TECHNICAL EDUCATION IN DEVELOPMENT

Internal and external factors influencing the sustainability of a technical institute in Ghana

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PREFACE

I will never forget the experiences I had during my internship in the past year. I learned how to conduct research, how to act in a business environment, how to behave in a different culture and how to strike a pose amongst private and business relationships. This is the beginning of a new (working) life and even though I know there are still a lot of things for me to learn and hopefully a lot of new experiences lie ahead, this will always be my first experience in the field of project development in Africa. This will remain the basis for my enthusiasm for this field of work. This experience confirmed my love for Africa and I hope to do a lot of other projects in the future!

Of course there are some people who I would like to thank for their help and care during the past year. I would like to start with Vlisco and all of the employees that took the time to share their experiences of Ghana, who accompanied me during the feasibility study in Ghana and always took the time to listen to me when I lost my drive. There are a few persons in particular that I would like to thank. In the first place, my supervisor Kees van Heijst who always gave me the freedom to do my own things. Next to that, he shared his experience, knowledge and ideas about things, not only directly related to the project. I have learned a lot from him.

The second person for me to thank is Marjanne Brill, the only woman on the department where I was stationed. I could always come to her for help, she helped me to be positive about my actions and she was always sociable and pleasant to chat with: thank you! Other persons of importance were Goof Roosen, who unfortunately retired in July 2004, but before his retirement devoted a lot of his time to the technical schooling project and Joop Martens who is an expert in the field of education and culture in Ghana. For the time in Ghana, I would like to thank Gerard van Damme who did his best to help me and listened to all of my experiences and always reacted enthusiastic, even though he was very busy.

INGRIN not only provided me a very suitable case, but the people working there like Robert van Weldam, Piet Kwak, Jaap Ronday and Ruud Groote Schaarsberg were always very welcoming and open about their experiences. Thank you all very much!

My supervisors at University, Bart Jan Pennink and Luchien Karsten share my enthusiasm for Africa and Vlisco and even took the effort to travel to Helmond in order to meet Kees van Heijst and see the factory. I think this characterises our

relationship as well. Their shared enthusiasm, next to the professional support I got from them supported me a lot.

I would like to thank my family and especially my sister Marieke who took care of me in the last weeks of writing this thesis. She examined my thesis, prepared tea and meals and motivated me to continue writing at moments I would have loved to do anything except for writing this thesis.

Last I would like to thank Dioni, my boyfriend, who has had a very difficult year himself but still took the effort to support me as well. You are the best, that's for sure!

Saskia Bosscha,
February 2005

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INTRODUCTION AND ORGANISATION OF THE RESEARCH

CHAPTER 1

INTRODUCTION

The sustainability of development projects is one of the themes that is discussed a lot at the moment; education in developing countries is a topic where sustainability can play an important role. A lot of institutions and organisations are working to provide a basic education for everybody in the world, before 2015. Here the focus only lies primarily on basic education and not on secondary or even tertiary education. Although there is a big need coming from the manufacturing companies in developing countries for practically educated technical students, the part in the schooling system were students are educated with technical, hands on skills is underdeveloped. In Ghana, were the focus of this research lies, it can be said that one of the main causes for this underdevelopment can be attributed to the lack of resources within the technical institutes. This brings about that it is hard to find well educated technical employees with hands on experience. A solution for this problem could be if the manufacturing companies assist the technical institutes with the required resources in order to upgrade this sector. When assisting in this way it is important to keep this sector upgraded, in order to create life long effects. One of the questions that comes to the fore is what factors influence these life long effects. *This research focuses on assessing the factors that influence the sustainability of a technical institute in Ghana.*

In this chapter the mainspring for this research will be outlined, which includes the accomplishment of the project in which I'm involved, a company profile of the principal and a short outline of the project.

1.1 ACCOMPLISHMENT OF THE ASSIGNMENT

In December 2003 a conference on partnerships for sustainable development[1] was organised in The Hague. This was a following up on the Johannesburg summit in 2002, the world summit on sustainable development. The conference in The Hague was primarily focussed on Dutch public and private organisations that are willing to cooperate in projects that contribute towards sustainable development.

I attended this conference because of my interest on this subject and hoped to meet some companies who are willing to hire me as an intern in order to graduate. One of the participants of this conference is Mr. Van Heijst, who is the Chief Technology Officer of Vlisco Helmond B.V. Vlisco Helmond B.V. is part of the Vlisco group which produces African cloth in the Netherlands, Ivory Coast and Ghana, for the West African market. Mister van Heijst attended this conference because of the problem they face in Ghana, finding good middle level technicians to work in one of their factories in Ghana, named TexStyles Ghana (TSG). In order to solve this problem, TSG has endeavoured several times to enrol courses in general knowledge as well as technical knowledge provided by internal and external trainers. But for several reasons, like a lack of educational background knowledge of the employees, different cultural background and too littie follow-up training, these initiatives were not successful in solving this problem for the long-term. This was the reason for Vlisco to search for other more sustainable solutions for this problem. A solution could be to set-up a technical institute in Ghana that this in this request.

At the moment of this conference Vlisco was already in conversation with differing consulting agencies in order to see if there are possibilities of setting up a technical institute in Ghana, together with other large production companies. Concrete arrangements with the Society and Enterprise Foundation (in Dutch Stichting Maatschappij en Onderneming, SMO), a Dutch knowledge centre that plays an active role in the dialog between the public and the private sector, were made in January/February 2004. These arrangements included to do a feasibility study in

[1] The most widespread definition of sustainable development is the one presented in the *Bruntland Report* (1987):

> Under lasting/sustainable development we understand a development that meets the needs of today's generation without jeopardizing the opportunities of future generation to satisfy their own needs and to choose their own lifestyle.

Ghana in order to find Out the needs of other companies and the willingness to set-up a technical institute. Next to that SMO will be in charge of seeking out the possibilities of public funding for this project. In March 2004, I was hired as an intern by Vlisco to assist in this project as well.

To create a clearer view on the principal and the activities they explore the next section includes a company profile of the Vlisco Group and the Gamma Holding, of which Vlisco is a part.

1.2 COMPANY PROFILE

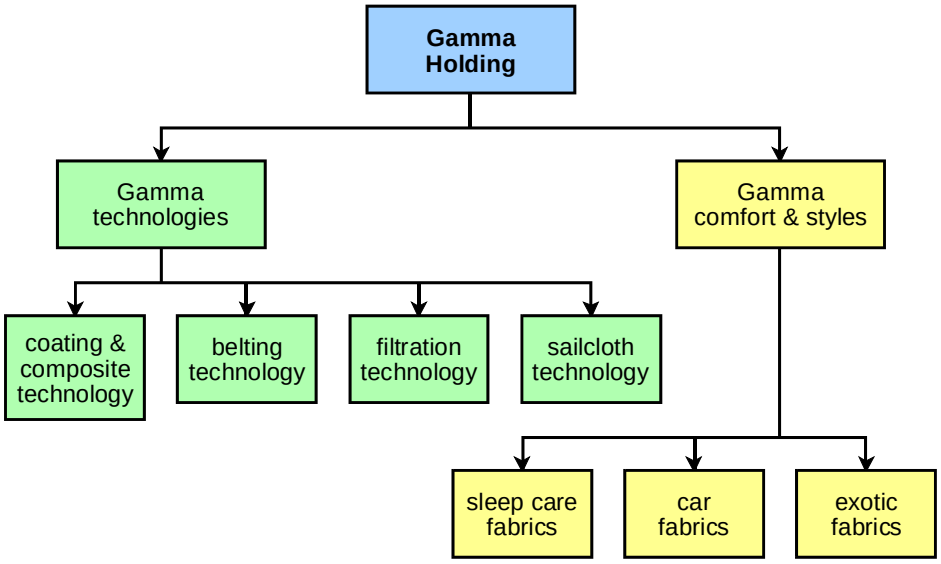
In this section an overview of the activities and the structure of the principal Vlisco will be given. Vlisco is part of Gamma Holding. This is the reason for introducing Gamma Holding first, in section 1.2.1 and secondly outlining the structure of the Vlisco group in section 1.2.2.

1.2.1 Gamma holding

Gamma Holding develops manufactures and sells innovative, high-quality textile-based products throughout the world. It has 163 separate companies, in 35 countries, including 43 production facilities, with a total of 9.353 employees. The headquarters are located in Helmond and its shares are listed on EuroNext Amsterdam.

Gamma Holding comprises of two sectors, Gamma Technologies and Gamma Comfort and Style. These are made up of seven business units specialised in belting, filtration, coatings and composites, sailcloth technology, as well as sleep care, car and exotic fabrics. The company is a leading player in its selected niche markets. (Gamma Holding, Annual Report 2003). Exotic fabrics are the part where Vlisco operates its business. The organisation chart below clarifies this.

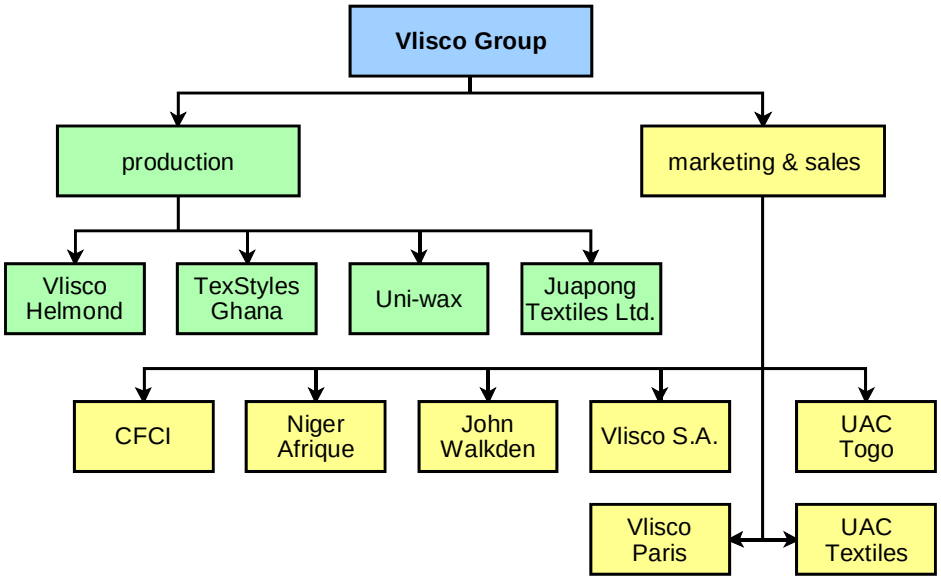
Figure 1.1 Organisation chart Gamma Holding



1.2.2 Vlisco Group

The Vlisco group produces printed fabrics for the African market for more than 150 years. The Vlisco group consists of a production and a sales unit (see organisation chart below). The head office and the production facilities for Vlisco-branded products are located in Helmond. Next to this production facility prints are produced in Ghana (Texstyles Ghana Ltd., TSG) and in Ivory Coast (Uniwax S.A.). Next to printing the cloth, another production company in Ghana (Juapong Textile Ltd.,) produces grew cloth in its Juapong-based spinning and weaving mill. GTP is a major buyer of this high-quality cloth. By far the largest proportion of textile prints produced within the Vlisco group are distributed by it's own sales offices in Africa: CFCI (Ivory Coast), John Walkden and Cie (Benin), Niger Afrique (Niger), UAC-Textiles (Ghana), UAC-Togo (Togo) and Vlisco South Africa (South Africa). Next to that Vlisco also has its own sales offices in Helmond and Paris. Vlisco has a total workforce of roughly 3.500 people; three-quarters of them are employed in Africa. TSG, having the biggest problems finding qualified middle level technicians, employs 700 people. Below an organisational chart of the Vlisco group is drawn.

Figure 1.2 Organisation chart Vlisco Group



1.3 SHORT INTRODUCTION OF THE PROJECT

From the head-office of Vlisco in Helmond the initiative has been taken to investigate the possibilities of setting up a technical institute together with other companies in Ghana that can fulfil the needs of middle level technicians for TSG. As mentioned in section 1.1, a feasibility study in Ghana is conducted in April 2004 to research the feasibility of setting up a technical institute (or upgrading an existing institute) together with other manufacturing companies in Ghana. This research was carried out by an independent consultant working for SMO, mister Vergeer, and myself. The project is, as part of a larger education project in West-Africa, proposed to the Dutch Ministry of Foreign Affairs, to get financial support, and is submitted with a subsidy from the Public Private Partnership (PPP) program. The goal of the project is to set-up a technical institute in Ghana that educates students into well educated middle level technicians which have a lot of hands on experience. This should cover part of the personnel requests of middle level technicians of the manufacturing companies that are producing in Ghana.

For the set-up of this technical institute two options still exist:

1. Cooperating with a local technical institute and upgrading this institute to a proper level which fits the requests of the manufacturing companies or
2. Building a newly established technical institute without cooperating with an existing institute, i.e. start from scratch.

When reading this thesis, it should be beard in mind that both options are still open to be executed. Next to that, a distinction should be made between the set-up of the institute (the project-assistance phase) and the phase where the technical institute starts running (the post-assistance phase).

1.3.1 My role in the project

The reason for hiring me was, in the first place, to help with the feasibility study. My supervisor at Vlisco, Mr. van Heijst, gave me the freedom to decide on my own what the subject for my thesis will be. I am very interested in the problems developing country's face and in the way businesses can assist in supporting development projects to solve these problems. When reading trough the literature about this subject, I realised that development aid is only useful when it has a sustainable character. Evaluation research shows that many projects, even executed by large organisations like the World Bank and the United Nations, who put great emphasis on supervising its projects, do not always have a sustainable character[1] (Stockmann, 1997, p. 19). This can be explained by many factors. When reading a bit more on this subject I discovered that the sustainability[2] aspect of development aid is a very hot topic, but not much literature is available yet about what factors influence the sustainability. Next to that there is no clarity about the meaning of this concept. Because I'm very interested in working in the development field, were the

[1] Projects that have a sustainable character create long term effects, if not, evaluating projects after the donor-assistance has ended this weakens the account for sustainable results.

[2] The term sustainability originally comes from the language of forest managers, who in the eighteenth century already raised the demand that forest use be limited in such a way as too not impair the forest's ability to reproduce itself. (Stockman, 1997, p. 25) In the context of the technical institute in Ghana, sustainability refers to the ability of the institute to maintain itself and to guarantee long term effects.

sustainability contains a critical criterion of success when executing projects, I think it's a challenge to search for information on this subject. Therefore, the sustainability of this educational project is the focus of this research.

CHAPTER 2

RESEARCH SET-UP

In this chapter an introduction of the problem will be given in section 2.1. The problem definition will be laid down in section 2.2, including the goal and the central question of the research. Section 2.3 provides the theoretical framework that is used to answer to research question. This includes the conceptual model and the underlying theories, resulting in a number of sub-questions in section 2.4. In section 2.5 the structure of the thesis will be described.

2.1 INTRODUCTION TO THE PROBLEM

If education is the solution, what is the problem? (Sterling, 2004, p. 7)

Finding and retaining qualified technical employees in Ghana that have a hands-on mentality is a problem for TSG and other manufacturing companies in Ghana ever since new technologies are brought into the country. This problem appeared since technologies that are used in the manufacturing companies are upgraded throughout the years, but the technical institutes, that serves the industry with technicians, has not moved forward. The problem of not having qualified technicians specifically arises when machines break down or when maintenance jobs have to be done. Vlisco tried to solve this problem[1] by sending teachers to Ghana and by selecting and hiring only people with a diploma, but these and other options did not solve the problem in a sustainable way. One of the results of this problem is that every year during the production stop at TSG employees from Vlisco in the Netherlands fly over to Ghana to assist in the overhaul. Of course this is no sustainable solution for the problem but only an answer to the problem.

[1] When saying Vlisco, I mean Vlisco in cooperation with TSG.

The Government of Ghana (GOG) also acknowledges the problems faced by technical and vocational education and training (TVET) sector in Ghana. This sector has not received the attention it deserves to enable to contribute effectively to national human resource development for years. This is particularly vital for establishing a productive and skilled workforce for Ghana's development (Sarpong, 2004, p. 6). The technical education is regarded as being out of date and not responding to the demands of the labour market. Since 1994 the Government of Ghana is working on this problem, but due to a lack of money and a lack of decisiveness nothing happened yet to actually upgrade the technical and vocational training sector (Congress on technical and vocational training, Accra, May 2004)[1].

To overcome this problem, Vlisco wants to set-up a technical institute that better fits the needs of the manufacturing companies on a sustainable basis. To find Out if other companies face the same problems and are willing to cooperate in this project a feasibility study was conducted in April 2004. The results show that a lot of other companies are welcoming this initiative and are willing to participate in this project.

Setting up a technical institute in Ghana is not an easy process, since it requires a lot of money and organisational competences to accomplish this, whereas it is not sure that this is a sustainable solution for the problem. A sustainable project in this context means: "If it is in the position to guarantee an appropriate level of benefits for an extended period of time following the end of financial, organisational and technical aid" (Stockmann, 1997, p. 27). For this project this entails that the output of students of the technical institute is of a proper number and fits the requests of the manufacturing companies in the future. When going trough the titerature it became more and more dear that, if projects are focussed on long term effects or development, it is important to know which factors are of influence on the sustainability in order to cater to these factors. Fortunatety a lot of money has been spent on development projects, but unfortunately surprisingly little is known about how projects are sustained after the end of the initial phase in which the donor was active. Stockmann (1997, p. 1767) describes this as follows; the same picture emerges from all those national and international donor organisations about which

[1] This congress was attended in May 2004 during the feasibility study. The major subject of the congress was by what means the TVET sector could upgrade itself. One of the major criteria to accomplish this is that the different Ministries that have a stake in upgrading the TVET sector should cooperate which each other.

information is available: “There is often very extensive monitoring of foreign aided projects during the period of implementation, but there is much less evaluation of how well they operate, how effectively they are sustained, and to what extent they produce the intended impacts”. Therefore, I think it’s a challenge to investigate the literature written about this subject and interview stakeholders of the future technical institute about their view on sustainability in order to give an advice to Vlisco concerning their strategy of setting up the technical institute. Taking this in mind, an important role on the sustainability wilt be attributed to the internal and external factors that are responsible for a long-lasting project-implementing organisation.

To explicate the relation between the parties involved in this project their roles will be clarified on the basis of a short analysis (Jonker and Pennink, 2000, p. 6). Vlisco Helmond B.V. is the problem maker in the sense that they placed the problem on the organisational agenda. The technical staff, including the technical director (Mr. van Damme) of TSG are the owners and persons involved in the problem. The parties involved in solving the problem are the consultants involved in this project, the participating manufacturing companies and the public sector (schools and government).

2.2 PROBLEM DEFINITION

In this research the focus will lie on the sustainability of the project (i.e. the set-up of the institute) and the future technical institute and which internal and external factors, like the organisational elements of the technical institute, the stakeholders and the external conditions, exert influence on and are responsible to preserve this sustainability. Here a distinction should be drawn between the project, as a clearly defined task of setting up the institute (project-assistance phase), and the technical institute, that starts operating when the project is finished (post-assistance phase). The reason for choosing this theme is the importance of the sustainability of the project for all parties (the manufacturing companies, the employees of the school, the students etc.), considering the long term effects of the project.

2.2.1 Research objective

Elaborating on this problem definition the following research objective is formulated:

Research objective: *To advise Vlisco on relevant factors concerning the sustainability of the technical institute in Ghana, in both the project-assistance and the post-assistance phase.*

This needs some further explanation. The relevant factors will be divided into internal and external factors that are of influence on the sustainability of the technical institute. The technical institute is not yet present at the moment, therefore a distinction needs to be drawn between the project-assistance phase in which the technical institute will be set-up and the post-assistance phase, where the technical institute starts operating. This implicates that the advice to Vlisco will be given in two phases.

2.2.2 Research question

In order to fulfil the objective of setting up a technical institute in Ghana and designing it in such a way that it will sustain itself, it is necessary to answer the question what internal and external factors will influence the set-up and sustainability of the technical institute. When these factors are explicated, subsequently, they should be applied to the technical schooling project.

Therefore the following research question is constructed.

Research question: *What are the internal and external factors that exert influence on the sustainability of the technical institute in Ghana during the project-assistance and post-assistance phase and what is the role of the different stakeholders in this process?*

Explanation of the definitions as they are used in this research:

1. *Internal factors:* Parameters that can be influenced directly by the project team or the board of the school that are of influence on the sustainability.

2. *External factors:* Elements in the broader society that can influence the project results, but cannot be directly influenced by ourselves.
3. *Project-assistance phase:* Phase where the actual planning and implementation of the project takes place, i.e. the founding of the technical institute.
4. *Post-assistance phase:* Phase in which the technical institute starts running, when the project-assistance phase has ended.
5. *Sustainability:* When the technical institute is in the position to guarantee an appropriate level of benefits for an extended period of time following the end of assistance (Stockmann, 1997, p. 27), where the benefit can be indicated by the fit between the demand of the manufacturing company and the supply of the technical institute.
6. *Technical institute:* An institute that educates practically oriented students in mechanics, electrics and process engineering, on middle level
7. *Stakeholders:* any group or individual who is affected by or can affect the achievement of the technical institute (Freeman, 1984, p. 5).

To give insight in the theory used to answer the research question, the next section will include an introduction to the theoretical framework of this research, including the conceptual model.

2.3 THEORETICAL FRAMEWORK

In this section the major theories that are used in this thesis will be outlined shortly. In subsection 2.3.1 the conceptual model is presented, which is based on the impact model made by Reinhard Stockman (1997) and the system theory of control (De Leeuw, 1997). The theoretical framework will be explained more into detail based on the conceptual model below. Consequently in sub-section 2.3.2 the theoretical background of the thesis will be outlined. On the basis of this, 6 sub-questions are originated which will support in answering the research question. These will be outlined in section 2.4.

2.3.1 Conceptual model

This thesis focuses on the sustainability of the future technical institute in Ghana, and the underlying factors influencing the sustainability. The goal of this research is therefore to operationalise these factors, in order to give an appropriate advice to Vlisco. When the factors are operationalised they will be supported by a benchmark about the set-up of a graphic and media training institute in Ghana. Theories that served as a background for the conceptual model will be discussed below shortly before the conceptual model will be presented.

2.3.1.1 Impact model and model of diffusion

The set-up of this thesis and the conceptual models are partly based on theory from the book *"The sustainability of development cooperation"* written by Stockmann (1997). His study aimed to help rectify the lack of sustainability analyses. Therefore he developed a set of analytic instruments, based on a theoretical model that is suitable for the empirical evaluation of sustainability. The technical and vocational training sector was chosen as object of the study in the book of Stockmann, which corresponds with the object of the technical schooling project in Ghana. One model is specifically of importance for this thesis namely; the impact model. The impact model explicates the factors that have an impact potential on the sustainability, i.e. the internal and external factors that influence the project results.

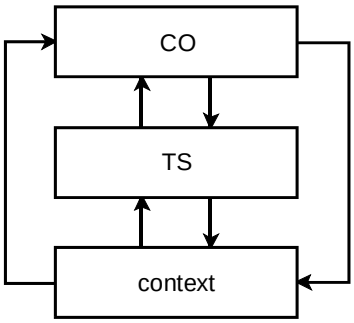
2.3.1.2 System theory of control

The system theory of control focuses on the way it can assist in the development of theory and the thoughts focussed on any way of directed influence on a target situation (De Leeuw, 1996, p. 107). Applying system theory of control on the sustainability of the set-up and operation of the technical institute in Ghana clarifies who is in control in what phase of the project.

One main concept of this theory, the so-called Controlling Organ (CO) Target System (TS) game, which will be applied in this thesis, requires some further explanation. The theory behind this game explains that control is the directed influ-

ence of events, regardless who is executing these tasks (De Leeuw and Volberda, 1992, p. 2). The CO-TS game forces researchers and managers to look at organ-isations as networks of Controlling Organs and Target Systems from a variety of angels. It is called a game because of the need to use the framework in a creative and playful way in order to enable the analyses of organisational phenomena from several contrasting or even conflicting points of view. In this project it is essential to focus on the changing position of the Controlling Organ, i.e. in the project-assistance phase the control is hands of the project team and in the post-assistance phase the control is in the hands of the board of the technical institute. Following this, the sustainability will be influenced by the controlling organ. CO and TS will be influenced by its context. The project team (CO) needs information from the technical institute (TS) and the environment (arrays that point upwards) in order to put in the control procedures (arrays that point downwards) to set-up the technical institute. When the institute starts operating the project team will be left out and CO will be replaced by a CO operating within the technical institute. This will be graphically presented in Figure 2.1.

Figure 2.1 CO-TS game



CO = controlling organ

TS = target system

source: De Leeuw and Volberda, 1992

In the following chapters the tasks of the project team and the characteristics of the future technical institute will be discussed, were, when possible, the CO-TS game will be played to see the interactions. This will be indicated by a box drawn at the end of each chapter.

2.3.1.3 Sustainability

Sustainability or the long term effects of the project can now be looked at from two points of view. On the one hand there are the decisions and steps undertaken by the project team in the planning and implementation phase that are of influence on the sustainability of the future technical institute. On the other hand there are the organisational elements of the future technical institute that determine for large part the sustainability of the institute. Since the sustainability of the technical institute is not a concept on it's own and therefore will be influenced by several factors ranging from the decisions taken by the project team, to factors coming from external environment, it needs to be clarified which specific factors will be of influence on the sustainability of the technical institute.

Linking this to the research objective it needs to be investigated what specific actions have to be executed by the project team and how the technical institute should be designed and controlled after the project team has fulfilled their tasks in order to preserve the sustainability of the technical institute. The project team and the technical institute do not stand on their own, but will subsequently be influenced by each other and by the context in which it all takes place. Next to that stakeholders will influence the control of the institute. These theories, together with a benchmark will lead to an advice for Vlisco about the factors influencing the sustainability of the technical institute. To clarify this, the conceptual model below has been drawn. The conceptual model depicted serves to illustrate the problem definition. This will be of help to organise and direct the data analyses in order to extrapolate the internal and external factors that influence the sustainability of the technical institute.

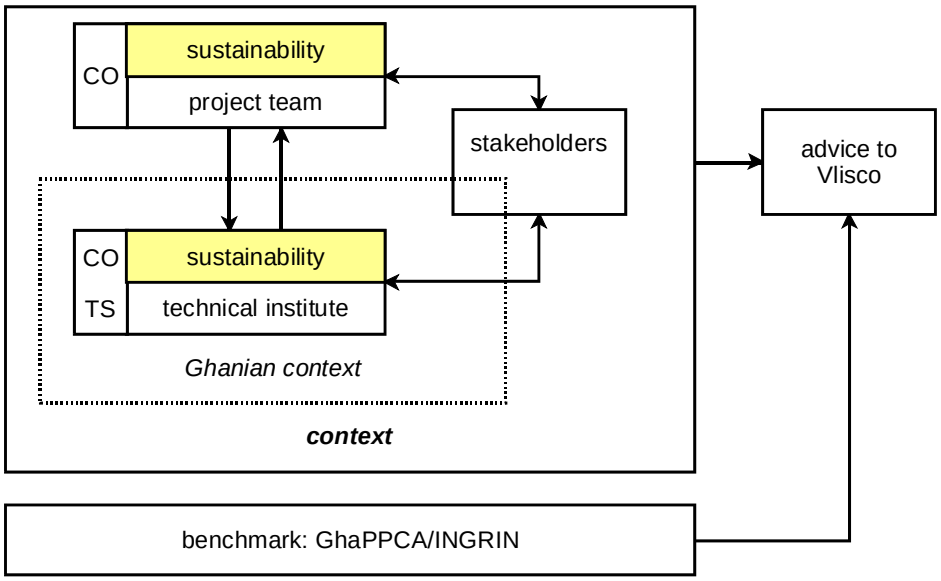
The contents of the boxes, including the link with other boxes will be outlined in the next subsection.

2.3.2 Theoretical background

In this sub-section the theory used in this thesis will be outlined. This will be done by explicating the content of all the boxes above, which serves as an outline for the total research. The variables that will be discussed are the project team, the context,

the stakeholders, the technical institute, the sustainability, the benchmark and finally the advice given to Vlisco.

Figure 2.2 Conceptual model



2.3.2.1 Project team

To gain an orderly view on the tasks of the project team, it is necessary to give some more insight with respect to the steps that have to be undertaken to set-up the technical institute. The tasks of the project team will be outlined on the basis of the project life cycle. One aspect of these tasks is that they should be executed in such a way that they will account for the future sustainability of the technical institute. In order to apply the concept of sustainability this should be explicated first, before going deeper into the tasks of the project team. In this thesis the conditions of the project will be described based on literature on the life cycle of projects, as presented in Stockmann (1997). This life cycle of a project specifically focuses on development projects. Within this life cycle a distinction has to be drawn between the project-assistance phase were the project team is active and the post-assistance phase where the technical institute starts operating on its own. Between the project-assistance phase and the post-assistance phase the controlling organ transforms

from the project team into the board of the technical institute. Therefore, the technical institute includes a TS and a CO in the box.

Obviously, the project team is being influenced by its context, the stakeholders and the target system, i.e. the technical institute. This leads to the first sub-question:

1: *What are the characteristics of this project during the different phases of the project life cycle and what role has the project team here in preserving the sustainability?*

2.3.2.2 Context

All projects are subject to the context in which it takes place. When not taking into account that the context is different in Ghana than in the Netherlands, the project will probably show some unexpected deviations. In order to provide inside in the context or the external factors that can influence the project's success or failure it is important to describe the project's context in a structured way. A distinction will be drawn between the Ghanaian context of the future technical institute and the Dutch context in which the project team operates, i.e. the context of the CO and TS.

"The general environment (context) is composed of elements in the broader society that can influence an industry and the firms within it" (Hitt, 1999, p. 47). These elements can be grouped into environmental segments called demographic, economic, political/legal, socio-cultural, technological and global segments.

As can be seen in the conceptual model above, the technical institute, the project team, the stakeholders as well as the sustainability of the technical institute are embedded in the (Ghanaian) context and therefore the context has impact on all of these variables. Subsequently the context will be influenced by the project. Here, the next sub-question comes to the fore:

2: *What are the characteristics of the project's context that can be of influence on the set-up and sustainability of the technical institute in Ghana?*

2.3.2.3 Stakeholders

Stakeholders are any group or individual who is affected by or can affect the achievement of a corporation's purpose (Freeman, 1984, p. 5). It is therefore important not to neglect these stakeholders but to identify them and take their influence into account. Stakeholder management focuses on overseeing relationships that are critical to an organisation's success (Savage, 1991, p. 62). In this research there will be a special focus on the stakeholders who give a positive input on the project and the technical institute, were the input can be divided into dear management tasks, financial inputs and technical assistance. In order to find Out who these stakeholders are, a stakeholder management process is carried Out with the central goal of identifying the different stakeholders. Next to the factor that some stakeholders are suppliers as well as customer of the technical institute, they are also an important factor that can trouble or stimulate results. Therefore, it is very important to actively involve them in the process of setting up the technical institute.

Accordingly stakeholders influence the project results and influence the operation of the technical institute and are being influenced by the context in which this all takes place. Together this creates the third sub-question:

3: *Which stakeholders can be distinguished and what are their roles during the set-up and operation of the technical institute in Ghana?*

2.3.2.4 Technical institute

Analysing the sustainability of the technical institute can only be done when there are features for assessing the sustainability on. Therefore it is essential to describe the constitutive features (organisational elements) of the technical institute. Constitutive features can be divided into three groups which are interwoven. The first one is the goal of the institute, the second one are the members and the organisational structure in which they are positioned. The organisational structure should be framed in such a way that it serves the goal of the organisation in an efficient and effective way (Paul, 1996, p. 62). The third element represents the resources which are required to fulfil the goal of the technical institute. This includes the technology

or the procedures employed in an organisation and the equipment used as well as the financial resources needed to keep the technical institute running (Stockmann, 1997, p. 84). These constitutive features will be designed by the project team and influenced by the context and the stakeholders. The sustainability of the institute will be evaluated by testing the effectiveness of these features in serving the goal of the technical institute.

