	N/A	N/A	N/A

Interviewee	3.5 Est-ce que vous sentez que votre directeur comprend completement les processus et tous les aspects de votre travail?	3.6 Imaginez vous une situation où vous aviez tous les outils necessaires, et tous les processus de Jamaa étaient optimales. Si vous comparez cette situation avec la situation, est- que on est proche de la situation optimale?	3.7.1 Quels sont les plus grands obstacles pour l'amélioration de votre travail et votre qualité de travail en general? Donnez-nous les trois plus importants - 1	3.7.2 Que sont les plus grands obstacles pour l'amélioration de votre travail et votre qualité de travail en general? Donnez-nous les trois plus importants - 2	3.7.3 Que sont les plus grands obstacles pour l'amélioration de votre travail et votre qualité de travail en general? Donnez-nous les trois plus importants - 3	4.1 Est-ce que vous vous entendez bien avec vos collègues de travail?	4.2 Pensez vous que vos collègues vous aideront dans votre travail?	4.3 Pensez vous que vous et vos collègues partagez les meilleures techniques de travail entre vous?	4.4. Est-ce que vous pensez que Jamaa a un bon esprit d'équipe et travail d'équipe?	5.1 Est-ce que vous pensez que votre manager communique parfaitement avec vous?	5.2.1 Le diriez vous a votre directeur si vous pensiez que quelque chose pourrait être améliorée à Jamaa?	5.2.2 Avez-vous eu une idee, que vous avez donnée au directeur?
Employee 1	2		aucun	aucun	aucun	5	1	2	3	4	4	2
Employee 2	1	3	nous partons souvent sans les sacs pour mettre charger les produits (nous sommes obligés d'attendre qu'on nous les envoie)	ou encore, nous partons avec les sacs et nous devons attendre l'argent pour acheter les produits et ça prend du temps	aucun	5	4	5	4	5	4	1
Employee 3	4	4	pas de grand obstacle	aucun	aucun	3	3	4	4	4	4	1
Employee 4	4	3	L'argent pour acheter les produits dans les villages est souvent envoyé en retard	aucun	aucun	5	4	5	5	5	5	2
Employee 5	3	3	Les pannes régulières des véhicules	La mauvaise qualité des produits que nous achetons au village	La lenteur pour vendre et le prix très bas à cause de la mauvaise qualité,	5	4	3	3	4	4	1
Employee 6	2	3	L'amelioration des langues			5	5	5	5	4	5	2
Employee 7	3	2	Le besoin en formation,	la prise de certaines décisions hiérarchiques	et les moyens financiers pour exécuter certains projets.	5	5	4	5	4	5	1
Employee 8	N/A	3	More qualified people closer to the CEO level will allow for more rapid change.			4	5	4	4	N/A	N/A	N/A

Interviewee	5.2.3 Si oui, est-ce que le directeur utilisait votre idée, pourquoi/pourquoi pas?	5.3 Ie diriez vous à votre directeur si vous aviez un problème serieux avec un autre manager?	5.6.4.1 Il y a-t-il d'autres choses dont vous ne pouvez pas parler avec votre directeur?	5.6.4.2 Commentaires:	6.1.1 Est-ce que vous êtes content du sondage sur la satisfaction des employés de Jamaa?	6.1.2 Si vous souhaitez ajouter d'autres commentaires veuillez le faire ci-dessous	6.2 Est-ce que vous pensez que le Programme de l'Amélioration continue de Qualité (PACQ) de Jamaa est une bonne idée?	6.3 Considerez-vous d'autres opportunités d'emplois actuellement?	6.4.1 Est-ce que vous pensez que le Programme de l'Amélioration continue de Qualité (PACQ) de Jamaa a eu des resultats positifs depuis février 2011?	6.4.2 Si vous souhaitez ajouter d'autres commentaires veuillez le faire ci-dessous
Employee 1		5	1	Tout dépend du problème	5	Ce sondage nous permet de donner nos avis aux chefs	5	1	2	les demandes d'argent ne traînent plus, on n'a plus beaucoup de retard
Employee 2	j'avais proposé l'évacuation des produits qui étaient bloqués au village à la fin de l'année passée et le chef avait approuvé	4	1	Quand c'est un problème très personnel qui n'est pas professionnel	4	Nous serions encore plus contents si la situation s'améliorait	4	2	1	les frais de mission ne sont pas suffisants
Employee 3	J'avais proposé que le véhicule qui était resté au village commence à faire les navettes pour qu'il ne soit pas un manque à gagner et il a accepté	5	1	Je peux avoir un problème très personnel dont je ne veux parler à personne	3	Je ne suis pas satisfait à 100% parce que certains points n'ont pas encore été améliorés; par exemple le salaire	4	4	3	le problème de salaire persiste
Employee 4		4	1		5	Je souhaite que nous ayons toujours un sondage comme ça pour connaître l'évolution de Jamaa	4	1	1	On a augmenté un tout petit peu notre salaire
Employee 5	J'ai été à la base de la création de 2 sites supplémentaires pour la vente des produits	4	2	aucun	5	Ce sondage nous permet de faire connaitre nos idées aux managers pour la réussite de Jamaa	5	3	4	Ce sondage a permis une communication permanente avec les managers
Employee 6	2						5	1	3	
Employee 7	Souvent, il est déploré le temps assez long entre la proposition d'une idée et son application effective. Cela est à la base de la perte de beaucoup d'opportunités.	5	6	J'ai l'habitude de l'informer de tous les problèmes dès qu'ils se posent. Donc, je ne voisplus rien de pertinent à ajouter.	4	J'aurais été encore plus content si ce sondage aidait à apporter une réponse réelle aux différentes questions qui se posent encore actuellement.	4	3	2	Si ces informations sont tenues confidentielles, je ne sais pas comment le management en sera tenu informé. Car aucun changement conséquent ne pourra être obtenu sans que les besoins de la base ne soient véhiculés au sommet.
Employee 8		N/A	N/A		5		5	1	4	Still need to implement some of the initiatives

