An assessment of entrepreneurial orientation in an agri-business

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ABSTRACT

Entrepreneurial behaviour is examined in this study, with specific reference to four industrial divisions in NWK Limited, situated in the North-West province of South Africa.

The primary objective of this study is to investigate entrepreneurial orientation and perceived success in the Industrial division of NWK Limited and to make practical recommendations to enhance entrepreneurial behaviour in the specific division, the organisation and other corporate organisations.

A literature study was conducted to define entrepreneurship in general. The literature study investigated the characteristics of entrepreneurs. The five variables of entrepreneurial orientation and two variables measuring perceived success were investigated. Lastly the establishment of entrepreneurship together with a framework and strategy to establish entrepreneurship in an organisation will be discussed.

The study was conducted on the Industrial division of NWK, which consisted of four divisions namely: Epko, Noordfed, Opti Chicks and Opti Feeds. Questionnaires were sent to the target group of 609 employees and a total of 79 usable questionnaires were received on which statistical analysis were conducted. The reliability of the data was tested by calculating Cronbach alpha coefficients for the different variables of entrepreneurial orientation and perceived success of the organisation. The data was further analysed by calculating the mean, standard deviation and range of the individual responses and the different variables. Additional to the analysis the relationship between selected demographic information and the different variables was tested to determine whether there were significant differences in the means.

Conclusions are drawn from all the demographic information as well as the different variables of entrepreneurial orientation and perceived success. Based on the data analysis recommendations is made based on all the relevant topics that have been
identified in the study. The data analysis, conclusions and recommendations supports the suggested action plan that can be used to improve the entrepreneurial orientation and ultimately the perceived business success of the agri-business. The study is concluded with measurements of the achievements and objectives of the study. Finally suggestions are made for further research that can be conducted.

**Keywords:** Agri-business, entrepreneurship, entrepreneurial orientation, intrapreneurship, and perceived success.
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<table>
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<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>EO</td>
<td>Entrepreneurial Orientation</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>HR</td>
<td>Human Resources</td>
</tr>
<tr>
<td>IIE</td>
<td>Investment in Excellence</td>
</tr>
<tr>
<td>JSE</td>
<td>Johannesburg Stock Exchange</td>
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<tr>
<td>MS</td>
<td>Microsoft</td>
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<tr>
<td>NWK</td>
<td>NWK Limited (formally known as North-West Co-operation)</td>
</tr>
<tr>
<td>ODI</td>
<td>Organisational Development International (Pty) Ltd</td>
</tr>
<tr>
<td>SCS</td>
<td>Statistical Consultation Services</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for Social Science</td>
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1.1 INTRODUCTION

The global economy is rapidly changing and is creating a need for organisations to be innovative and pro-active to survive in their competitive environment (Moriano, Molero, Topa & Margin, 2011:1). During 2008 to 2009 the world economy was dumped in a recession, that reduced the gross domestic product (GDP) and trade of the four major economies of the world: United States of America, Japan, China and Germany (Eaton, Kortum, Neiman & Romalis, 2011:1).

New technologies increased marketing integrations and globalisation shifted the focus from traditional business strategies to a more entrepreneurial approach in order to grow organisations and to create new ventures (Mojica, Gebremedhin & Schaeffer, 2010:3). A hyper competitive and fast changing business environment increases the necessity for organisations to take more risks and adapt innovative and creative approaches (Anu, 2007:149). This statement was also identified by Foba and De Villiers (2007:1) where they stated that traditional leadership should change to more innovative, creative, pro-active, risk-taking, personal decision making and flexibility in order to achieve organisational success.

Economists identified the value of entrepreneurial initiatives as a generator towards greater economic activity and creating sustainable economical growth (Audretsch, 2004:167). Marchisio, Massola, Sciscia, Miles and Astrachan (2010:349-350) agreed with this statement and indicated that entrepreneurial behaviour can contribute to an organisation’s long-term profitability and growth and that entrepreneurial behaviour has a major contribution worldwide. Globally there is a tendency by governments and tertiary institutions to encourage innovation and entrepreneurship to foster economic

Primary agriculture contribute 3% to South Africa’s gross domestic product (GDP), while the agro-industry sector contributes about 12% to the GDP in South Africa (Van Niekerk, 2012). The agriculture sector in South Africa is a net exporter of products and therefore contributes to employment in the country and earns foreign exchange. Agriculture and the agricultural co-operatives, nowadays known as agri-businesses form an integral part of the South African economy (Botha, 2005:1). Due to the importance of agri-businesses in the South African economy, this study focused on the entrepreneurial orientation and perceived success of a selected agri-business.

This chapter aimed to explain the problem on which this study was based. It also provided the objectives of the study, described the scope of the study, provided a summary of the research methodology, presented some limitations to the study and briefly described the layout of the study.

1.2 PROBLEM STATEMENT

Agri-businesses play an important role in the maintenance and development of the agricultural sector in South Africa, especially during the last decade. Agri-businesses are major role players regarding input to farmers and have been an integral link in the marketing of commodities (Ortmann & King, 2007:219-220). This statement was supported by Thamanga-Chitja and Dlamini (2011:1-2) and they added that agri-business are large providers of employment.