As can be seen the technical institute is drawn at the centre of the conceptual model and will be set-up by the project team and influenced by the context and the stakeholders. Opposite to this the technical institute will have an impact on the context and the stakeholders. To outline the features of the technical institute the following sub-question should be answered:

4: *What are the characteristics of the constitutive features of the technical institute that exert influence on the sustainability of the technical institute?*

2.3.2.5 Sustainability

The final goal of this research is to define, in the form of an advice, which factors influence the sustainability of the future technical institute in Ghana and how to deal with them. Since there is a massive school of definitions on sustainability, an evaluation of the existing definitions is necessary in order to use this concept. Sustainability in its purest form means: “keeping an effort going continuously, the ability to last out and keep form falling” (Oxford advanced learners’ English dictionary). In order to provide some structure in the array of definitions, the categorical scheme developed by Elshorst (Elshorst in Stockmann, 1997, p. 74) proves useful, which proceeds on the basis of a “hierarchy of sustainability” (Stockman, 1997, p. 73). The sustainability will not be preserved without acting towards it, for that reason evaluation mechanisms are brought into life. Evaluation mechanisms assist to operationalise, register and evaluate:

1. the pre-existing structures and conditions,
2. the project interventions, and
3. the changes achieved in the individual phases of the life course of a project.

The conceptual model shows that the sustainability of the technical institute can affect the context, this are spin-off effects. Next to this it will exert influence on the stakeholders, the way they think about the results of the technical institute and they will subsequently act on that. To clarify this the following sub-question has to be answered:

5: *What is the significance of the sustainability of the technical institute and in what way can the sustainability be evaluated?*

2.3.2.6 Benchmark: GhaPPCA/INGRIN

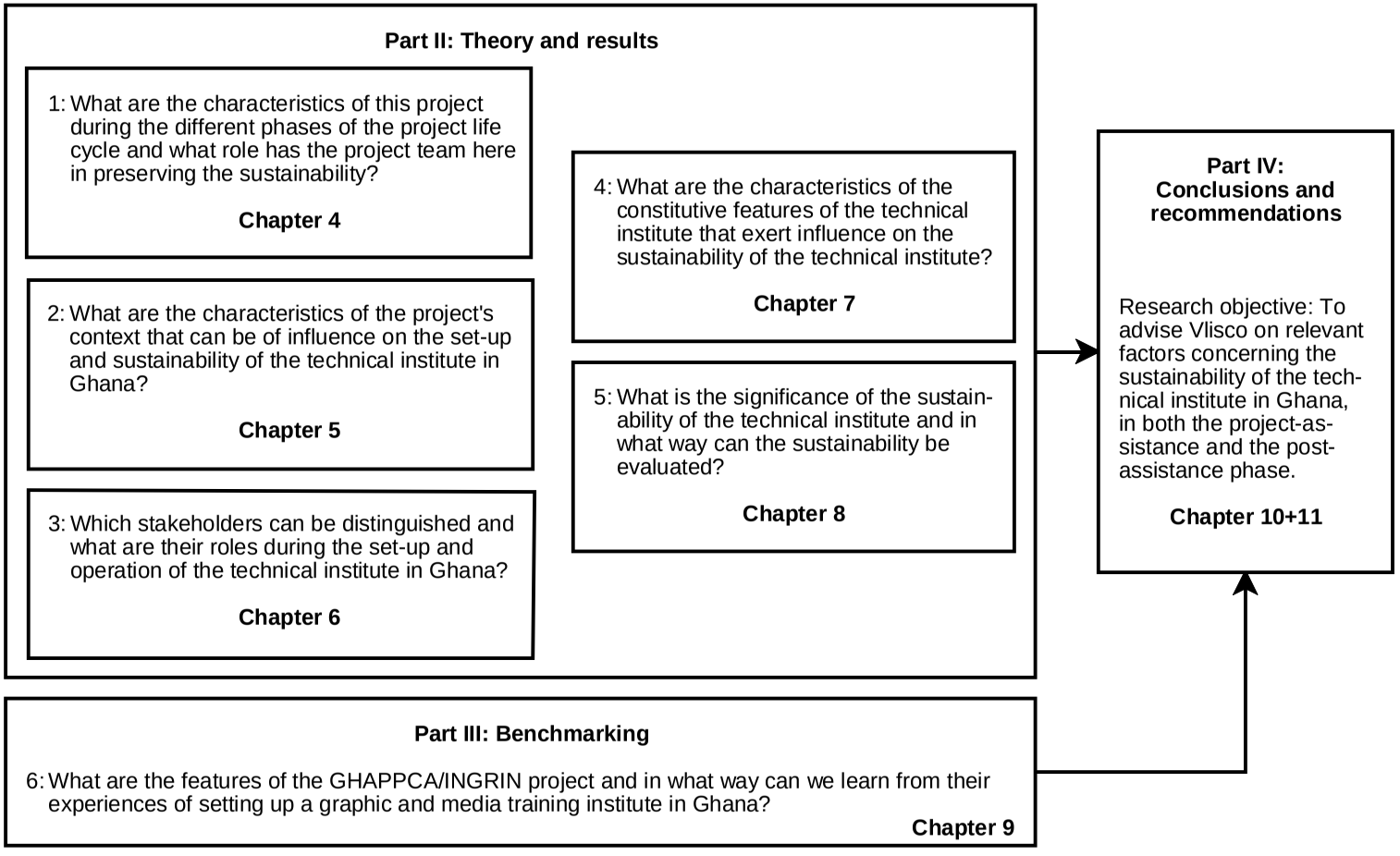
GhaPPCA/ INGRIN Graphic and Media Training

Next to explicating the features of the project and the technical institute a benchmark of the GhaPPCA/ INGRIN project is included which focuses on showing the best and worst practices of setting up a graphic and media training institute in Ghana. This serves to support the internal and external factors that came to the fore in this thesis in order to come with a more underpinned advice towards Vlisco. In order to cope with the training situation and needs in the graphic industry in Ghana, Ghana Printers and Paper Converters Association (GhaPPCA), in 2001, got in touch with the INGRIN Foundation NL to seek out the possibilities of setting up a training institute for the graphic and media branch in Ghana. This resulted in the now existing graphic and media training institute in Accra, the capital of Ghana. The graphic and media institute opened his doors in October 2004.

The project team will get the information about this case and this can be used as a benchmark for the technical institute in Ghana. Apart from that there are no direct connections between the technical schooling project and the benchmark. The benchmark will support the rest of the findings and will be taken along in the advise towards Vlisco. The sub-question involved with this benchmark is:

6: *What are the features of the GhaPPCA/INGRIN project and in what way can we learn from their experiences of setting up a graphic and media training institute in Ghana?*

Figure 2.3 Conceptual model of the sub-questions



2.3.2.7 Advice

The overall goal of the research is to advice Vlisco on the set-up of the technical institute and the sustainability thereof, by studying the features of the technical institute and its context and executing a benchmark. The factors influencing sustainability are taken into account. The advice for Vlisco is based on theory used, the findings of the field-research and the benchmark.

2.4 SUB-QUESTIONS

The sub-questions are outlined in a model (see Figure 2.3). The arrows function as information flowing from one box to another as well as actions that follow on the gaining of information. Insight is given into the structure of the report by outlining the chapter numbers in the model.

2.5 STRUCTURE OF THIS THESIS

This thesis consists of four parts.

Part I, consisting of Chapter 1, 2 and 3, describes the introduction of this research, including the set-up and methodology. In Chapter 1 the background of the research is outlined, with a short overview of the principal. In Chapter 2 the research set-up is outlined. This includes the problem statement, the conceptual model and the theoretical background of this thesis. In Chapter 3 the methodology of the research will be described, which will include the methods of data collecting and information needed to answer the research question.

Part II of the research consists of Chapter 4, 5, 6, 7 and 8. This comprises the theoretical framework as well as a description of the research results. Theory in this part is used to set-up the research, structure the research results, as well as support the research results. In Chapter 4 a detailed description of the project is being outlined. The different phases of the project will be discussed which give an overview of the different tasks of the project team. In this chapter the concept of sustainability is introduced as well. Because the features of the project and the factors

influencing sustainability are the major themes of this research they are introduced at the start of this part. In order to gain some more insight in the project's context, in Chapter 5 the context is outlined. A distinction will be made between the Ghanaian context of the future technical institute and the context from were the initiative is taken, namely the Dutch context. When the outline of the project and the context are discussed, the project's stakeholders are being identified in Chapter 6. Therefore a stakeholder analyses will be carried out with the use of a six-step stakeholder management process model. In this chapter the focus of the description of the stakeholders will lie on the preparation of a sustainable school, with a distinction between the stakeholders of the project team and the stakeholders of the technical institute. After the description of the stakeholders the constitutive features of the technical institute will be discussed in Chapter 7. This includes an outline of the goal, the members, the structure and the financial resources and the technology of the project. Finally in chapter eight the thesis will go deeper into the sustainability aspect of the project again. Sustainability will be divided into two parts: the first part consists of the activities that have to be executed during the project planning and implementation phase to ensure the satisfactory continuation of benefits once the investment phase is finished. The second part consists of the features of the technical institute that should preserve the sustainability of the institute. To make sure these two parts will be assessed well, an evaluation model will be outlined. Chapter 8 also serves as a concluding chapter of Part II where the results are gathered.

Part III of this thesis consists of a single chapter, Chapter 9, which includes a benchmark to support the findings of the research which are described in Part II. This will function as a comparative analyses of the findings from Part II. The benchmark describes the set-up of a graphic and media training centre in Ghana. This training centre is set-up with the help of a Dutch NGO, named INGRIN and Ghanaian companies active in the graphic and media industry. This benchmark will be described in order to learn from their experiences and support the findings as described in Part II.

Part IV consists of Chapter 10 and 11 and functions as a conclusion, including recommendations. Therefore in Chapter 10 the research question will be answered and an evaluation about the research will take place. In Chapter 11 the goal of the research will be fulfilled by advising Vlisco on the factors influencing the sustainability of the technical institute.

Table 2.1 The research questions and sub-questions

research questions	answer in chapter
What are the internal and external factors that exert influence on the sustainability of the technical institute in Ghana during the project-assistance and post-assistance phase and what is the role of the different stakeholders in this process?	10
sub-question	
1. What are the characteristics of this project during the different phases of the project life cycle and what role has the project team here in preserving the sustainability?	4
2. What are the characteristics of the project's context that can be of influence on the set-up and sustainability of the technical institute in Ghana?	5
3. Which stakeholders can be distinguished and what are their roles during the set-up and operation of the technical institute in Ghana?	6
4. What are the characteristics of the constitutive features of the technical institute that exert influence on the sustainability of the technical institute?	7
5. What is the significance of the sustainability of the technical institute and in what way can the sustainability be evaluated?	8
6. What are the features of the GHAPPCAJ JNGRJN project and in what way can we learn from their experiences of setting up a graphic and media training institute in Ghana?	9

2.6 CONCLUSION

This chapter includes an introduction to the problem. The major problem of the principal is the difficulty they face in finding qualified middle level technicians in Ghana to work in one of their factories. To solve this problem Vlisco initiated the idea to set-up a technical institute in cooperation with other manufacturing companies in Ghana which fits the needs of the manufacturing companies perfectly. The founding costs of a technical institute are very high, therefore it is important to secure the sustainability of the institute. Subsequently the following research objective is formulated:

To advise Vlisco on relevant factors concerning the sustainability of their technical institute in Ghana, in both the project-assistance and the post-assistance phase.

The research question and the chapters in which they will be discussed are summarized in the Table 2.1.

The methods that are used for the data collection in order to answer the research questions are presented in the next chapter.

CHAPTER 3

METHODOLOGY

Before answering the question which research methodology to use it's important to issue the underlying choice of the data collection method (Saunders, 2000, p. 84). This will be discussed in section 3.1. In section 3.2 the strategy of research will be discussed, which includes a description of the data collection methods in sub-section 3.2.1 and the constraints that eventually restrict the research in sub-section 3.2.2. In section 3.3 a time schedule of the research is to be found and in section 3.4 a conclusion will be given.

3.1 NATURE OF THE RESEARCH

Different methodological approaches make different assumptions about their subject areas. This means that when people apply different approaches in practice, they have to proceed differently when trying to understand, explain, and improve business (Arbnor and Bjerke, 1997, p. 2). The appropriateness of certain approaches can be clarified by looking at the underlying problem that needs to be solved. That is the reason for outlining the assumptions underlying the goal of this research, in order to find the best way to do research in this subject area. First the research approach will be discussed and thereafter a description of the approach that fits the goal of this research, namely the qualitative approach will be discussed.

3.1.1 Research approach

The goal of the research is to advise Vlisco on relevant factors concerning the sustainability of the technical institute in Ghana, in both the project-assistance and the post-assistance phase. This means that the goal is not to contribute to scientific knowledge, but to answer the specific question of Vlisco. Next to that, it is a uni-

que project which can not be perfectly generalized to other educational projects. Therefore this research doesn't aim at building a general theory for setting up schools but aims at capturing the rich complexity of setting up a technical institute, in order to give advice to Vlisco about the set-up of the technical institute in Ghana. This entails that in contrast to pure scientific research the set-up will be different. Especially the use of theory will be different. In the process of this research the researcher will first use theory to set-up the research, this can also be indicated as sensitizing concepts. When I felt confident with these concepts, based on background theory, the interview schedule was drawn up and the actual gathering of primary data could start. After this data was gathered, more theory was used to structure the outcomes of the data collection. Therefore in this research, theory will also be used to structure the research and to support the findings. Concluding it can be said that no quantitative analyses will be executed, but the focus lies more on capturing all kinds of qualitative information and ordering this information. This indicates that the qualitative approach of data collection and processing is being used.

3.1.2 Qualitative research

Denzin and Collin (1994, p. 4) describe qualitative research as follows: the word qualitative implies and emphasis on processes and meanings that are not rigorously examined, or measured, if measured at all, in terms of quantity, amount, intensity or frequency. The final goal of this research is subsequently not to test certain theories but to develop a theory which can support the set-up and operation of the technical institute in Ghana on the aspects influencing sustainability. Therefore this research fits the fundamental idea of qualitative research. From another perspective it can be said that qualitative research stresses the way in which data is gathered. In this research data collection entails taking open en semi-structured interviews in order to acknowledge the factors influencing the sustainability. From this point of view qualitative data are detailed, concrete, non metric descriptions of people and events, drawn from direct observation, interviews, case studies, historical writings and the writing of participants (Wester, 1991, p. 4). This research fits the qualitative approach because the knowledge created in this research can only be gathered 'trough the eyes of the researcher' which is me (Jonker and Pennink, 2000, p. 101) and not trough the eyes of others.

3.2 RESEARCH STRATEGY

The research strategy is a general plan of the actions that have to be undertaken before answer can be given to the research questions. Therefore the data collection method will be discussed in sub-section 3.2.1 and the constraints in section 3.2.2.

3.2.1 Data collection methods

The process of data collection has gone trough different stages. In the first stage much information about the project was gathered by studying the literature and interviewing several employees of Vlisco in order to gain insight in the problem area. After a month of exploring and researching quite some persons from Vlisco have been interviewed about knowledge transfer and culture in Ghana, because the transfer of knowledge is the basis of this project. For me the problem definition was dear: “in which way should the employees of TSG be trained in order to get to the level needed to do maintenance and repair work in a proper way?”

In the second stage of the research I went to Ghana for the first time and it became dear that the project of setting up a technical institute seemed viable. That’s the reason for changing the problem definition into one more related to the actual execution of the project. Consequently the subject of research was changed into the sustainability of the project and factors influencing this sustainability. The following data sources have been used for this research. There are two techniques for data collection: (Arbnor and Bjerke, 1997, p. 224) using material previously collected (secondary data) or collecting new data (primary data).

1. ***Secondary data***
   - *Literature:*
     Literature is used for the set-up of the research as well as to support in structuring the primary data. The literature I used deals with project management, stakeholder management, the context, sustainability and organisational elements etc.
   - *Articles:*
     Articles about the subject of this research, i.e. the same use as the literature.

- *Reports:*
  Reports on running projects in Ghana, on INGRIN projects etc.
- *Internet:*
  Websites about Ghana, sustainability and evaluation mechanisms from the World Bank and the OECD etc.
- *Internal documents:*
  Annual reports, staff magazines etc.

2. ***Primary data***
   - *Interviews:*
     Several managers who can give financial, managerial and technical support were interviewed about stakeholders, the constitutive features of the technical institute and sustainability (more about this in the concerning chapters which will discuss the results). For the list of interview questions see appendix one and two, and to see who has been interviewed see appendix three. During the first visit in Ghana mainly unstructured interviews were held, this in order to get an understanding of the context and the stakeholders of the project. When visiting Ghana for the second time semi-structured interviews were held, aimed at obtaining information to assist in answering the research question. This time the interview schedule is used, as can be seen in Appendix 1 and 2.
   - *Observations:*
     During formal meetings on the subject and during conferences in which I participated.

The Table 3.1 gives an overview of which data sources have been used to answer which question.

3.2.2 Constraints

The following constraints were of influence during this research:

1. *Access to data and location:*
   Much of the data could be found in the Netherlands, but to collect data about the stakeholders this will not always be easy because half or more than half of the stakeholders are located in Ghana.

Table 3.1 Overview methodology

question	subject	data source	desired answer	chap-ter
reseach question	factors influencing sustainability	- all sources	advice on the factors that influence the sustainability of the technical institute in Ghana and the way to deal with these factors	10
1	outline of the project	- literature - internet - reports	overview of the goals and general characteristics of the project	4
2	relevant description of the context	- literature - reports - internet	structured description of the external factors that are of influence on the project results	5
3	stakeholders	- literature - internet - interviews	overview of all relevant stakeholders and their roles	6
4	features of the technical institute	- literature - interview - internet	advice in the form of a possible structure for the future technical institute	7
5	sustainability	- literature - interview - reports	clarification on the concept, the way stakeholders think about it and what evaluation mechanism to put in place for measuring the sustainability	8
6	benchmark GhaPPCA/ INGRIN	- reports - interviews - observation	description of benchmark and best/worst practices to learn from	9

Although visiting Ghana twice, not all necessary information from the stakeholders is gathered because of the time pressure and the very busy schedule[1]. This brings about that this research is by far not exhausting, but aims at giving an overview of relevant factors concerning the sustainability of the technical institute. Subsequently although some aspects could be

[1] For the schedules of appointments in Ghana see appendix four and five.

described more into detail, this is not done because of the length and the goal of this thesis.

2. *Costs and time:*
   all of the costs for the study, including dormitory and travelling costs are being paid by Vlisco, but it should be done within the constraints of the time limit of seven months as is stated in the contract. Due to personal circumstances the research has had some delay; this was a reason for Vlisco to prolong my contract up to graduating. Although this is enough time to make up a proper advice, it stili is not enough time to exhaustively describe all relevant factors.
3. *Public funding:*
   The approval of the subsidy request already takes one year. This brings about that the progress of the project has some delay.

3.3 TIME SCHEDULE

A time schedule is drawn in Table 3.2 to show the process of the research. Although it is a rough schedule that does not include what is done precisely, it gives a good overview of the dynamic process of the research. As can be seen, in the first months the secondary data is assessed and interviews were held. After the first round of interviews, secondary data was assessed again. The reason behind this is after visiting Ghana for the first time new ideas and thoughts about the problem statement came to the fore and therefore new literature had to be studied etc.

3.4 CONCLUSION

In this chapter the background of the data collection method is discussed. To give an answer to the research question primary and secondary data will be gathered. This is done in a cyclical process, because after the first round of data collection another research question has been drawn up.

Table 3.2 Time schedule of the research

week 2004-2005	location	assess. sec. data	design prim. data research	interview	process. interview results	writing report
10 upto 15	Vlisco					
16	Vlisco					
17 upto 19	TSG, Ghana					
20 upto 24	Vlisco					
25 upto 33	at home					
34 upto 37	Vlisco					
38 upto 42	TSG, Ghana					
43 upto 46	Vlisco					
47 upto 52	at home					
1 upto 6	at home					

This chapter was the last chapter of Part I were the research program has been outlined. The next part of this thesis, Part II, will outline the theory used in this thesis and presents the results of the research. Part II consists of Chapter 4 till 8.

To introduce the project and the concept of sustainability more extensively, which are the major subjects of this thesis, in the next chapter an overview of the life cycle of the research will be given together with an introduction to the concept of sustainability.

PART II

THEORY AND RESULTS

CHAPTER 4

OVERVIEW OF THE PROJECT

In this chapter the different phases of the project will be outlined with the use of Stockmann's life-course model. This means the actions that have been taken and have to be undertaken by the project team will be outlined in a structured way. To determine the factors of influence on the sustainability of the technical institute it is important to get to know the features of the project as well as the meaning and significance of the sustainability of the technical institute. Next to that it is of use to show who is in control during the different phases of the project and which requirements have to be fulfilled in order to effectively control the project. Together this constitutes as a basis for part two, where all the theory will be introduced and where the results of the data collection will be expounded.

In section 4.1 a small introduction is given about the theoretical background of life-courses (or life cycles), with a special focus on the last phase of the life course, the sustainability phase. The characteristics of the technical schooling project will be discussed in section 4.2, in a structured way. Where the life-cycle includes the post-assistance phase in which the sustainability plays a central role as well as an important role in this thesis, this concept will be discussed separately in section 4.3. In section 4.4 the system theory of control will be introduced again where the requirements for effective control will be discussed, with a review on the CO-TS game. The chapter will end with a conclusion in section 4.5 which gives answer to sub-question 1.

1: *What are the characteristics of this project during the different phases of the project life cycle and what role has the project team here in preserving the sustainability?*

4.1 ELEMENTS OF THE LIFE-COURSE MODEL

Project management can be defined as “the application of knowledge, skills, tools and techniques in order to meet or exceed stakeholder requirements from a project” (Muriithi and Crawfors, 2002). When executing projects this will most of the times occur in several phases, or life-cycles. A lot of literature is written about the life-cycles[1] of projects (Pinto and Prescott, 1988, p. 5), but every author have it’s own subtle difference. The concept of life course research or studies designates an inter-disciplinary program of theory and research that has emerged in the last ten to fifteen years and whose goal is “the reproduction and explanation of living situations and events within the lives of individuals as well as of overall societal processes within standardized, formal, categorical, and empirical frame of reference” (Stockmann, 1997, p. 67). All different approaches share a common definition of a life course as a ‘continuous succession of event-defined phases’. Though what is lacking in most theories about life courses is the post-assistance phase (see Figure 4.1), which means most literature only takes into account the planning and implementation phase of a project. When not taken into account the post-assistance phase, a major threat is that the projects will last for a few years and after that they will deteriorate. This is the most important reason for choosing a model that will be used in this research which also includes the post-assistance phase, specifically in order to preserve the sustainability.

In this thesis the reason for using this life course model to describe the project is to provide a vivid picture of the tasks of the project team that have to be fulfilled in order to set-up the institute in an effective and efficient way. In the model below an overview is given of the total life course of the project.

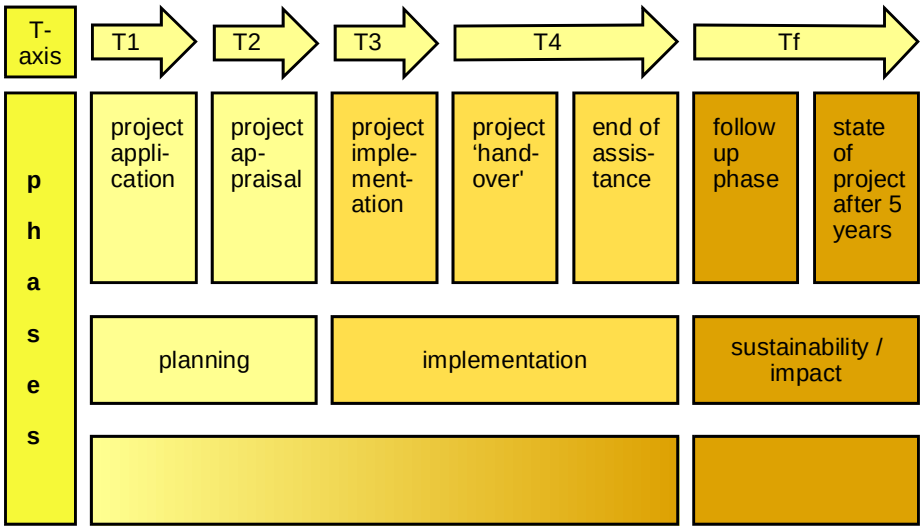
Jessen (in Muriithy and Crawford, 2003: 314) uses Hofstede’s four dimensions[2] to suggest ideal cultural profiles for various phases of the project life cycle. The proposition of a ‘ideal profile for project management’ has immediate appeal because of its potential to explain why projects fail repeatedly. More about the

[1] In this thesis life-cycles and life-courses will be used interchangeable where this includes the stages a project will go trough in achieving the final result of a running technical institute that provides well educated practical oriented technical students.

[2] Hofstede provides validated concepts for understanding cultural differences using four dimensions: power distance, uncertainty avoidance, masculinity/femininity and individualism/collectivism. The dimensions are explicated in section 5.1.4.

cultural profiles of Dutch and Ghanaian people and their fitness for project management in the next chapter. For now firstly an introduction to the project will be given.

Figure 4.1 Life-course model



source: Meyer, 2002, p. 5

T-axis = temporal axis

The boxes of the life-course model will be adapted to the technical schooling project in Ghana in the next section.

4.1.1 Clarification of the model

As can be seen the boxes show arrays on the temporal axis. This makes it dear that the different boxes influence each other, to be precise that all the phases previous to the post-assistance phase are of influence on the sustainability.

The life-course of the project can roughly be divided in three phases: the planning and implementation phase, during the period of assistance and the sustainability phase, after the period of assistance.

1. *Planning:*
   - *T1: Project application*
     The aid application can be marked as the beginning of the life course of a project. In this stage a concrete project application will be applied to the donor or sponsor of the project. Mostly in this stage a feasibility study is conducted with preliminary findings of the objective, the anticipated costs and the specialized and technical questions of implementation.
   - *T2: Project appraisal*
     During the project appraisal the donor or sponsor agency examines the intended project according to its own judgement and under its own authority with appraisal criteria that have been agreed on with the government. Based on the business plan the donor decides on aid suitability and will give an implementation order or not.

2. *Implementation:*
   - *T3: Project implementation*
     In this phase all plans should be implemented and the actual project will be executed. In the course of the project implementation a wealth of information accumulates in the form of project progress reports. On the basis of progress monitoring and with the help of evaluation reports the project team keeps up with the progression of the plans.
   - *T4: Project 'hand over'/end of assistance*
     When the goals of the project become visible, the process of ending project-assistance will be initiated. In this phase the operating board takes over the role of the project team. Before handing over the project to the operating board, all of the constitutive features should be fulfilled in order to run effectively.

3. *Sustainability/impact:*
   - *Tf: Follow up*
     In this phase evaluation takes place on the intended goals and whether they have been attained or not. The project and progress will be evaluated financially, technically and on managerial field, as well as on the fit with demands of the industry.

4.2 APPLYING THE LIFE-COURSE MODEL TO THE TECHNICAL SCHOOLING PROJECT

In this section the different phases, as discussed in the previous section, will be operationalised for the technical schooling project. First the goal of the technical institute will be explicated to get a dear view of the aspirations of this project.

Goal: *To educate practical oriented technical students in a way that it fits the needs of middle level technicians of the manufacturing companies.*

The technical institute in Ghana will be located in the greater Accra region (see the map of Ghana, Figure 5.1). The costs of this institute will be spread over the cooperating local companies together with funding from the public sector. The subject focus will lie on mechanical, electrical and process engineering in order to work as middle level technicians in the industry. The technical institute will offer two kinds of programs:

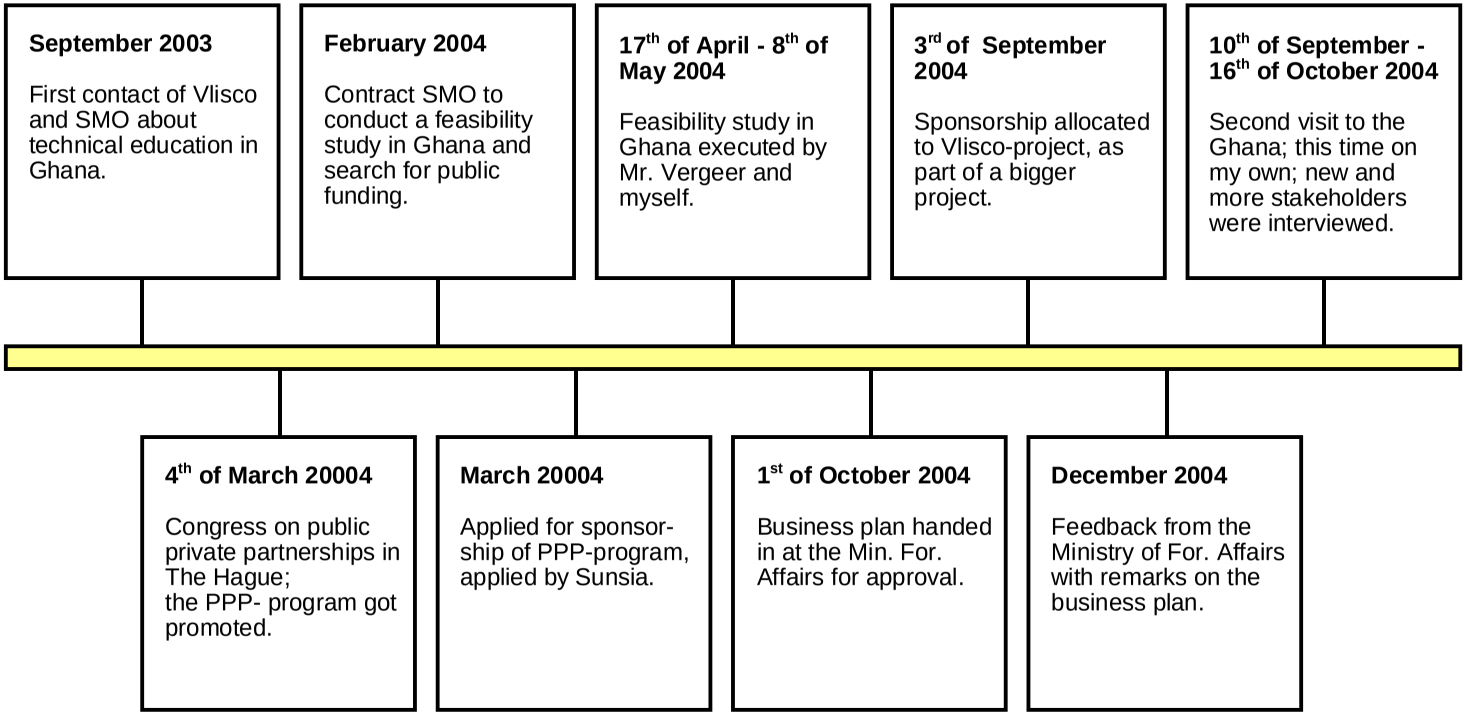
1. Day time class for full time students. Students that have finished basic education will be recruited. This functions as a regular technical institute, with a focus on practical technical skills.
   Approximately 60 students per year should get their diploma, after a two/three year during course. They can immediately start working in one of the cooperating local companies.
2. Evening class for part time students. Engineers or technicians already working in the manufacturing companies can enter for refresher courses. These students are mainly employees from the cooperating companies. Other companies can also send their employees to this school, but will pay a higher fee per student.

A small time line is drawn below, which gives an overview of the formal steps that have been taken for the project.

The different phases applied to the technical schooling project will be discussed are:

1. planning,
2. implementation,
3. sustainability/impact.