Interviewee	6.5.1 Est-ce que vous pensez que le Programme de l'Amélioration continue de Qualité (PACQ) de Jamaa va apporter des resultats positifs au futur?	6.5.2 Si vous souhaiter ajouter d'autres commentaires veuillez le faire ci-dessous	6.6.1 Est-ce que vous pensez que vous etes plus content de votre travail depuis le Programme de l'Amélioration continue de Qualité (PACQ) de Jamaa?	6.6.2 Si vous souhaitez ajouter d'autres commentaires veuillez le faire ci-dessous	6.7.1 Est-ce que vous pensez que vous etes ou Jamaa est plus effectif a cause le Programme de l'Amélioration continue de Qualité (PACQ) de Jamaa?	6.7.2 Si vous souhaitez ajouter d'autres commentaires veuillez le faire ci-dessous	7.1 Est-ce que vous avez des nouveaux commentaires à ajouter?
Employee 1	4	Nous voulons qu'il y ait encore plus de changement	2	aucun	2	aucun	Nos managers ne connaissent pas bien les aspects de notre travail. Pour le transport, il faut quelqu'un qui connaît bien
Employee 2	3	La hiérarchie doit considérer nos révendications	1	Nous voulons voir les choses changer	1	aucun	aucun autre commentaire
Employee 3	4	Les resultats seront positifs à condition que vous preniez en considération nos plaintes	1	Nous n'avons vu aucun résultat important depuis février	1	aucun	J'ai tout dit, je n'ai plus de commentaire
Employee 4	5	Que nos avis soient pris en considération parce que c'est nous qui connaissons les réalités du terrain	4	aucun	3	aucun	Que tout ce que nous disons soit pris en consdération
Employee 5	4	Prendre en considération nos critiques	3	aucun	3	aucun	Je souhaite que ce sondage soit pris en considération et qu'il se fasse régulièrement
Employee 6	4		4		3	aucun	Non
Employee 7	3	Aucun	3	Si le management a autorisé ce programme, cela dénote une certaine volonté de changement. Mais entre la simple volonté et la réalisation effective, l'écart n'est pas toujours facile à combler!	2	aucun	Aucun
Employee 8	5		4		4	Trade department	Does not think we will see the full effects of this program for a while. Will take approximately 3-4 months before we see tangible results.

Appendix 47 Raw data from 4 trip tickets from Round 2

Trip departure date	1 Driver	1 Assistant 1	1 Assistant 2	1 License Plate	1 Vehicule has been checked?	1 Start time
27-Apr	Medand Ngoie Kabulo	Jean Bosco Tsangu Mukula	Tresor Ndungi	1492AB01	Yes	27/04/2011 19:45
10-May	Medand Ngoie Kabulo	Jean Bosco Tsangu Mukula	Tresor Ndungi	1492AB01	Yes	10/05/2011 21:50
24-May	Daniel Matwa	Jose Mbadu	Dakota Ngumbu	0927AB01	Yes	24/05/2011 10:02
27-May	Medand Ngoie Kabulo	Jean Bosco Tsangu Mukula	Tresor Ndungi		Yes	27/05/2011 09:30

Trip departure date	1 Type1	1 Quantity1	1 Type2	1 Quantity2	1 Type3	1 Quantity3	1 Type4	1 Quantity4	1 Signed receipt?	1 Time to load (hours)	1 #of loaders	1 Time leaving Kinshasa
27-Apr	Farine(sacs)	123	Sacs sel	500	Cartons Pil T:	300	Divers		Yes	24:00	6	28/04/2011 19:45
10-May	Divers		Gazoil (bidons)	240	Ciments (sac:	30	Babouches (sacl	200	Yes	24:00	6	11/05/2011 21:50
24-May	DIVERS								Yes	9:27	6	24/05/2011 19:29
27-May	Cartons Huils	1986	Futs Gasoil	4					Yes	14:40	6	28/05/2011 00:10

Trip departure date	2 Arrival time Kikwit	2 Time to unload	2 #of unloaders	2 Dam_Type1	2 Dam_Quantity1	2 Dam_Reason1	2 Dam_Type2	2 Dam_Quantity2	2 Dam_Reason2	2 Dam_Type3	2 Dam_Quantity3	2 Dam_Reason3	2 Dam_Type4	2 Dam_Quantity4	2 Dam_Reason4	2_Dam_total
27-Apr	29/04/2011 19:45	48:00	6													0
10-May	12/05/2011 16:02	24:00	6													0
24-May	26/05/2011 10:10	8:04	4													0
27-May	28/05/2011 23:17	36:00	6													0

Trip departure date	2 Lost_Type1	2 Lost_Quantity1	2 Lost_Reason1	2 Lost_Type2	2 Lost_Quantity2	2 Lost_Reason2	2 Lost_Type3	2 Lost_Quantity3	2 Lost_Reason3	2 Lost_Type4	2 Lost_Quantity4	2 Lost_Reason4	2 Lost_total	2 Punc_Date1	2 Punc_dura1	2 Punc_evit1	2 Punc_Date2	2 Punc_dura2	2 Punc_evit2
27-Apr													0						
10-May													0						
24-May													0	24/05/2011 21:36	5:00	Non	25/05/2011 06:05	11:08	non
27-May													0						

Trip departure date	2 Punc_Date3	2 Punc_dura3	2 Punc_evit3	2 Punc_Date4	2 Punc_dura4	2 Punc_evit4	2 Punc_Total	2 delay_Date1	2 delay_Time1	2 delay_dura1	2 delay_type1	2 delay_Date2	2 delay_Time2	2 delay_dura2	2 delay_type2	2 delay_Date3	2 delay_Time3	2 delay_dura3	2 delay_type3	2 delay_Date4	2 delay_Time4	2 delay_dura4	2 delay_type4	2 Delay_total
27-Apr							24:08																	0:00
10-May							0:00																	0:00
24-May	26/05/2011 00:00	8:00	Non				24:08																	0:00
27-May							0:00																	0:00

Trip departure date	2 barr_Date1	2 barr_dura1	2 barr_type1	2 barr_Date2	2 barr_dura2	2 barr_type2	2 barr_Date3	2 barr_dura3	2 barr_type3
27-Apr	28/04/2011 21:15	0:24	Pont Nsele	28/04/2011 21:50	0:49	Nsele-Bambou	28/04/2011 23:14	0:07	Menkao
10-May	11/05/2011 22:41	0:19	Pont Nsele	11/05/2011 23:08	0:01	Nsele-Bambou	11/05/2011 23:39	0:01	Menkao
24-May	24/05/2011 20:00	0:08	Pont Nsele	24/05/2011 20:17	0:08	Nsele-Bambou	24/05/2011 21:01	0:01	Menkao
27-May	28/05/2011 01:01	0:44	Pont Nsele	28/05/2011 02:02	0:03	Nsele-Bambou	28/05/2011 02:38	0:07	Menkao