Research has shown that entrepreneurship is a tool to create new value in an organisation, through innovation, business development and renewal. New value creation can only be developed with a high level of entrepreneurial activity (Bhardwaj, Agrawal & Momaya, 2007:131). This argument was supported by Hough and Scheepers (2008:17), who also stated that an innovative environment is strengthened
by the development of the human, social and structural capabilities within the organisation. In order for an organisation to achieve a competitive edge it needs to apply its resources and abilities effectively and in a creative way (Sirmon, Hitt & Ireland, 2007:238). A competitive edge is created when an organisation exceed their competitors’ ability to solve their clients’ needs and expectations, while still improving on their long-term financial performance and creating wealth for their investors (Morrow, Simon, Hitt & Holcomb, 2007:271).

Studies indicated that there is a positive relationship between entrepreneurial orientation and business performance (Madsen, 2007:188). Therefore, entrepreneurship can be a valuable organisational capability which will contribute to the building and renewing of the organisation (Scheepers, Hough & Bloom, 2008:51).

There is sufficient evidence that entrepreneurial orientation has a positive effect on business’ performance which can also be true for NWK as an agri-business. It is for the above mentioned reasons that the study was conducted and the investigation of the entrepreneurial orientation and perceived success within NWK was done. After the assessment was done recommendations were made in relation to entrepreneurial orientation for the specific agri-business.

1.3 RESEARCH OBJECTIVES

The objectives of this study were divided into primary and secondary objectives.

1.3.1 Primary objective

The primary objective of this study was to investigate entrepreneurial orientation and perceived success in the Industrial division of NWK Limited. Practical recommendations to enhance entrepreneurial behaviour in the specific sector, the organisation and other corporate organisations were formulated.
1.3.2 Secondary objectives

To address the primary objective, the secondary objectives were formulated as follow:

- Define the concept of entrepreneurship.
- Obtain insight in the variables of entrepreneurial orientation by means of a literature study.
- Obtain insight in the variables of perceived success in the organisation.
- Gain insight in the business environment of NWK as an organisation.
- Assess perceived entrepreneurial orientation and perceived success within the industrial sector of NWK.
- Investigate the impact of entrepreneurial orientation variables on perceived success of the business.
- Assess the difference between the means of selected demographical variables, and the variables measuring entrepreneurial orientation and perceived success.
- Suggest practical recommendations to enhance the development of entrepreneurship in the organisation.

1.4 SCOPE OF STUDY

1.4.1 Field of the study

This study focused on the entrepreneurial orientation in an organisation, as a section of the major study field of entrepreneurship.

1.4.2 Business under investigation

NWK Limited is a large agricultural business formally known as “Noordwes Koöperasie”. NWK Limited’s head office is situated in Lichtenburg, North-West province. In 1998 the “Noordwes Koöperasie” was registered as a limited company and for the purpose of this study NWK will refer to NWK Limited.
NWK was founded in 1909. An interesting fact is that Genl. De la Rey, that was also known in Afrikaans as the “Leeu van die Wes-Transvaal” (The lion of the Western Transvaal), was the first name on the founder members list of NWK (NWK, 2009b:3). The main focus of the business then was to handle and store grain of the surrounding farmers. Increased volumes of grain created a bigger bargaining power for the farming industry. Since then NWK has grown to a large agricultural business, still with a very strong division to handle, store and trade with agricultural commodities. NWK diversified its business into processing and value addition of agricultural products. NWK manages these value addition business under the Industrial division, where NWK is the sole owners of business in the milling (Noordfed (Pty) Ltd), oil seed crushing (Epko Oil Seed Crushing (Pty) Ltd), animal feeds (Opti Feeds (Pty) Ltd) and chicken industries (Opti Chicks (Pty) Ltd). NWK has partial ownership in “Grasland ondernemings (Pty) Ltd”, suppliers of agricultural lime (NWK, 2011). The figure below indicates the organogram of NWK.

**Figure 1.1: NWK’s organogram**

![NWK Organogram](image)

**Source:** NWK (2011)
The organisational structure of NWK as indicated in figure 1.1 shows the Board of Directors together with the senior management and all the divisions reporting to them. The Financial director, Human Resources and the Group manager for Internal Audit are overseeing the organisation as a whole.

For this study specific focus was placed on the Industrial division which includes the following companies: Noordfed (Pty) Ltd, Epko Oil Seed Crushing (Pty) Ltd, Opti Feeds (Pty) Ltd and Opti Chicks (Pty) Ltd. Each company is managed independently and 100% equity is owned by NWK Limited.

1.4.3 Geographical demarcation

NWK limited is operating in a large geographical area mainly in the North-West province of South Africa. NWK’s main office is based in Lichtenburg and with a number of decentralised silo complexes and industries. Figure 1.2 below indicates the different geographical areas where NWK has business interests.

Figure 1.2: Map of NWK’s geographical areas

Source: NWK Intranet (2010)
NWK mainly focuses on grain storage, handling and trading, therefore the largest geographical area of NWK is occupied by 37 grain silo complexes.

1.4.4 North-West economics

A brief description of the economics of the North-West province will be explained. Below is a map of South-Africa highlighting North-West province.

Figure 1.3: Map of South-Africa


The North-West province is housing 3,200,900 people (Stats SA, 2010:4) on an 116,329km² piece of land, with Mahikeng (formerly known as Mafikeng) as the capital city (Anon., 2012a).
The infrastructure consists of a road network, including the N4, N12 and N14 as major trade routes. Rail and bus services are available through the province and there is the Mahikeng airport as well (Punt, Van Schoor & Pauw, 2009:4).