Figure 4.2 Time line of the project



4.2.1 Planning

The projects are:

1. T1: project application,
2. T2: project appraisal.

4.2.1.1 T1: Project application

This project will be executed by the project team and financed by a Pool of companies and public organisations. The reason for Vlisco to cooperate with other companies is to spread the costs, as well as to get more broad roots. The cooperation will have positive effects when the different parties have a common goal (Pennink, 2003, p. 7). Therefore the purposes of the project should be communicated clearly. The parties that initiated this project are Vlisco and SMO. SMO was hired to do the feasibility study in Ghana. This study was carried out by Mr. Vergeer, working for SMO, and myself. For an overview of the parties visited in Ghana during the feasibility study see Appendix 4. The results show that there is indeed a big gap in the national education system when it applies to technical and vocational training (TVET) in Ghana. The TVET sector is underdeveloped and can not fulfil the demands of middle level technicians of the industry. Next to that the results of the feasibility study show that the reaction from other manufacturing companies is very positive and almost every company which had been visited is enthusiastic to cooperate in this project. After getting positive results of the feasibility study, the project was presented to the Dutch Ministry of Foreign Affairs (in specific to the Directorate-General for International Cooperation (DGIC[1])) in order to get public funding from the Public Private Partnership program. In March 2004 the project was officially proposed by a Dutch company named Sunsia. The Vlisco schooling project is proposed as part of a bigger schooling project in West Africa,

[1] DGIC wants to involve the private sector more actively in the development projects in developing countries. Its objective is to support private sector initiatives for public private partnerships, additional to existing development cooperation efforts, by implementing more pro-poor activities, and generating extra funds and results.

i.e. the knowledge and skills centres program (KSC program)[1]. In the period from March tili May 2004 an evaluation was held by the Ministry of Foreign Affairs in order to reduce the group of companies that could be eligible for a sponsorship from the PPP-program. The result of the evaluation is that this project is one of the nineteen projects of the Public Private Partnership Pools who, hopefully, get sponsored by the Dutch Ministry of Foreign Affairs.

4.2.1.2 T2: Project appraisal

Before the DGIC will give their approval for public finding the following requirements and criteria have to be met (www.minbuza.nl):

1. There should be consorted action between the government and the private sector
2. Private sector partners have to contribute 50% of private capital to the total budget, without the public cooperation the private sector would not be able or willing to implement the activities
3. There should be a transfer of knowledge to the local partners
4. PPP's have to generate sustainable results (i.e. sustained benefits to the target groups)
5. The project has to be in line with the development country's national strategy for poverty reduction and sustainable development, and additional to the existing Dutch development cooperation
6. The project has to be supported by the recipient countries and include involvement and participation of stakeholders on all levels.

The running president in Ghana, mister Kufour, has as its major policy to reduce poverty to upgrade the private sector. He sees this as the 'engine for development' (www.ghanaweb.com). The Government of Ghana, in specific the Ministry of Education, has been contacted and they welcome the initiative warmly. There shall be a constant interaction between the technical institutes and the companies, accordingly the technical institute shall generate sustainable results.

[1] The KCS program aims at stimulating social-economic development by creating solid and sustainable local knowledge and skills program in the West-African agro-industrial sector that empowers farmers, other small businesses and the local workforce in large companies.

4.2.2 Implementation

The projects are:

1. T3: Project implementation,
2. T4: Project hand over/end of assistance.

4.2.2.1 T3: Project implementation

In the implementation phase the actual realisation of the technical institute will be carried out. The list of steps that should be executed in the implementation phase is based on the interviews conducted in Ghana and on talks with several experts in the Netherlands. This list is not exhaustive but rather gives a short overview of important tasks to execute in the implementation phase. These actions don't have to be carried out in the order that they are stated down. In fact mostly they will overlap each other in time. In order to get more clarity the actions will be divided in managerial, financial and technical tasks. An important remark is that all these actions have to be carried out by the project team. The project team, for now, only consists of the employees working for Vlisco and the members of SMO working on the project. In the future, when having the final list of cooperating companies in Ghana, a full project team will come into being with a focal point in Ghana and the Netherlands.

Actions focussed on finances

1. Search for public funding, next to funding from the PPP-program. See embassies from other countries or seek out particular funding for specific parts of the project.
2. Get private funding; make contracts for the cooperating companies with the payments that have to be done when becoming a participant of the project.
3. Open a bank account where all the financial resources for the project can be put on.

Actions focussed on the management

1. Establish a project team, with members in The Netherlands as well as in Ghana.

2. Design a structure for the technical institute, with an operating board, an advisory board and a board of directors. Have general meetings every month/few months.
3. Draw up evaluation lists for the process of implementation as well as after the implementation in order to check on the progress and the sustainability of the project.

Actions focussed on the technical field

1. Put together a teaching program and check on the appropriateness for the needs of the manufacturing companies.
2. Draw a list of equipment and seek for possible suppliers of the equipment.

4.2.2.2 T4: Project hand over/end of assistance

This is the end of the task of the project team. The technical institute starts running on its own at this point and the management of the project is handed over from the project team to the operating board of the technical institute. From this point on, the operating board should be able to work without the help of the project team.

4.2.3 Sustainability/impact

4.2.3.1 Tf: Follow up

In this phase the only responsibility of the project team is to take care of the composition of an evaluation mechanism that will evaluate the activities undertaken by the members of the technical institute. The evaluation takes place on various areas of impact, internal in the technical institute as well as external in the target population. More on the evaluation framework in chapter eight.

In order to explicate what sustainability actually entails and what the meaning and significance is for this project, the sustainability concepts will be outlined in the next section.

4.3 A MULTI DIMENSIONAL CONCEPT OF SUSTAINABILITY

In this section the third phase of the project life course will be discussed more into detail because it is of major importance for the results of this research, namely the concept of sustainability is being outlined. In the first part the theory behind this will be discussed and in the second part it will be outlined what this implies for the technical institute. This will support in extracting the factors that influence the sustainability of the technical institute, because when the concept of sustainability is dear, it will help for the participants of the project to work towards that.

4.3.1 Assessment of the existing concepts

As mentioned in the introduction, there are a wealth of definitions of sustainability. Systematization and evaluation of existing definitions is necessary, in order to use this concept as a basis for advising Vlisco. Two major theories about sustainability will be discussed, first the hierarchy of sustainability and subsequently the distinction between internal and external sustainability. One important aspect of influence on this is the impact of follow-up support. This would allow one to determine on the one hand, whether project outcomes are sustainable or not. On the other hand, it would make it possible to actively support the process of sustainability by means of appropriate measures (Karlsen, 1997, p. 1780). But before putting in appropriate measures, the factors of influence have to be determined, this will be done in the following chapters.

In order to provide some structure in the array of definitions, the categorical scheme developed by Elshorst (Elshorst in Stockman, 1997, p. 73) proves useful, which proceeds on the basis of a ‘hierarchy of sustainability’. Even if this classification doesn’t necessarily represent a hierarchy, but more likely involves different dimensions of sustainability, this categorical scheme is very useful for systematising the various definitions of sustainability. The different dimensions of sustainability are given in Table 4.1.

Table 4.1 Dimensions of sustainability

dimension of sustainability	internal sustainability	external sustainability
1: project oriented	Project infrastructure (i.e. project staff) still exists within the implementing agency.	Products and services developed during implementation phases are still available for the target group
2: output/ production oriented	Structural changes of the project infrastructure occurred for improving the offered services due to target groups demands.	Products and services developed during implementation phase have been updated and adapted to changing needs of the target group.
3: systems oriented	Comparable infrastructures with similar tasks have been building up in other organisations and became some kind of standard.	Products and services developed during implementation phase have become a common use within the whole social system.
4: innovation oriented	New-build institutions within the social system guarantee a constant progress of the infrastructure and its innovative capacity.	New-build institutions within the social system guarantee a constant progress of products and services due to the needs of the target group.

source: Meyer, 2002, II

4.3.1.1 Dimensions of sustainability

These dimensions of sustainability will be explained, including the dimension that fits the technical schooling project, as well as the shortcomings of the different dimensions. In the fourth stage in the hierarchy of sustainability, there is no shortcoming presented, because this dimension can be seen as the ultimate dimension. After reading this it should be dear which dimensions of sustainability are in use and what dimension will be the focus of the technical schooling project.

1. *Project oriented sustainability*
   In this dimension a project is classified as sustained “if the project-implementing organisation and/or target population continue the innovations achieved by the project without external assistance for a long period of time”. For the technical institute this implies that the board of the institute

runs the technical institute in such a way that it will continue the activities, accordingly educating technical students, in the same way as it was delivered by the project team. This dimension lacks a development oriented perspective, which increases the danger of producing mere islands of success, it is purely project oriented.

2. *Output/ production oriented sustainability*
   Here sustainability is defined "as a program's continuing to deliver services or sustain benefits after the donor's technical, managerial and financial support has ended". Organisations that classify sustainability is this manner are USAID, the OECD and the World Bank (Stockmann, 1997, p. 74). This dimension is also required when getting support from the PPP-program. PPPs have to generate sustainable results, i.e. sustained benefits to the target group (www.minbuza.nl). This implies that the services delivered by the technical institute should not just be continued as they are implemented by the project team, but they should also be adapted to changes in the demand structure in order to create sustainable benefits for the companies in Ghana. When the manufacturing companies demand for more high-tech teaching programs the possibility should be there to fulfil this request, technically, financially and in the managerial field. In addition there is a danger that by concentrating on 'outputs', attention will only be paid to the goals pursued and, in this way, only intended effects will be perceived.

3. *Systems oriented sustainability*
   In this dimension projects are seen as interventions aimed at the transformation of social systems. The United Nations Development Program (UNDP) has a system orientation on sustainability: the purpose of technical cooperation was supposed to change the nature and performance of one or more or all components of the system. As such it is the evaluation of the system, into which the technical co-operation has been introduced, that shou!d be the focus of the concern with sustainability. Thus, here the technical institute should focus on changing the system of technical education in Ghana. Because of a lack of time and finances it is not in the scope of this research and this project to reach that goal. Though the system oriented definition of sustainability extends the focus of study beyond the immediate project field, it still neglects the creation of problem solving potential.

4. *Innovation oriented sustainability*
   This is an approach to sustainability that includes the ability to adapt innovatively to the system. It is premised upon behavioural changes in the target population and the members of the project implementing organisation which enable them to improve their living conditions on their own in a continuing and enduring manner. However since it involves above all the aspects of innovative changes in behaviour, this type of sustainability will be called innovation-oriented sustainability. This dimension of sustainability meets the problem solving requirement.

4.3.1.2 Internal versus external sustainability

Since project interventions can be connected to the implementing agency itself or go beyond this institution to impact upon environmental systems two dimensions of sustainability are distinguished: internal and external sustainability (Stockmann, 1997, p. 1771).

Internal sustainability refers to the enduring organisational effectiveness of the implementing organisations of the project. In order to determine the effectiveness, each of the constitutive features of the organisation is studied in terms of the degree to which it contributes to the organisational effectiveness. The internal sustainability mainly focuses on the existing infrastructure within the implementing organisation. External sustainability refers to the diffusion effects in the systems of vocational and technical training and employment (Stockmann, 1997, p. 282). Decisive in assessing diffusion in the occupational-training system is the degree to which the occupational training model is disseminated in this system and serves the needs of the target population.

4.3.2 This research' concept of sustainability

The answer to the question whether programs or projects were able to achieve sustainable effects is dependent upon the evaluation criteria selected. It is therefore very important to define the requirements and goals of the project, to subsequently evaluate on the basis of these requirements and goals. In this project it is the goal to

reach in the first place output-/production oriented sustainability. This implies that the goal is reached when the structure of the school is organised in a way that it will permanently guarantee benefits, accordingly to satisfy the needs of the industry by upgrading the technical resources and the teachers when necessary, supplying enough students etc.

As mentioned in the introduction, different Ministries in Ghana are already very busy upgrading the technical and vocational training institutes as they recognize the gap between the demand of the manufacturing companies and what these institutes can offer (TVET policy report, 2004). It depends on their decisiveness if the diffusion effects will reach the third dimension of sustainability, namely to change the nature and performance of the education system, or not. A possible option could also be that the technical institute, founded by the industry, can function as a model school.

Although we can debate about the meaning of the concept of sustainability for a longer period, what in fact is important in this case is that the technical institute serves the needs of the industry for a longer period of time. When their needs are served properly the technical institute proves to be sustainable. To find out what the needs of the industry are and the way they think about sustainability, the participating manufacturing companies were interviewed about this subject, the results are outlined on the next page.

4.3.2.1 Needs from the manufacturing companies

Below, the needs from the manufacturing companies will be expounded. All of the interviewed manufacturing companies have been questioned on their view about sustainability. For an overview of the questions see Appendix 1 and 2.

When thinking of sustainability, most companies focus on the following aspects:

1. Sustainability depends on the generation of cash flow for the future. Financial commitment from the companies for some years, i.e. for more than one year, because only after a few years it is possible to say that it reached the intended impacts. It should be self funding. There should be a person monitoring this.

2. There should be a board of governors for financial and technical supervision and internal control in which at least some manufacturing companies take place.
3. The institute should have intended impact for the companies, therefore the demand of the manufacturing companies and the supply of the technical institute of students should constantly be monitored on content and number. There should be an advisory board consisting of representatives that give advice to the board of the technical institute about the content of the teaching programs.
4. The technical teachers should often be upgraded and paid more salary than the average teachers in Ghana. Next to that it needs strong management and up to date equipment and enough money to maintain this equipment.
5. The institute should be promoted or marketed well; therefore a brochure should be made.
6. The institute should screen the students on practical skills and knowledge to separate the wheat from the chaff. After getting their certificate the students should be evaluated on their skills and knowledge to see if they can fill in the demand of technical employees from the companies.
7. The students should be educated according to international standards, to stay upgraded and up to date, it's good to have a sister school in Europe.
8. There should be a good canteen for the students and the personnel.

Concluding it can be said that the manufacturing companies want to make sure that there are enough financial resources for the coming years and that it should be evaluated often if this technical institute still fits in the request of the manufacturing companies of not. It seems that the request of the manufacturing companies is reflected the best, when saying it aims at output oriented internal sustainability.

4.4 REQUIREMENTS FOR EFFECTIVE CONTROL

For the project team to proceed effectively it can be handy to start by fulfilling the requirements for effective control. As mentioned in the research set-up a distinction is made between the project team (the controlling organ, CO), the technical institute (the target system, TS) and the context. In the system theory of control there are requirements declared that should be fulfilled in order to enable effective control. The requirements briefly are: specification of goals, a model of the target sys-

tem, information about the context, set of control procedures, and capacity of dealing with information (De Leeuw, 1997, p. 112). In order for the project team to operate effectively, i.e. fulfill the tasks in a successful way, and to achieve sustainable results, it is necessary to fulfil these requirements. It should be acknowledged that these requirements for effective control are necessary but not sufficient. The requirements will be outlined more into detail and after that the CO-TS game will be played, which has been introduced in Section 2.3.

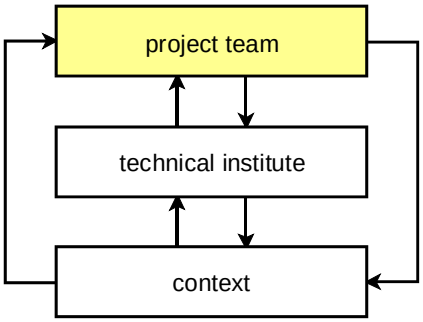
1. *Requirements for effective control*
   - *Specification of goals*
     The central goal of the project is to set-up a technical institute will fulfil the needs of middle level technicians of the cooperating manufacturing companies for a long period of time. In order to sustain this needs of the manufacturing companies evaluation should take place on the fit between technical institute offers or supplies and the requests of the manufacturing companies. Next to that it is important to evaluate on financial aspects, because when there are not enough funds, the fit can be perfect but it will not last for ever.
   - *Model of the target system*
     Within this requirement it is important to specify the system to be controlled. This requires some representation decisions regarding the system in question, such as the system boundaries, the choice of appropriate levels of aggregation and the part system to be considered. In this research the representation of the technical institute is bounded by the goals of the institute. In the goals it is stated that this technical institute should fulfil the needs of the manufacturing companies, this means, for the problem of control, only the future technical institute have to be focussed on and not the other already existing institutes.
   - *Specification of the context*
     The context consists of the Ghanaian educational structure, the employment structure and other external factors that can influence the project results. One should bear in mind that the context in which the project team operates will partly be different from the context of the future technical institute. More about the influence and characteristics of the context in the next chapter.
   - *Adequate control procedures*
     This means that the set of the control mechanisms should be larger, or equal to, the set of disturbances. To organise this it is important that the

planning and process of the project team is set-up in a way that it is flexible enough to handle external disturbances. The planning should be set-up adequately to meet the requirements of the consumers of the technical institute

- *Capacity of dealing with information*
  For the dealing with information it is important that the incoming information can be converted to effective control procedures. Therefore the information should be processed and coordinated well. It is important that every party in this project knows who the focal point in this project is. Even more important is that there is a focal point in Ghana as well as in The Netherlands. Than it is dear for everybody, who deals with all the information and where to go when information is required.

2. *CO-TS game*
   The CO-TS game will be played in all of the following chapters, in order to look at the project from a variety of angels. To distinguish this game from the rest of the text it will be described in Figure 4.3.

Figure 4.3 CO-TS game: The project life-cycle



The project team is presented as the Controlling Organ which controls the set-up of the future technical institute (Target System). When heading towards the phase of handing over the project to the operating board of the school, the roles change. The project team is no longer in control of the technical institute and the technical institute will no longer send information to the project team. The project team loses its role as Controlling Organ and within the technical institute the operating board will take over its role and will focus on controlling and running the technical institute.

Herewith the roles of the board has been changed into a controlling one. The target system hereby changes from a system to set-up, i.e. the set-up of the technical institute into a system to be run, i.e. the operation of the technical institute.

4.5 CONCLUSION

In this chapter the following sub-question has been discussed:

1. *What are the characteristics of this project during the different phases of the project life cycle and what role has the project team here in preserving the sustainability?*

The project will go trough different phases which can be divided into the project-assistance phase, which includes planning and implementation and the post-assistance phase which includes the sustainability. In the planning and implementation phase the technical institute will be set-up and the constitutive elements will be designed where in the sustainability/impact phase the project will be evaluated on the previously stated goals. Sustainability in this project refers to the continuation of the activities of the technical institute over time and the adaptation of the teaching program to changes in the demand structure in order to create sustainable benefits for the companies in Ghana.

The project team, for now, only consists of Vlisco employees working on the project as well as some employees from SMO, who together are in control of the project-assistance phase. Thereafter the operating board of the school will take over the controlling task in the post-assistance phase when the technical institute starts operating. The role of the project team is ended when the technical institute starts operating. In order to control the set-up of the institute effectively the project team should fulfil the requirements for effective control.

In the next chapter the context of the project will be discussed.

CHAPTER 5

CONTEXT OF THE PROJECT

In order to provide insight in the external factors that can influence the project's success or failure it is important to describe the project's context in a structured way. As the project will be executed on a different continent, Ghana, and thus another culture, it is even more important to concentrate on those aspects that can influence the project success or failure. It should not be underestimated that the members of the project team have different backgrounds as well and therefore it is important that all of the members have to have a common sense of the context in which the project takes place. The external factors are not described in general, but instead focussed on the terms of impact, i.e. the factors that are of influence on the project and the technical institute.

The structure of this chapter will be as follows: in Section 5.1 the different aspects of the external context of Ghana will be described on the basis of the six environmental segments described by Hitt (1999). Within these segments the focus will lie on those aspects that are of importance for the project. In Section 5.2 the more specific external factors of influence from the Netherlands and the general tendencies in the world of businesses will be discussed shortly, taking along that the project team will be influenced by the external factors in Ghana as well as the external factors from the Netherlands. This chapter will end in Section 5.3 with a conclusion that gives an answer to the second sub-question.

2: What are the characteristics of the project's context that can be of influence on the set-up and sustainability of the technical institute in Ghana?

5.1 CONTEXT IN GHANA

It is generally recommended that project interventions should be made in close cooperation with one's partner (target population). Here one should be sure to investigate adequately the general cultural, societal and economic conditions prevailing the effectiveness of the implementing agencies' organisations (Stockman, 1997, p. 1779). This is one of the reasons for outlining the external context of Ghana. The context in Ghana corresponds to the context where the technical institute will be set-up.

Following Hitt (1999), the general environment is composed of elements in the broader society that can influence an industry and the firms within it (Hitt, 1999, p. 47). These elements can be grouped into environmental segments called demographic, economic, political/legal, socio-cultural, technological and global segments. Because firms cannot directly control these segments it is a strategic challenge to understand each segment and it's implications in order to formulate appropriate strategies that can be implemented specifically for this project. These segments will be discussed in the following sub-sections in order to create an overview of the most important elements that have to be taken into account when setting up and sustain a technical institute in Ghana.

5.1.1 Demography

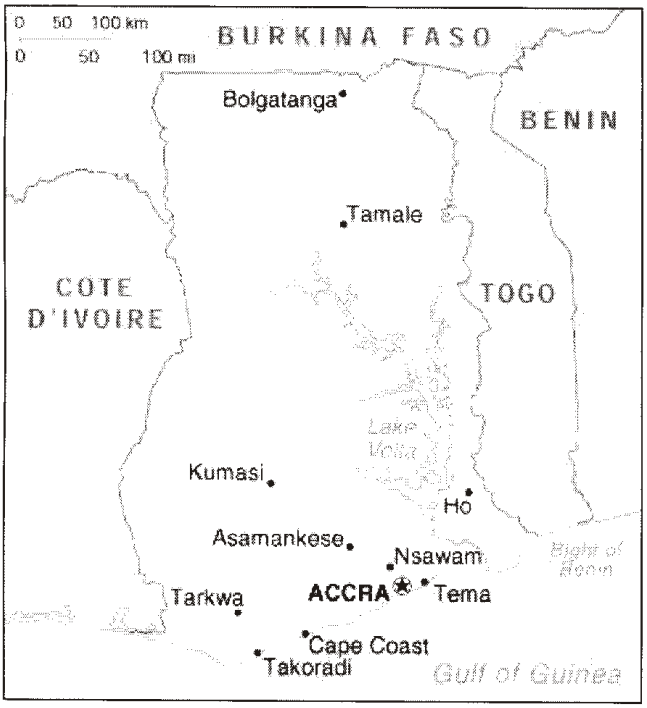
The demographic segment is concerned with the administrative position and the geographic position of Ghana and its inhabitants.

5.1.1.1 Administrative and geographic

Ghana, located in West Africa, is bordered by Cote d'Ivoire (668 km), Burkina Faso (548 km) and Togo (877 km), see Figure 5.1. Accra is the capital were 1.719.100 people live of a total of 20.350.800 people that live in Ghana. TSG is located in Tema, 30 km to the east of Accra. Where Accra is the capital of Ghana, Tema has the largest harbour where also most of the large production companies are located. Ghana consists of 10 official regions. All of the production companies

and school that have been consulted are located in the Greater Accra region, which includes Tema and Accra (Atta-Quayson, 1999, p. 13). Because most business activities are executed in this area, the technical institute will also be located in this area.

Figure 5.1 Map of Ghana



5.1.2 Politics/law

The political/ legal segment is the arena in which organisations and interest groups compete for attention and recourses. The body of laws and regulation guides these actions. In order to describe the politics first a small historical overview is given, after that the government structure will be described. One important aspect of the government structure is the part were education fits into the structure, in specific the technical training sector. When the political aspects are described, the thesis will follow with the background of the legal system, in which the technical institute should be registered.

5.1.2.1 History

The history of the Gold Coast (previous name of Ghana), before the last quarter of the fifteenth century, is derived primarily from oral tradition that refers to migrations from the ancient kingdoms from the western Soudan (the area of Mali and Mauritania). The first contact between Europe and the Gold Coast dates back to 1470 when the Portuguese arrived. Gold was the principal trading commodity in the early colonial period. With the opening of European plantations in the new world during the 1500s suddenly the demand for slaves overshadowed the demand for gold. The Dutch, the Danish, Swedish and British also arrived. In 1821 the British took over all the trading posts and in 1874 the British finally defeated the local people and proclaimed the Gold Coast as a British colony. On the 6th of March 1957 the Gold Coast became an independent country and changed its name to Ghana (Country Watch, 2004).

5.2.1.2 Government structure

The conventional long form of Ghana is the republic of Ghana. It is a constitutional democracy, multi party, run by a president who is on his second term at the moment, named Kufour. Mister Kufour is just re-elected on the 7th of December 2004 and runs the New Patriotic Party (NPP). The NPP government has made the decision to focus on the development of the private sector to serve as the dedicated engine for development in Ghana (www.ghanaweb.com). Since the NPP is ruling the initiative taken by the private sector to set-up a technical institute is welcomed greatly. Ghana's political climate remains stable. The ministries who are of importance for this thesis are the Ministry of Education and the Ministry of Manpower Development. The Ministry of Education is in charge of the certification of diplomas for the whole education sector and the Ministry of Manpower Development is responsible for the technical and vocational training sector.

5.2.1.3 Educational structure

"Educational investments can only be effective under special structural conditions. These include, among others, the existence of labour opportunities in various econ-

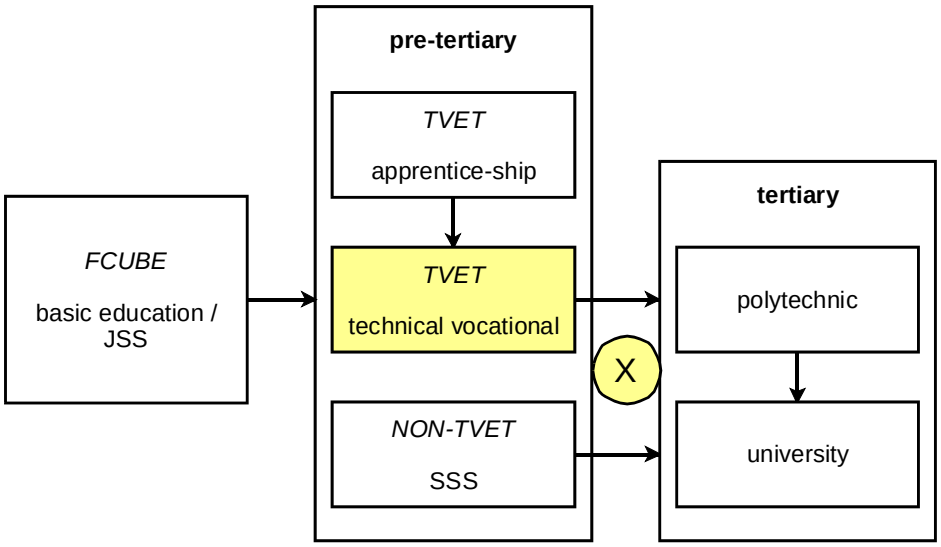
omic sectors, the general recognition of educational degrees as entrance qualifications for given occupation, the existence of demand among trainees and students for certain occupations and courses of study, comprehensive means of access to the educational system and an educational system of demonstrably adequate efficiency" (Stockmann, 1997, p. 150). In order to get an understanding of the embedding of the technical institute in the Ghanaian educational system, first an overview of the existing educational system in Ghana will be outlined, after that it will be described in what way the technical institute fits into this system:

1. *The Ghanaian Education System*
   The education system of Ghana comprises three levels, the Free Compulsory Basic Education (FCUBE), pre-tertiary and tertiary education. FCUBE consist of primary and Junior Secondary School (JSS). The attendance of basic education is, unsurprisingly, compulsory and free. Currently, the five subjects taught in primary schools are English, Ghanaian Language and Culture, Mathematics, Environmental Studies, and Religious/Moral Education. The JSS curriculum consists of English, Ghanaian Language and Culture, Mathematics, Science, Agricultural Science, Pre-Technical Skills (including technical drawing), Religious/Moral Education, Social Studies, and French (optional).
   In addition, Music, Life Skills, and Physical Education are also offered but they are not subject to external examination (Canagarajah and Ye, 2001, p. 13).
   The Ministry of Education is in charge of the basic education in Ghana and releases certification for the schools. After basic education, students can choose to go to Senior Secondary School (SSS)(high school) or go to a technical or vocational training school (TVET). In general only the upper class of the society can afford to send their children to a SSS, therefore going to a technical institute is seen as inferior.
   The primary goal of Technical and Vocational Education and Training (TVET) is to prepare youth and adults for employment (TVET policy for Ghana, 2004, p. 20). In order to remain relevant, technical and vocational education and training should be fully informed by industry advices on current skill requirements. Unfortunately the TVET sector has not for years received the requisite attention it deserves to enable the sector to contribute effectively to the national human resource development which is so vital for establishing a productive and skilled workforce for Ghana's development. The sector has remained practically the same in content and delivery

over the past 40 years (Sarpong, 2004, p. 6). Therefore there is the need for a transformation of TVET in Ghana to a demand-driven system, based on identified job competencies relevant to the needs of the industry.

For an overview of the Ghanaian educational system see Figure 5.2.

Figure 5.2 Overview Ghanaian education system



2. *Teacher education*
   At the primary school level, teachers are assigned by grade. For example, a first grade teacher teaches one class for all subjects. At the JSS level and above, teachers are specialized by subjects. Since teachers are a success factor of the technical institute and therefore special attention should be given to the selection and training of the teachers. When visiting Ghana for the second time I went in search of teaching training colleges. Mr. Ofei[1],

[1] Next to being a vice principal of the SOS Herman-Gmeiner International College Mr. Ofei also executed several feasibility studies for setting up international colleges in Tema and Kumasi and takes place in the advisory board of these colleges. The chancellor of the University College of Education in Winneba, Mr. Anamuah-Mensah is an acquaintance of Mr. Ofei.

the vice principal of SOS Herman Gmeiner International College gave the tip to visit the Univesity College of Education in Winneba because it appears that this is the best teaching training college of Ghana. Therefore a visit was paid to the University College of Education together with the training manager of TSG, Mr. Tetteh-Voetagbe. Here we took cognisance of the possibilities of recruiting teachers from this University. When the project team explicates what kinds of teachers are needed, the chancellor, Mr. Anamuah-Mensah offered to deliver tailor made teachers for the technical institute.

3. *Fit of the technical institute in the existing structure*
   For the future technical institute to turn into a success it is important to fit into the existing schooling system. Therefore the decision should be taken at which level to operate in order to fit into the existing system. The training were the future technical institute aims at will recruit students who have at least finished JSS. The level of institute will correspond to the Dutch Voortgezet Middelbaar Beroeps Onderwijs (VMBO) / Middelbare Technische School (MTS) level and in between the Ghanaian technical school and polytechnic level (see the X in Figure 5.2). The Ministry of Manpower Development is in charge of the TVET-sector. When the technical institute wants to register this can be done at the Ministry of Education. Other activities that need to be approved or pointed out by this Ministry are: the appointment and payment of teachers, particular teaching programs should be approved, the recruitment of equipment and autonomous administration of revenues which are acquired next to the standard income from the Ministries in the institute is not permitted. For the TVET sector this is all imposed from above. Although the affairs between the technical institutes and the Ministries are very strictly bounded to the rules, during conversations held with the director of the technical and vocational division, Mr. Duodu, of the Ghana Education Service, he indicated that there are of course possibilities to widen the rules when getting private funding.

4. *Problems in the technical and vocational training system*
   The following problems generally arise with technical and vocational training in Africa and Latin America:
   - low degree of orientation towards the requirements of the economy;
   - lack of practical orientation;
   - an over proportion of general subjects;

- inadequate practical training;
- lack of qualified instruction personnel;
- high costs and concomitant funding problems;
- poorly managed schools.

When observing the technical institutes in Ghana, it seemed that these institutes showed all of these problems as well. It is therefore important to bear in mind when cooperating with a local partner to acknowledge what the pro's and cons are in this matter and to make allowances in order to solve these problems.

5.2.1.4 Law

1. *Judicial System*
   The civil law in Ghana is based on the Common Law, doctrines of equity and general statutes which were in force in England in 1874, as modified by subsequent Ordinances. Ghanaian customary law is, however, the basis of most personal, domestic and contractual relationships (www.ghanaweb.com).

2. *Company law in Ghana*
   The company code codifies the law relating to companies in Ghana. Before a company (or school) can transact any business it has to comply to one condition: the company has to deliver to the Registrar a return in duplicate providing certain particulars (Bondzi-Simson, 1998, p. 10). The technical institutes regulations is its fundamental constitution or charter: it sets out the purpose of the company (or school); it defines it's limitations of the power in the institute, it defines its duties, the rights and powers of the organs and the members of the company; it defines the interrelationships between the organs, members, officers and the institute; and it spells out how the internal affairs may be change from time to time (Bondzi-Simpson, 1998, p. 20). Accordingly before registering officially the previous discussed regulations have to be considered. It is not in the scope of this research to outline the whole constitution or charter, because that doesn't fulfil the purposes of this research.
   In order to find out what legal constructions are possible options for running a school the legal advisor of TSG, Mr. Amoako-Attah, is questioned.