Trip departure date	2 barr_Date4	2 barr_dura4	2 barr_type4	2 barr_Date5	2 barr_dura5	2 barr_type5	2 barr_Date6	2 barr_dura6	2 barr_type6
27-Apr	29/04/2011 00:48	0:01	Dumi	29/04/2011 01:25	0:01	Mbakana	29/04/2011 01:55	0:05	Mongata
10-May	12/05/2011 00:49	0:08	Dumi	12/05/2011 01:38	0:14	Mbakana	12/05/2011 02:21	0:01	Mongata
24-May	25/05/2011 02:10	0:01	Dumi	25/05/2011 02:44	0:01	Mbakana	25/05/2011 03:01	0:01	Mongata
27-May	28/05/2011 04:01	0:01	Dumi	28/05/2011 05:00	0:02	Mbakana	28/05/2011 05:22	0:01	Mongata

Trip departure date	2 barr_Date7	2 barr_dura7	2 barr_type7	2 barr_Date8	2 barr_dura8	2 barr_type8	2 barr_Date9	2 barr_dura9	2 barr_type9
27-Apr	29/04/2011 02:06	1:00	Kabuba	29/04/2011 03:43	0:01	Pont Kwango	29/04/2011 04:53	0:02	Bukanga-Rongo
10-May	12/05/2011 03:24	0:01	Kabuba	12/05/2011 04:11	0:01	Pont Kwango	12/05/2011 04:41	0:01	Bukanga-Rongo
24-May	25/05/2011 03:38	0:02	Kabuba	25/05/2011 04:11	0:24	Pont Kwango	25/05/2011 05:31	0:01	N.C. Lonzo
27-May	28/05/2011 05:49	0:01	Kabuba	28/05/2011 06:18	1:16	Pont Kwango	28/05/2011 08:10	0:05	Bukanga-Rongo

Trip departure date	2 barr_Date10	2 barr_dura10	2 barr_type10	2 barr_Date11	2 barr_dura11	2 barr_type11	2 barr_Date12	2 barr_dura12	2 barr_type12
27-Apr	29/04/2011 06:01	0:59	Kenge	29/04/2011 09:13	9:30	316 km	29/04/2011 10:41	2:09	Depot-Masa-Muna
10-May	12/05/2011 05:57	0:46	Kenge	12/05/2011 08:08	0:01	316 km	12/05/2011 09:09	0:41	Depot-Masa-Muna
24-May	25/05/2011 18:32	0:37	Kenge	25/05/2011 20:36	0:02	316 km	25/05/2011 21:38	0:02	Depot-Masa-Muna
27-May	28/05/2011 10:10	1:15	Kenge	28/05/2011 13:24	0:01	316 km	28/05/2011 14:27	1:11	Depot-Masa-Muna

Trip departure date	2 barr_Date13	2 barr_dura13	2 barr_type13	2 barr_Date14	2 barr_dura14	2 barr_type14	2 barr_Date15	2 barr_dura15	2 barr_type15
27-Apr	29/04/2011 13:17	0:03	Masi-Manimba	29/04/2011 17:09	0:01	Kasai	29/04/2011 18:55	0:01	Pont-Kurengo
10-May	12/05/2011 10:58	0:28	Masi-Manimba	12/05/2011 14:01	0:01	Kasai	12/05/2011 15:28	0:01	Pont-Kurengo
24-May	25/05/2011 23:53	0:02	Masi-Manimba	26/05/2011 02:10	0:05	Kasai	26/05/2011 08:33	0:01	Kwenge
27-May	28/05/2011 16:49	0:09	Masi-Manimba	28/05/2011 19:45	0:26	Kasai	28/05/2011 22:16	0:01	Pont-Kurengo

Trip departure date	2 barr_Date16	2 barr_dura16	2 barr_type16	2 barr_Date17	2 barr_dura17	2 barr_type17	2 barr_Date18	2 barr_dura18	2 barr_type18	2 barr_avg	3 Last place in Kikwit	3 Departure time in Kikwit
27-Apr	29/04/2011 19:35	0:01	Kikwit-3							0:57	Kanga Nzadi	04/05/2011 18:40
10-May	12/05/2011 16:00	0:02	Kikwit-3							0:10	Centre Mayala et village Fundu	16/05/2011 19:20
24-May	25/05/2011 09:52	0:16	Kikwit							0:07	Village Fumu Njoko	03/06/2011 11:12
27-May	28/05/2011 23:10	0:02	Kikwit-3							0:20	Village Kimbimbi et Ngadi	06/06/2011 13:45

Trip departure date	3 Arrival time in Kins	3 Travel time (calculated)	3 Unloading time	3 # of unloaders	3 Dam_Type1	3 Dam_Quantity1	3 Dam_Reason1	3 Dam_Type2	3 Dam_Quantity2	3 Dam_Reason2	3 Dam_Type3	3 Dam_Quantity3	3 Dam_Reason3	3 Dam_Type4	3 Dam_Quantity4	3 Dam_Reason4	3 Dam_total
27-Apr	07/05/2011 05:01	58:21		6													0
10-May	19/05/2011 21:30	74:10	84:00	6													0
24-May	06/06/2011 15:48	76:36															0
27-May	10/06/2011 02:48	85:03	48:00	5													0

Trip departure date	3 Lost_Type1	3 Lost_Quantity1	3 Lost_Reason1	3 Lost_Type2	3 Lost_Quantity2	3 Lost_Reason2	3 Lost_Type3	3 Lost_Quantity3	3 Lost_Reason3	3 Lost_Type4	3 Lost_Quantity4	3 Lost_Reason4	3 Lost_total	3 Punc_Date1	3 Punc_dura1	3 Punc_evit1	3 Punc_Date2	3 Punc_dura2	3 Punc_evit2
27-Apr													0						
10-May													0	18/05/2011 21:15	24:00	NON			
24-May													0	04/06/2011 18:21	3:08	Non	04/06/2011 22:47	11:47	non
27-May													0						