The North-West province contributed 6.5% to South Africa’s GDP (Whales et al., 2011:10). Mining (34%), community services (19%), finance (13%) and transport (10%) are the biggest contributors to the economy in the North-West province. The North-West province’s government are focusing on the mining industry, manufacturing, renewable energy and agricultural sectors for direct investment.

The mining industry plays a huge role in the province’s economy, with mainly platinum mines as well as gold, diamonds and other minerals. The province is often referred to as the platinum province. The province contributes 64.7% of South Africa’s total platinum production, with some of the biggest mines in the Britz and Rustenburg areas (Whales et al., 2011:10-16).

Sunflower and maize are the major crops produced in the province, with large areas of wheat production as well. Cattle breeding and ranching are also major agricultural industries. Large herds of cattle can be found in the Stellaland area near Vryburg and this area is sometimes referred to as: “The Texas of South Africa” (Whales et al., 2011:10-16).

Tourism is a great asset to the province, with a number of national- and provincial-parks. The Sun City entertainment complex, with casinos and the valley of the waves are great attractions (Anon., 2012b).

1.5 RESEARCH METHODOLOGY

The research was done in two phases: an in depth literature study to clearly understand entrepreneurship, followed by an empirical study of the Industrial division of NWK.
1.5.1 Literature study

The literature study defined entrepreneurship in general as well as entrepreneurial orientation and perceived business success. The literature study then investigated the characteristics of entrepreneurship in order to identify possible entrepreneurs. The entrepreneurial orientation with the five variables thereof as well as the two variables measuring perceived success was discussed in depth. Lastly the establishment of entrepreneurship together with a framework and strategy to establish entrepreneurship in an organisation was discussed.

The following topics were regarded as important in the research study:

- Defining entrepreneurship
- Characteristics of entrepreneurs
- Defining entrepreneurial orientation
- Variables for entrepreneurial orientation
- Defining perceived business success
- Measurements to evaluate perceived success
- Establishment of entrepreneurial behaviour

The following sources were used to obtain a comprehensive overview of the topic:

- Written publications
- Previous dissertations
- Companies’ publications
- Magazines
- Scientific journals
- Internet articles
1.5.2 Empirical research

A questionnaire was compiled using identified aspects from the literature study. The aim of the questionnaire was to determine the employees’ entrepreneurial orientation and their perception regarding the perceived success of the organisation.

1.5.2.1 Selection of questionnaire

An empirical study was done, based on an article by Lotz and Van der Merwe (2013), where the correlation between entrepreneurial orientation, as independent variable and perceived success, as dependable variable, in agri-businesses, was investigated (Lotz & Van der Merwe, 2013). The correlation between the two variables namely Business development and improvement and Business growth, was investigated respectively.

A questionnaire was developed by combining the measurements of entrepreneurial orientation (Lotz, 2009:344-345) and perceived success (Lotz, 2009:349). The questionnaire consisted of three sections, Section A gathered demographic data, Section B assessed entrepreneurial orientation and Section C measured perceived success of the organisation.

Section A: Demographic information. This section captured demographical information of the participants. Age group, gender and race classification were measured as well as post levels, highest academic qualification achieved and work division of each participant.

Post levels of the respondents indicated different levels of management in the organisation; where post levels one to five indicated lower level of employment. Level six to eight included lower managers, level nine to 14 middle managers and post levels 15 to 20 included top- and executive-managers. The post level system is standardised in this agri-business and the application is fairly consequent.
**Section B:** Entrepreneurial orientation. Section B, consisted of 27 statements and aimed to assess the entrepreneurial orientation of the employees in the organisation. The statements addressed the five dimensions of entrepreneurial orientation namely: **Autonomy, Innovativeness, Risk-taking, Pro-activeness and Competitive aggressiveness.** The participants indicated to what degree he/she agreed or disagreed with the statements. The statements were measured on a five point Likert scale, which varies from one to five, where one indicated that the respondent strongly disagreed to the statement to a five where the participant strongly agreed with the statement.

**Section C:** Perceived success. Section C consisted of 11 statements and aimed to measure the organisation’s perceived success. The statements addressed the two dimensions of perceived success namely: business growth and business development and improvement. This section’s statements were also measured on a five point Likert scale, which varied from one to five, where one indicated that the respondent strongly disagreed with the statement to a five where the participant strongly agreed with the statement. The participant indicated to what degree he/she agreed or disagreed with the statements.

1.5.2.2 Study population and sampling method

Cluster sampling was used to select the population. The cluster was the Industrial division of NWK, which included the following companies: Noordfed (Pty) Ltd, Epko Oil Seed Crushing (Pty) Ltd, Opti Feeds (Pty) Ltd and Opti Chicks (Pty) Ltd. This cluster was chosen because the business units were big enough to function as a business on their own. With this sample selection all the levels of management: junior, middle and senior management were investigated.

1.5.2.3 Data collection

Permission to perform the study was obtained from all the parties involved and notification of the questionnaire were given, well in advance. The Human Resources
department was kept up to date with the development of the study. The questionnaire was sent to the Human Resources department and the executive management of NWK for approval before the questionnaires were distributed.