There are six types of companies that can be registered under the company code:

- private company limited by shares;
- private company limited by guarantee;
- unlimited private company;
- public company by limited shares;
- public company limited by guarantee;
- unlimited public company.

Following the advice of Mr. Amoako-Attah the technical institute should be registered as a Private Company limited by guarantee.

5.1.3 Economy

The economy refers to the nature of direction of the economy in which the technical institute operates. Therefore first the natural crops of Ghana will be outlined shortly, after that the economic performances in general will be discussed with a focus on the employment structure.

5.1.3.1 Natural crops and soil

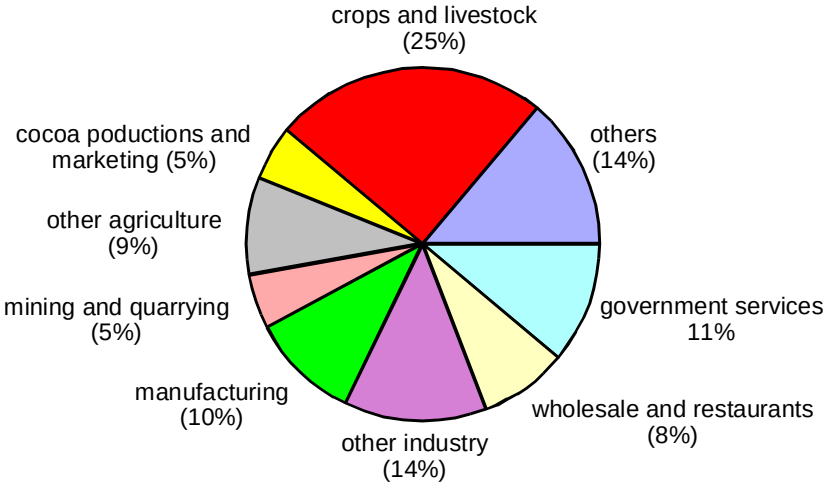
Ghana is primarily an agricultural country with almost 50% it's working population in agriculture. The major foods crops produced in Ghana are; cassava, yam, plantain, cocoyam, maize, millet and guinea corn and rice. Next to food crops other commercial crops include cocoa, coconuts, groundnuts and limes/lemons. Other important crops include; bananas, coffee, palm oil and tobacco and cotton (Atta-Quayson, 1999, p. 15). Next to cultivating agricultural products Ghana also exploits mmning activities, mostly in gold, diamonds, manganese and bauxite. The mining activities mainly take place in the area around Kumasi. Although the mining companies need well educated technical employees as well, they have not yet been contacted to cooperate in the project, because the area in which they are located is too far from the greater Accra region. The most important group of manufacturing companies is aimed at processing Ghana's own agricultural, forest

and mining products. Also, quite some companies in the consortium of the project process the crops cultivated in Ghana.

5.1.3.2 Economic performance

Ghana has transformed its economy since the early 1980s, emphasizing exports, value added processing of its products, privatization of state-owned enterprises and a growing openness to foreign and domestic private investment. Ghana has maintained Gross Domestic Product (GDP) growth in the four percent range for the last six years, but this comparatively strong performance was married in 1999 and 2000 by poor government management and external shocks, steeply rising oil import costs and declining cocoa export prices, that caused a sharp deterioration in terms of trade. For an overview of the contribution per sector see Figure 5.3.

Figure 5.3 GDP by sector in 2002



source: African Economic Outlook, 2003

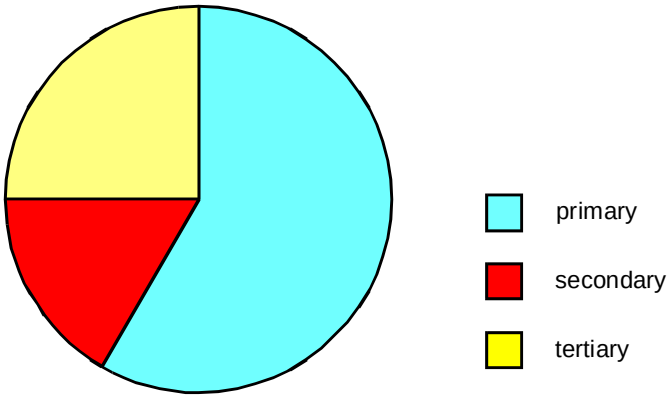
In the context of medium to long term economic developments, Ghana stands well poised to take advantage of its new found political and economic liberalism. The infrastructure is superior to many of its neighbours, the financial sector is adequate and the implementation of structural reforms is progressing, which are all positive factors for a success of the project.

Contrastingly, the GDP per capita is far below the average in the world, and even below the average in sub-Saharan Africa, which is in Ghana 301 dollars a year, in sub-Saharan Africa 617 dollars and in the world 5632 dollar per capita per year (African Economic Outlook, 2003, p. 164). Conversely, because of the stable political climate in Ghana, Ghana receives a lot of development aid and shows potential for a fast growing economy.

5.1.3.3 Employment structure

Employment structure refers to the way the workforce is divided into three main employment sectors - primary, secondary and tertiary. Employment structures change over time. Below the structure is presented graphically in a diagram.

Figure 5.4 Employment structure in Ghana in 2002



source: www.ghanaweb.com

Primary includes agriculture, secondary includes industry and tertiary includes services.

A large part of the population of Ghana in unemployed, but sources differ about the actual amount. The sources differ between 7.5% and 30% of the population. Unfortunately the secondary sector, which comprises of the manufacturing companies cannot solve the unemployment. But when conditions are created by the

government to support the private sector, more jobs can be created. Regarding the technical schooling project, the participating companies in the project can at least guarantee jobs for technical institute graduates.

5.1.4 Culture and social structure

The socio/cultural segment is concerned with different societal patterns, social attitudes and cultural values. Because attitudes and values are a society's cornerstone, they often drive demographic, economic, political legal and technological changes. The members of the project team are challenged to understand the meaning of attitudinal and cultural differences.

For Ghana to attract foreign investments and be competitive in the global market, the workforce should not only have hands-on occupation-specific skills but should also be equipped with desirable work values, attitudes, habits, and skills for life ling learning. Social-cultural factors play a potent role in determining the shared norms, values, attitudes and beliefs about work and organisations, among both managers and employees. The aspects of the Ghanaian culture that stand out for me, based on the two visits paid to Ghana, are the openness, the friendliness and the relaxed attitude. This brings about that exactness with regards to the time and appointments should also be taken with a gram of salt, which can be quite frustrating when taking seriously the Dutch exactness.

In Ghana seven ethnic groups and languages occur, that are subsequently subdivided into more groups. English is the official language, which is also taught at primary school. Formed by people from the same village, district, region, or ethnic background, ethnic associations in the working environment functions like extended families in which membership entails obligations and benefits. It is therefore important to first get to know more about the different ethnic groups and the relationships between the groups, before hiring people to work in the technical institute. This should be done with an eye on the structure of the institute and the relationships of the different ethnical groups. The rest of this sub-section includes an outline of the dimensions of culture developed by Hofstede and the application of Western management theories in an African context.

5.1.4.1 Hofstede's cultural dimensions

One of the most important studies which attempted to demonstrate how cultural differences across countries result in wide variations of social norms and individual behaviour and reflects the effectiveness of different organisational forms is the one executed by Hofstede (Hofstede in Bartlett and Ghoshal, 2000, p. 99). Hofstede describes national cultural differences along four key dimensions: power distance, uncertainty avoidance, individualism and masculinity. Ghana can be ranked as high power distance country, which implies that the society accepts the unequal distribution of power in organisations. This implies that hierarchy is very important and therefore Ghanaian look up to people with "higher" positions in companies. This is one of the reasons that working as a middle level technician is not seen as an important job, i.e. you don not sit in the office. On uncertainty avoidance Ghana scores average, this refers to the society's (dis)comfort with uncertainty. Ghana is a collectivist country, were family ties are important as well as the emotionally dependents with groups. Masculinity is average in Ghana, this means Ghanaians are a combination of assertive, materialised persons and nurturing, relationship persons. (Hofstede in Bartlett and Ghoshal, 2000, 193).

5.1.4.2 Approaches to project management in Africa

In Africa, theorists and practitioners in many disciples are increasingly wary of adopting wholesale concepts of Western origin. Because values at work and in social settings are culturally based - therefore when dealing with human behaviour (i.e. managing) - we should recognize the cultural and societal context (Muriithy and Crawford, 2003, p. 309). Uncritical transfer of management theories and techniques based on western ideologies and value systems has in many ways contributed to organisational inefficiency and ineffectiveness in the developing country context (Jaeger and Kanungo in Muriithy and Crawford, 2003, p. 311). Many of the concepts, tools and techniques of project management are based on economic rationality and analyses of means and chains. When used in cultures whose values are not based on economic rationality, such as the Ghanaian culture, the techniques may be inappropriate and result in project failure. The techniques are not faulty per se. Rather the assumptions inherent in them about people, what motivates them, how they view or value work, how they relate to authority, what values or virtues they hold most dear, are not applicable in most African cultures (Muriithy and

Crawford, 2002, p. 310). When drawing a conclusion it can be said that the western management techniques are only successful when embedding them in the Ghanaian culture, norms and values. It is important for the set-up of the technical institute that all of the members of the project team are aware of these cultural differences and act upon them.

Jessen (in Muriithy and Crawford, 2003, p. 314) uses Hofstede's four dimensions to suggest ideal cultural profiles for various phases of the project life cycle. The proposition of a 'ideal profile for project management' has immediate appeal because of its potential to explain why projects fail repeatedly. The cultural profiles and the fitness to the different life cycles is summarised in the table below and applied to the Dutch and Ghanaian cultural profile (Bartlett and Ghoshal, 2000, p. 194-195). Although the phases being used do not fully correspond with the phases used in this thesis, there is some overlap, so when adapted a little it can be applied to this thesis. This can support the choice for hiring a Dutch or Ghanaian consultant for a job in different phases of the project.

Table 5.1a Ideal cultural approach by phase in life - initiation

phase	dimension			
	power distance	uncertainty avoidance	individu-alism col-lectivism	masculinity femininity
level	**high**	**high**	**medium**	**low**
ideal score	7.5	7.5	5.0	2.5
NL. score	3.8	5.3	8.0	1.4
Ghana score	7.7	6.8	2.0	5.3

Table 5.1b Ideal cultural approach by phase in life - design/planning

phase	dimension			
	power distance	uncertainty avoidance	individu-alism col-lectivism	masculinity femininity
level	**high**	**high**	**medium**	**low**
ideal score	2.5	5.0	5.0	5.0
NL. score	3.8	5.3	8.0	1.4
Ghana score	7.7	6.8	2.0	5.3

Table 5.1c Ideal cultural approach by phase in life - execution

phase	dimension			
	power distance	uncertainty avoidance	individu-alism col-lectivism	masculinity femininity
level	**high**	**high**	**medium**	**low**
ideal score	2.5	5.0	5.0	5.0
NL. score	3.8	5.3	8.0	1.4
Ghana score	7.7	6.8	2.0	5.3

Table 5.1d Ideal cultural approach by phase in life - termination / hand over

phase	dimension			
	power distance	uncertainty avoidance	individu-alism col-lectivism	masculinity femininity
level	**high**	**high**	**medium**	**low**
ideal score	5.0	8.0	8.0	5.0
NL. score	3.8	5.3	8.0	1.4
Ghana score	7.7	6.8	2.0	5.3

5.1.5 Technology

Technology is rapid changing the nature of work and is a major determinant of competitiveness in the global market. This process of the changing nature of work is accelerated by the global economy[1]. This will influence the technology and will bring about rapid technological changes, rapid technology diffusions, dramatic changes in information technologies and an increased importance of knowledge (Hitt, 1999, p. 11). These technological changes have been brought into Ghana by the multinational companies, but the educational system in Ghana is not yet adapted to these changes. Therefore, I think, it's a very good initiative that these same multinationals also introduce these technologies to the educational system in Ghana, in specific to the technical institutes. Acquisition of theoretical or hands-on skills alone will not ensure competitiveness in this global economy. Students completing compulsory education and post-compulsory education should also have the academic skills needed for the acquisition of and adaptation to emerging new technologies. To draw a conclusion, the students should have enough academic knowledge to solve problems and enough hands on skills to carry out the actions themselves to actually solve the problem.

5.1.6 Global context

Globalization is the spread of economic innovations around the world and the political and cultural adjustments that accompany this diffusion. Globalization encourages international integration, which has increased substantially during the last generation. Since globalization has also reached Ghana, taking along that the standardized production processes of multinationals are also implemented in Ghana, this requests that the operating personnel should also be able to work on the same technological level. Next to the spread of economic innovations it is also necessary to compete with other companies on the other side of the world. At the moment global competition also comes from countries as China and other low wage countries, therefore Ghana has to stress it's distinctive features otherwise Ghana will not be able to compete globally.

[1] A global economy is one in which goods, services, people, skills and ideas move freely across geographic borders.

5.2 CONTEXT IN THE NETHERLANDS

Although the members of the project team are being influenced by and have to reckon the Ghanaian context and the global context, they will also be influenced by the Dutch environment were some of the members actually come from. Only the features that are of importance for this project will be outlined for the Netherlands. First some general features of the Dutch context are discussed, followed by the tendency by businesses to execute projects which have a lucrative and social character.

5.2.1 Dutch context

The Netherlands have a prosperous and open economy, which depends heavily on foreign trade. The economy is noted for stable industrial relations, moderate unemployment and inflation, a sizable current account surplus, and an important role as a European transportation centre. Industrial activity is predominantly in food processing, chemicals, petroleum refining, and electrical machinery. The DGIC is stimulating companies to invest in projects in developing countries. Next to being stimulated, an overall tendency is coming up in the business environment that every company at least has to execute some socially responsible projects every year. In order to assist companies in executing these project a lot of NGO's and other foundations are started up.

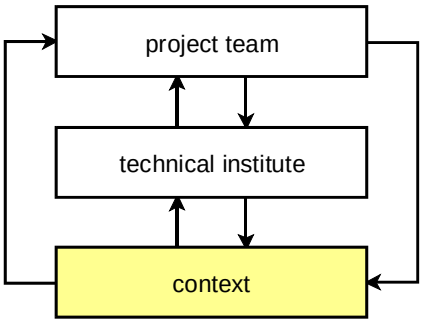
5.2.2 Corporate social responsibility

A focussed approach to sustainable economic, social and environmental developments will boost the confidence companies can inspire in their stakeholders. Companies can publicise their policy and performance in this area in a sustainability report. However, the standards that this report should meet regarding clarity, reliability and timeliness necessitate an enterprise-wide commitment to the report and the underlying information systems and internal controls (www.ey.nl).

In The Netherlands a trend is coming up to invest more and more into projects that support the company as well as the society in which it operates its businesses.

Companies operate in an environment in which it is very important to take place in projects that support corporate social responsibility. This is also one of the reason for Vlisco to set-up the technical institute. Next to that, it is important to survive in an economy where it is hard to find good skilled technical employees and where the competition coming from China is almost impossible to compete for.

Figure 5.5 CO-TS game: Aspects of the context



The system theory (Figure 5.5) emphasizes the importance of the external links that are part of every organisation. Thus, organisations or projects described as ‘open system’ are part of a much larger network rather than independent self-standing entities. This entails that the system (the project) should be bounded by a border, which are in this specific case the borders of Ghana. In order to create sustainable results for the project, the project team should investigate the context and make sure the technical institute fits in the existing educational structure. Therefore, the importance touched upon investigating the Ghanaian context by the project team is approved. Information inquired about the Ghanaian context and notably the cultural differences have to listen to carefully and have to be catered for.

5.3 CONCLUSION

The sub-question treated in this chapter is:

2. *What are the characteristics of the project’s context that can be of influence on the set-up and sustainability of the technical institute in Ghana?*

Ghana is a very stable country were the major political party focuses on the private sector to realise poverty reduction. The Ministry of Education and the Ministry of Manpower Development have not focussed enough on the technical and vocational training sector what brings about that this sector has not get the input that it deserved in the past few decades. That is the reason that the training sector not fits the demands of the fast-growing industry that is influenced by the technology from the global economy. For the project to turn into a success it is important that the future technical institute perfectly fits into the existing education sector, it perfectly fits the requests of the manufacturing companies and has support from the Government of Ghana and other major stakeholders. Next to that it is important that all the members of the project team take into consideration the cultural differences of the participants of the project and act upon this.

The next chapter will deal with the stakeholders that are essential for setting up and sustaining the technical institute.

CHAPTER 6

OVERVIEW OF THE STAKEHOLDERS OF THE PROJECT

This chapter focuses on the different stakeholders that will be of importance for the set-up and sustainability of the technical institute, to advise Vlisco on the organisation of the project. The importance of discussing these stakeholders is that it can facilitate the set-up of the technical institute, because when mapping the different stakeholders it will be dear for all participants in the project who is involved and who is not (yet) involved. The stakeholders are determined by interviewing different experts that are working in the field of education, governmental affairs, industry and project management. By asking the respondents about their connections in the world of education and consultancy, I have spoken to a lot of very interesting and important parties. Apart from the contribution to the project this was a very fascinating experience for me as well.

The stakeholders will be grouped on the basis of the role that they play in the different phases of the project. It should be noticed that not all stakeholders are of equal importance during the project, accordingly the stakeholder salience will be discussed.

The structure of this chapter will be the following: Section 6.1 will introduce the several theories written about stakeholders, stakeholders' management and their influence on the set-up and sustainability of the technical institute. In this section the theory about the identification of stakeholders will also be introduced. This is the basis for carrying out a stakeholder analyses. In Section 6.2 the results of the stakeholder analyses will be outlined and the stakeholders will be ordered into two groups, stakeholders operating in the project-assistance phase and stakeholders operating in the post-assistance phase. In Section 6.3 the stakeholders' salience will be discussed briefly. The chapter will end with a conclusion, in Section 6.4, which will give an answer on the third sub-question.

3: Which stakeholders can be distinguished and what are their roles during the set-up and operation of the technical institute in Ghana?

6.1 STRATEGIES FOR ASSESSING AND MANAGING THE PROJECT'S STAKEHOLDERS

Stakeholders are any group or individual who is affected by or can effect the achievement of an organisations objective (Freeman, 1984, p. 46). The idea of stakeholders, or stakeholder management, or a stakeholders approach to strategic management, suggests that managers should formulate and implement processes which satisfy only those groups who have a stake in the business, in this case the in the set-up and sustainability of a technical institute in Ghana. The central task of this process is to manage and integrate the relationships and contributions of share-holders, employees, customers, suppliers, communities in a way that ensures long term success of the firm (in this case school). A stakeholder approach emphasizes active management of business environment, relationships and the promotion of shared interests (Freeman and McVea, 2002, p. 8). This can be grounded by the experience when not actively inform the stakeholders on the progress of the project they will loose attention. This happened somewhat after the feasibility study, when there was indistinctness about who was going to inform the stakeholders on the results. In the end when the stakeholders were finally informed, some of them already lost track of the project.

For now it is important to expound who these stakeholders are. In sub-section 6.1.1 the theory about stakeholder identification will be discussed, were in Section 6.1.2 the background about stakeholder categorization will be argued. In the next section they will be explicated.

6.1.1 Identification of stakeholders

Stakeholder identification can be considered as a boundary drawing issue. The identification of the stakeholders started when the feasibility study in Ghana was being prepared. During the preparation, in April 2004, parties to be visited were

selected. For the feasibility study it was important to know which companies were interested to support in this project and how this project fits into the existing educational system. Therefore the most important parties to visit were the existing technical institutes and manufacturing companies operating in the greater Accra region. Subsequently from the 40 largest manufacturing companies in Ghana, I contacted the ones operating in the greater Accra region and appointments were made. Mr. Bayitse, the Human Resource Director of TSG, contacted existing technical institutes and the Ministry of Education. This was the mainspring for meeting other stakeholders in Ghana as well. At this stage it should be noticed that not all of the parties that were met will be discussed, but only the stakeholders that came to the fore after taking all the interviews in Ghana. In the first round of interviews, during the feasibility study, open interviews were held and in the second round semi-structured interviews were held (for the questions see Appendix 1 and 2). To structure the process of identification, analysing and dealing with the stakeholders a stakeholder management process is carried out.

6.1.1.1 Stakeholder management process

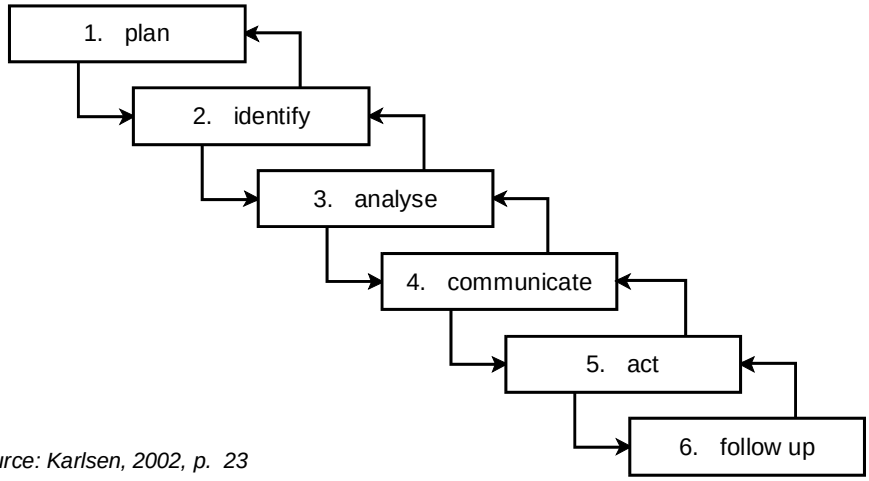
Stakeholder management focuses on overseeing relationships that are critical to an organisation' s success (Savage a.o., 1991, p. 62). This is one of the reasons for carrying out a stakeholder management process, with the central goal of identifying the different stakeholders. Other reasons for performing a stakeholder management process are: to become acquainted with the projects' stakeholders; secondly it is important for ensuring the balance between contribution and reward; thirdly it is a basis for managing the stakeholders and fourth, it is a basis for deciding who should be involved in determining the project goals and how success should be measured. The framework that will be used in this thesis has been suggested by Adams and Barndt, King and Cleland and Pinto and Prescott (Karlsen, 2002).

Very briefly the different steps included are planning the process, identifying the stakeholders, analysing the stakeholders, communication of the stakeholder assessment to the management and the project members, managing the project stakeholders (act) and following up the strategies and actions that have been implemented. They will first be outlined below in a figure where the five yellow steps identify the steps that will be carried out and acted upon by the researcher and

the project team and the blue step will be carried out by operational board of the technical institute. After that they will be discussed more into detail.

As a result, when outlining the different stakeholders, they will be mapped and classified into the different phases of the project. This will be done in the section 6.2

Figure 6.1 Project stakeholder management process



source: Karlsen, 2002, p. 23

1. *Plan: Initiation of the process*
   An important task in this phase is to define the purpose of the stakeholder management process. Another task includes the planning activities regarding the process: organisation, time and resources constraints and the necessary documentation needed in order to fulfil the goal of the stakeholder management process. The goal for this research is to create an overview of the stakeholders, in order to structure them into groups with different tasks. The organisation of this process is done as follows; in the first months as much information about varying stakeholders was gathered, in the second round of interviews stakeholders in Ghana were interviewed about their role in the project.

2. *Identification of the stakeholders*
   The identification of the stakeholders includes the stakeholders that are already involved in the project as well as the potential stakeholders. In this research the stakeholders will be identified by interviewing experts with different backgrounds. These experts will include managing/technical directors of large multinationals in Ghana and experts that have experience in the educational sector in the Netherlands. In order to structure the interviews a bit an interview schedule is drawn up with the use of Emans (2000) book about techniques of interviewing. For the interview schedule see Appendix 1 and 2. The persons who are interviewed are described in Appendix 3.

3. *Analyses of the stakeholders*
   This step, as mentioned in the title, focuses on analysing the stakeholders. One possible consideration is to evaluate the stakeholders in relation to selected topics, like interests or contributions. Another technique is to assess the stakeholders along two dimensions like threatening or collaborating. In this study the stakeholders will be classified on the basis of the different phases of the project and their contributions in the specific phases. Vos and Achterkamp (2004) also underscore the importance of dividing the roles of the stakeholders into different phases. Every stakeholder has other salience in different phases. A distinction is made between the project-assistance phase and the post-assistance phase. This distinction is chosen, because this fragmentation comes back in the rest of the thesis.

4. *Communication* to the management
   This step includes the communication to the management of the project. For now the communication will include the thesis itself towards Vlisco. Since at the end it should contribute towards the goal of the project, I think, it's sensible to inform all of the participants of the project about the involvement of the other stakeholders. This will create clarity among the participants.

5. *Develop implementation strategies*
   As the list of stakeholders has been developed, that list should become an integral part of the project plan and be reviewed with other elements of the plan during the project's life cycle to determine if the stakeholders' perceptions or views of the project have changed (Cleland, 1986, p. 160).

Implementation strategies aim at the way of dealing with the stakeholders. It goes beyond the scope of this research to develop an implementation strategy; this will be the task of the future project team.

6. *Follow up*
   This step focuses on following-up the strategies and actions that have been implemented. One comment on this is that if the relationship between the stakeholder and the project has been changed, a different strategy or action should be considered.

6.1.2 Categorisation of the stakeholders

Reading trough the literature of stakeholder theory leads me to the question what role the stakeholders can play in the set-up and sustainability of the technical institute. In short, who are these stakeholders and what should their role be? In the next section the identification of stakeholders will be discussed. In this section the categorization will be discussed, i.e. drawing a distinction between the role of the stakeholders.

The categorization can for example be based on a distinction between ‘affected’ and ‘can affect’, primary and secondary stakeholders, voluntary and involuntary or fiduciary and non-fiduciary stakeholders (Vos and Achterkamp, 2004). Because of constraints of time and money it is not in the scope if this research to investigate all the stakeholders, i.e. also the threatening ones, but this research will only focus on all the stakeholders who are of help during the set-up and sustainability phase of the technical institute. In this research the stakeholders will be categorised on the basis of the roles they fulfil and the phases in which they are involved. This implies a split up in stakeholders that give financial, managerial or technical support. A distinction within these stakeholder-groups will be drawn within the different phases of action, namely the project-assistance phase and the post-assistance. With regard to financial support we understand the funding for the set-up of the technical institute during the project-assistance phase and the running costs of the technical institute in the post-assistance phase. Regarding managerial support we understand the management tasks of selling up the technical institute or the running tasks of the institute, i.e. all the tasks aimed to support the organisation of the project. The

technical support encompasses the knowledge transfer to the technical institute as well as the technical equipment used.

6.2 ANALYSIS OF THE PROJECT'S STAKEHOLDERS

The purpose of the stakeholder management process was to explicate who the different stakeholders are and which ones are of importance for setting up and preserve the sustainability of a technical institute. This implies that with the use of this process a stakeholder map for setting up a technical school in Ghana is created in order to clarify which stakeholder has what role in which part of the project. In sub-section 6.2.1 the stakeholders of the technical schooling project will be introduced and divided into groups with the same background. In sub-section 6.2.2 the stakeholders will be divided into the phases of the project and the specific roles they have.

6.2.1 Discussion of the stakeholders

An overview of the operating parties, or stakeholders within the project is provided below. Some of the stakeholders have been involved in the project already, which will be called the active stakeholders. Next to that, another group of stakeholders exists that have not been involved yet but will be involved, which will be called the in-active stakeholders. Although more parties were interviewed, like other polytechnics and other companies, the parties presented below are the only stakeholders who fit the goal of the project and are willing to support this project. The parties that need to be contacted and which will be active in the future will be discussed after that. When mentioning local, we understand Ghana in this context. The future project team will be compiled with different stakeholders, belonging to different groups, for this reason the project team is not mentioned separately.

6.2.1.1 Active stakeholders

All of the active stakeholders outlined below have been met personally. Some of them I met one time, others even more times, alone or in combination with other people. With all of these stakeholders the project has been discussed extensively and a large part of them are also questioned with the interview questions drawn in Appendix 1 and 2. The stakeholders are assorted into groups and presented below. In this chapter only the company name or name of the organisation is mentioned, for more information about the exact persons and their positions see Appendix 6.

1. *Local companies*
   The local companies are responsible for financing part of the project and part of these companies will also take place in the project team and the future board of the school. This is visualized by Figures 6.3 and 6.4.
   The companies who would like to play a role in this project are: Texstyles Ghana Ltd. (TSG), Interbeton, Ballast Nedam International Ghana BV, Domod Co. Ltd., Ghana Breweries Ltd. (Heineken), Pioneer Aluminium Factory, F. Malawi Engineering Co Ltd., Ghana Rubber Products Ltd., Irany Brothers and Others Ltd., Shell, Unilever Ghana Ltd., The Coca-Cola Bottling Company of Ghana Ltd., Dwa Gizengoff Ghana Ltd., Tractor and Equipment (Caterpillar), Nestie Ghana Ltd., Accra Brewery Ltd. (SAB Miller) and Fanmilk Ghana Ltd.

2. *Government parties*
   The government parties who, at this moment, play a role in this project are the following: Non-local are: the Dutch Directorate-General for International Cooperation (DGIC) which is part of the Ministry of Foreign Affairs, the British Department of International Development (DFID), Royal Dutch Embassy in Accra, the British High Commission Accra (department trade and investment), the Danish Embassy in Accra. The Ghanaian stakeholders will mainly provide managerial support: Ghana Education Service (part of Ministry of Education Youth and Sports), division technical and vocational education.

3. *Educational institutions*
   In Ghana the educational institutions will support in a managerial way as well as in technical assistance. Local institutions: SOS Herman Gmeiner International College, Tema Technical Institute (TTI), Accra Technical

Training Centre (ATTC), Tantra Hill International College and Winneba University College of Education
From the Netherlands the ROC Helmond Ter AA/ Ter Kemmenade College (Helmond, the Netherlands), can give technical assistance as well.

4. *Local branch organisations*
   The local branch organisations can support in the marketing of the institute and can mediate between the Ghanaian government and the manufacturing companies in Ghana. These can act as consulting parties. Association of Ghana Manufacturing companies (AGI), Crown Agents, Ghana Institution of Engineers, Ghana Employers' Association and Ghana Netherlands Chamber of Commerce (Ghanecc).

5. *Dutch consulting parties*
   The Dutch consulting organisations have helped insomuch with the feasibility study and are in charge of the subsidy application, namely the Society and Enterprise Foundation(SMO) and Sunsia.

6. *Legal advisor*
   Legal advisor working for TSG can help with the registration of the institute and drawing of contracts for the companies.

6.2.1.2 Inactive stakeholders

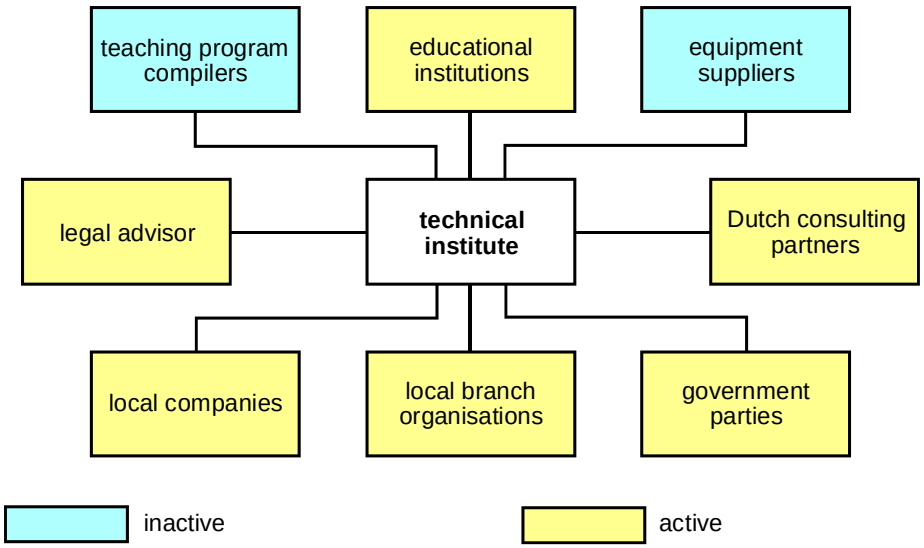
All of the inactive stakeholders will be contacted as soon as the public funding is completed and more definitive plans are made.