Trip departure date	3 Punc_Date3	3 Punc_dura3	3 Punc_evit3	3 Punc_Date4	3 Punc_dura4	3 Punc_evit4	3 Punc_Total	3 delay_Date1	3 delay_dura1	3 delay_type1	3 delay_Date2	3 delay_dura2	3 delay_type2	3 delay_Date3	3 delay_dura3	3 delay_type3	3 delay_Date4	3 delay_dura4	3 delay_type4	3 Delay_total
27-Apr							0:00													0:00
10-May							24:00	18/05/2011 21:15	0.5	Prise d'air										12:00
24-May							14:55													0:00
27-May							0:00	07/06/2011 07:30	2	Assenissement de la route										48:00

Trip departure date	3 barr_Date1	3 barr_dura1	3 barr_type1	3 barr_Date2	3 barr_dura2	3 barr_type2	3 barr_Date3	3 barr_dura3	3 barr_type3
27-Apr	05/05/2011 16:15	1:03	Kikwit 3	05/05/2011 17:47	0:01	Pont Kwenga	05/05/2011 19:45	0:03	Kasai
10-May	17/05/2011 20:10	0:14	Kikwit 3	17/05/2011 21:15	0:01	Pont Kwenga	18/05/2011 00:43	1:00	Kasai
24-May	04/06/2011 16:03	1:16	Kikwit 3	04/06/2011 22:10	0:01	Pont Kwenga	04/06/2011 23:55	0:01	Kasai
27-May	Missing								

Trip departure date	3 barr_Date4	3 barr_dura4	3 barr_type4	3 barr_Date5	3 barr_dura5	3 barr_type5	3 barr_Date6	3 barr_dura6	3 barr_type6
27-Apr	05/05/2011 22:50	0:01	Masi-Mamimba	06/05/2011 00:18	0:01	Masa-Muna-Depo	06/05/2011 10:18	0:01	316 km
10-May	18/05/2011 04:55	0:20	Masi-Mamimba	18/05/2011 06:56	2:44	Masa-Muna-Depo	18/05/2011 11:01	0:12	316 km
24-May	05/06/2011 06:45	1:06	Masi-Mamimba	05/06/2011 11:25	0:03	Masa-Muna-Depo	05/06/2011 12:00	0:01	316 km
27-May	09/06/2011 13:41	0:01	Masi-Mamimba	09/06/2011 14:44	5:16	Masa-Muna-Depo	09/06/2011 21:45	0:03	316 km

Trip departure date	3 barr_Date7	3 barr_dura7	3 barr_type7	3 barr_Date8	3 barr_dura8	3 barr_type8	3 barr_Date9	3 barr_dura9	3 barr_type9
27-Apr	06/05/2011 13:10	0:36	Kenge	06/05/2011 16:00	0:01	Bukanga-Pongo	06/05/2011 16:46	1:14	Pont Kwango
10-May	18/05/2011 13:01	1:44	Kenge	18/05/2011 16:33	0:01	Bukanga-Pongo	18/05/2011 18:21	1:58	Pont Kwango
24-May	05/06/2011 15:29	0:15	Kenge	05/06/2011 17:12	0:02	M.C.Lonzo	05/06/2011 18:26	1:48	Pont Kwango
27-May	09/06/2011 23:08	0:02	Kenge	10/06/2011 02:46	0:02	Bukanga-Pongo	10/06/2011 05:00	0:37	Pont Kwango

Trip departure date	3 barr_Date10	3 barr_dura10	3 barr_type10	3 barr_Date11	3 barr_dura11	3 barr_type11	3 barr_Date12	3 barr_dura12	3 barr_type12
27-Apr	06/05/2011 18:42	0:01	Kabuba	06/05/2011 19:30	0:55	Mungata	06/05/2011 21:01	2:09	Mbakana
10-May	18/05/2011 22:48	0:02	Kabuba	19/05/2011 00:11	0:08	Mungata	19/05/2011 01:45	14:50	Mbakana
24-May	05/06/2011 19:37	0:01	Kabuba	05/06/2011 20:06	0:09	Mungata	05/06/2011 21:14	0:02	Mbakana
27-May	10/06/2011 05:59	0:02	Kabuba	10/06/2011 07:16	0:01	Mungata	10/06/2011 08:10	9:50	Mbakana

Trip departure date	3 barr_Date13	3 barr_dura13	3 barr_type13	3 barr_Date14	3 barr_dura14	3 barr_type14	3 barr_Date15	3 barr_dura15	3 barr_type15
27-Apr	06/05/2011 23:53	0:14	Dumi	07/05/2011 01:40	0:03	Menkao	07/05/2011 02:30	0:04	Nsele Bambou
10-May	19/05/2011 16:01	0:11	Dumi	19/05/2011 18:21	0:24	Menkao	19/05/2011 19:22	0:02	Nsele Bambou
24-May	05/06/2011 22:11	0:05	Dumi	06/06/2011 12:02	0:01	Menkao	06/06/2011 12:40	0:04	Nsele Bambou
27-May	10/06/2011 18:39	0:02	Dumi	10/06/2011 20:24	0:02	Menkao	10/06/2011 20:58	0:05	Nsele Bambou

Trip departure date	3 barr_Date16	3 barr_dura16	3 barr_type16	3 barr_Date17	3 barr_dura17	3 barr_type17	3 barr_Date18	3 barr_dura18	3 barr_type18	3 barr_avg	4 Mar1 Name	4 Mar1 Arrival date	4 Mar1 Time to unload
27-Apr	07/05/2011 02:47	1:44	Pont Nsele							0:30	Kingasani w Basoko	07/05/2011 05:01	NA
10-May	19/05/2011 19:40	0:20	Pont Nsele							1:30	Kingasani w Basoko	19/05/2011 21:30	84:00
24-May	06/06/2011 13:52	1:10	Pont Nsele							0:22	Mont Ngafula	07/06/2011 07:22	9:12
27-May	10/06/2011 21:12	3:46	Pont Nsele							1:31	Ngaba Lobo	11/06/2011 02:48	48:00