The questionnaire was developed in Afrikaans and English. NWK employs a large number of Afrikaans speaking employees and it was appropriate to develop an Afrikaans questionnaire as well. The questionnaire was available in three formats:

- Hard copy format that consisted of the established questionnaire attached to a letter addressed to the respondents explaining to them the working and purpose of the study.
- Electronic PDF or Microsoft (MS) Word format, that was e-mailed to the department heads for further distribution and anyone who required this kind of format to complete the questionnaire.
- Electronic questionnaire developed through Surveymonkey. Surveymonkey is a software system designed to create a survey questionnaire, collecting data from respondents electronically via an internet link and analysing the collected data (Surveymonkey, 2012).

Prior to the questionnaire being distributed to the full sample population the questionnaire was distributed to a test group consisting of five employees at Epko Oil Seed Crushing (Pty) Ltd. The functionality of the different formats of the questionnaire was evaluated.

The questionnaire was distributed to all the department heads, via e-mail. The department heads then re-distributed the questionnaire to their employees. (The department heads were contacted in person to ask for permission to distribute the questionnaires to relevant employees.)
1.5.2.4 Data analysis

The data was collected through hard copy questionnaires and electronically via Surveymonkey and e-mail. The data collected via Surveymonkey was exported into an MS Excel spreadsheet. The data generated through hard copy questionnaires and via e-mail was added to the data generated through Surveymonkey. The combined data and demographic data was summarised, presented and discussed, to obtain an overall insight of the demographics of the study group.

The Surveymonkey software has a tool to automatic analyse the collected data. This analysis was used to gain an understanding of the data that was collected through the electronic survey. As the electronic surveys only formed part of the study, these analyses was only used to gain insight into the data and was not the sole analytical tool that was used.

The combined data was further processed and analysed by the Statistical Consultation Service (SCS) of the North-West University at the Potchefstroom campus. The data collected was statistically analysed, by using Statistica (Statsoft, 2010) and Statistical Package for Social Science (SPSS) (SPSS, 2010).

1.6 LIMITATIONS TO THE STUDY

The main aim of this study was to determine the entrepreneurial orientation and perceived business success in certain industries of NWK and to formulate practical recommendations on how to improve entrepreneurial behaviour in an agri-business.

The target population was a limitation to this study, seeing that only one division of one specific agri-business was investigated. The response of the employees was limited, especially the lower post level employees. The lack of response might be due to lack of time to complete the survey and possibly poor access to computers among the lower
post grade personnel. The response rate from the lower post level employees may be improved to provide a more comprehensive study.

Entrepreneurship is a dynamic field and the challenges are ever changing and so also the characteristics required from entrepreneurs (Lotz, 2009:13). Only the five variables of entrepreneurial orientation were analysed in this study and the effect it had on the perceived success of the organisation. Further research may be conducted to fully understand more characteristics of entrepreneurs. A more comprehensive questionnaire as was used by Lotz (2009) can be used to evaluate more aspects of entrepreneurship in an organisation.

NWK has invested in a number of training programmes to support the organisation’s sustainable growth, development and improvement. The different programmes are: Investment in Excellence (IIE), Steps and 20 keys, (discussed in chapter 3). The effects of these different training programmes, on entrepreneurial orientation and perceived success, could be investigated.

1.7 LAYOUT OF THE STUDY

The figure below indicates the graphical layout of the study per chapter:

Figure 1.4: Graphical layout of the study
CHAPTER 1: Nature and scope of the study

Chapter one provided the background to the study. As an introduction a few concepts of entrepreneurship and the effect that it could have on an organisation as well as the economy was discussed. External aspects, such as the demands of investors and global crises such as the last recession of 2008 and 2009, have a significant influence on any organisation. All organisations need to adapt to these market influences in order to survive and sustain their business. Creating an innovative and entrepreneurial culture in your organisation is suggested as a possible solution for a sustainable business.

In the problem statement the business and strategy of NWK is briefly explained. The organisation is committed to a growth strategy, to ensure a sustainable and growing business in future, which will deliver reasonable returns to their shareholders. Due to the vision of the organisation, there is a clear need for entrepreneurship within the organisation.

In order to address this study primary and secondary objectives were defined and the scope of the study was specified. The scope of the study was defined by providing more information regarding the business under investigation and the geographical area in which the organisation is functioning. The economics of the North-West province was briefly described to place the study in context.

The research for the study was done by means of a literature study and data collected empirically. The questionnaire that was used was based on an article by Lotz and Van der Merwe (2013), where the entrepreneurial orientation and perceived success of agri-businesses in South Africa were measured. The data capturing and analysis was explained.
Limitations to the study was identified to indicate the shortfalls of the study and to provide insights for future research that can be done in the same field of study. Lastly a chapter review was provided to guide the reader through the study.

CHAPTER 2: Literature review on entrepreneurship

This chapter was essentially about the literature study regarding entrepreneurship and more specific the five variables of entrepreneurial orientation and perceived business success. The term entrepreneurship was defined by highlighting aspects of entrepreneurship and by defining the term entrepreneurship.

To define entrepreneurial orientation the variables thereof was investigated. For the purpose of this study the five variables of entrepreneurial orientation namely: **Innovativeness, Pro-activeness, Risk-taking, Autonomy and Competitive aggressiveness** were described.

The effect of the entrepreneurial orientation was measured against the perceived success of the organisation. A study done by Lotz and Van der Merwe (2013) analysed perceived success as one variable in order to define two different variables for perceived business success namely: **Business growth** and **Business development and improvement**. These two variables as defined by Lotz and Van der Merwe (2013) was used in this study.