1. *Teaching program compilers*
   The teaching program should be compiled in a way that it fits into the existing educational programs in Ghana and fits the demands of the manufacturing companies. These programs will be complying with the help of experts in the field of education. Maybe help will be received from partners in Great Britain, because they can supply English teaching programs.

2. *Equipment suppliers*
   The suppliers of teaching materials and equipment have to be selected on the basis of the costs, quality and services they offer after delivery. Therefore, first, a list of equipment has to be drawn up, after that it should be inquired what the companies can supply for internally. When having the final list of equipment that is needed to fit out the technical institute, suppliers can be contacted to see what the costs are. Considering the services, it is important to know if spare parts can be obtained in Ghana and, if, for what time period the guarantee is valid. To transport the equipment to Ghana, also a transport company has to be contacted.

The different groups of stakeholders are mapped below. To not become entangled in the large number of individual parties the map is classified on the basis of the overlapping groups. The yellow boxes are parties that have already been contacted. The blue boxes consist of parties that still have to be contacted by the project team.

Figure 6.2 Stakeholders map

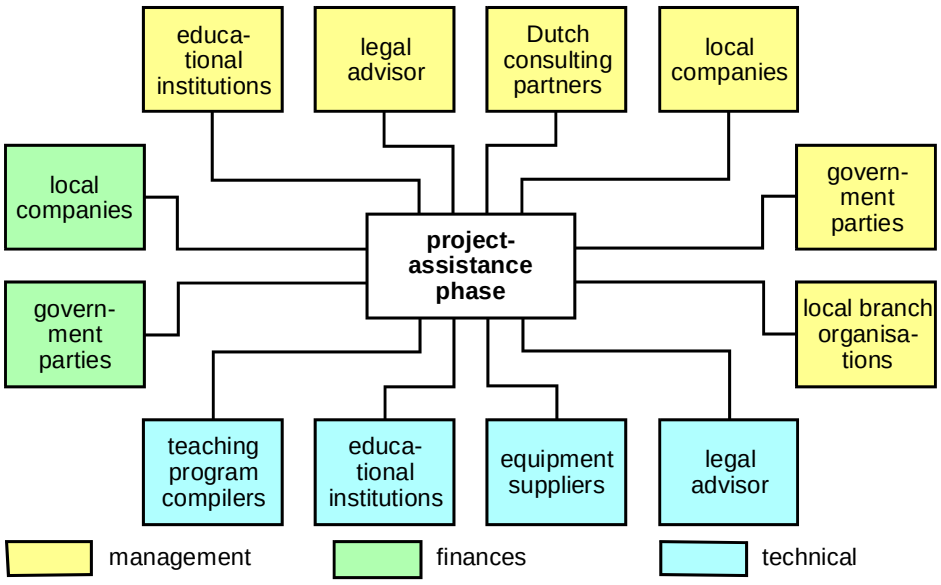


6.2.2 Stakeholders mapped into different phases and roles of the project

In the coming overview the stakeholders will be grouped into the different phases of the project and within these groups a distinction will be drawn between the stakeholders who give managerial support, stakeholders who give financial support and stakeholders who give technical support.

These different parties can be divided into stakeholders who are active in the project-assistance phase and stakeholders who are active in the post-assistance phase. Next to this distinction, the stakeholders will be divided, as mentioned before, into groups that will perform management tasks, stakeholders that contribute financially and stakeholders that will give technical assistance. Some stakeholders, as can be seen in the Figures 6.4 and 6.5, will fulfil several tasks in the same time.

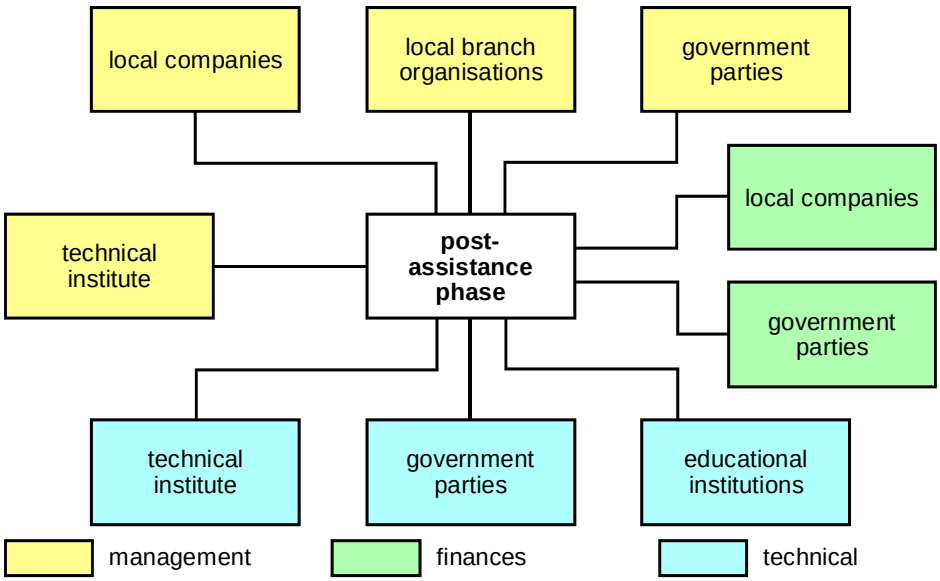
Figure 6.3 Stakeholders mapped in the project-assistance phase



1. *Stakeholders expounded in the project-assistance phase*
   First a stakeholder model of the project-assistance phase is drawn below. These stakeholders are responsible for the planning and execution phase of the project.

2. *Stakeholders expounded in the post-assistance phase*
   In the post-assistance phase the technical institute itself is also drawn as a stakeholder, this is done to underscore the role of the operational board of the technical institute in the post-assistance phase. Part of the other stakeholders will take place in the board of directors or in the advisory board of the technical institute, but the technical institute also has its own employees that can influence the post-assistance phase of project, i.e. the sustainability of the technical institute.

Figure 6.4 Stakeholders mapped in the post-assistance phase



As can be seen in the two figures above most parties maintain their role in the two phases but a few parties also change roles or will even be left out.

6.3 STAKEHOLDER SALIENCE

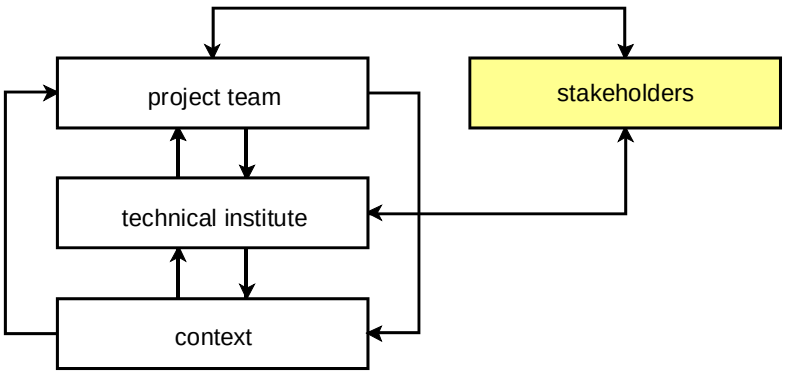
One aspect of importance is that stakeholders are not static maps, even though theorists might try for static clarity, managers should never forget that stakeholders change in salience, requiring different degrees and types of attention (Mitchell and

Agle, 1997, p. 13). For the technical schooling project the first and far most important role to account for are the financial aspects of the project. The reason for this is that without sufficient funding no project will be executed at all and no start sign will be given by Vlisco. When the financial aspects have been taken care of, the technical support can take it's entrance into the process. The teaching programs should be drawn on the basis of the needs of the cooperating manufacturing companies, the matching equipment and tools have to be listed and purchased and shipped towards Ghana. The management roles have a change in demand but are always needed in every phase of the project.

This entails, that even though there are stakeholders that also have to fulfil some managerial skills, before starting to execute these roles the funding needs to be fulfilled.

Next to this salience it is important for the project team to involve all stakeholders at the right moment to create as much satisfaction among the stakeholders as possible (see Figure 6.5).

Figure 6.5 CO-TS game: Stakeholders roles



The importance to play the CO-TS game in this chapter can be stipulated by focussing on the changing role of stakeholders trough the different phases of the project. Stakeholders who will assist the project team can later in the project operate in the board of the technical institute. Accordingly the roles can change easily. Important to emphasize on is that they all have to be satisfied in order to

achieve the intended results. It is also important that all the stakeholders have to be acquainted with the other stakeholders in order to anticipate on their roles.

6.4 CONCLUSION

In this chapter answer is given to the following sub-question:

3. *Which stakeholders can be distinguished and what are their roles during the set-up and operation of the technical institute in Ghana?*

In this thesis only the stakeholders that contribute positively to the project results will be discussed. This demarcation is chosen because it is not in the scope of this research to outline all the stakeholders, including the ones that have negative effect on the project results. Eight different groups of stakeholders can be distinguished which can be divided into stakeholders that support in the management of the project, stakeholders who financially support the project and stakeholders that will give technical assistance. These groups are subsequently subdivided into stakeholders operating in the project-assistance phase and the post-assistance phase. The different groups of stakeholders consist of local companies, government parties, Dutch consulting partners, local branch organisations, educational institutions, teaching program compilers, equipment suppliers and a legal advisor. Together these stakeholders have to cooperate in order to achieve the intended results, i.e. the set-up and sustainability of the technical institute in Ghana.

In the next chapter the constitutive features of the technical institute will be discussed more into detail. The roles of the stakeholders will also be discussed again, this time focussing on the stakeholders that will operate within of the technical institute.

CHAPTER 7

FEATURES OF THE TECHNICAL INSTITUTE

The constitutive features (or the components of the design) characterize the future technical institute, therefore these are very important elements of influence for the future sustainability. These features are the internal factors of influence on the sustainability, because they can be directly influenced by the project team and the future board of the technical institute. These features consist of the goals, members, formal structure, technology and the financial resources (Stockmann, 1997, p. 82) of the technical institute. The way they are applied in this project is not yet dear for all elements, however in this chapter a suggestion will be given how to organise them, taking in mind the precondition of sustainability. Only if the structures created are implemented in such a way as to include the potential to transform them (in order to be able to adapt to the changed needs of the companies), they will be able to fulfil their tasks in a sustainable manner (Stockmann, 1997, p. 78).

The structure of this chapter will be the following: in section 7.1 the components of design will be introduced and discussed before they will be applied to the technical institute. In the following sections the components, or the constitutive features, will be discussed extensively. In order to have dear purposes for the project, the goal for the different parties will be outlined shortly in section 7.2. After that in Section 7.3 the members that operate in the technical institute as well as the organisational structure will be outlined. In section 7.4 the technology as well as the financial resources needed for the operation of the technical institute will be discussed. In the end of this chapter, in section 7.5, an answer will be given to the fourth sub-question.

4. *What are the characteristics of the constitutive features of the technical institute that exert influence on the sustainability of the technical institute?*

7.1 COMPONENTS OF DESIGN

The components of design[1] consist of those elements in an organisation that together work towards the realization of the goals. Because there is a lot of literature to acquire about the components of design a choice has been made which literature to use. A combination of two sources will be used, which are to my opinion the most appropriate for this research, namely theory about organisational elements drawn by Stockmann (1997) and the components of design for systems of education compounded by Banathy (1991). The organisational elements developed by Stockmann easily closes up with the rest of the thesis, because the rest of the thesis is also partially based on the literature written by Stockmann (1997). The components of design developed by Banathy (1991) is specially developed to design systems of education, therefore a combination of these two will be presented below. Thereafter they will be adapted to the project in order to create an overview of the components that have to be designed and developed. As these components can be influenced by the project team these are the internal factors of influence on the sustainability.

The three components, or organisational features, that are being used in this thesis are:

1. *A statement of the goal and the parameters of the system*
   - What should it do? What is it for? (in system terms, this is a 'root definition').
   - Who owns it, who are the clients, what services does it provide, how does the technical institute relate to the community, society or government?
2. *The management and organisation of the technical institute*
   - What systems, structures, people, capacities, competences and actions are likely to be needed to work towards to realization of all the above?
   - Who are the members of the organisation and how is the organisation formally structured?
3. *Required resources of the technical institute*
   - What does the system need to do technically and financially to fulfil their purposes?

[1] The components of design will be used interchangeable with the" features" of the technical institute.

These three components will be discussed as well as applied to the features of the technical institute in the following sections.

7.2 GOALS OF THE TECHNICAL INSTITUTE

This section includes the goal, i.e. the statement of purposes of the technical institute, and outlines the parameters of the system.

7.2.1 Statement of purposes

The initial goal of the project, stated before the feasibility study was executed, was:

> *To establish a business oriented technical education institute, aiming at developing practical applicable technical skills in the field of mechanical engineering and electronics and at delivering basic education. It is the purpose to establish this institute together with other production companies in the area (Report on outlines of the project, 18th February 2004).*

Between the feasibility study in April 2004 and the submission of the project proposal in the form of a business plan in October 2004, the goal of the project became more and more specific.

The goal as proposed in the business plan to the Dutch Ministry of Foreign Affairs on the first of October 2004 is:

> *Establishing a tailor made school for the industry in Ghana in cooperation with local manufacturing companies and an existing institute based in the Tema-Accra region, delivering about 30 trained people every year.*

When interviewing directors from local companies in Ghana even more specific goals came to the fore. These goals are summarised in the statement of purposes below.

A combination of the various goals from different stakeholders results in the *following statement of purposes* (as being an expansion of the already mentioned goal in section 4.2): to educate technical students in a way that it fits the requests, of middle level technicians, of the manufacturing companies. The demand focuses on mechanical, electrical and process engineering students that have a lot of hands on experiences.

The technical institute in Ghana will be located in the greater Accra region (see Figure 5.1). If cooperation with a local technical institute is regarded, the choice will be made between Accra Technical Training Centre and Tema Technical Institute. Because these institutes supply a more broad curriculum than only engineering and electronics, the cooperation will result in the cooperation with a local technical institute on the part of engineering and electronics only. The costs of this institute will be spread over the cooperating local companies together with funding from the public sector. The graduates should be able to work as middle level technicians, preferably within the companies that financially support the technical institute. The technical institute will offer two kinds of courses:

1. Day time class for full time students. Students that have finished basic education will be recruited. This functions as a normal technical institute, with a focus on practical technical skills. Approximately 60 students per year should get their diploma, after a two/three year during course. The intention is that the students who finish this school should work in the consortium of manufacturing companies, but the students can not be obligated to do this.
2. Evening class for part time students. The students that are already working in the manufacturing companies can enter for refresher courses. These students are mainly employees from the cooperating companies. Other companies can also send their employees to this school, but will pay a higher fee per student.

7.2.2 Parameters of the system

The parameters of the technical institute can not be outlined into detail yet because the decision whether to cooperate with a local institute or not has not yet been taken. Taking this in mind, the following things can be said.

The owners of the institute will be the parties that have financially invested in the institute, namely the cooperating companies, the public funding parties and, if cooperating with a local institute, the partner institute in Ghana. The 'consumers' partially have overlaps with the owners, namely these same companies that are the owners will acquire the graduated students to work in their companies, next to companies that will send employees to this institute for refresher courses. These refresher courses are open to every company who wants to send their employees, or individual that want to be extra educated, in a certain subject area. The technical institute will be designed in such a way that it will fit in the existing educational system, i.e. that it will connect to the knowledge gathered during basic education. The effectiveness and the long-term effects will be all the greater when the goal system is accepted by all the members of the organisation. Therefore, the goal establishment and the formulation should take place in close cooperation with the local partner.

7.3 MANAGEMENT AND ORGANISATION OF THE TECHNICAL INSTITUTE

In this section a possible organisational structure for the technical institute will be drawn. It is important that design should be seen as a continuous learning process rather than a blue print. This implies that the structure drawn at the moment of writing the thesis could change when acquiring new information about the content of the project. There should be a participative process of modelling which can be carried forward into actual development, management and evaluation as an on-going learning process involving all members (Sterling, 2004, p. 81).

The design of the structure is based on questioning Ghanaian stakeholders how they view the future organisational structure of the technical institute. Next to that, Dutch experts that work in the educational sector are questioned. It should be emphasized that these are my own thoughts on how to structure the institute, based on the different views from experts. In other words this indicates that there could, of course, be other possibilities that suit the goals of the institute even better. To make dear how the institute will be organised, first the members of the institute will be discussed, after which a possible formal structure will be drawn.

7.3.1 Members

When cooperating with a local institute the principal and its board of directors will be influenced by the effectiveness of the national directories and the effectiveness of the local institute. This will act upon the choice of cooperating with a local institute or not.

Members of organisations share the fact that an organisational structure serves to combine and focus their activities towards the achievement of specific goals (Stockmann, 1997, p. 83). Membership however does not refer to the entire person, but only to the specific actions and performances of his or her qua member. The members of the technical institute consist of the professional staff and the students. In this chapter the focus lies on the professional staff of the technical institute, because this chapter is concerned with the organisation of the technical institute. The staff operates on three levels that is the board, the middle level management and the teaching personnel. Because at the time of the writing it is not yet dear which persons will fulfil what role, only the action and performances will be described and not the entire persons.

1. *Principal, board of directors*
   The principal and the board of directors are in control of the technical institute. When the technical institute starts running, the project team is not active anymore. Therefore the technical institute will be controlled by the board of directors, which can be seen as the controlling organ.
   The board of directors will be supported by an advisory board. Experts that offered to take place in the advisory board are: Mr. Titi Ofei (vice-principal of the SOS Herman Gmeiner International College), Mr. P.V. Obeng (former Prime Minister of Ghana), Seth Twum Akwaboah (business development consultant of AGT), Mr. Asamoah Duodu (director technical vocational education (GES)), and Carlien D. Bou-Chedid (Ag. Executive secretary of Ghana Institution of Engineers), and Kees van Heijst (Technical director Vlisco)

2. *Middle management/ general staff*
   The middle management, the second layer of the organisation, consists of the following four departments; facility department, PR and marketing department, students' counsellors and finances/administration and personnel. The facility department will ensure the maintenance of the equipment and

the replacements of parts as well as the cleaning and housekeeping of the institute. This department will also provide food and drinks for the students and the staff. The PR/marketing department will recruit new students as well as funding from the industry and public sectors. The students' counsellor will look after the students beyond the teaching activities. The finances/administration and personnel department will take care of the personnel tasks and the accounting and bookkeeping tasks.

Although this middle management level is divided into four separate departments, this does not assure that these departments will actually originate. It could be that the PR, as well as the financial and personnel activities will be executed by the same person. The four departments are drawn here to underscore the separate activities that exist. Although the focus most of the times lies on upgrading the technical teaching staff, it should not be neglected to train the administrative and management staff. This is one of the preconditions for long term success (Stockmann, 1997, p. 259). The PR activities should also not be neglected, accordingly when being in conference with AGI, agreements were made about publishing an article about the technical institute in their newsletter[1]. This will enable the institute to get free publicity and to recruit students and to attract stakeholders to invest.

3. *Teaching personnel*

Within the teaching department, the third layer of the organisation, three different divisions exist. The department will be divided into the teaching staff that teaches technical practical subjects in the workshop (mainly mechanical, electrical and process engineering), teachers that teach general subjects (English, mathematics and science) and behavioural subjects focussing on attitude, behaviour on the work floor, health and safety. The technical teaching personnel will be attracted from the University College of Education in Winneba. They can provide the future technical institute with teachers that are tailor made. 1f necessary they can also be supported with train the trainer course given by Nuffic in the Netherlands. Teachers for general subjects can also be provided by the University College of

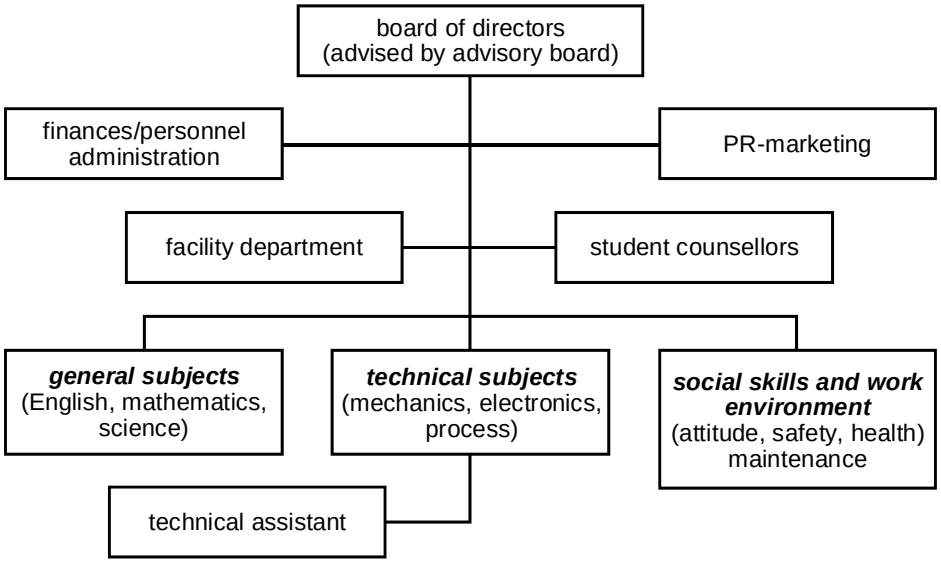
[1] The newsletter of AGT is released every month, digital and hard copy, and will supply all of their members (1000 large industrial companies) with information about policy breakthroughs and fairs.

Education in Winneba. This is agreed upon with the chancellor Mr. Anamuah-Mensah.

7.3.2 Formal structure

Taking in mind the two options, cooperation or go private, it should be noticed that irrespective of the selected option, my advise for the structure will be almost the same. It should be acknowledged that when cooperating with a local institute the composition of the board will be somewhat different.

Figure 7.1 Organisation chart of the technical institute



The key structural elements determine what occurs in organisations and their level of effectiveness. The organisational structure or formal structure of an organisation refers to the patterned or regularized aspects of relationships existing among participants in an organisation (Stockmann, 1997, p. 83). The formal structure should specifically be suitable for the long-term fulfilment (sustainability) of the tasks of the technical institute. Here it should be beard in mind that cultural factors, like

power distance, influence the success of the designed formal structure. Schematically the structure of the technical institute will look like the design in Figure 7.1

The division of labour is not split into formal positions yet, but according to the size of the technical institute choices will be made about the division of labour. The smaller the size of the institute, all the more tasks will be combined in a position for one person. For now the division of labour will be done according to the organisation chart above. Experience from the field shows that at least the following departments should function well in order to ensure long term task fulfilment: the procurement system, maintenance and upkeep, transportation system and accounting and bookkeeping (Stockmann, 1997, p. 353).

Accordingly it is not enough to design the technical institute in such a way that is keeps running, the technical institute should also maintain this function over time. In terms of this task, however, it is important that the employees are given the ability and learn how to keep equipment in operation (maintenance, repairs, provision of spare parts), how it can be modernized and made conform to new developments in the long run (replenishment of capital investments and new investments), how the curricula can be further developed in keeping with these trends, how the instructors should be trained further. Only if the structures created are implemented in such a way as to include the potential to transform them they will be able to fulfil their tasks in a sustainable manner.

7.4 REQUIRED RESOURCES OF THE TECHNICAL INSTITUTE

This section outlines what resources are required in order to fulfil the purposes. In the first place this refers to the teaching programs and the technical needs, in the second place it refers to the financial requirements.

7.4.1 Technological resources

The technology of an organisation refers to the procedures employed in an organisation and the technical equipment used to perform the intended products. Within schools and vocational training institutions the product consists of better informed

individuals. This product encompasses both the knowledge about procedures for imparting information and skills (such as the teaching programs) as well as the knowledge about the techniques/technology to be used in this context and the technical equipment needed to do so (such as equipment, tools, instruments and so on). At the moment the teaching programs have not yet been drawn, first there needs to be more clarity about the financial aspects of the technical institute and the cooperation between the stakeholders.

Although there are no teaching programs yet, the manufacturing companies in Ghana did indicate during the interviews what the main subjects for them should be. Next to interviewing local companies, two visits were paid to the ROC Helmond Ter AA/Ter Kemmenade College (a Dutch technical vocational institute) in order to investigate how the workshop is organised and what equipment is presented. The ROC has a list of required equipment and tools (and the cost of it) for the organisation of one workshop alias practice classroom. When the teaching programs are drawn, professionals from this same ROC are willing to give their advice on which equipment and tools to purchase.

Table 7.1 List of technical subjects based on the demands of the manufacturing companies in Ghana

subject	specification
mechanical engineering	pumps, welding, bearing aligning machines machining drives tool identification
electrical engineering	making and reading drawings guidelines security tool identification
process control	reading of technical drawings and control diagrams PLC
maintenance	lubrication bearings spare parts reading of equipment manuals maintenance planning (scheduling)

Every respondent from the industry is being asked about their needs concerning educated middle level technicians. In specific they are asked which subjects they think are relevant. Below a list of technical subjects is presented according to the demands of the manufacturing companies.

Experience in this field shows that the factors of technology that will be of influence on the long-term fulfilment of the goals, i.e. the sustainability, are the level of the facilities (with regard to the local economy and the training requirements) and the state of the facilities and materials supply (maintenance and upkeep and new investments and replenishment) (Stockmann, 1997, p. 334). Therefore the technical equipment has to be evaluated often on the level of the facilities, the state of. the facilities and the supply of materials in order to keep up with the technological changes in the context, i.e. the changing demands of the manufacturing companies.

In order to stay effective and to create long term effects the established technical facilities should be appropriate for the training given and this thereupon should fit the existing educational system in Ghana.

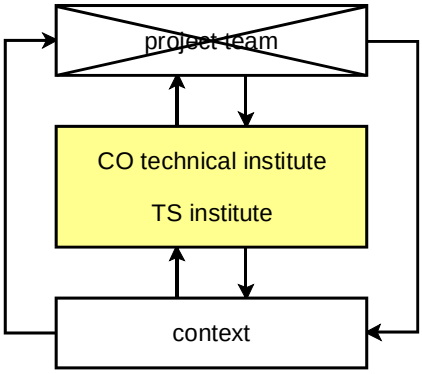
7.4.2 Financial resources

Some organisational theories in sociology tend to underestimate the importance of the financial resources an organisation requires to maintain its ability to function. However, without funding or self-financing, no organisation can secure its long-term existence. Whereas business enterprises produce the means required to cover their running expenses for personnel and materials by selling their products, most schools are dependent upon government funding or upon tuition and other means of creating independent revenue (such as trough the sale of products or services). In conclusion it can be stated that external funding is needed for the set-up and the operation of the technical institute, because a local technical institute either Vlisco can not carry the costs on their own.

Looking at the financial aspects of the technical institute, again it depends whether cooperation with a local institute takes place. It should be beard in mind that even when cooperating with a local institute the expectations for funding from their side can be neglected. As mentioned in chapter four: the technical institutes in Africa

have high costs and concomitant funding problems. Therefore it is better to expect minima! to no funding from the Ghanaian counterpart. Also school fees will not provide an income that is able to influence the financial resources substantially. Maybe the evening class will generate some income, since these courses are given on a commercial basis. Mr. Vergeer compiled a draft for the founding costs and the operational spending of the institute. For more information on these costs, see Appendix 7. Although this is not drawn into detail, it gives a dear overview of the costs involved in the project.

Figure 7.2 CO-TS game: Change of CO and TS



The constitutive features of the technical institute are discussed (see Figure 7.2). By going deeper into the organisational structure it becomes dear that the role of the project team fades away when the institute starts operating. When the technical institute starts operating it is the board of directors together with the middle management who are in control. From this point onwards the technical institute can be seen as the controlling organ and the target system. Whereas the board and the middle management are in control of the output of the technical institute. The output, (well-educated students) when evaluated, will on the other way influence the board's way of acting. TS therefore changed from the set-up of the institute to the operation of the technical institute.

7.5 CONCLUSION

This chapter dealt with the constitutive features of the organisation, the following sub-question has been answered:

> *4. What are the characteristics of the constitutive features of the technical institute that exert influence on the sustainability of the technical institute?*

The constitutive features consist of the goal of the institute, the management and organisation, technology and the financial resources. The goal of the institute is to educate technical students in a way that it fits the needs of middle level technicians, of the manufacturing companies. In order to fulfil this goal in the long run the organisational structure should be set-up in a way that it will be dear which department is responsible for what tasks and that sufficient maintenance and evaluation takes place. The technology should fit the goal to deliver well-educated students. We should not underestimate the importance of the financial resources an organisation requires to maintain its ability to function. The operational costs of the technical institute will be afforded by the cooperating companies together with public funding. Accordingly it is not enough to design the technical institute in such a way that is keeps running, but the technical institute should maintain this function over time. In terms of this task, however, it is important that the employees are given the ability and learn how to keep equipment in operation (maintenance, repairs, provision of spare parts), how it can be modernized and made conform to new developments in the long run (replenishment of capital investments and new investments), how the curricula can be further developed in keeping with these trends and how the instructors should be trained further. Only if the structures created are implemented in such a way as to include the potential to transform them the members will be able to fulfil their tasks in a sustainable manner.

To conclude Part II of this research the sustainability of the technical institute will come back in the next chapter.

CHAPTER 8

SUSTAINABILITY AND EVALUATION STUDIES

As by this time it should be dear what different phases the project will go on before the technical institute is operational and what aspects will influence this process, in this Chapter 1 will elaborate on the aspect of sustainability. Whereas all the aspects of setting up the institute, running the institute and sustaining it, have been described it is not yet dear how to audit this.

In Chapter 4 an introduction to the concept of sustainability was already given, in this chapter the debate about sustainability will be entered with a focus on how different organisations anticipate on sustainability and in what way evaluation mechanisms can help in reaching sustainable results. Apart from the importance to touch upon the role the different stakeholders have to fulfil in order to preserve the sustainability it is also necessary to verify the sustainability by using evaluation tools and by explicating the factors that influence the sustainability. Next to that the internal and external factors that influence this will be explicated. Together this will serve as the completion of part two where the theory and results of the research have been presented.

The structure of this chapter will be as follows: in section 8.1 the discussion will be entered into the role sustainability has in development projects and the way different organisations act towards reaching sustainable results. In section 8.2 the internal and external factors that came to the fore in the previously discussed chapters of part two will be summarised. In section 8.3 an evaluation mechanism is setup to evaluate the sustainability on different stages in the life cycle and explicate the role evaluation mechanisms can have in preserving this sustainability. Together with the results of this research the evaluation mechanisms will be based on the way the several development organisations deal with it. After that a conclusion is given in section 8.4, in which the fifth sub-question will be answered.

5. *What is the significance of the sustainability of the technical institute and in what way can the sustainability be evaluated?*

8.1 DEBATE ABOUT SUSTAINABILITY

For all models of self-help and forms of technical, personnel and financial support, sustainability is “an at least implicit, high priority aim”. This is underpinned by the World Bank, the OECD and USAID and the United Nations (Stockmann, 1997, p. 27), which are some of the largest development organisations of the world, with a lot of experience and research in this field. These organisations’ definitions of sustainability will be discussed in this section. In sub-section 8.1.1 views on sustainability will be explicated where in sub-section 8.1.2 the way they act upon them will be outlined.

8.1.1 Several views on sustainability

1. Sustainability, definition applied by the World Bank: the ability of a project to maintain an acceptable level of net flow of benefits throughout its economic life. This ability rests on a number of factors and is frequently expressed in terms of economic or financial rates of return on the project investment (www.worldbank.org).
2. Sustainability, definition applied by USAID: the program’s continuing to deliver services or sustain benefits after the donor’s technical, managerial and financial support has ended (www.USAID.gov).

8.1.2 Several views on evaluation mechanisms

“There is often very extensive monitoring of foreign aided projects during the period of implementation, but there is much less evaluation of how well projects operate, how effectively they are sustained and to what extend they produce the intended impacts” (Stockmann, 1997, p. 1768). Since the sustained, long term improvement of the output of technical students is the underlying goal of this cooperative activity, it is no longer a source of dispute that the sustainability of the technical institute represents a major criterion in assessing whether this goal has in fact been reached. All of the organisations discussed above have their own evaluation department, which operates separately from the development departments. In order to learn what can all be done with evaluations a little insight is given into the work

these departments do. Next to that lessons learned from their evaluation mechanisms will be outlined.