Trip departure date	4 Mar1 Type1	4 Mar1 Quantity1	4 Mar1 Price1	4 Mar1 Type2	4 Mar1	4 Mar1 Price2	4 Mar1 Type3	4 Mar1	4 Mar1 Price3	4 Mar1 Type4	4 Mar1	4 Mar1 Price4	4 Mar3 Total quantity	4 Mar1 Total Sales in CDF	4 Mar1 Buyer's reselling time	4 Mar1 Leaving market
27-Apr	Fufu	155	30,600										155	4,743,000	36:00	08/05/2011 13:00
10-May	Fufu	213	27,100										213	5,772,300	84:00	25/05/2011 13:00
24-May	Fufu (sacs)	115	28,000										115	3,220,000		07/06/2011 17:00
27-May	Fufu	230	30,000										230	6,900,000	48:00	14/06/2011 13:00

Trip departure date	4 Mar2 Name	4 Mar2 Arrival date	4 Mar2 Time to unload	4 Mar2 Type1	4 Mar2 Quantity1	4 Mar2 Price1	4 Mar2 Type2	4 Mar2	4 Mar2 Price2	4 Mar2 Type3	4 Mar2	4 Mar2 Price3	4 Mar2 Type4	4 Mar2	4 Mar2 Price4
27-Apr	Ngaba Av. Lobo	08/05/2011 14:35	14:35	Fufu	70	30600									
10-May															
24-May	Ngaba Av. Lobo	07/06/2011 17:23	6:00	Fufu (sacs)	115	28000									
27-May															

Trip departure date	4 Mar3 Total quantity	4 Mar2 Total Sales in CDF	4 Mar2 Buyer's reselling time	4 Mar2 Leaving market	4 Mar3 Name	4 Mar3 Arrival date	4 Mar3 Time to unload	4 Mar3 Type1	4 Mar3	4 Mar3 Price1	4 Mar3 Type2	4 Mar3	4 Mar3 Price2	4 Mar3 Type3	4 Mar3	4 Mar3 Price3
27-Apr	70	2,142,000	12:00	08/05/2011 17:20												
10-May	0	0														
24-May	115	3,220,000		08/06/2011 15:22												
27-May	0	0														

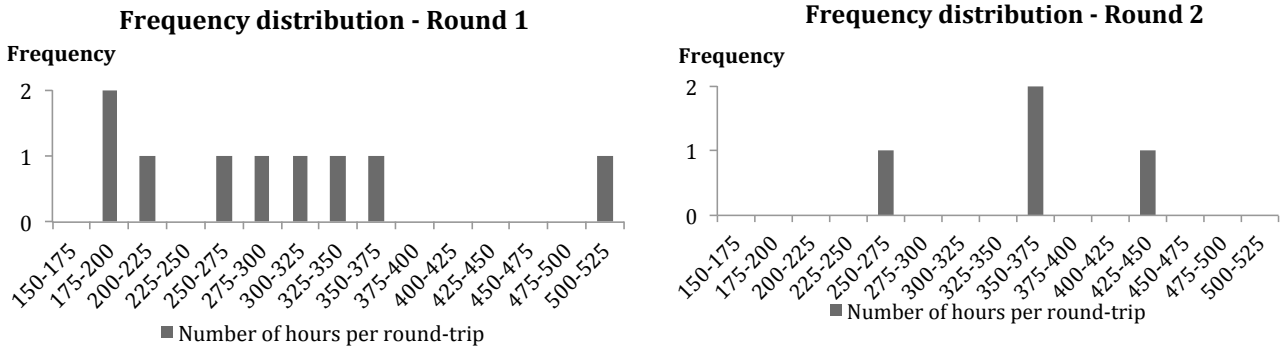
Trip departure date	4 Mar3 Type4	4 Mar3	4 Mar3 Price4	4 Mar3 Total quantity	4 Mar3 Total sales in CDF	4 Mar3 Buyer's reselling time	4 Mar3 Leaving market	5 Total sales in CDF	5 Total sales in CDF	5 Total sales in USD assuimg 1000 CDF =	5 Arrival date in Kingabwa	5 Time last market-
27-Apr				0	0			225	6,885,000	6,885	08/05/2011 17:20	1:25
10-May				0	0			213	5,772,300	5,772	25/05/2011 13:20	0:19
24-May				0	0			230	6,440,000	6,440	08/06/2011 16:12	0:44
27-May				0	0			230	6,900,000	6,900	14/06/2011 18:22	5:22

Appendix 48 Statistical tests of sample means – Non parametric and F-test for equal variance

iv. Non-parametric testing for small, skewed sample sizes

As mention in our delimitations, for small sizes of respectively 9 and 4, theoretically, we should use non-parametric tests. Nonparametric tests are called so, because they have few assumptions regarding the distributions, so because as there are "fewer and weaker than those associated with parametric tests" (Siegel & Castellan 1988, pp.33-35). That is, nonparametric tests require fewer assumptions about the shapes of the samples' distributions. Therefore, non-parametric tests are good when the assumption of for instance normal distribution is violated, which is often the case for small samples. As the following to histograms shows, our small samples do exactly violate the assumption of normality.

Figure 90 – Overview of non-normality in both Round 1 and 2



Source: Appendix 51, p. 321

We should use a non-parametric test such as Mann-Whitney U Test or Wilcoxon Signed-Ranks Test, but as mentioned, this is not a statistical paper, and we shall use parametric T-test to analyse our data further.

v. Parametric testing two sample independent T-test

In order to use the Independent two-sample t-test assuming unequal sample sizes, we first need to conduct a F-test of the equality of variances of our two samples, as our H_0: hypothesis is that are the variances are equal. This assumes normality, which is again violated (Field 2009, pp.316-346).

Figure 91 – F-test of variances

F-Test Two-Sample for Variances

	Round 1	*Round 2*
Variance	10101.14	5412.23
Observations	9.00	4.00
df	8.00	3.00
F	1.87	
P(F<=f) one-tail	0.33	
F Critical one-tail	8.85	

Source: Appendix 51, p. 321

Although the numbers could indicate that there is unequal variance, as variance has dropped from 10101.14 to 5412.23 from Round 1 to 2, this is clearly insignificant, as the high p-value of 0.33 tells us. Therefore, we have to continue assuming equal variance in our t-test.