To conclude the literature study the factors that had an influence or created a barrier for entrepreneurship have been discussed. Actions that encourage entrepreneurial behaviour in an organisation and the factors influencing the behaviour have been discussed. In order to introduce or enhance entrepreneurial behaviour the study was concluded with some recommendations on how to establish entrepreneurial behaviour in an organisation.
CHAPTER 3: An overview of the Industrial division within NWK

This chapter provided a brief overview of NWK as a whole from their establishment in 1909, development of the organisation, current strategies and initiatives. NWK has a rich history and has developed over a century to become a well established agri-business primarily in the North-West province. Recently the organisation uplifted its corporate identity and is pursuing a growth strategy, with the aim to increase their market share. A number of initiatives have been implemented to support the organisations overall strategy. These initiatives are focused to develop the employees and might have a positive influence on the entrepreneurial orientation of the employees and the organisation as a whole.

NWK divided its organisation into different business divisions to maintain focus on the diverse support that it provides. The grain, trade and corporate services was briefly discussed and more focus was placed on the Industries as it was the main focus of the study. The Industries include Noordfed, Epko, Opti Feeds and Opti Chicks. Noordfed is active in the milling industry for over 50 years. Epko is an oil crushing plant, mainly focusing on the production of sunflower and maize germ. Opti Feeds are producing animal feeds for: cattle, sheep, ostriches, chickens and horses. Opti Chicks are supplying day-old broiler chickens to chicken growers.

The change in the corporate identity and strive to establish growth for the organisation requires certain supporting programmes. NWK has implemented the Investment In Excellence (IIE) and 20 Keys training programmes to support the organisations strategy. Investment In Excellence is a training programme to unlock the personnel’s personal potential and to increase the organisation’s performance and corporate culture. 20 Keys is a system to energise the workplace to do work better, deliver faster service and to reduce the costs in the organisation.

With this information NWK as an agri-business is placed into context and assists in the understanding of the study that was done.
CHAPTER 4: Empirical research

A comprehensive explanation of the research methodology that was followed to complete the empirical study was provided in chapter 4. The data distribution, gathering and analysing process was explained. The data was statistically analysed and the whole analytical process was explained. The processed data, responses, analysis and findings were presented in this chapter.

A questionnaire was used to conduct an empirical study to investigate the five variables of entrepreneurial orientation as well as the two variables of perceived success in the organisation. The questionnaire used to conduct the study consisted of three sections, Section A gathered the demographic data of the respondents, Section B used 27 statements to assess the entrepreneurial orientation in the organisation and Section C measured the perceived success of the organisation.

The target population of the study was the employees of selected divisions of NWK, namely Epko, Noordfed, Opti Chicks and Opti Feeds. The entire population consisted of 609 employees working at the selected divisions.

The internal consistency and reliability of the responses were tested with Cronbach alpha coefficients. The data was further analysed by evaluating the mean values and standard deviations for all the statements measuring the different variables of entrepreneurial orientation and perceived success. To conclude the data the combined results for the different variables were analysed collectively for entrepreneurial orientation and perceived success of the organisation. In addition the spread of the data was analysed for entrepreneurial orientation and perceived success. Further analysis was conducted to determine the relationship which exists between selected demographic variables and the different variables for entrepreneurial orientation and perceived success of the organisation.
CHAPTER 5: Conclusion and recommendations

The last chapter of the study drew conclusions from all the literature, analysis and findings. The respondents to the study were investigated and the differences in the demographic information were discussed. The findings of the study concluded and interesting aspects that was discovered during the study was highlighted. The study leads to practical recommendations than can be applied to the specific corporate agricultural organisation, referred to as agri-business in this document. Definite actions that the agri-business can apply were described in a conclusive action plan.

Finally the primary and secondary objectives set for the study was confirmed and evaluated. Insights obtained from this study were translated to provide research suggestions for future research.
CHAPTER 2
LITERATURE REVIEW ON ENTREPRENEURSHIP

2.1 INTRODUCTION

Entrepreneurship has been identified as a driving force of economic growth, job creation and social enhancement (Gurol & Atson, 2006:25-26). Motlhasedi (2012:13) supported this statement and added that South Africa as a country can benefit from an increase in entrepreneurial activity, stimulating the countries’ economy. Innovation is an integral part of any business and has become a prerequisite for many businesses to achieve sustainability. Re-engineering, restructuring and downsizing are terms that are frequently used and implemented in organisations, to keep up with global forces (Melk, 2010:13). The concept of entrepreneurial orientation has been used for more than three decades to measure the level of entrepreneurial behaviour in an organisation and to conduct strategy research (Slevin & Terjesen, 2011:973). Entrepreneurial orientation provides a measurement for all organisations to be measured and represented on a scale. Assumptions are made that all organisations have some level of entrepreneurial behaviour which can vary from a low level in conservative organisations to a high level in entrepreneurial organisations (Covin & Slevin, 1998:218).

This chapter described the term entrepreneurship as the basis of this study. One of the objectives of this study was to present a strategy to increase entrepreneurial orientation in an agri-business. To better understand entrepreneurial orientation, the term entrepreneurship was defined and typical characteristics of entrepreneurs were discussed. Entrepreneurial orientation was discussed, including the five variables of entrepreneurial orientation as a tool to measure entrepreneurial activity in an organisation. Aspects of perceived success were discussed and the application thereof to evaluate the effect entrepreneurial behaviour has on an organisation. Finally factors which contribute and in contrast, reduce entrepreneurial behaviour in an organisation,
were discussed. A literature study was conducted in order to provide an organisation with some insight to create an environment stimulating entrepreneurial behaviour.