8.1.2.1 World Bank

The Operations Evaluation Department (OED) is an independent unit within the World Bank; it reports directly to the Bank's Board of Executive Directors (www.worldbank.org). OED assesses what works, and what does not; how a borrower plans to run and maintain a project; and the lasting contribution of the Bank to a country's overall development. The goals of evaluation are to learn from experience, to provide an objective basis for assessing the results of the Bank's work, and to provide accountability in the achievement of its objectives. It also improves Bank work by identifying and disseminating the lessons learned from experience and by framing recommendations drawn from evaluation findings. The World Bank has developed an increasingly rigorous system of evaluation over the past 30 years. Two independent reviews sponsored by evaluation units of regional development banks have found that the Bank's evaluation tools and approaches come closest to best practice among the multilateral development banks.

8.1.2.2 USAID

While there are only a few people in USAID who are full-time program evaluation officers, many people wear the evaluation hat on occasion.

The following website (http://www.dec.org/partners/evalweb) is designed to serve both groups. The evaluation agenda focuses on two types of studies: experience reviews and evaluations. Evaluations are assessments of what USAID (and others) have done, accomplished, and learned in particular development areas. USAID wants evaluations to be driven by a real need for information; information which management then uses to improve programs and policies. In addition, evaluations serve as a valuable tool through which international organisations learn and improve.

8.1.2.3 OECD

Development Co-operation Directorate (DAC), is the department of the OECD that executes evaluations on pro grams. The Development Assistance Committee (DAC) is a key forum of major bilateral donors. They work together to increase the effectiveness of their common efforts to support sustainable development. The DAC concentrates on two key areas:

1. How international development co-operation contributes to the capacity of developing countries to participate in the global economy, and
2. The capacity of people to overcome poverty and participate fully in their societies.

8.1.2.4 Lessons learned from development organisations

In a project's life cycle several events might 'trigger' an evaluation. All three of the following sections as tests can be used for deciding to evaluate or not. Think through the potential evaluation in terms of how its purpose would be classified, whether the management need behind it is associated with positive or negative signs, and whether it is generated by one of the situations below (www. USAID. gov):

1. Performance monitoring indicates unexpected results (positive or negative) that need to be explained;
2. A key management decision should be made and there's inadequate information;
3. Annual performance reviews have identified key questions that need to be answered;
4. The contribution of the technical institutes activities to the results should be questioned;
5. Issues of sustainability, cost-effectiveness, or relevance arise;
6. Recommendations for actions to improve performance are needed.

8.1.2.5 Successful evaluations

Successful evaluations tend to have four qualities are:

1. Making the decision to evaluate. Before getting started, the people involved in the evaluation needs to be in agreement on the evaluation's purpose. They need to agree on what they are trying to find out and what they plan to do with that information.
2. The scope of work is well thought-out. The Scope of Work (SOW) is a plan for the evaluation. It briefly answers the big questions: who, what, where, when, and why. The best SOWs deal with these questions head-on and do not postpone decisions for the evaluation itself.
3. The team is capable. In conducting an evaluation on the technical schooling project, the project team needs to go beyond a generically 'qualified' team. The team and the mix of skills it brings need to be qualified for the evaluation. As a member of the project team thinks about what he or she is trying to accomplish, he/she should think about how much country and program specific knowledge he/she needs, how much independence, and how much he/she wants to include program participants on the team
4. The results are used. Translating the results of an evaluation into action depends in part on clarity of purpose. But even evaluations, which are otherwise well done, are not always used. Disseminating results effectively requires effective communication

The way these four elements are combined to make a successful evaluation is subtle. Even the best evaluation team cannot fix problems caused by an unclear purpose or a vague SOW. These four elements are interdependent, and you need to get them all right to be successful.

8.2 INTERNAL AND EXTERNAL FACTORS THAT AFFECT SUSTAINABILITY

As outlined in the previous chapters the sustainability will be influenced externally by factors that cannot directly be influenced by the project team and internally by factors that can be influenced. This brings about that the external factors should be anticipated on in order to create sustainable results and the internal factors can be influenced by the project team. Therefore before going into the execution phase it should be though about either the technical institute fits the external context (external factors) and what internal decisions to take.

When these sustainability factors are identified, the capacity for the future delivery of benefits can be increased by appropriate attention to those critical factors. They will be divided into internal and external factors and subsequently dealt within sub-section 8.2.1 and 8.2.2.

8.2.1 Internal factors

Internal factors refer to those factors that can be influenced directly by the members of the technical institute itself or by the project team. To structure the internal factors these will be divided into factors of influence during the project-assistance phase and factors of influence during the post-assistance phase. In both phases evaluation will play an important role and therefore will be taken along as being a factor of influence.

1. *Project-assistance phase*
   The factors of influence on the sustainability that come to the fore in this phase are the design of the project, the management of the project and the monitoring of this, target group participation and the way the constitutive features of the institute are designed. Here it is assumed, that in order to be sustainable, the technical institute has at its command a system of goals accepted by organisational members, qualified personnel, a functioning organisational structure, financial resources, technical facilities, and a training model that is in keeping with the preceding achievements of the general system of education and with the requirements of the labour market (Stockmann, 1997, p. 55).

2. *Post-assistance phase*
   This only applies when the technical institute starts running. The factors consist of the elements that can be influenced and on which evaluations will be held. These elements include all of the constitutive factors. Are these factors still appropriate to serve its goal, do they need to be adapted to the new requirements of the industry? This should be monitored every year, before new teaching programs can come into being. The factors can now be divided into the three elements of the constitutive features, namely the goals and parameters of the system, the member and the structure in which they operate and the resources required for executing this.

8.2.2 External factors

The external factors do not consist of actual tangible things, but consists of general features that can influence the functioning of the technical institute. The board of the technical institute have to take in consideration what the influence of these factors is, but can hardly influence these factors themselves (Paul a.o., 1996, p. 117). These factors will also be divided into the project-assistance phase and the post-assistance phase not because the factors will differ, but because the way to deal with these factors differs.

1. *Project-assistance phase*
   These factors are the general economic conditions, the general socio-cultural conditions, the general national-political conditions, the general international and the general global conditions, i.e. the factors coming from the context. Important here is that the technical institute fits well into the system. It is better to adapt to these factors than to try to influence them. Although hardly anyone would dispute the fact that this list of factors can influence sustainability, it gives rise to several problems. The individual categories are both distinct nor mutually exclusive, it can never be sure if no essential factors are missing and there is a lack of any indication of the relative strength and significance of individual factors. The most important things to reckon with are the educational structure and the employment structure. These factors have to reckon with throughout the whole project-assistance phase, i.e. adapt to the needs of the industry and fit into the existing system. All of the other external conditions have to reckoned in such a way that it will ease the set-up.

1. *Post-assistance phase*
   In the post-assistance phase the board of the school has to give an eye on changes in the context. Is the demand for technicians changing, how do other technical institute around the world act upon this changed demand, is the technology changing etc. In this phase, changes in the environment (context) and the way the institute is able to adapt to these changes are key issues.

8.3 EVALUATION RESEARCH

The use of a more systematic approach to considering project performance at all stages, including after completion, may itself help to improve sustainability. This section will go deeper into evaluating the project during the project-assistance phase as well as during the post-assistance phase. One of the most important reasons for conducting evaluation research is to detect the relationships of cause and effect during the different phases of the project. These elements of evaluation research will be discussed in this section; based on theory on evaluation, by different developing organisations and Stockmann (1997) in sub-section 8.3.1. Next to that, it is important for the usefulness of this evaluation method (for the technical schooling project) to make it ready to use in the form of an advice and checklist for evaluations. This will be compiled in sub section 8.3.2.

8.3.1 Theory about evaluation research

Evaluation research is generally defined as 'the systematic application of social research procedures in assessing the conceptualization and design, implementation and utility of social intervention programs. In other words evaluation research involves the use of social research methodologies to judge and improve the planning, monitoring, effectiveness and efficiency of human services programs (Stockmann, 1997, p. 99). Correspondingly the field of evaluation research can be structured according to:

1. *The sectors of study evaluation research takes up*
   In this research the evaluations study that should be executed focuses on the technical institute.
2. *The phases of policy process it treats*
   At the technical institute the evaluation takes place in three phases. The first phase is the phase of program development. This aims at recognising negative effects of a program or measure. In this phase donors (like DGIC) select on program. The second phase is during the implementation, this aims to provide decision making assistance for managing program implementation and to facilitate changes in program design by offering early opportunities for correction. In the third phase, following the completion of the implementation of a program, it is the task to determine and assess the

full extent of the impact produced by it and the changes need to undertake when recognising deviations.

3. *The cognitive interest it pursues*
   The evaluation research in this study is focussed on improving policies, their implementation and their impact.
4. *The evaluation model it is based on*
   The evaluation in this study is formative in structure, i.e. designed to be actively formative, constructive and conductive to communication.

Since the objective of the project-progress monitoring is to promote the strengths of a project and, if applicable, establish its existing deficiencies and their causes and recommend appropriate means of improvement, it is naturally carried out during the course of the project. This means, it can only provide very limited conclusions about sustainability. If no ex-post-facto evaluations are taken, the only thing that could be determined are the expectations about the future sustainability of the project (Stockmann, 1997, p. 54). For that reason, when monitoring the project, the post-assistance phase should not be neglected in the evaluation.

When the post-assistance phase is started evaluations are executed and follow-up projects should be brought into life. Follow up projects increase sustainability because they tend to strengthen institutional capacity assisted by earlier investments. Educational projects should be planned in series as part of a long-term investment program with clearly defined goals based on sound sector work, and should include activities designed specifically to enhance the sustainability of earlier investments (www.worldbank.org). Therefore also in the technical schooling project of Vlisco money has to be retained for follow-up projects. The follow up should be done no earlier than the first students get their diploma's, because only than conclusions can be drawn about the appropriateness of the teaching programs.

It follows from the life course model that the entire life course of a project has to be investigated in order to analyse the long term effectiveness of a development scheme. The framework of evaluation is constructed in such a way that, under the given conditions and possibilities of action within individual areas of impact, planned and unplanned impacts produced by material or personnel-related project inputs in the project implementing organisation and target population are systematically investigated in three parameters:

1. Basic data, i.e. project influence, personnel- and material-related interventions are documented and assessed for all phases of its life course.

2. Internal area of impact/implementing organisation, i.e. the constitutive features derived from organisational theory are employed, in order to be able to capture changes over time for individual dimensions
3. External areas of impact/target populations, i.e. in the evaluation framework this parameter is treated in terms of the target-group system or the field of impact.

8.3.2 Evaluation checklist

An evaluation checklist is presented below. The evaluation should be compared over time and weighed and combined into one comprehensive evaluative table (Table 8.1). The selected indicators are a combination of indicators designed by Stockmann (1997) and indicators mentioned by the interviewed persons in Ghana. The first part consists of indicators assessing the quality of the project team and the project design, the second part focuses on the internal areas of impact, what the technical institute can do for itself to influence the sustainability and the third dimensions evaluates what the intended impact is on the external context.

This is a rather compact overview of a larger evaluation framework developed by Stockmann (1997) that can be applied to the technical schooling project. For an overview of the total evaluation framework developed by Stockmann see Appendix 8.

The CO-TS game can also be played when going deeper into the evaluation framework (see Figure 8.1). In the project-assistance phase, were the project team is in control of setting up the institute, evaluation takes place on both of the variables, CO and TS. The project team will be evaluated on its execution of the project, but also ‘meta’-evaluation takes place by evaluating the target system in the set-up phase. When the post-assistance phase is attained the operating board of the technical institute will be evaluated on its actions and they will be ‘meta’-evaluated by evaluations on the internal areas of impact. This evaluation will go on for years until the institute proves that it can support oneself and will continue to educate students that will serve the needs from the industry. When the evaluation shows that the institute does not attain its goals the project team is deployed back again to do follow-up support.

Table 8.1 Selected assessment indicators

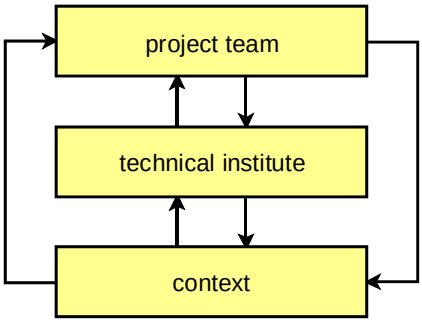
a. Project demography and design: indicators for assessing the quality of intervention process	1. Quality of the planning of the intervention process 2. Quality of the management of the implementation process 3. Quality of the project transition 4. Quality of follow-up support
b. Internal areas of impact: indicators for assessing internal sustainability	1. Goal acceptance among implementing-organisation management personnel 2. Goal acceptance among implementing-organisation teaching and training personnel 3. Qualification level of teaching and instruction personnel 4. Organisational effectiveness of the higher-level implementing organisations (TVET) 5. Organisational effectiveness of the direct implementing organisation 6. Financial effectiveness of the implementing organisation 7. Quality of technical facilities, and the training model 8. Conformity of training to the prior educational level of incoming students 9. Conformity of training to employment system requirements
c. External areas of impact: indicators for assessing external sustainability	1. Diffusionary effects in the technical-training system 2. Diffusionary effects in the employment system

8.3 CONCLUSION

In this chapter the concept of sustainability is outlined more into detail, the following question has been answered:

5. *What is the significance of the sustainability of the technical institute and in what way can the sustainability be evaluated?*

Figure 8.1 CO-TS game: Sustainability and evaluation of the project



There is a wealth of definitions in use describing sustainability, but in order to answer to the question whether programs or projects are able to achieve sustainable effects it is dependent upon the evaluation criteria selected. The evaluation criteria are selected on the basis of the goal of the project. In this project sustainability refers to the technical institutes continuing to deliver services or sustain benefits after the donor's technical, managerial and financial support has ended. This entails that it should deliver well educated technical students that also over the years fit the requests stipulated by the industry. If sustainability is set as a goal in itself, working towards that goal is possible. In order to preserve the sustainability, evaluation mechanisms are brought into life that will evaluate on basic data, internal areas of impact and external areas of impact. These evaluation criteria are designed in the manner that they will be able to assist in improving policies and design activities.

The next chapter will outline a benchmark on the set-up of a graphic and media training institute in Ghana. In this chapter, the criteria discussed in all the previous chapters, influencing sustainability, will be supported by empirical findings.

Part III

Bench marking

CHAPTER 9

BENCHMARK: GHAPPCA/INGRIN

In order to support the factors that are of influence on the sustainability that were described in the previous chapters, this chapter includes a benchmark (of the GhaPPCAI/INGRIN case) in Ghana, on an educational project which is in its final stages at the moment. The case study that will be described is one on the set-up and operation of a graphic and media training institute in Ghana (Accra) that provides refresher courses for the employees working in the graphic and media industry in Ghana. INGRIN, the Dutch partner in this project not only has experience with setting up training institutes in Ghana, but also in Sri Lanka and Indonesia. Part of the project team are interviewed several times in order to extract their best and worst practices.

In Section 9.1 the GhaPPCA/INGRIN project will be introduced, including the way they got involved in this research. Thereafter in section 9.2 the content of the previous chapter will be filled in for this specific project in a short version, in order to describe the best and worst practices in section 9.3. In section 9.4 a review on the findings in this chapter will be given aiming to support the results of the rest of the thesis. This chapter will end with the conclusion in section 9.5 which will give an answer to the 6th sub-question.

6. *What are the features of the GHAPPCA/INGRIN project and in what way can we learn from their experiences of setting up a graphic and media training institute in Ghana?*

9.1 BACKGROUND OF THE PROJECT

In this section a short introduction is given on the project and the parties involved, together with the way they are included in this research.

9.1.1 Introduction of GhaPPCAIINGRIN Graphic Media Training Institute

INGRIN is a non-profit organisation involved in international graphic training co-operation. It is a Dutch-based NGO with as main objective to contribute to the development of graphic media manufacturing companies in developing countries in Asia, Africa and Latin- and South America. It was on 21 August 1990 that the INGRIN organisation was founded in Amsterdam, and it was in the second half of 1991 that the first batch of trainees came to the Netherlands to follow the first INGRIN programme of practical training. They execute the following activities:

1. Organising train the trainer courses;
2. Co-operating with local branch and governmental organisations in setting up and supporting both sector development centres and branch institutes;
3. Providing technical cooperation and support by organising seminars and workshops programs and in-house technical assistance projects;
4. Carrying out networking activities by for example establishing 'work floor-to-work' floor relations and organising study tours (www.ingrin.org).

The Ghana Printers and Papers Converters Association (GhaPPCA) is an association of large companies operating in the field of printers and paper converters in Ghana. INGRIN, which disposes a wide network of Dutch/European graphic expertise, has been working together with companies from the Ghanaian graphic and media industry in the field of practical training since 1994 already. From 1994 onwards 12 trainees from Ghana came to the Europe, subsequently to INGRIN, for a program of practical training.

INGRIN projects are always demand-driven. In order to be able to cope with the training situation and needs in the graphic and printing industry the GhaPPCA got in touch with the INGRIN foundation NL, to find out to which extend it would be possible to set-up a branch training institute for the Ghanaian graphic and media industry. INGRIN already has a successful experience in setting up similar institutes in for example. Sri Lanka and Indonesia. After some deliberations the outcome has been the set-up a graphic and media training institute, assigned by the name of "GhaPPCA/INGRIN Graphic & Media Training Institute". The goal of this institute is to improve the general standard of the graphic and media industry of Ghana and its region (Business Development Plan, 2001). This goal will be pursued by providing training and schooling to those already working in the industry as well as to those who are about to enter the industry in initially Ghana, and subsequently in other West African countries. The project will be partially financi-

ally supported by FMO. Within FMO the Investment Promotion & Technical Assistance program will bear 66.7% of the eligible expenses. This department stimulates cooperation between companies in developing countries and enterprises in industrialized nations. All the FMO programs are financially supported by the Dutch Ministry of Foreign Affairs.

9.1.2 Involvement in this research

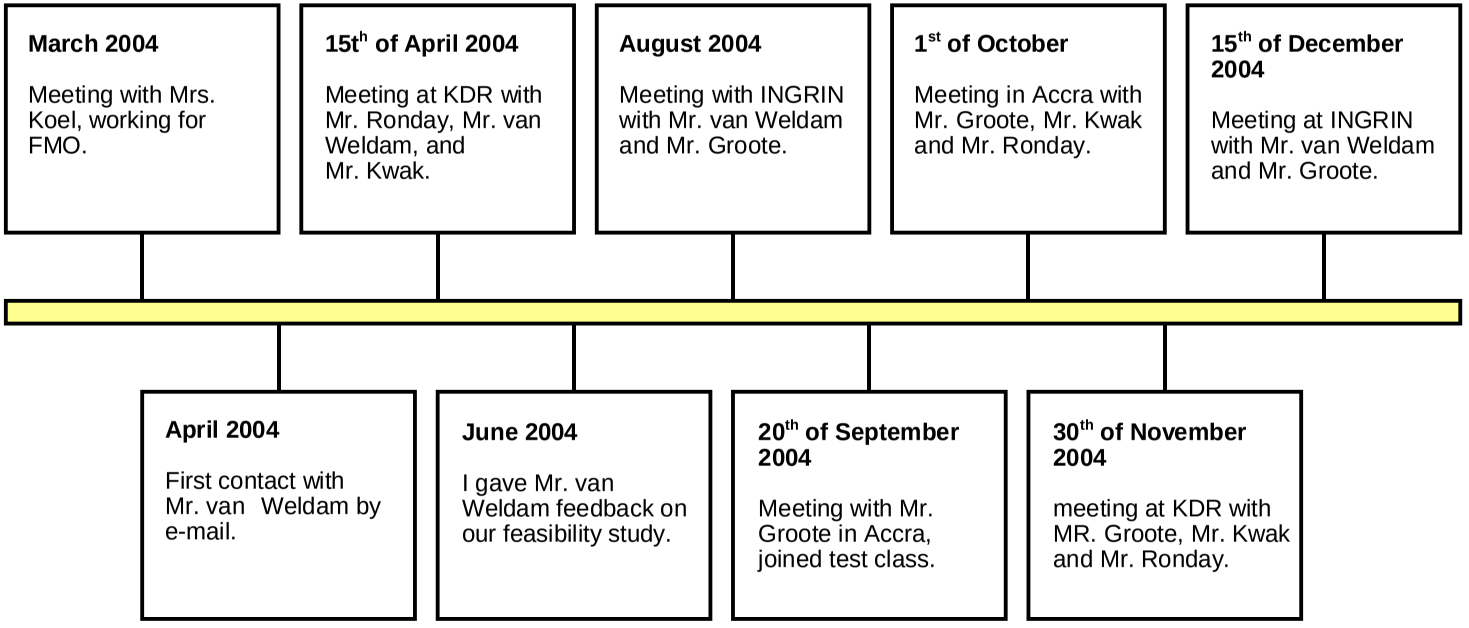
On a congress about sustainability development, held in March 2004, I met Mrs. Koel, working for FMO, who is active in the field of education in developing countries. We exchanged thoughts about the content of the Vlisco project and my individual thesis and she offered to assist I needed more information on the subject. Mrs. Koel is head of the Technical Assistance department and has the GhaPPCA/INGRIN project in her portfolio. She gave me the contact details of Mr. van Weldam, the director of INGRIN. Therefore I contacted Mr. van Weldam and I met him as well as with two members person active for INGRIN, namely Mr. Kwak and Mr. Ronday in April 2004. Mr. Ronday is a member of the board of INGRIN and together Mr. Kwak and Mr. Ronday are the directors of a large graphic company, named Kwak, van Dalen and Ronday (KDR).

Next to these three persons working for INGRIN, I met Mr. Groote Schaarsberg several times in Ghana; who[1] is the technical assistance co-ordinator for INGRIN. Below a time-line has been drawn to give an overview of the different meetings and contacts we had in the past year.

As can be seen in the time line above, there has been intensive contact between INGRIN, KDR and me. In the first meeting in April they introduced the GhaPPCA/TNGRTN project and I introduced the technical schooling project to them. In June feedback about the feasibility study in Ghana is given. In August I contacted INGRIN again in order to discuss the features of their project again. Two days after our meeting Mr. Groote went to Ghana for clearing the container with technical equipment as well as to assist in the final phase before opening their institute. In Ghana I met Mr. Groote as well as Mr. Kwak and Mr. Ronday two times

[1] In the rest of this chapter when referring to Mr. Groote Schaarsberg, T will only use the name Mr. Groote.

Figure 9.1 Time-line of the contacts with INGRIN



and discussed their best practices as well as their failures when executing the project. Following the visits paid in Ghana two appointments followed in the Netherlands, in order to discuss the final subject and the approval of describing of their case in this thesis.

9.2 EVALUATION OF THE GHAPPCA/INGRIN CASE

In this section the features of the GhaPPCA/INGRIN project will be discussed, including the same aspects as the description of the technical institute.

9.2.1 Introduction to the life course of the project

In order to be able to cope with the training situation and needs in the graphic and media industry the GhaPPCA got in touch with the INGRIN foundation NL to find out to which extent it would be possible to set-up a branch training institute for the Ghanaian graphic and media industry. Therefore a feasibility study was carried out in Ghana from the 26th of November to the 7th of December 2001 executed by INGRIN in Ghana, preceded by a visit of the GhaPPCA delegation to The Netherlands at the end of 2000 and a return visit of an INGRIN delegation to Ghana in early 2001. Due to various reasons the evaluation of the project proposal to set-up a branch institute proper took some time. In June 2002 the funding by FMO was approved (and a lot of preliminary activities had to be carried out, which took a lot of time). Early 2003 the original building offered by GhaPPCA, was replaced by a building offered by one of the biggest printer companies in Accra. Financial delays at FMO caused the project to a momentary standstill in 2003, but nevertheless after due consultation between the Chairman of GhaPPCA and INGRIN, the project was revived in the second half 2003. From the moment that the building was taken care of, the curriculum could be formulated and an operational manager had been pointed out. In May 2004 the Ghanaian trainers came to The Netherlands for a train the trainer course. In June the equipment was send in a container by ship. At the end of August the container still was not cleared trough customs, therefore Mr. Groote was sent to Ghana, to help with the clearing and assist the operational manager with the final tasks before the in-official opening of

the institute. GhaPPCAI/INGRIN Graphic & Media Training Institute opened doors in October 2004.

The “GhaPPCA/ INGRIN Graphic & Media Training Institute” is a non-profit organisation with as goal to improve the general quality standard of the graphic and media industry of Ghana and its region. This goal is pursued by providing training and schooling to those already working in the industry as well as those who are about to enter the industry in initially Ghana, and subsequently in other West-African countries.

The activities of the institute focus on immediately applicable subjects, which guarantee direct implementation, in the form of seminars and workshops (1-2 days full-time), short courses (1-5 days full-time) modular certificate courses (3-6 months, one or two evening per week) and special projects, including in-company training projects.

The project will be financially co-funded by a Dutch funding organisation named FMO, they will take care of 2/3 of the eligible funding costs of the project, and the other 1/3 should be paid out by the local organisations in kind or in cash. Important to note here is that GhaPPCA and the other local partners have hired INGRIN for technical assistance, 2/3 of these costs are being paid by FMO and 1/3 by the local partner. Technical Assistance consists of services, materials and equipment. Although the local partner offered a building, this is not included in the technical assistance agreement and therefore brings about that the local partner has not yet invested their part of the contributions.

9.2.2 Context

The context in which this project takes place is the same as the context of the technical institute with the difference that it focuses on the graphic and media industry. Therefore only this part of the context will be discussed. The printing industry in Ghana is going trough rapid changes at the moment. One important change or rather transition has been the technological merger between the ‘conventional’ graphic and printing industry on the one hand, and information and communication technology on the other. This has resulted in the emergence of new media, which has caused new jobs to be created. Therefore there is a need to train and retrain new

and existing personnel and staff and a need to improve the quality of printed products in order to meet international standards. From a technical point it has been analysed that there is a lack of knowledge and skills among the workers in the industry to produce quality printed products. There are at present over 250 printing houses in Ghana, of which 7.5% is considered to be large-scale.

The existing types of training and schooling (provided by:

1. Tema Technical Institute,
2. the Comboni printing school, and
3. the Titus Glover printing industry) only include a relatively small portion of practical training and are moreover aiming primarily at junior and secondary school going youth and not really at the people working in the industry itself.

9.2.3 Stakeholders

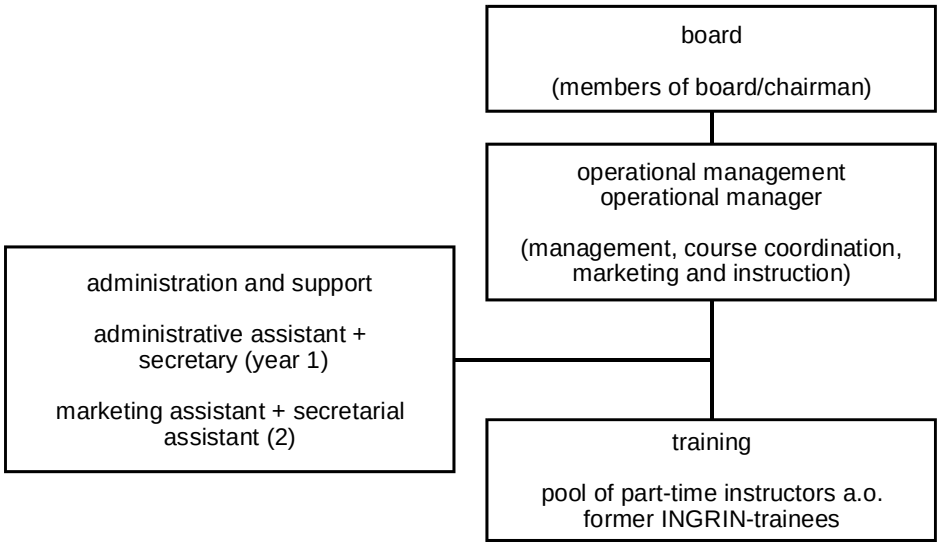
The stakeholders in this project are INGRIN, local companies operating in the field of the graphic and media industry, European companies and government parties.

The Dutch consulting party is INGRIN, which has a database of Dutch graphic media expertise at its disposal, such as KDR, which has become closely associated with the project. INGRIN functions as intermediary between the counterpart in Ghana on the one hand and the funding organisation in the Netherlands (FMO) on the other hand. The local companies that are active in this project are the companies united in GhaPPCA, Sokoa Press Ltd., MAX associates Ltd. and IKAM Ltd. Government parties that are active in this project are the Ghanaian Ministries, i.e. the Ministry of trade and Industry, the Ministry of Manpower Development and Employment and the Ministry of Education. The educational part is fully supervised by INGRIN. The suppliers that supported the acquisition of equipment by offering special prices are suppliers such as Heidelberg, Tetterode and Agfa Belgium BV. The last stakeholders, represented by local branch organisations are: the Association of Ghana Manufacturing companies (AGI), the Ghana Book Publishers Association and the Ghana Book Development Council and GhaPPCA.

9.2.4 GhaPPCA/ INGRIN Graphic Media Training Institute

The goal of this institute as mentioned in the introduction is to improve the general standard of the graphic and media industry of Ghana and its region. The organisational structure or formal structure of GhaPPCA/ INGRIN looks like this the organisational chart in Figure 9.2.

Figure 9.2 Organisation chart of GhaPPCA/INGRIN Graphic Media Training Institute



The board will give direction to the institute for the long term. Where the board is constituted as follows: it consist of the above mentioned Ministries in Ghana, the managing directors of the local companies, the president of GhaPPCA, the treasurer and a consultant of INGRIN and the directors of the local branch organisations. In the initial phase the board shou!d convene at least once every month to monitor matters.

The operational manager should make sure that the institute runs according to plan. This operational manager will be supported by an administrative assistant. The operational manager will be held by a person who was one of the first INGRIN trainees from Ghana in 1994.

The training staff will be hired only on free-lance, or on training project basis. In this regard technical experts in Ghana will be hired, as well as ex-INGRIN trainees from Ghana. The trainees will come to the Netherlands for basic training in didactic and curriculum development and adjustment.

The technical support for equipment is given by Heidelberg and Tetterode and Agfa Belgium, and especially by the Dutch expertise. Next to the technical equipment the institute needs refurbishment, interior design, tools and it should be installed well.

9.2.5 Sustainability

From the goal of the research, "to improve the general quality standard of the graphic & media industry of Ghana and its region" it can be derived that the long term effects are not only aimed at serving the demand from the industry by educating employees only, but also to improve the general quality standard in the graphic and media industry of Ghana i.e. to change the nature and performance of one or more or all components of the system. This will subsequently involve that the sustainability of the institute is only underwritten when the general quality standard is actually improved and will be improved over the years.

If an evaluation mechanism is set-up, it should fit the goal of the institute. Accordingly the evaluation mechanisms outlined in section 8.3 will not be exhaustive for INGRIN, because the one outlined in chapter eight only serves the goal of the technical institute, i.e. evaluates to serve the long term effects of the technical institute. The long term effects of the technical institute are not directly aimed at changing the social system, consequently this evaluation mechanism is not exhaustive enough.

9.3 BEST AND WORST PRACTICES

During the visits paid to INGRIN in the Netherlands and during visits in Accra, the best and worst practices of the GhaPPCA/INGRIN project were discussed several times. In order to describe their best and worst practices first some general findings

they came across and tips will be outlined16. Most of their findings relate to cultural matters. The findings will be outlined[1]:

1. Appointments are often not obeyed by the Ghanaian counterpart, i.e. a lot of times the appointments were not met and a lot of time was lost by waiting although proper appointments were set.
2. Trust is hard to obtain, especially when it involves money.
3. When not showing any progress in the project to the stakeholders, you will loose their attention and trust.
4. It is important to recognise the signals when losing the confidence of the parties; act early when seeing signals like not showing up on meetings.
5. The government will only fully commit itself to the project when the institute has proved itself. With government support the set-up for sure will go more easily but the governments more or less have a wait and see mentality.
6. It is important to know about the start which legal construction the institute will apply to, this creates clarity for all parties.
7. Very important is communication to the stakeholders to emphasize the positive effects of the training institute and show that the project has started as soon as possible, for example in building the premises. When the building is arranged, a person can be employed in Ghana that works on a full time basis for the project.
8. In the final phase it is very important that the teaching programs are inspected, the container is cleared by customs and the equipment is tested.
9. Since the board consists of persons that are very busy in general, it is important to design a well-established communication structure that does not require a lot of time.
9. For getting the equipment without paying customs a letter of exemption can be obtained at the Ministry of Education Youth and Sports.
10. The activities undertaken during the project-assistance phase in Ghana should be monitored often because it frequently happens that activities are not being executed even though they are planned.
11. INGRIN got part of the equipment for special prices from the equipment suppliers which saved a lot money in the project-assistance phase.