Appendix 49 Data behind comparison of value add in Round 1 and 2

	Decision how to distribute the total			Do not change
Sub-component (in hours:minutes)	Value-adding	Value-enabling	Waste	Total
Total net transportation time	44:27	0:00	0:00	44:27
Total time due to punctures	0:00	0:00	21:47	21:47
Total time due to other delays	0:00	0:00	15:00	15:00
Total barrier time	0:00	2:30	17:45	20:15
Total loading time	0:00	10:00	37:02	47:02
Total collection time in Kikwit	0:00	96:00	29:24	125:24
Total selling time	0:00	36:11	44:53	81:04
Sum	44:27	144:41	165:53	355:01
Round 1	61:30	132:30	101:50	295:50
Round 2	44:27	144:41	165:53	355:01
Round 1 (in %)	21%	45%	34%	100%
Round 2 (in %)	13%	41%	47%	100%

Appendix 50 Data from punctures and delays

PUNCTURES AND DELAYS - ROUND 1 AND 2					
	Round	Average per puncture	Average per delay	% of trucks experiencing punctures	% of trucks experiencing delays
24-Feb	1	0	1	0	1
25-Feb	1	1	0	1	0
26-Feb	1	3	1	1	1
09-Mar	1	0	2	0	1
22-Mar	1	1	1	1	1
24-Mar	1	2	1	1	1
29-Mar	1	3	0	1	0
05-Apr	1	6	1	1	1
11-Apr	1	2	0	1	0
27-Apr	2	3	0	1	0
10-May	2	1	1	1	1
24-May	2	5	0	1	0
27-May	2	0	1	0	1

		Average per puncture	Average per delay	% of trucks experiencing punctures	% of trucks experiencing delays
Round	1	2.00	0.78	78%	67%
Round	2	2.25	0.50	75%	50%

		Total number of punctures'	Total number of delays	Average time per puncture	Average time per delay
Round	1	18	7	6:22	14:58
Round	2	9	2	9:41	30:00

Appendix 51 Breakdown of total round-trip times into sub-components– Round 1 & 2

		TOTALS (in hours)							
Trip departure date	Round	Total net transportation	Total time due to punctures	Total time due to other delays	Total barrier time	Total loading time	Total collection time in Kikwit	Total selling time	Total round-trip time
24-Feb	1	25	0	3	24	17	184	14	268
25-Feb	1	58	2	0	18	18	133	53	285
26-Feb	1	23	26	240	7	18	129	63	508
09-Mar	1	70	0	72	20	64	44	31	303
22-Mar	1	71	2	1	7	22	74	18	198
24-Mar	1	22	24	24	13	36	38	19	178
29-Mar	1	92	22	0	4	13	140	87	361
05-Apr	1	101	31	4	11	8	150	29	335
11-Apr	1	88	6	0	19	39	61	7	223
27-Apr	2	37	24	0	22	72	70	34	261
10-May	2	29	24	12	26	48	75	135	351
24-May	2	70	39	0	6	17	184	47	366
27-May	2	40	0	48	25	50	170	106	440

	AVERAGES FOR ROUND 1 AND 2 (in hours)							
Round 1	61	12	38	14	26	106	36	295
Round 2	44	21	15	20	47	125	81	355
% difference	-28%	71%	-61%	43%	77%	18%	124%	20%

Appendix 52 Data behind value add in Round 2

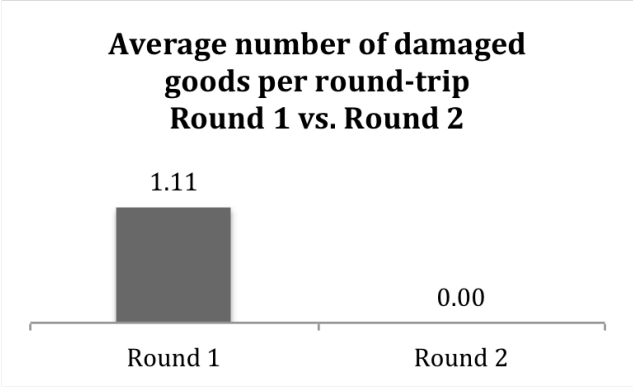
	Decision how to distribute the total			Do not change
Sub-component	Value-adding	Value-enabling	Waste	Total
Total net transportation time	44:27	0:00	0:00	44:27
Total time due to punctures	0:00	0:00	21:47	21:47
Total time due to other delays	0:00	0:00	15:00	15:00
Total barrier time	0:00	2:30	17:45	20:15
Total loading time	0:00	16:00	31:02	47:02
Total collection time in Kikwit	0:00	96:00	29:24	125:24
Total selling time	0:00	24:00	57:04	81:04
Sum	44:27	138:30	172:04	355:01
Round 1	61:30	138:30	95:50	295:50
Round 2	44:27	138:30	172:04	355:01
Round 1 (in %)	21%	47%	32%	
Round 2 (in %)	13%	39%	48%	

Appendix 53 Price overview of USD per bag of cassava from Jamaa Financial statements

Date	Price
15-Jan	48.9
08-Feb	45.1
17-Feb	39.3
24-Feb	44.7
25-Feb	39.8
09-Mar	32.4
11-Mar	33.6
18-Mar	34.4
22-Mar	36.7
29-Mar	34.1
05-Apr	35.8
14-Apr	29.0
15-Apr	31.2
23-Apr	30.9
23-Apr	32.9
29-Apr	30.6
07-May	27.1
19-May	31.5