2.2 ENTREPRENEURSHIP

Entrepreneurship is a study field on its own with a variety of characteristics and applications. Entrepreneurship can be identified as a process which entrepreneurial individuals or groups are following. This process is called the entrepreneurial process and will be explained in this chapter. Understanding entrepreneurial processes assist an organisation in implementing systems which will enhance entrepreneurial behaviour.

2.2.1 Defining entrepreneurship and entrepreneurial orientation

The term entrepreneurship was derived from the French verb “entreprendre” which meant to “go between” or to “undertake” (Hisrich, Peters & Shepherd, 2008:6). The meaning of this French verb was in line with Cantelon’s definition, back in 1734, an entrepreneur is self-employed, willing to take risks and uncertain of an income (Lotz, 2009:18).

Mintzberg (1973:45) defined entrepreneurial orientation as “In the entrepreneurial mode, strategy-making is dominated by the active search for new opportunities” and “dramatic leaps forward in the face of uncertainty”. Later Khandwalla (1977:25) focused more on the management’s approach with his definition. “The entrepreneurial management style is characterised by bold, risky, aggressive decision-making”. Miller and Friesen (1982:5) defined entrepreneurial orientation focussing more on product and market and stated that “The entrepreneurial model applies to firms that innovate boldly and regularly while taking considerable risk in their product-market strategies”. Morris and Paul (1987:249) added pro-activeness to their definition and stated that “an entrepreneurial firm is one with decision-making norms which emphasize pro-active, innovative strategies which contain an element of risk”. Covin and Slevin (1998:218) gave insight to the differences between entrepreneurial- and conservative-organisations in their definition
“Entrepreneurial firms are those in which the top managers have entrepreneurial management styles, as evidenced by the firms’ strategic decisions and operating management philosophies. Non-entrepreneurial or conservative firms are those in which the top management style is decidedly risk-averse, non-innovative, and passive or reactive”.

There was a tendency in literature to use only three variables of entrepreneurial orientation namely: innovativeness, pro-activeness and risk-taking, which was supported by the definition of Cools and Van den Broeck (2008:27), “Entrepreneurial orientation (EO) refers to the top management’s strategy in relation to innovativeness, pro-activeness, and risk-taking”. Zahra and Neubaum (1998:124) supported this definition and stated that “Entrepreneurial orientation is the sum total of a firm’s radical innovation, pro-active strategy action, and risk-taking activities that are manifested in support of projects with uncertain outcomes”.

Pearce, Fritz and Davis (2010:219) included five variables of entrepreneurial orientation in their definition “An entrepreneurial orientation (EO) is conceptualized as a set of distinct but related behaviours that have the qualities of innovativeness, pro-activeness, competitive aggressiveness, risk-taking, and autonomy”. This statement was supported by Lumpkin and Dess (1996:136-137) and Voss, Z.G., Voss, G.B. and Moorman (2005:1134), they also included the five variables of entrepreneurial orientation in their definitions.

Timmons and Spinelli (2009:101) described entrepreneurship as a way of thinking, reasoning and acting that is opportunity obsessed. Entrepreneurial leadership is balanced and holistic in approach, with the purpose to capture and create value for all the participants and stakeholders. Bygrave and Zacharakis (2011:49) kept their definition of an entrepreneur very simple and stated that an entrepreneur is an individual that identifies an opportunity and then create an organisation to pursue the opportunity.
Szirmai, Naudé and Goedhuys (2011:4) agreed with above mentioned statements and added that entrepreneurs are masters to discover and exploit opportunities. Entrepreneurs can contribute to the economy through innovative ways by developing new products, new processes, new sources of supply, exploiting new markets and new ways to organise businesses (Szirmai et al., 2011:26). Szirmai et al. (2011:4) also made the statement that entrepreneurial talent can be applied to different areas and that not all are benefitting to society. Entrepreneurial talent can be applied to find creative and ingenious ways for an individual or group to increase their own wealth, power and prestige. Szirmai et al. (2011:4) also described a term named: productive entrepreneurial activity, where positive opportunities are recognised, created and utilised for the benefit of the greater society.

2.2.2 Characteristics of entrepreneurs

The characteristics of entrepreneurs will be discussed in this chapter to assist in the development of an entrepreneurial strategy for an organisation. Organisations should be able to identify entrepreneurs in order to create a corporate environment that will enhance entrepreneurial behaviour (Ramachandran, Devarajan & Ray, 2006:90).

The art of entrepreneurship is to identify the correct management team to seize an opportunity and to make a success of the venture. It is highly unlikely to find one person whom is outstanding in all businesses areas. One of the main roles of a leading entrepreneur is to construct a management team that is capable of all skills needed (Timmons & Spinelli, 2009:315-316).

Bygrave and Zacharakis (2011:53) summarised the characteristics of an entrepreneur as the 10 D’s. The 10 D’s according to the authors are the most important characteristics of an entrepreneur. Below are the 10 characteristics of an entrepreneur as identified by Bygrave and Zacharakis (2011:53), each with a short description.
• **Dream:** Entrepreneurs have a vision of what the future could be like for them and their business and they have the ability to implement their dreams.

• **Decisiveness:** They don’t procrastinate. They make decisions swiftly. Their swiftness is a key factor to their success.

• **Doers:** Once they decided on a course of action, they implement it as quickly as possible.