[1] The findings of Mr. Van Weldam, Mr. Groote, Mr. Ronday and Mr. Kwak will be discussed jointly, in spite of the fact that there might be small differences between their views about Ghana and the institute.

12. Important when selecting and appointing somebody to be the chairperson or director of the institute: it should be a powerful and prestigious person in the industry.

These findings result in best and worst practices summarized in Table 9.1.

Table 9.1 Best and worst practices from the GhaPPCA/INGRIN case

worst practices	best practices
Plan extra time for appointments because Ghanaians are frequently late. At least bring something to do during the wait.	Take some things to do with you during waiting.
Contracts were broken, since they don not have the same value as they have in the Netherlands.	Always examine if parties understand what is written in a contract and if they act upon it.
INGRIN lost the attention of the Ghanaian counterpart during both the long approval period for funding, as well as the delay in funding during the project. At that time the Ghanaian counterpart also became suspicious about the destination of the funding.	Give updates to the stakeholders frequently to not loose their attention and trust.
Problems were created when at the end INGRIN found out that the legal construction they planned for the institute was not existing in Ghana.	Seek out in the planning or implementing phase what legal structure is appropriate for the institute.
The PR activities were started too late with the consequence that the enrolment rate is very low.	Start early with PR activities to prevent an enrolment rate which will not fulfil the goal of the institute.
At some points in time separate meeting were held where the Ghanaian counterpart were discussing the progress of the project separately from the Dutch counterpart, this created a bridge between the Ghanaian and the Dutch counterpart.	Establish good communication mechanisms in order to keep every party well informed and create open communication lines to prevent parties from not informing other parties.

The following conclusions can be extracted from these best and worst practices:

1. From the context the social/cultural dimension can be seen as one of the most important dimensions to research trough and trough in order to prevent misunderstandings.

2. The stakeholders should be updated very often in order to keep their minds close to the project and a communication structure should be established that will enable the board and other stakeholders to communicate monthly in a meeting and contact each other easily, as long as it is realised that it should accommodate their availability, given the fact that they are busy persons.
3. From the start of the project it should be dear what organisational structure the institute will have, this in order to clarify to the stakeholders how the different parties stand in proportion to each other. Next to that the importance of having a powerful person ahead of the institute.
4. During the project-assistance phase monitoring should take place often, because activities are frequently not executed even though they are planned well.

From their experiences it is confirmed that the internal and external factors described in this thesis (characteristics of the constituent factors, the context and the stakeholders) are indeed of influence on the effectiveness of the set-up and sustainability of the technical institute. This implies that a good evaluation of the internal and external factors is a smart thing to do.

9.4 ADDED VALUE FOR THE RESEARCH

When speaking with members of INGRIN about the dimensions discussed in this thesis, they proclaimed that all the dimensions are of influence of the project results, but it should be emphasized that the dimensions should be weighted differently from country to country. The dimensions should be adapted to the different contexts. For example, where in Sri Lanka the local counterpart were mainly very thankful for the funding provided by FMO, in Ghana the local counterpart became a little bit suspicious about the destination of the funding, because in Ghana there is a unwritten rule that nothing comes for nothing.

The actual added value on top of the rest of the research can be market by the practical experience of INGRIN in Ghana. Therefore it can be concluded that the experience from this thesis shows that theory is important to create a scientific framework, but this is not exhaustive for giving an appropriate advice to Vlisco.

Therefore you need both, practical experience and theoretical knowledge in order to give a well-founded advice.

Generally, the dimensions discussed in this thesis are all of importance to touch upon in order to create an advice that creates long term effects for Vlisco.

9.5 CONCLUSION

The sub-question dealt with in this chapter is:

6. *What are the features of the GHAPPCA/INGRIN project and in what way can we learn from their experiences of setting up a graphic and media training institute in Ghana?*

The GhaPPCA/INGRIN Graphic & Media Training Institute is a non-profit organisation with the goal to improve the general quality standard of the graphic & media industry of Ghana and its region. This goal is pursued by providing training and schooling to those already working in the industry as well as those who are about to enter the industry in initially Ghana, and subsequently in other West-African countries. The project-assistance phase officially started in the year 2000 (although project was approved in June 2002) and will have ended in March 2005, unless extension of the project is requested. The institute started operations by October 2004. Because the GhaPPCA/INGRIN project has much the same features as the Vlisco project the best and worst practices can be adopted very well. The results of the best and worst practices show that actively informing the stakeholders as well as seeking premises in the initial phase of the project are important activities to explore. In the project execution phase, good communicating structures as well as an organisational structure should be established quickly and it should be sought out what legal construction is appropriate for registration of the institute. Because the graphic and media institute has just opened its door there are no best and worst practices yet for the post-assistance phase.

The next chapter looks back on all of the previous chapters and will give an answer to the central question. The research will also be evaluated in order to put forward the successes and drawbacks of the research.

PART IV

CONCLUSIONS AND RECOMMENDATIONS

CHAPTER 10

CONCLUSION AND EVALUATION

This chapter includes a conclusion of the total research; the research question will be answered. Besides that an evaluation takes place, in which the research will be evaluated on the content and the process of the research. In section 10.1 the conclusion will be outlined and in section 10.2 the evaluation on the research will be drawn.

10.1 CONCLUSION

Going back to the roots of this research the following problem came to the fore: Vlisco has problems in finding qualified middle level technicians to work in one of their production companies in Ghana, named Texstyles Ghana Ltd. (TSG). To respond to this problem, Vlisco would like to set up a technical institute in Ghana, together with other large manufacturing companies, in order to fill in the need of middle level technicians. The main aspect of setting up a technical institute that is researched in this thesis is that it should serve as a sustainable solution for the problem. The focus of the research therefore is to explicate the factors determining the sustainability of the technical institute. Sustainability in this respect means that the services delivered by the technical institute should not only be continued just after they are implemented by the project team, but they should also be adapted to changes in the demand structure in order to create long term (sustainable) benefits for the companies in Ghana.

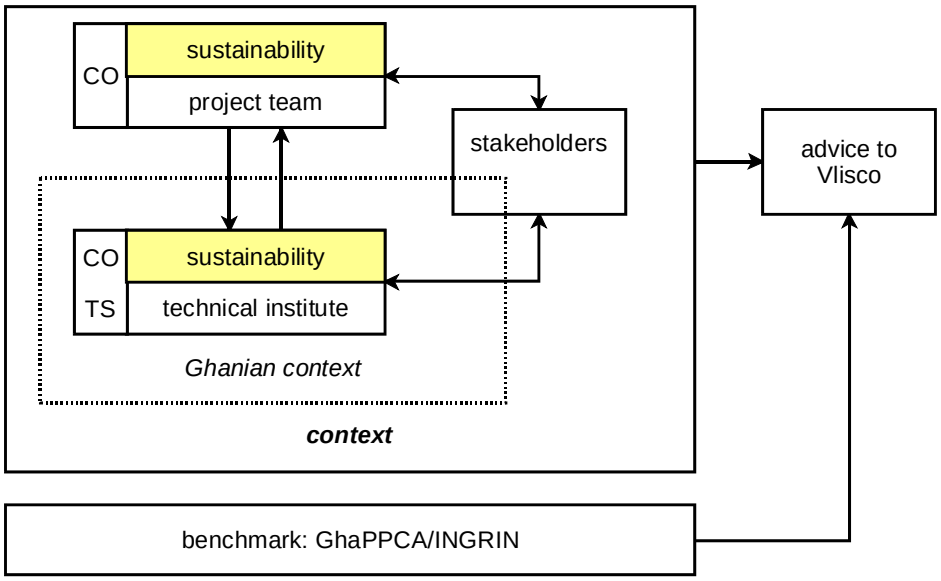
The problem statement consists of the following research objective and research question:

Research objective: *To advise Vlisco on relevant factors concerning the sustainability of the technical institute in Ghana, in both the project-assistance and the post-assistance phase.*

Research question: *What are the internal and external factors that exert influence on the sustainability of the technical institute in Ghana during the project-assistance and post-assistance phase and what is the role of the different stakeholders in this process?*

In order answer this research question six subquestions were developed. First the conceptual framework will be introduced, to give a better overview of the outline of the research. Subsequently the subquestions will be outlined, together with answers to the questions. After that a final conclusion will be provided, answering the research question.

Figure 10.1 The final CO-TS game



This research consists of four parts: in Part I the introduction and organisation of the research is outlined, Part II describes all the theory and results of the field research (oval at the top of the conceptual model) and includes sub-questions 1-5. Part III consists of a benchmark (oval at the bottom of the conceptual model) to support the findings of part two and includes sub-question 6. In Part IV the results of the research are presented in the form of a conclusion and an advice to Vlisco. The different aspects of this conceptual model stipulate the urgency to explicate these factors, since they all influence the sustainability of the technical institute.

The starting point of this research is an explication of the variables of the project, in order to outline the total project. Sub-question one is created to clarify this:

1. *What are the characteristics of this project during the different phases of the project life cycle and what role has the project team here in preserving the sustainability?*

The project will go trough different phases which can be divided into the project-assistance phase, which includes planning and implementation and the post-assistance phase, which includes the sustainability of the project.

In the planning and implementation phase the technical institute will be set up and the constitutive elements of the technical institute will be designed, were in the sustainability phase the project will be evaluated on the previously stated goals. The project team consists of Vlisco employees working on the project as well as some employees from a Dutch knowledge centre (SMO) who are in control of the project-assistance phase The role of the project team ends when the technical institute starts operating. Then, the operating board of the school will take over the controlling task. Sustainability in this project refers to the continuation of the activities of the technical institute over time and the adaptation to changes in the demand structure. This should ensure sustainable benefits for the participating companies in Ghana.

In order to sustain the technical institute the external factors should be studied well before starting the execution of the project. Therefore the following question is answered:

2. *What are the characteristics of the project's context that can be of influence on the set up and sustainability of the technical institute in Ghana?*

The context consists of the general environment in Ghana. The elements of the general environment can be seen as the external factors of control on the sustainability of the technical institute. Ghana is a stable country were the major politicali party focuses on the private sector to realise poverty reduction. The government has not focused enough on the technical and vocational training sector in the past few decades. For this reason, the sector does not fit the needs of the fast-growing industry that is influenced by the global economy. If the future tech-

nical institute is to be successful, it should fit into the existing education sector perfectly, matches the requests of the industries and has support from the government of Ghana and other major stakeholders. Next to that it should be taken into account by what dimensions the Ghanaian culture can be characterized and how to deal with the cultural differences between Ghana and the Netherlands.

The arrows in the model indicate the direct influence of the stakeholders on the project team and the technical institute, vice versa. To explicate their role the following subquestion has been defined:

3. *Which stakeholders can be distinguished and what are their roles during the set-up and operation of the technical institute in Ghana?*

Only the stakeholders that contribute positively to the project resuits are discussed in this thesis. This demarcation is chosen because it is not in the scope of this research to outline all of the stakeholders, including the ones that have a negative effect on the project results. Eight different groups of stakeholders can be distinguished which can be divided into stakeholders that give managerial, financial and technical inputs. Although it should not be seen black and white totally, the following groups fulfil the following roles:

Local companies and public organisations (governmental parties) support in a financial and managerial ways. Dutch consulting partners and local branch organisations provide managerial inputs. Educational institutions, teaching program compilers and equipment suppliers provide technical inputs. Finally, the legal advisor provides managerial inputs as well.

Founding a sustainable technical institute demands the constitutive features of the technical institute to be explicated, therefore the following subquestion is:

4. *What are the characteristics of the constitutive features of the technical institute that exert influence on the sustainability of the technical institute?*

The constitutive features consist of the goal of the institute, the management and organisation, technology and the financial resources.

The goal of the institute is to educate practically oriented technical students that fit the personnel needs of the industry perfectly. In order to attain this goal the organisational structure should be set up in such a way that supports the goal of the institute. The technology should fit the goal, to deliver well educated students. We should not underestimate the importance of the financial resources required by the organisation to maintain its ability to function. The operational costs of the technical institute will be afforded by the cooperating companies and public funding. Designing the institute does not guarantee future results, therefore continuous evaluation should take place.

In terms of this task, however, it is important that the employees are provided the opportunity to learn how to keep equipment in operation (maintenance, repairs, provision of spare parts), how it can be modernized and made conform to new developments in the long run (replenishment of capital investments and new investments), how the curricula can be further developed in order to keep up with trends and how instructors should be trained further. Only if the structures are implemented in a way as to include the possibilities to alter them they will be able to fulfil their tasks in a sustainable manner.

When the features of the technical institute are discussed, we come back to the sustainability of the technical institute. The following subquestion has been created to structure this:

5. *What is the significance of the sustainability of the technical institute and in what way can the sustainability be evaluated?*

There is a great deal of definitions in use describing sustainability. In order to answer the question whether programs or projects were able to achieve sustainable effects it is dependent upon the evaluation criteria selected. If sustainability is set as a goal in itself, working towards that goal is possible. The evaluation criteria are selected based on the goal of the project. In this project sustainability refers to the technical institute continuing to deliver services or sustain benefits after the donor's technical, managerial and financial support has ended. This entails that it will deliver well educated technical students, which also over the years fit the requests stipulated by companies. In order to preserve the sustainability, evaluation mechanisms are brought into life that will evaluate on basic data, internal areas of impact and extemal areas of impact. These evaluation criteria are designed in such a way that they will be able to assist in improving policies and design activities.

To support the internal and external factors that a benchmark is described and their best and worst practices are portrayed:

6. *What are the features of the GHAPPCA! INGRIN project and in what way can we learn from their experiences of setting up a graphic training institute in Ghana?*

The "GhaPPCA/ INGRIN Graphic & Media Training Institute" is a non-profit organisation with the goal of improving the general quality standard of the graphic & media industry of Ghana and its region. This goal is pursued by providing training and schooling to those already working in the industry as well as those who are about to enter the industry in Ghana, and subsequently in other West-African countries. The project-assistance phase started in December 2000 and ended in October 2004 when the institute started operating. Since the GhaPPCA/INGRIN project and the Vlisco project have a lot of commonalties, the best and worst practices can be adopted very well.

The results of the best and worst practices show that actively informing the stakeholders as well as seeking premises in the initial phase of the project are important activities. In the project execution phase, good communicating structures as well as an organisational structure should be established quickly. An appropriate legal construction for registration of the institute should be selected. Since the graphic institute has just opened its doors there are no best and worst practices for the post-assistance phase yet.

The external factors that influence the set up and sustainability of the technical institute consist of the elements in the context that are in one way or another related to the technical institute. These elements can be divided into elements in the direct context of the technical institute, in Ghana, and elements that influence the project team, in the Netherlands. The elements can be divided into demographic, political/-legal, economic, social/cultural, technical and global elements. These factors are difficult to control. Still, their importance should be stressed, to design and adjust the technical institute and its features to the context in which it will be set-up, which is the Ghanaian context.

Stakeholders are one group of external factors. Internal factors that influence the set up and sustainability of the technical institute, on the other side, can be formulated and designed by the project team itself. These factors consist of the constitutive

features of the technical institute that can be grouped into the goal of the institute, the management and organization and the required resources for this. Stakeholders of the institute, play a deciding role by influencing the goal of the institute. They influence the organisation and determine whether the required resources are available.

To preserve sustainability, evaluation should take place on internal and external factors that influence the project results. The evaluation should be carried out in the project-assistance phase as well as in the post-assistance phase, in order to examine the fit between the requests of the companies and the supply of the technical institute.

10.2 EVALUATION OF THE RESEARCH

This section provides an evaluation (or review) of the research. The evaluation depicts how I look back on the process of the research and the content of the thesis and therefore reflects only my thoughts about the research. This implies that, of course, other people can have a different view on the research process and the contents of this thesis.

When I started this research my enthusiasm overshadowed the structural thinking a person needs for executing a scientific research. I was enthusiastic about the project in which I was involved, Vlisco and the product they produce, Ghana as a country and everything around it. Partly because of my enthusiasm and party because I didn't have a dear view on what exactly to research I arranged a lot of appointments with people working for Vlisco and interviewed them about the Ghanaian culture, the working conditions in Ghana, the educational system in Ghana and a lot more. After one and a half month it felt like I didn't do anything useful because still no focussed research goal emerged.

Together with Mr. Vergeer I went to Ghana in April 2004, to execute the feasibility study for the technical schooling project. I was very pleased to speak with a lot of interesting persons, but wondered how these different parties should cooperate and communicate in order to work towards reaching one goal. Next to that I wondered what the meaning of sustainability exactly was, because all the parties said the sus-

tainability is a prerequisite of the project, but the word seemed to have different meanings for different people.

When the feasibility study showed that the project was actually feasible I became even more enthusiastic about the project and realised I wanted to focus my research on the technical schooling project, but I did not want to intervene in the progress of the project; I did not want the progress of the project to be dependent on my results. Therefore I searched for a subject for my thesis that would be useful for Vlisco, but would not influence the progress of the project. This resulted in the focus on the factors influencing the sustainability of the project. Looking back on my role in the project, I could say that even though it was not intended quite some results of my research are being used for the progress of the project. Afterwards I can also say that the results of my research could have been used better if I communicated the results better to other stakeholders, like SMO or Sunsia.

At the start of the project my role in this was not really dear for me. I was a bit insecure when I had to call to Ghana to make appointments and also didn't know if I was the right person for doing this kind of work. After a few days in Ghana during my first visit, I already learned a lot and during the second visit I learned even more especially how to take care of everything on my own. In the end I can say for sure that I'm still enthusiastic for this type of projects and that in a lot of cases I could also transfer my enthusiasm on other parties.

With respect to the content of the thesis a few things can be said. The content should give an overview of factors influencing the sustainability of the technical institute. I think the overview of all factors influencing sustainability is depicted quite clearly in this research, but the importance of linking these factors into adaptation of the project plan or into actions should be kept in mind.

I don't know whether every reader is able to translate knowledge of these factors into appropriate action. Hopefully I have described all my findings in such a way that they can be recognised by and are useful to others.

The chapters are exhaustive in my opinion, in serving the goal of the research but I can imagine that for some it is to broad, too much information and too many pages, therefore it could keep people from reading it. The reason for not shortening it too much is that the goal of advising Vlisco on relevant factors influencing the sustainability of the project can not be shortened too much. If I had shortened this thesis I

would not have been able to explicate the factors like I did now and I think the value of the research would be reduced.

I am satisfied about the theories found, outlined and supplied to the technical schooling project. I learned a lot from the theories that I read, and from taking all the interviews and putting the results together in this thesis.

Looking back to the first months they seemed useless but they actually were quite useful. I could see the broader context in which the project takes place. The drawback of this it that it still cost me one and a half month. What was lacking at that moment was the theoretical background needed to structure the research.

When the research came to an end I realised that it was very special that Vlisco gave me the chance to go to Ghana twice, but also that without actually seeing the context of the project it is hardly impossible to make any well grounded statements about the sustainability of the project. In Ghana things just work differently than in The Netherlands.

CHAPTER 11

ADVICE

After reading this thesis it should be dear that several dimensions of sustainability are in use. When discussing the concept of sustainability, it is important to be dear about the dimensions we talk about and how to act in order to attain the goal of sustainability. Before starting the advice first the objective of this research will be presented again:

Research objective: *To advise Vlisco on relevant factors concerning the sustainability of the technical institute in Ghana, in both the project assistance and the post assistance phase.*

As can be extracted from the research objective the factors influencing sustainability are divided into factors in the project-assistance phase and factors in the post-assistance phase. Therefore, the advice will be given in two phases.

Sustainability in this project refers to the continuation of the activities of the technical institute over time and the adaptation of the teaching program to changes in the demand structure in order to create sustainable benefits for the companies in Ghana. This means that the sustainability is output oriented. In the next part the factors of influence will be discussed which includes concrete advice about how to answer to those factors.

11.1 PROJECT ASSISTANCE PHASE

Relevant factors of influence on the sustainability can be divided into internal and external factors of influence. Every person involved in the planning and implementation phase of the project should become absorbed in the context of the project before interfering in the project. First of all every person working on the project should start by having a dear view on what the goal of the project is and should

meet the stakeholders already involved in the project. He/she should also make dear to the other stakeholders what his/her role would be.

In order to make the right decisions and execute the project in the most efficient and effective way it is important that the context in which it takes place is studied well. Persons working on the project should at least investigate the project's context on the aspects in which he/she is involved. This should all be taken into account when designing the technical institute; these are the internal factors of influence. In Ghana the ruling party (NPP) focuses on the private sector to reduce poverty, this entails that it should be easy to get support from the government. The educational structure is organised in such a way that when a technical institute wants to change something in the system of the institute, the Ministry of Education always needs to approve the change. It is important for the set up of the technical institute that all of the members of the project team are aware of these (cultural) differences and act upon them. The advice that follows from this data is to be careful when co-operating with a local institute, because in order to fulfil the needs of the industries the technical institute should be flexible to changes. It should also not be forgotten that cultural differences lead to other approaches of management and hierarchy. Therefore, one should not try to apply western management approaches in a Ghanaian context.

It is generally recommended that project interventions should be made in close cooperation with one's partner (target population). Here one should be sure to investigate adequately the general cultural, societal and economic conditions prevailing and the effectiveness of the implementing agencies' organisations (Stockman, 1997, p. 1779). Because firms cannot directly control these segments, it is a strategic challenge to understand each segment and its implications in order to formulate appropriate strategies that can be implemented specifically for this project.

In order to have sustainable results, the technical institute should be designed in a way that it fulfils the needs of the industries now and in the future. The most important factors of influence are appropriate teaching programs, supported by enough and up to date technical equipment; well-educated teachers who are familiar with the latest technological changes and good management to keep the teaching programs up to date. All this refers to the importance of the phases prior to the post-assistance phase. These are all of the influence on the sustainability.

11.2 POST-ASSISTANCE PHASE

The things that can be done in preserving the sustainability are different in the post-assistance phase than during the project-assistance phase. In this phase no project team is needed to manage the set up, but an organisation to operate the technical institute. The sustainability will not be determined by the design of the constitutive features of the technical institute but by the way that the constitutive features keep up with the changed demand coming from the industry. Evaluation mechanisms can play an important role in this phase, where all the constitutive features must be evaluated every year. Especially the supply of students of the technical institute, the needs of the industries and the fit between these two are important evaluation parameters. Evaluations should take place on internal factors. External factors have to watched closely in order to extract important deviations in the context that could influence the technical institute's performance. In advance (during the project-assistance phase) money has to be saved in order to be able to upgrade the equipment when this is needed.

Sustainability of the technical institute starts in the set-up phase, where the members of the project team have to study and take into account the context of the project. They have to act in a way that fits this context. The internal factors can be influenced by the project team itself, external factors cannot be influenced. By designing the institute in a way that is most appropriate according to the goals and fitting the context, the project team is able to exert influence over the sustainability of the institute. How and why has been described in this thesis.

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PHOTOS

Saskia Bosscha
Chris Klaasens
Pieter Peeters

APPENDICES

APPENDIX 1

INTERVIEW SCHEDULE COMPANIES

A1.1 BACKGROUND INFORMATION

Introduction about myself:

1. business administration;
2. graduating;
3. focus on developing countries.

Results last visit and request for subsidy:

1. 13 companies are possibly willing to be partner in the project, 3 to invest only;
2. All the schools are interested;
3. PPP, will be subsidised by the Dutch Ministry of Foreign Affairs, 50%.

Goal of the interview:

1. Project related: to inform all the cooperating manufacturing companies and get to more know more about their exact needs?
2. For graduating: to gather more information about the sustainability of the project, the evaluation mechanism, the stakeholders etc.

Reasons for interviewing you again:

1. Last time a positive reaction.

Reason for using a tape recorder:

1. No information shall be lost, difficult to write and listen at the same time;
2. I'm the only person that shall ever hear the tape.

Costs and results:

1. All input from the company will be reported in order to be able to use for the future project manager;
2. It will take roughly one hour.

Structure of the interview:

1. The questions for my own research and the project have an overlap, so they are integrated into one interview.

Ending of introduction:

1. Is everything dear?
2. Do you, at this moment, like to know more about the project?
3. Is it ok with you that I now turn on the tape recorder?

A1.2 INTERVIEW

Introduction

1. What is your name?
2. What position do you occupy?
3. For how long are you in this position now and for how long will you stay on this position?
4. What is your background?

Part 1: Role of your company and other stakeholders

1: What are your requests on the part of learning methodologies?

a. If you are in the position to put together the subjects that will be taught, which ones would you choose?
b. On what level are the students taught? What should the entrance level be?
c. Which proportion should be practically and which proportion theoretically?

2: How many students could you employ every year?

a. How many students can you guarantee a job?

3: What role can your company play in sponsoring the project?
   a. Under what conditions are you prepared to sponsor the project?
   b. Are you prepared to finance the project?
   c. Is it possible that your company can sponsor something in kind? (people, machinery)

4: Which stakeholders are according to you, next to the manufacturing companies, important for the success of the schooling project?
   a. Which groups of stakeholders can you distinguish and what are their roles?
   b. Can you distinguish these stakeholders between the different phases of the project?
   c. Do you know persons yourself who you think are important to contact as well? If yes could you provide me with the names of these persons?

Part 2: Sustainability and evaluation

5: Were do you think of when think of sustainability?
   a. What characteristics contain a sustainable project?
   b. By what means does your company normally take care of the sustainability of projects?

6: Where do you think of when you think of setting up a sustainable school?
   a. What are characteristics of a sustainable school?
   b. What is necessary requirements for setting up a sustainable school?

7: How do you normally evaluate projects?
   a. In what phases do you evaluate projects?
   b. Can you give an example of project evaluation in your company?

8: How should you evaluate a project in order to preserve the sustainability?
   a. What has to be evaluated?
   b. In what phases of the project should you evaluate?
   c. Who is responsible for setting up an evaluation mechanism?

Part 3: Cooperation

9: What should be the role of the Ghanaian government in this project?
   a. In what way should we cooperate with the existing schools?
   b. If you could choose, would you go for a private school or for cooperation with an existing school? When cooperating, what school would you choose?

10: What consortium should be set-up in order to preserve the sustainability?
   a. What parties should take place in the board of the school?
   b. How many years should companies commit themself to the consortium?

11: What legal construction is possible to draw up the board?
   a. How should a consortium be put together when cooperating with an existing school?

Part 4: Training and retaining the employees

12: In what way do you train your employees at the moment?
   a. What employees are being trained?
   b. At what level do you train the employees?
   c. Which subjects are taught?
   d. Who is training these employees; do you have a separate schooling department within your company?
   e. How many hours a week are they being trained?

13: How do you try to retain your employees?
   a. Is it possible to oblige your employees to work for you a certain period of time, after you trained them?
   b. Is it legally possible to do that?

A1.3 EVALUATION

14: Do you think I got a good overview of what the requests are of your company? (Subjects, employees a year, your role in the project)

15: Do you think I got a good overview of the stakeholders that you think are necessary for the success of the project?

16: Is it ok with you if I send you an email when I need some extra information?

Thank You

APPENDIX 2

INTERVIEW SCHEDULE SCHOOLS

A2.1 BACKGROUND INFORMATION

Introduction about myself:

1. business administration;
2. graduating;
3. focus on developing countries.

Results last visit and request for subsidy:

1. 13 companies are possibly willing to be partner in the project, 3 to invest only;
2. All the schools are interested;
3. PPP, will be subsidised by the Dutch Ministry of Foreign Affairs, 50%.

Goal of the interview:

1. Project related: to inform all the cooperating schools and get to more know more about their exact needs?
2. For graduating: to gather more information about the sustainability of the project, the evaluation mechanism, the stakeholders etc.

Reasons for interviewing you again:

1. Last time a positive reaction.

Reason for using a tape recorder:

1. No information shall be lost, difficult to write and listen at the same time.
2. I'm the only person that shall ever hear the tape.

Costs and results:

1. All input from the schools will be reported in order to be able to use for the future project manager.
2. It will take roughly one hour.

Structure of the interview:

1. The questions for my own research and the project have an overlap, so they are integrated into one interview

Ending of introduction:

1. Is everything dear?
2. Do you, at this moment, like to know more about the project?
3. Is it ok with you that T now turn on the tape recorder?

A2.2 INTERVIEW

Introduction:

1. What is your name?
2. What position do you occupy?
3. For how long are you in this position now and for how long will you stay on this position?
3. What is your background?

Part 1: Structure of the school

1: What is the curriculum of this school?

a. Which basic subjects are given in the first year, what directions can you start from?
b. What mayors know your school?
c. How many years does it take to finish a course?
d. What practical subjects are being taught?
e. Do you have a description of your teaching programmes? If yes, can I have a copy?

2: What is the input and what is the output of the school?
   a. How many students are there in total?
   b. What percentage is really finishing the education?

3: What school fee have the students to pay every year?
   a. Is there a difference between training programmes?
   b. Do you know what a private school asks for school fees per year?
   c. Are there possibilities to send employees, for example from TSG, for a refresher course to your school

4: Is money disposable to cooperate with the manufacturing companies?

Part 2: Structure of the educational system

1: Can you explain to me shortly how your school fits into the existing educational system of Ghana?
   a. What preparatory training is required?
   b. What continuation training is possible?

2: Under what Ministry are you located?
   a. In what way is this bond tied?
   b. Do you cooperate with other schools?
   c. To what extend are you authorized to deviate from the existing program?

3: What background education is needed in order to teach at your school?
   a. Where are the technical teacher training schools?
   b. What preparatory training is required in order to give lessons on a technical institute?
   c. Are there also private teacher schools in Ghana?

Part 3: Cooperation with the industry

4: In what way do you try to span a bridge between the industry and your school?

a. Are you already having contact with the manufacturing companies and in what way is this contact fixed?
b. In what way do you like to cooperate with the manufacturing companies?
c. What kind of attachments should the industry offer?

5: What possibilities exist within your school to cooperate with the industry?
a. Is there a possibility to create a private part in your school for a separate group of students?
b. Do you have land or buildings that are not being used at the moment?

6: How should cooperation look like?
a. Do you know any examples of a public/private partnership?
b. Is it possible that the manufacturing companies can decide on the teaching programmes, the teacher salaries, without intervention of the concerned Ministry?

A2.3 EVALUATION

7: Do you think I got a good overview of what your school offers at the moment?

8: Do you think I got a good view of the needs of your school?

9: Do you think I got a good view of the Ghanaian education system?

17: Is it possible to contact you whenever I need *extra information?*

Thank you

APPENDIX 3

RESPONDENTS

In this appendix the respondents of the interviews will be listed. For the companies it applies that the exact interviews have been taken, for other groups of respondents it mainly applies that during the meeting several of the interview questions have been asked in an open interview.