Appendix 54 Damaged goods comparison – Round 1 & 2

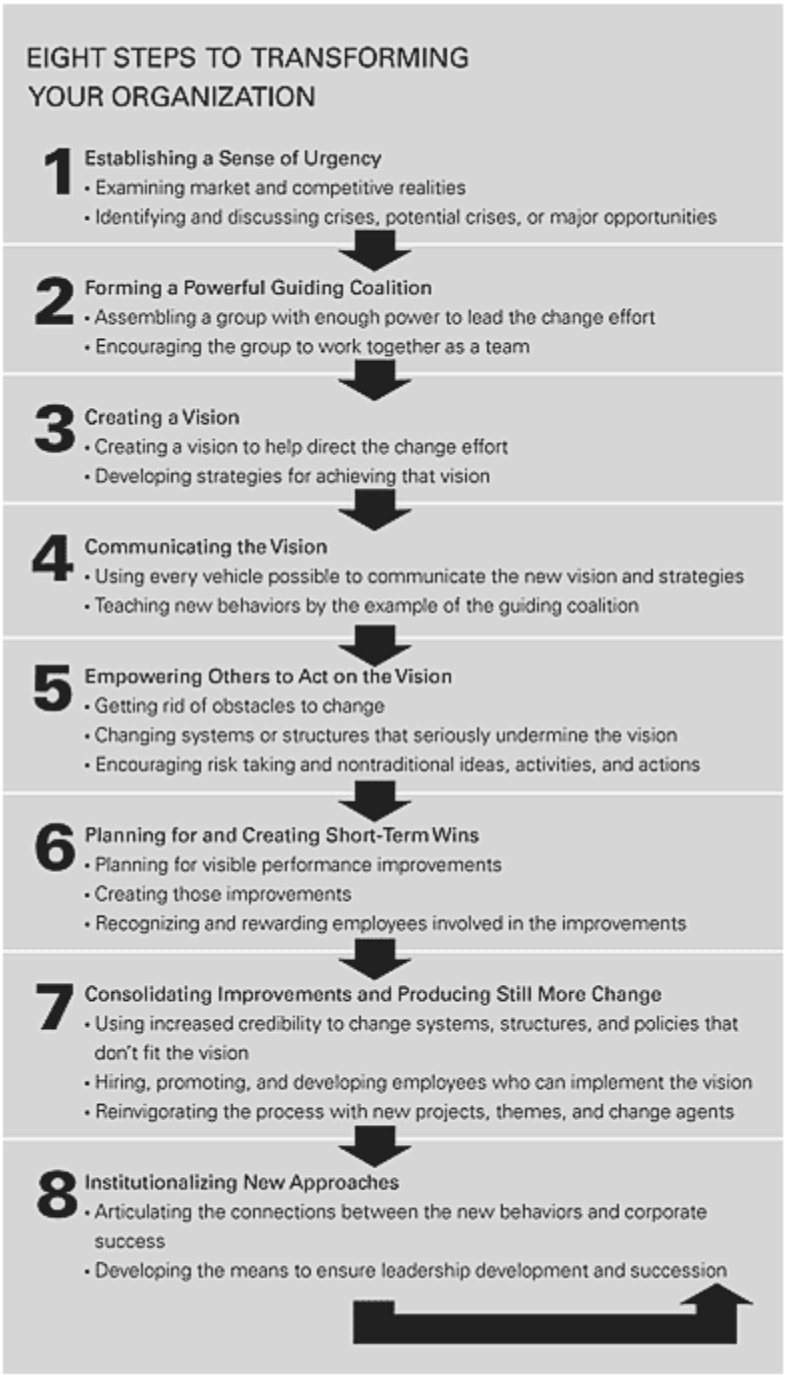
Damaged goods		
Date	Round	# damaged goods
24-Feb	1	8
25-Feb	1	0
26-Feb	1	0
09-Mar	1	0
22-Mar	1	1
24-Mar	1	0
29-Mar	1	1
05-Apr	1	0
11-Apr	1	0
21-Apr	2	1
10-May	2	0
24-May	2	0
27-May	2	0



	Damaged goods
Round 1	1.11
Round 2	0.00

Appendices Chapter 12: Future recommendations

Appendix 55 Kotter's 8-step model for managing change



Source: Kotter 1995 (Revised version from 2007)

Appendix 56 Measuring and Managing Social Return on Investment

Achieving a social impact is a key aspect of Jamaa's mission, and a bigger emphasis on measuring and managing social return on investment is thus crucial for Jamaa in the future. Currently, the organisation is focusing on ensuring financial viability. Once the future of the organisation is secure, however, Jamaa can begin focusing on managing social returns. Recommendations on how to measure social return on investment is presented in Appendix

This can be done in two main ways. First, *internal* measurements and benchmarks can be established, either through simple or more complex means. A simple way of measuring SROI would be by conducting individual case studies and village surveys on a regular basis (for example quarterly). This was done by the authors in February 2011, as shown in Appendix 27 on page 262. More complex and informative measurements can also be used, however. The general formula for measuring SROI is NPV of Social Impact divided by NPV of Social Investment Costs, which implies a larger amount of data and assumptions (Hockerts 2010). However, a great deal of relevant literature and best practices exist that can be leveraged. For example, Hubbard shows how "anything can be measured" if the right approach is taken (Hubbard 2010). Furthermore, Lingane and Olsen specify 10 specific guidelines to measure SROI (Lingle & Schiemann 1996), Nicholls provides a thorough guide to SROI (Nicholls et al. 2009), while Harvard Business School recently focused on the issue on their website (Hanna 2010). The internal measurements can be used to share best practices and guide strategic decisions and resource allocation in order to increase the social impact of the firm.

Second, *External* measurements and third party organisations are useful in providing best practices and giving credibility to Jamaa vis-à-vis external stakeholders. Organisations such as the OECD, The SROI Network, and REDF can give external certification to the assumptions and measurements reported by Jamaa, which will increase the integrity of the Jamaa "brand" (OECD 2011; SROI Network 2011; REDF 2011). Measuring SROI in a systematic manner will also allow Jamaa to widen its scope and address wider, indirect issues such as environmental impact, contribution to education, access to clean water, living conditions and so on. By looking at its wider societal impact in a structured manner and engaging with the villages and people whom it touches, Jamaa will be able to identify the areas where its total contribution to society are maximised.

Appendices Chapter 13: Wider implications

Appendix 57 Doing business in SSA

We will here briefly expand our focus beyond Congo and look at 9 contextual factors of doing business in SSA, in order to test if our work could be applicable in a broader SSA-context.

i. Using Sub-Saharan Africa as defined wider area

In order to determine where the findings of this thesis could be applied, the authors investigated if it could be relevant to expand the scope to a broader base of countries. First, we examined the three Regional Economic Communities[50] (RECs), in which Congo participates under the umbrella of the African Union (Masson 2008, p.536). As Møller notes, the RECs are very inharmonious and some members have even been at war. As such, the RECs do not represent a more homogeneous group of countries, and this grouping might as well therefore be abandoned in favour of the larger Sub-Saharan Africa (SSA) area (Møller 2009, p.1). Despite the larger area, the countries within SSA, excluding South Africa, are often identified as being somewhat similar in international contexts (International Monetary Fund 2010; Ratha et al. 2008). The authors agree that the countries within SSA share similar characteristics, although it is also acknowledged that national and regional differences exist. Some scholars oppose the idea of the generalisation of "Africa" as a homogenous entity, for instance Kamoche (Kamoche 2007, p. xvii). While the authors accept Kamoche point to some extent, the authors still propose that the wider implications and knowledge generated through this thesis are somewhat applicable within the wider Sub-Saharan region, excluding South Africa, although it is certainly necessary to take national, regional, cultural, historical, and religious differences into account (Møller 2009).

ii. 9 contextual factors of doing business in SSA

Within our defined SSA area, the business environment is very challenging due to deficiencies within the following nine challenging areas of SSA.