• **Determination:** They implement their ventures with total commitment. They seldom give up, even when confronted by obstacles that seem insurmountable.

• **Dedication:** They are totally dedicated to their business, sometimes at considerable cost to their relationship with friends and family. They work tirelessly. Twelve-hour days and seven-day workweeks are not uncommon when an entrepreneur is striving to get a business off the ground.

• **Devotion:** Entrepreneurs love what they do. It is that love that sustains them when the going gets tough and it is the love for their product and service that makes them so effective at selling it.

• **Details:** It is said that the devil resides in the details. This is even more applicable when starting and growing a business. The entrepreneur must be on top of critical detail.

• **Destiny:** Entrepreneurs want to be in charge of their own destiny rather than dependent on an employer.

• **Dollars:** Getting rich is not the prime motivator of entrepreneurs. Money is more a measure of success. Entrepreneurs assume that if they are successful, they will be rewarded.

• **Distribute:** Entrepreneurs distribute ownership of their businesses key employees who are critical to the success of the business.

It is fundamental to determine entrepreneurial individuals in order to create and sustain entrepreneurial behaviour in an organisation (Hayton & Kelly, 2006:407). Raugh and Friese (2007:355) contributed to the argument stating that characteristic traits can be used to predict entrepreneurial behaviour. Therefore researchers have tried to identify character traits of individuals in an attempt to differentiate between entrepreneurs and
non-entrepreneurs (Maes, 2003:4). Literature studies done to determine the characteristics of an entrepreneur can only be used as a guideline, because it is unlikely to find an individual possessing all the characteristics. The characteristics of an entrepreneur as identified in the studies can be used to compare characteristics of an individual (Timmons & Spinelli, 2009:315).

This section provided some insight to assist with the identification of individuals who possess some entrepreneurial behaviour traits. Identifying characteristics of a typical entrepreneur provides more insight to the term entrepreneurship and will assist in implementing an entrepreneurial environment in an organisation. The list of characteristics discussed in this section can be used as a guidance to identify entrepreneurs and manage entrepreneurial behaviour in an organisation.

2.3 AN OVERVIEW OF ENTREPRENEURIAL ORIENTATION

Entrepreneurial orientation is a measure to indicate entrepreneurial activity in an organisation. Dimensions of entrepreneurship will be discussed, that collectively forms part of entrepreneurial orientation.

Miller (1983:770) identified three dimensions of entrepreneurial orientation namely: innovativeness, pro-activeness and risk-taking. Later studies by Morris and Kuratko (2002:39) supported the three dimensions of entrepreneurial orientation as identified by Miller (1983:770). The three dimensions of entrepreneurial orientation are still relevant and are used in studies such as the study done by Cools and Van den Broeck (2008:27).

Later Dess and Lumpkin (2005:147) added two more dimensions namely: autonomy and competitive aggressiveness to the term entrepreneurial orientation. The five variables identified by the above mentioned authors were: innovation, pro-activeness, risk-taking, autonomy, and competitive aggressiveness. These variables can be measured independently but are collectively a measurement of the term entrepreneurial
orientation. These variables work together to enhance an organisation’s entrepreneurial performance and infuse decision making styles and practises (Oosthuizen, 2006:81). Any organisation has some level of entrepreneurship, which can range from a low level in conservative organisations to a higher level in entrepreneurial organisations. By monitoring entrepreneurial orientation the level of entrepreneurship present in a specific organisation can be determined (Morris, Kuratko & Covin, 2008:54). For the purpose of this study the five dimensions of entrepreneurial orientation as defined by Dess and Lumpkin (2005:147) will be used.

**Figure 2.1: The five variables of the entrepreneurial orientation concept**

![Diagram of entrepreneurial orientation concept](image)

*Source: Enslin (2010:31)*

The five variables of entrepreneurial orientation presented in the above figure will be discussed in the sections below.
2.3.1 Innovativeness

Innovativeness is one of the dimensions of entrepreneurial orientation as discussed by Miller (1983:770). The importance of innovation in an organisation was emphasised by Lumpkin and Dess (1996:141). They stated that innovation is the one dimension that is a necessity for an entrepreneurial organisation. Although all dimensions of entrepreneurial orientation combined are used to measure level of entrepreneurship, innovation is one dimension that has to be present in order for an organisation to be entrepreneurial (Gürbüz & Aykol, 2009:323).

According to Morris et al. (2008:54-55), innovation can take on lots of forms, but can be identified by outcomes in the workplace, changes to the way things are done, new improved services and new and better ways of accomplishing functions and tasks. This statement was supported by McFadzean, O’Loughlin and Shaw (2005:353), who stated that new products, services or processes are the result of innovation.

Innovation is an activity that challenges the basic principles of management; innovation is changing the future of products and services, while management is about controlling the existing activities. Managers mostly focus on maximising the efficiency of the proven existing products and neglecting the innovation of future products and services. These innovations can sometimes be costly and is therefore neglected until it’s absolutely necessary (Morris et al., 2008:57). Innovation in businesses is essential today to gain a competitive advantage over competitors. Pursuing new opportunities which will lead to financial gain are important. These are all necessary aspects for an organisation in order to stay in business (Memili, Lumpkin & Dess, 2010:331). Globalisation, opening of new markets, new products and improved technology are increasing the customers buying power and is forcing organisations to be innovative. Innovation can support an organisation to launch new and improved products faster and with a reduction in cost (Morris et al., 2008:55-56). Process innovation is invisible to the user but with definite impact on cost and or quality of the product (Johnson, 2001:139).
The same is true with product innovation which can have an incremental effect of cost reduction, quality enhancement or shorter manufacturing times (Bessant, 2003:5).