Table A3.1a Respondents from local companies

company	respondent
Accra Brewery Ltd.	Bert Grobbelaar, technical director
Dwa Dizengoff Ghana Ltd.	Yuval Nativ, managing director
Fan Milk Gh. Ltd.	Ulrik Plenge Jacobsen, factory manager
F. Malawi Engineering co Ltd.	Ahmad Fouad Karime, deputy managing director
Ghana Rubber Products Ltd.	A. Venkateswaran, managing director
Ghana Breweries Limited (Heineken)	Henk van Klompenburg, technical director
Interbeton	Martin Egas, contract manager
Irany brothers & Others Ltd.	Tom Byrne, chief miller
Nestle Ghana Ltd.	Will Laskowski a.o., factory manager
Pioneer Aluminium Factory	Charles Amoah-Wilson, human resource and corp. Affairs manager

Table A3.1b Respondents from local companies

company	respondent
Shell Ghana Limited	Roy L. Kretzen, managing director / chairman
The Coca-Cola Bottling Company of Gh. Ltd.	Festus Anagblah, Human Resource Manager
Tractor & Equipment (Caterpillar)	Steven A. Scott, Managing Director
Texstyles Ghana Ltd. (TSG)	- Gerard van Damme, technical director - Micheal Tetteh-Voetagbe, training manager - Kofi E. Bayitse, HRM director - Kwasi Amoako-Attah, group legal advisor - Hein Strating, chief engineer
Unilever Ghana Ltd.	Memuna Adama a.o., Group training &Dev't/Remuneration

Table A3.2 Respondents from local organisations*

local organisation	respondent
Association of Ghana Manufacturing companies (AGI)/ IntEnt	Seth TwumAkwaboah, business development consultant
Crown Agents	Tke Duker, managing director
Ghana Employers'Association	Rose K. Anang, executive director
Ghana Institution of Engineers	Carlien D. Bou-Chedid, ag. executive secretary
Oxia	Samuel Sarpong, managing director

* During these interviews only part of the interview was taken)

Table A3.3 Respondents from educational institutions

educational institutions	respondent
Accra Technical Training Centre	Ralph K. Asabere, principal
Ghana Education Service (GES)	Asamoah Duodu, director, technical vocational education
Tema Technical Institute	George N.T. Provencal, principal
Unversity of Education	Winneba: Prof. Jophus Anamuah-Mensah, vice chancellor
SOS-Herman Gmeiner International College	Titi Ofei, vice principal

Table A3.4 Respondents from governmental organisations

governmental organisations	respondent
British High Commission Accra, Trade and Investment	Henrietta Opokua Amissah, trade and investment officer
Department for International Development Ghana (DFID)	John Winter, chief of DFID Ghana
Royal Dutch Embassy	Bob Hensen, Second Secretary: Commercial affairs, Culture, Press, Information
Ghana Education Service (GES)	Asamoah Duodu, director, Technical Vocational Education

Appendix 4: Planning first visit to Ghana

			mon 19-04	tues 20-04	wed 21-04	thurs 22-04	vr 23-04	
7-8 uur								
8-9 uur						8.30 Interbeton	8 JTL, Marc Montei	
9-10 uur			9-11 GTP Gerard	10- 11 CPC , Mr. Awua	9 Ministry of education	Martin Egas		
10-11 uur	10 check in		en Kofi, Micheal, Kees		board TTI	10 Ballast Nedam		
11-12 uur						K.E. Tayler	11 HO Technique, Afeti	
12-13 uur	12.15 leave Schiphol			12 Accra polytechnic				
13-14 uur	14 arrive Milaan			14 Priest Koos J.				
14-15 uur			14.30 Embassy	and Mr. Suweto from		14 Philips/ F. Malawi		
15-16 uur	15.10 leave Milaan		Bob Hensen, Kees	NVTI		Engineering: Karime	15 Aluworks	
16-17 uur							Vean Kataramana	
17-18 uur							16.30 Feedback at GTP	
18-19 uur						18 Thomas Hes,		
19-20 uur						Tema		
20-21 uur								
21-22 uur	21.50 arrive Accra							
22-23 uur								
	mon 26-04	tues 27-04	wed 28-04	thurs 29-04	fr 30-04			
7-8 uur								7-8 uur
8-9 uur	8.30 Shell	8.30 Unilever, Memuna		8.30 B.B.C. , Mr.	8.30 Dwa Gizengoff			8-9 uur
9-10 uur	Roy L. Kretzen	Adama	9.30 TTI George N.T.	Odaymat	Avaram Tal			9-10 uur
10-11 uur		11 African Concrete	Provencal					10-11 uur
11-12 uur		Products C.F. Richards		11.30 Heineken, Henk	11 Ghana Rubber Pro.			11-12 uur
12-13 uur				Klompenburg	A. Venkateswaran			12-13 uur
13-14 uur		13 ATTC, Mr. Opare-						13-14 uur
14-15 uur		Anor						14-15 uur
15-16 uur	15.30 Gratis, Mr	15 Latex Foam	16.30. SOS Child	15 Coca Cola, Festus				15-16 uur
16-17 uur	Darfoor	Mr. Nowfill Solomon	Village, Titi Ofei	Anagblah				16-17 uur
17-18 uur		Laba						17-18 uur
18-19 uur	19 AGI, Seth				18.30 Koniginnedag			18-19 uur
19-20 uur	Akwaboah	19 SOS Child Villages			Ambassade			19-20 uur
20-21 uur		Titi Ofei						20-21 uur
21-22 uur								21-22 uur
22-23 uur								22-23 uur
	mon 03-05	tues 04-05	wed 05-05	thurs 06-05	fr 07-05			
7-8 uur							7.15 arrive Milaan	7-8 uur
8-9 uur			8.30 Aluworks R. David		Writing report			8-9 uur
9-10 uur		9 Start Forum, TVET	Adzogble				9.15 leave Milaan	9-10 uur
10-11 uur	10 Feijenoord, Karel			10.30 Nestle Andre				10-11 uur
11-12 uur	Brokken		11 DOMOD	Pochet			11.10 arrive Schiphol	11-12 uur
12-13 uur			Samuel K. Kwofie	12 Irany Bro. And O.				12-13 uur
13-14 uur			13 Lunch at forum	Mr. Byme				13-14 uur
14-15 uur		14.30 Tractor& Equip.	14.15 Closing remarks	15.30 Unilever, Muna	14 Pioneer Aluminium			14-15 uur
15-16 uur		Steve Sott	Forum	Adama	Factory, Miss Butler			15-16 uur
16-17 uur					15.30 Feedback GTP			16-17 uur
17-18 uur	Dinner with Priest							17-18 uur
18-19 uur	Koos Jansen			18.30 Drink Ghanecc				18-19 uur
19-20 uur								19-20 uur
20-21 uur						21 check in accra		20-21 uur
21-22 uur								21-22 uur
22-23 uur						23.15 leave accra		22-23 uur

Appendix 5: Planning second visit to Ghana

			mon 13-09	tues 14-09	wed 15-09	thurs 16-09	vr 17-09	
7-8 uur			7.15 Gerard				7.30 Kwasi Amoako-Attah	
8-9 uur				Preparation interview	10 Introduced to Kwasi		Legal Advisor TSG	
9-10 uur			10 Kofi	School and industry	Amoako-Attah TSG	10 Henk v Klompenbur	10 Pioneer Aluminium F.	
10-11 uur			11 Gerard		10.45-12.30 TSG	Ghana Breweries	Charles (HR-director)	
11-12 uur					Renee Jones-Bos		11.30 Feedback Gerard	
12-13 uur			13.30 George (teacher)		and Bob Hensen		13 George teacher TSG	
13-14 uur	14 M. Egas Interbeton		14 Hein		(kopie naar Bob)	14.30 Titi Ofei		
14-15 uur						SOS child village		
15-16 uur			15 Jeff (Library)		Whole afternoon:			
16-17 uur					George, teacher and	17:15 Hash		
17-18 uur					Library +			
18-19 uur								
19-20 uur								
20-21 uur								
21-22 uur								
22-23 uur								
	mon 20-09	tues 21-09	wed 22-09	thurs 23-09	fr 24-09			
7-8 uur	Call Roy Shell, done	Call Winneba University			Call Roy Shell, he's out the next week			7-8 uur
8-9 uur	Call Memuna Unilever							8-9 uur
9-10 uur	10 Kees van Heijst GTP							9-10 uur
10-11 uur			10-17 Tvet Follow up	10.30 Titi Ofei and	11 Gerard Feedback			10-11 uur
11-12 uur			" "	Accra parcel (SOS)				11-12 uur
12-13 uur				Former Chief Cocoa				12-13 uur
13-14 uur		14 Mr. A. Karime	12.30 Lunch	Bond Ghana				13-14 uur
14-15 uur	15 Ingrin (Graphic train)	F. Malawi Engineering						14-15 uur
15-16 uur	Ruud Groote							15-16 uur
16-17 uur								16-17 uur
17-18 uur								17-18 uur
18-19 uur								18-19 uur
19-20 uur								19-20 uur
20-21 uur								20-21 uur
21-22 uur								21-22 uur
22-23 uur								22-23 uur
	mon 27-09	tues 28-09	wed 29-09	thurs 30-09	fr 01-10			
7-8 uur		Gerard kaart ophalen	Call Kwofi Domod					
8-9 uur			Call Oxia		9 GES, technical div.			8-9 uur
9-10 uur	10 Caroline, shipping	10-11.30 TTI			Mr. Duode (With Micheal)			9-10 uur
10-11 uur	costs	Mr. Provencal			10.30 Oxia, Samual			10-11 uur
11-12 uur					Sarpong			11-12 uur
12-13 uur				13 Ingrin, Jaap en Piet	12 Lunch Ingrin and Dutch			12-13 uur
13-14 uur		14 Alfie Design:		canceled	Directors, Nogahill			13-14 uur
14-15 uur		Nana	14 Irany Brothers & O					14-15 uur
15-16 uur		15 A. Venkateswaran	Tom Byrne					15-16 uur
16-17 uur		Ghana Rubber Pr.						16-17 uur
17-18 uur								17-18 uur
18-19 uur								18-19 uur
19-20 uur								19-20 uur
20-21 uur								20-21 uur
21-22 uur								21-22 uur
22-23 uur								22-23 uur

	Mon 04-10	Tues 05-10	Wed 06-10	Thurs 07-10	Fri 08-10			
7-8 uur	7.30 Leave TSG (Gerard	Call Ghana Rubber,		8 See premises Shell	, Gershon Klutse			7-8 uur
8-9 uur	Kofi, Micheal, Saskia)	crown agents		8.30-9.30 Memuna	9 SOS IC T. Ofei			8-9 uur
9-10 uur	10 Mr. VC Anamuah-	10 Ghanecc Ingrid,		Unilever				9-10 uur
10-11 uur	Mansah, Uni. Winneba	Auke			11 Feedback Gerard			10-11 uur
11-12 uur			11 Domod, Mr. Kwofie					11-12 uur
12-13 uur			cancelled		Email Clubbeer			12-13 uur
13-14 uur		14 Roy Kretzen , Shell	13 ATTC Mr. Opare-		Call Domod			13-14 uur
14-15 uur			Anor		ACP			14-15 uur
15-16 uur				15.30 Call TV Obeng				15-16 uur
16-17 uur			16 Crown Agents					16-17 uur
17-18 uur					17-18 Marjorie-Y			17-18 uur
18-19 uur					PV Obeng			18-19 uur
19-20 uur				18.30 Ghanecc Meeting				19-20 uur
20-21 uur				Golden Tulip				20-21 uur
21-22 uur								21-22 uur
22-23 uur								22-23 uur
	Mon 11-10	Tues 12-10	Wed 13-10	Thurs 14-10	Fri 15-10			
7-8 uur	Call S. Scott, for			8 Dwa gizengoff	7 Colonel and Mrs.			7-8 uur
8-9 uur	appointment this week	8.30 Intercultural		Uwal Mative	Taksi, Tatra Hill with			8-9 uur
9-10 uur	Call Fanmilk reminder	Management course			Gerard			9-10 uur
10-11 uur	10 Accra Brewery,	Ghanecc	11 Alice Ouedraogo	11 AGI				10-11 uur
11-12 uur	Bert Grobbelaar		IFC (World Bank)	Seth Twum-Akwaboah				11-12 uur
12-13 uur	12 DFID, John Winter		cancelled		12 Ulrich Jacobsen			12-13 uur
13-14 uur			14 Samual Sarpong	14.30 British High Con	FanMilk	Feedback Gerard		13-14 uur
14-15 uur			Oxia	Sarah Stevenson/	13.30 Tractor Equip.			14-15 uur
15-16 uur	15.30 Anagblah, Coca-		16 Ghana Institute of	Hernietta Amissah	15.30 Nestle, Will			15-16 uur
16-17 uur	Cola	17 End of the course	engineers		Slomski a.o.			16-17 uur
17-18 uur			18 SAB,Lionell Maule					17-18 uur
18-19 uur	Dineer with Wienco and		New Alica Hotel					18-19 uur
19-20 uur	Tjalling		North Ridge Area					19-20 uur
20-21 uur						21.15 Check in Accra		20-21 uur
21-22 uur								21-22 uur
22-23 uur						23.15 Fly from Accra		22-23 uur

APPENDIX 6

OVERVIEW STAKEHOLDERS

Table A6.1a Local companies

company name	name contact person + position	activities
1. Texstyles Ghana Ltd. (TSG)	Gerard van Damme, technical director	Manufacturing textile for the West African market. 700 employees.
2. Interbeton	Martin Egas, contract manager	Building and construction business services; engineering in Ghana. 30-50 permanent employees.
3. Ballast Nedam International Ghana BV	Adri Verwij, commercial manager	Construction company, mainly pipelines for water. Permanent staff of 50 people, sometimes extended to 300 people.
4. Domod Go. Ltd	Samuel Kwofie, managing director	Manufacturing aluminium pans. They employ around 150 people.
5. Ghana Breweries Ltd. (Heineken)	Henk van Klompenburg, technical director	Manufacturing beverages, mainly beer. 500 employees.
6. Ghana Rubber Products Ltd	A. Venkateswaran, managing director	Manufacturing rubber sandals for the West African market. 250 employees.
7. F. Malawi Engineering Go Ltd	Ahmad Fouad Karime, deputy managing directors	Carry out services activities like maintenance service and installation for companies. 50 employees.
8. Pioneer Aluminium Factory	Charles Amoah-Wilson, human recourse manager	Manufacturing aluminium pan and pots. 160 employees.
9. Irany Brothers and Others Ltd.	Tom Byrne, chief miller	Manufacturing four mainly for bread. 180 employees.

Table A6.1b Local companies

company name	name contact person + position	activities
10. Shell	Roy Krezten, managing director	Selling oil. Hard to measure the number of employees.
11. Unilever Ghana Ltd	Memuna Adama, training and dev't manager	Manufacturing soap, food and personal products for the West African market. 600 employees.
12. The Coca-Cola Bottling Company of Ghana Ltd	Festus Anagblah Human Resource Manager	Manufacturing beverages. 760 employees.
13. Dwa Gizengoff Ghana Ltd.	Yuval Nativ, managing director	Sales and services on three divisions: Motorola, Electro mechanical and Agricultures. 300 employees.
14. Tractor and Equipment	Steven Scott, managing director	Sales and services on the equipment they sell. 250 employees.
15. Nestie Ghana Ltd.	Will Laskowski, factory manager	Manufacturing milk, beverages and cereals for the West African market.
16. Accra Brewery Ltd. (SAB Miller)	Bert Grobbelaar, technical director	Manufacturing beverages, mainly beer. 400 employees.
17. Fanmilk Ghana Ltd.	Ulrik Plenge Jacobsen, factory manager	Manufacturing dairy products and ice. About 500 employees.

Table A6.2 Governmental parties

name of department	name contact person + position	activities
1. Royal Dutch Embassy in Accra	Bob Hensen, Commercial affairs, Culture, Press	They represent the Netherlands on political, economy and trade, development cooperation, consular tasks and press and cultural affairs.
2. British High Commission	Henrietta Amissah, trade and investment officer	They represent the Great Britain on political, economy and trade, development cooperation, consular tasks and press and cultural affairs.
3. Royal Danish Embassy in Accra	Carsten Bondersholt, PSDP-coordinator	They represent the Denmark on political, economy and trade, development cooperation, consular tasks and press and cultural affairs.
4. The British Department for International Development (DFID)	John Winter, chief of the department	Development cooperation between Britain and the developing world.
5. Dutch Ministry of Foreign Affairs (DGIC)	Peter de Koning, DGIC	Directorate-general for International Cooperation (DGIC), the development department within the Ministry of Foreign Affairs.
6. Ghana Education Service, technical division	Asamoah Duodu, director, Technical Vocational Education	GES is an office with branches at both the regional and the district levels to implement the budget policies of the Ministry of Education.

Table A6.3 Educational institutions

name of the school	name contact person + position	activities
1. Accra Technical Training Centre (ATTC)	T. Opare-Anor, principal	Educating technical students, 1600 students, in the field of auto body repairs, auto-mechanics, electrical installation, industrial maintenance, refrigeration and air-conditioning, small engines repairs and welding and fabrication.
2. Tema Technical Institute (TTI)	Mr. Provencal, principal	Educating technical students, 1439 students, in the field of block laying, printing, welding, electronics, mechanics, carpentry and engineering.
3. SOS Herman Gmeiner International college	Titi Ofei, vice principal	Providing academically able students from SOS Villages in Africa the opportunity for tertiary education.
4. Tantra Hill International College	Mr. and Mrs. Takyi, owners of premises	Building a school which has no destination yet. The premises includes dormitory for girls and boys and the building is suitable for technical education.
5. ROC Helmond Ter AA / Ter Kemmande College	Piet Gijsberts	A Dutch vocational school, which educates middle level technicians in four years time.
6. University College of Education, Winneba	Mr. Anamoah-Mensah, chancellor	A Ghanain University focussing on the education of teachers on all fields.

Table A6.4 Local branch organisations

name of the organisation	name contact person + position	activities
1. Association of Ghana Manufacturing companies (AG1)	Mr. Twum-Akwaboa, business development consultant	Financing and administration, policy and communication and business development services for the companies associated with AGI.
2. Ghana Employers' association (GEA)	Rose K. Anang, managing director	An organisation that looks after the interest of Ghanaian employers.
3. Ghana Institution of Engineers	Carlien Bou-Chedid, ag. executive secretary	They give courses in several subjects, give advice on courses, do certification with UK engineering counsel and take place in accreditation boards of Polytechnics.

Table A6.5 Dutch Consulting organisations

name of the organisation	name contact person + position	activities
1. Society Enterprise Foundation (SMO)	- Jan Roland Vergeer, consultant - Michiel Hillen, project leader	A knowledge centre that that bridges the gap between the society, the businesses and public organisation
2. Sunsia	Mahamadi Kabore. managing director	A company building a bridge between businesses in Africa and The Netherlands.

APPENDIX 7

OVERVIEW OF COSTS

(prepared by Jan Roland Vergeer)

Table A7.1 Founding costs

technical school	costs					
	year 1	year 2	year 3	year 4	year 5	year 6
1. new building	230000					
2. new technical equip-ment	400000					
3. school furniture	3000		3000			3000
4. teacher training						
total	633000		3000			3000

* in euro's

Table A7.2 Operational costs

technical school	costs*					
	year 1	**year 2**	**year 3**	**year 4**	**year 5**	**year 6**
1. teacher salaries	11000	14000	17000	17000	17000	17000
2. school manager	4320	4320	4320	4320	4320	4320
3. administration / secretary	1000	1000	1000	1500	1500	1500
4. electricity / public utilities	5000	5000	5000	6000	6000	6000
5. maintenance and repair	2500	2500	2500	3500	3500	3500
6. various and unforeseen	5000	5000	2500	2500	2500	2500
total operational spendings	28820	31820	32320	34820	34820	34820

7. depreciation building	9200	9200	9200	9200	9200	9200
8. depreciation techn. equip.	40000	40000	40000	40000	40000	40000
9. depreciation school furniture	300	300	600	600	600	900
total depreciation costs	49500	49500	49800	49800	49800	50100
total operational cost. incl. depreciation	78320	81320	82120	84620	84620	84920
total yearly operational spendings (cash out)	28820	31820	32320	34820	34820	34820

* in euro’s

Table A7.3 Income

technical school	costs*					
	year 1	year 2	year 3	year 4	year 5	year 6
school Fee's	0	0	0	0	0	0
subsidy	0	0	0	0	0	0
total income	0	0	0	0	0	0
balance total spendings	- 28820	- 31820	- 32320	- 34820	- 34820	- 34820
balance operational costs incl. depreciation	- 78320	- 81320	- 82120	- 84620	- 84620	- 84920

* in euro's

APPENDIX 8

EVALUATION FRAMEWORK

Evaluation framework for surveying the sustainability of developments projects.

A8.1 BASIC DATA

Table A8.1 Project demography and design

subject	characteristics
introduction	Title, implementation period, implementing organisation, project life cycle data, proposal, type, resources.
planning	Characteristics of feasibility study and outcomes, are follow up costs incorporated in planning, stakeholders involved, location of the institute.
management	Is there a functioning management and evaluation system, what are the implementation problems, how was the cooperation between the stakeholders assessed?
end of project-assistance	Is there a goal system developed for the post-assistance phase, how is the hand-over taken care of?
follow up assistance	Does the project receive follow up support, what post monitoring will the project team carry out?
project continu-ation	Can the board of the technical institute continue the project in their own, are the goals the same when the project-assistance phase is ended, are their donors for the future?

Table A8.2 National demography

subject	characteristics
introduction	Total land area, population, life expectance at birth, inhabitants per physician, income distribution, GNP, GNP per capita, inflation rate, government expenditures, official development assistance.
Ghana	Social-political system, social/culture, economic systems, cultural system, population structure, settlement structure.

A8.2 INTERNAL AREAS OF IMPACT/IMPLEMENTING AGENCIES

Table A8.3 Goals

subject	characteristics
introduction	Description of the goals, outcomes pursued, consistency of goals internally, indicators for gauging goal achievement, did the goals change.
goal acceptance	Goals accepted by all the stakeholders, did the target population have identical interests and goals.
political priority	Is the project government supported, what is the priority of the government and did this change?
political support	What support did the government give, which other institutions support the project, is it part of a sector program?
political stability	What influence has the political stability on the project.
change / transformation	What important changes occurred, can the changes be attributed to the project activities, were this planned or un-planned changes?

Table A8.4 Members

subject	characteristics
experts	How many experts were involved during implementation, how frequently did the contact person change, how can the experts be judged?
counterparts and local staff members	How many members are working for the project, hoe many of them are foreigner?
training	How many staff members are trained during project-assistance and how many thereafter, how many in technical subject, how many in administrative sector?
teaching personnel	How many teachers work at the school, how many of them were upgraded, and in which field were they upgraded, is it possible to recruit a sufficient amount of teachers?
career	What kind of job promotion can be found among the members?
work motivation	How great is the work motivation?
level of qualification	Are the members competent to do their jobs, what is the level of competence of the management?
labour market	Does the competent personnel exist in the labour market, is the technical institute an attractive employer?
fluctuation	How great is the fluctuation at the technical institute, is it dependent on the training they got?
norms	Which norms influence the commitment of the personnel?
change / transformation	What changes can be observed during the period of existing and thereafter?

Table A8.5 Organisational structure of the project-implementing organisations

subject	characteristics
division of labour	- What is the structure, to what extend is this appropriate for the long term fulfilments of the tasks? - How do the sub-system function: procurements, maintenance and upkeep, transportation system and accounting and bookkeeping?
coordination	How are planning and coordination regulated and do these systems work?
formalisation	Has everybody dear tasks, informal structure?
external decision making structure	To which government is the technical institute subordinated to, are the technical institute powers and scope of tasks adequate for completing its tasks, how should the level of autonomy be judged?
internal decision making structure	Which committee take part in important decisions, what are the management styles, how are the areas of responsibility divided?
internal and external cooperation	How is communicated between the technical institute and all of the stakeholders?
structural conditions	What social structures is the technical institute incorporated to?
change / transformation	What important changes occurred during the period of assistance and thereafter?

Table A8.6 Financial resources

subject	characteristics
implementing	How high is the annual budget, how high are the annual costs for materials?
organisation expenses	And equipments, personnel and how high are the costs per student, which self financing mechanisms are developed.
students expenses	What fees do the trainees pay, do they receive scholarship aid?
follow up costs	Which direct follow-up costs will result out of personnel and material related issues, is it possible to finance these follow up costs, are there problems with finances?
financial state	What is the assessment of the overall financial effectiveness, at the start of the project, at the end of assistance and at the post-assistance phase?
sources of funding	Who is responsible for funding the project, are those involved in funding also willing to make their contributions for a longer term?
change / transformation	What important changes occurred during the period of assistance and thereafter with regard to the financial situation and cost structure of the technical institute?

Table A8.7 Technical facilities

subject	characteristics
facilities	What is already available within the cooperating companies, how does the system of maintenance and upkeep work?
investments	What type of investments are needed during assistance and what type are needed thereafter (building, equipment, materials and teaching materials)?
technology	What type of technologies were introduced, whose requirements are the introduced technologies geared towards, how should the level be assessed in relation to that of local production industry, how optimal as the implemented technology in terms of the following criteria: maintenance, provision of spare parts, import dependency, follow up costs?
level of technology	Is the level of technology in conformity of the state of knowledge in Ghana?
change / transformation	What important changes occurred during the period of assistance and thereafter to the premises and technical facilities of the implementing organisation?

Table A8.8 The training model

subject	characteristics
contents of training	Is the training practically oriented, how large is that part, is the instruction followed by the criteria set by the curricula, is the training model in conformity to the previous educational levels of trainees?
fit	Does it fit the requests of the manufacturing companies?
exams	Which degrees and diplomas does the vocational school grant, what do exams consist of, how many trainees leave the school every year, how many trainees successfully graduate?
state of instruction	How many hours a week instruction is given, what is the teacher/trainer ratio, where is practical instruction given, how many practical training positions are available in the workshop?
change / transformation	What important changes did the training model undergo during the period of assistance and thereafter?

A8.3 EXTERNAL AREAS OF IMPACT/TARGET POPULATIONS

Table A8.9 Training system/ trainees as target population

subject	characteristics
target population	How were target populations identified, defined and distinguished from population other populations?
definitions	
students	Is it possible to recruit enough students, how many trainees are trained at the technical institute?
benefits	What concrete advantages was the target population able to gain, to what extend did project's assistance measures improve this, to what extend were the target population's own inputs in keeping with the sough-after project, to what extend did the target population take advantage of the program offered?
diffusion effects	Which diffusion effects can be established in the employment system?
training system	Which educational system prevails in Ghana, is there legislation covering training, which government and non government training institutions are active in technical training?
political structures	How should the political strength of the target population be assessed?
social structures	Is the target population concentrated geographically or is it widely dispersed, how is the social status of the target population defined in the society?
change / transformation	Which diffusion effects occurred in the educational and occupational-training system during the period of assistance and thereafter?

Table A8.10 Employment structure/ employers as target population

subject	characteristics
labour-market chances	What percentage of those successfully graduating find a position within the cooperating companies, what percent find other positions, how are the wages earned by graduates of the technical institute compare to those who have not completed this institute?
displacement and multiplier effects	Who is displaced from his/her job by graduates, which effects does the project have on other comparable training centres, which change do graduates bring with them into the world of labour?
diffusion effects	How many trainees are reached by innovations in total?
Role of companies enterprises	To what extend are the manufacturing companies involved in the technical institute, how great is the quantitative need for trained personnel on the labour market, to what extend are businesses willing to provide practical-training positions for trainees?
change / transformation	Which diffusion effects occurred in the employment system during the period of assistance and thereafter?

MANAGEMENT SUMMARY

Finding qualified technical employees in Ghana has always been a problem for Vlisco and other manufacturing companies when bringing new technologies into the country. Vlisco is a textile printing company producing in the Netherlands as well as in Ghana (in Ghana the company produces under the name of Texstyles Ghana Ltd., TSG).

To provide a sustainable solution for this problem Vlisco initiated the idea of setting up a technical institute, together with other manufacturing companies in Ghana. Therefore a three week feasibility study was carried out in April 2004. The results show that the existing technical and vocational institutes in Ghana do not educate students adequately, to meet the needs of Vlisco. Other results show that the other large production companies cope with the same problems and are willing to invest in a technical institute if it fits the needs of these manufacturing companies.

In order to create long term effects it is important that the setting up a technical institute is sustained after the period of assistance. Since the sustainability of this project presents a critical criterion of success, but little is known about the factors influencing the sustainability, this is the focus of this research. Therefore the central question is:

> *What are the internal and external factors that exert influence on the sustainability of the technical institute in Ghana during the project-assistance and post-assistance phase and what is the role of the different stakeholders in this process?*

Theory on sustainability suggests that the sustainability can be affected by internal and external factors, where the internal factors can be influenced directly and the external factors cannot be influenced. When these factors are examined extensively, appropriate measures can be implemented that will have positive effects on the long term goals of the project. In order to cope with these factors it is important to know what these factors are. Therefore several interviews were held in Ghana and the Netherlands. Next to that, literature and the internet are reviewed in order to advise Vlisco on the organisation of the project. Next to the findings from the theory

and the interviews, a benchmark on a graphical training project supports the findings.

In order to structure the internal and external factors of influence of the sustainability, the project is divided into a project-assistance phase where the project team is active and a post-assistance phase where the technical institute starts operating.

The context (external factors that are of influence) of the technical institute can be characterized by the following factors:

Ghana is a stable country where the major political party focuses on the private sector to realise poverty reduction. The government has not focussed enough on the technical and vocational training sector what brings about that this sector has not get the input that it deserved in the past few decades. That is the reason that the training sector does not fit the requests of the fast-growing industry that is influenced by the global economy. Other important external factors to take into account are the cultural differences between Ghana and the Netherlands and the economic structure of the country.

Eight different groups of stakeholders can be distinguished for the set-up of the technical institute. These groups all support the project financially, technically or in managerial terms, or in some combination of these three disciplines. These groups are subsequently subdivided into stakeholders operating in the project-assistance phase and the post-assistance phase. The groups of stakeholders consist of local companies, government parties, Dutch consulting partners, local branch organisations, educational institutions, teaching program compilers, equipment suppliers and a legal advisor. The project will be partially funded by the cooperating companies in Ghana and partially by public organisations.

The internal factors of influence on the sustainability are mainly characterized by the constitutive features of the technical institute and the management of the project. The constitutive features consist of the goal, the management and organisation and technology and financial resources required to fulfil the goal of the institute.

The goal is *to provide well educated technical students that fit the personnel requests of the industry*. In order to attain this goal the organisational structure should be set up properly. Therefore three layers of management will be implemented consisting of the board, controlling the technical institute, the middle management,

which includes a facility department, a pr/marketing department, administration, personnel and financial affairs, a member operating for student affairs and a teaching department, which encompasses the teachers of the technical institute. The technology, the teaching programs and the equipment needed for these programs should fit the goal to assist in delivering well educated students.

Sustainability in this context refers to the ability to attain the intended goals for an extended period of time; this implies that when this goal is reached, the structure of the school is organised in a way that it will permanently guarantee benefits. In order to follow the changing needs of the industry trough time and adapt the teaching programs to these changing needs an evaluation mechanism is brought into life, which evaluates if the system is still appropriately serving its goals. Evaluation takes place on project design for assessing the quality of intervention process, on internal areas of impact for assessing internal sustainability and on external areas of impact, the indicators for assessing external sustainability.

The benchmark includes a case on the set-up of a graphic and media training institute in Accra. The main parties involved in the set-up are INGRIN and GhaPPCA. INGRIN (a Dutch NGO) is hired to give technical assistance by the set-up of a graphic and media training institute. The lessons learned form this case are summarised as:

> It is important to actively inform the stakeholders, to keep them enthusiastic about the project, as well as seeking premises in the initial phase of the project. In the project execution phase, good communicating structures as well as an organisational structure should be established quickly. An appropriate legal construction for registration of the institute should be selected.

The context of the institute can be divided into elements in the direct context of the technical institute, in Ghana, and elements that influence the project team, in The Netherlands. The elements can be divided into demographic, political/legal, economic, social/cultural, technical and global elements. Stakeholders are part of these external factors. Internal factors that influence the set-up and sustainability of the technical institute can be formulated and designed by the project team itself. These factors consist of the constitutive features of the technical institute, which eau be grouped into the goal of the institute, the management and organisation and the required resources. Stakeholders in this case also play a deciding role. To preserve

the sustainability, evaluation should take place on the internal and external factors that influence the project results. The evaluation should be carried out in the project-assistance phase as well as in the post-assistance phase in order to examine the fit between the request of the company and the supply of the technical institute.

Sustainability of the technical institute starts in the set-up phase, where the members of the project team have to study and take into account the context of the project. They have to act in a way that fits this context. The internal factors eau be influenced by the project team itself, external factors cannot be influenced. By designing the institute in a way that is most appropriate according to the goals and fitting the context, the project team is able to exert influence over the sustainability of the institute. How and why is described in this thesis.