[50] Respectively, Common Market for Eastern and Southern Africa (COMESA), Economic Community of Central African States (ECCAS), Southern African Development Community (SADC) (Masson 2008, p.536)

First, the economic development perspectives look good for some countries with GDP growth rates above 5% (Simon Johnson et al. 2007, p.1). There are large opportunities for both Western and Asian firms if they are able to capitalise on this forecasted growth.

Second, unemployment rates are double digit figure in roughly half the countries (OECD & AfDB 2010, pp.272-273), making it easy to for employers to find labourers, although wages are relatively high, making very-labour intensive production less cost-efficient than in Asia. Furthermore, the level of education in these workers is comparatively modest, see point 7.

Third, the political environment was regionally the second-worst in the world according to Freedom House's Survey for 2011, in which 81 % SSA nations were classified as only "partly-free" or "not-free"[51]. In comparison, only the Middle East did worst with a total of 95 % of the countries (FreedomHouse.org 2011, pp.22-23). For successful foreign firms, they need to understand the political scene in these countries and accept that many things will be different. Establishing a long-term relation to public officials may be necessary and potentially very helpful. Ideally, firms should furthermore have clear guidelines on how to handle sudden political changes and have back-up plans in such cases.

Fourth, in terms of business legislation, SSA nations are noticeable by being the 9 lowest-ranking countries on the World Bank's Doing Business report (World Bank 2011, p.4). As the point above, foreign firm-owners will have to accept impeding laws that they may be unaccustomed to in their own home country. One way to counter this would be to hire local experts and rely on them to deal with legal complications.

Fifth, corruption is rife, as SSA nations are 10 of the last 20 lowest ranking countries on Transparency International's Corruption Perceptions index (Transparency International 2010). As mentioned before, for successful foreign firms, firm owners need to understand the context of corruption in these countries and accept that many things will be different. As Mtafifikolo mentions *"[For most public servants, their wages are]…insufficient to proper feed and clothe the average size household. Consequently, public servants resorted to extensive*

[51] A "partly free" country is one in which there is limited respect for political rights and civil liberties. "Partly free" countries suffer from an environment of corruption, weak rule of law, ethnic and religious strife, and a political landscape in which a single party enjoys dominance despite a certain degree of pluralism. A "not-free" country is one where basic political rights are absent, and basic civil liberties are widely and systematically denied (FreedomHouse.org 2011, p.3).

moonlighting and other unofficial (often illegal) activities to supplement their incomes (Mtafifikolo in Kamoche 2007, p.76)

Establishing a long-term relation to public officials may be necessary and potentially very helpful. Ideally, firms should furthermore have clear guidelines on how to handle requests for bribery, and make clear how much "lubrication" the firm is willing to accept. The issue of corruption should not be underestimates, as Kamoche also points out "*…corruption has been mentioned as often or more often than poverty and unemployment as the single most important issue facing the economy"* (Kamoche 2007, p.88).

Sixth, infrastructure has suffered seriously due to corruption and wars, as for example only 12.5 % of roads are paved in SSA, compared to 78% in South-East Asia and 90% in the OECD (Iwanow & Kirkpatrick 2009, p.1041). Still, mobile phone networks are expanding rapidly in these countries. This naturally affects the firms' capabilities in terms of transportation both up-stream and down-stream, but still firms can try to exploit the expansion of mobile networks. Again, these circumstances needs to be taken into consideration from a very early stage, and the business plan should be based on the current poor levels of infrastructure.

Seventhly, higher education is still largely unavailable as only 5% of the people in SSA attained secondary degrees compared to 20% in the Middle-East and 70 % in the Western world (Bloom et al. 2006, p.3). SSA also suffers from a severe brain drain, as many of the educated Africans move to Europe and the US in pursuit of a better life. As an example between 10-30% of physicians in SSA actually leave SSA (Mullan 2005, pp.1814-16). This means that well-educated labour is scarce and, as natural supply-demand relation tells us, comparatively expensive. Therefore, the business should expect that well-educated employees will be hard to attract and keep, and the organisation should ideally be flexible enough to endure large employee churns.

Eighth, in their seminal paper, Lopez and Murray found that the life expectancy in SSA is the lowest in the world, being a mere 55 years old, as even curable diseases tend to wither away the people in SSA (Murray & Lopez 1997, p.1499). This means that the firm should plan with significantly earlier retirement ages for its senior staff, but also that the orientation of the employees may be more short-term, as there is no or little retirement to look forward to.

Ninth, in terms of cultural aspects, SSA is dominated by cultures with high level of collectivism and high power distance in between people (Brooks 2003, pp.270-273). This may cause employees not to speak up, come up with ideas, as they are simply afraid of their superiors. It may also make decision-making and negotiations slower and more complicated, as it is necessary to obtain consensus for major issues (R. Lewis 2006). Finally, in some cases individual bonus schemes should be replaced by group or organisation-wide compensation schemes.

In conclusion; although there are some differences between Congo and the larger SSA region, we believe that there are significant similarities as well, such as significant economic growth coupled with high political corruption and poor infrastructure on top of extremely impoverished, social conditions in collectivistic cultures dominated by high power distances. So although the contexts differ somewhat across SSA, it is clear that there are strong contextual factors that are relatively similar, and needs to be taken into consideration. In this sense, the authors believe to have provided at least some preliminary findings on the some similar characteristics of doing business in SSA compared with Congo, although much more research is needed.



"What I have found is that everything in Congo is random, nothing is consistent. It is one of the most frustrating places to do business in the world."

Ryan Shepherd
CEO, Jamaa Enterprises