“Management of innovation” seems like a contradictory statement, because management is synonym with control and innovation involves a lot of uncertainty. This actually implies the control of the unknown. An effective way to manage innovation is to have a formal innovation strategy that relies heavily on cross-functional teams. Having a well-defined new product development process and formal criteria to measure the new product development, assist management of the innovation process (Morris et al., 2008: 59-60). Innovative businesses can generate extraordinary performances. Wiklund and Shepherd (2003:1309) described these businesses as the engines of economic growth. It is pleasing to know that innovativeness has a positive effect on an organisation’s performance. Most studies agreed with this statement (Casillas & Moreno, 2010:269). A positive relationship between innovativeness, business performance and growth was found with the studies of Raugh, Wiklund, Lumpkin and Friese (2009), Morena and Casillas (2008) and Subramanian and Nilakanta (1996) (Lotz & Van der Merwe, 2013).

2.3.2 Pro-activeness

Pro-activeness is the opposite of re-activeness and it involves the development of products and services to improve (Morris et al., 2008:66). Madsen (2007:187) described pro-activeness as having a posture of anticipation that acts on future wants and needs in the marketplace. Pro-activeness is more than only providing a solution or improved process. Pro-activeness involves looking for new opportunities, the implementation of ideas, taking responsibility and bringing concepts to be functional. This all happens very swiftly so that the organisation can gain from the first mover advantage (Wiklund & Shepherd, 2005:82). Entrepreneurs go further; they clearly define and effectively communicate the advantages. They make sure that the innovation is implemented and launched (Morris et al., 2008:66-67).
Pro-active organisations determine and act on future needs and wants and strive to gain from the first mover advantage over their competitors (Madsen, 2007:187). Pro-activeness create a first mover advantage whereby organisations can secure scarce resources, grow market share, gain new knowledge and as a result get into a positive position that is hard to duplicate or defend by competitors (David, 2007:200). Care should be taken, as first movers are not always successful. The market does not always accept new products and services. Therefore a proactive strategy should be accompanied by careful analysis and extensive feasibility studies in order to be successful (Dess & Lumpkin, 2005:151). Organisations can be forward thinking and fast, acting but they are not always the first (Lumpkin & Dess, 1996:146). Gürbüz and Aykol (2009:323) summarised the statement clearly in stating that pro-active businesses are more of a leader than a follower, they have the foresight to seize new opportunities even if they are not the first to the market.

Pro-activeness of an organisation has a positive effect on a business’ performance as was found in the study of Raugh et al. (2009) and Casillas and Moreno (2010).

2.3.3 Risk-taking

Risk-taking is another dimension to entrepreneurial orientation. There are risks involved with every new venture or change and there is a chance that the result will differ from what was expected. Dewett (2004:258) defined risk as the uncertainty of whether a significant and/or disappointment of a decision will be realised. This does not imply that higher entrepreneurial activity involves higher risk. It is more a case of being aware of the risks and putting systems in place to minimise the effects of the risks (Morris et al., 2008:62). Entrepreneurial organisations are not per se high risk-takers (Lambing & Kuehl, 2007:19), but they clearly define risks they are willing to take. They minimise the effect of risks by putting managing systems in place (Timmons & Spinelli, 2009:52). The viewpoints of such organisations are comprehensively described by McBeth and Rimac (2004:18) as being risk-aware and opportunity focused.
Risk is not standing alone and there is a correlation between level of innovativeness and planning time it takes to implement new ventures. The figure below indicates the correlation between level of innovation in an organisation and risk involved.

**Figure 2.2: Relating innovation to risk**

![Diagram showing the relationship between innovation and risk](image)

**Source:** Morris *et al.* (2008:63)

If an organisation participates in little or no innovation initiatives, the employees will be unable to manage risks involved with innovative ventures, and then the risk to an organisation is high. The more frequent organisations undertake innovative initiatives, the more experienced and resourceful the organisation becomes in managing risks involved. This higher level of awareness and experience in risk-taking actually lower the risks involved (Morris *et al.*, 2008:62). Organisations that do not innovate face very little risks in the short run, but have a large risk in the long term, because innovation is a necessity for organisations to grow and develop (Burns, 2008:291). With highly innovative initiatives, organisations are venturing in unknown territory and are doing ground breaking work. The variables regarding innovativeness are high and in lots of areas mistakes can easily be made. Although returns on highly innovative ventures can be high, so can risks be (Morris *et al.*, 2008:62-63).
There are risks involved in the time taken to evaluate and develop a venture. The risks can be categorised into two phenomena; the chance of acting too quickly on an unsubstantial opportunity “sinking the boat” or the chance of taking too long to take action on a significant opportunity “missing the boat” (Mullins & Forlani, 2005:51). The following figure illustrates how risk varies to planning time.

**Figure 2.3: Relating risk to planning time**

![Figure 2.3: Relating risk to planning time](image)

**Source:** Morris *et al.* (2008:65)

New ventures normally involve two types of risks: “missing the boat” and “sinking the boat”. “Sinking the boat” is when a business venture seems to be a great opportunity, but with further investigation, more pitfalls are unveiled. This implies with more planning time this type of risk is lowered. The second risk involved is “missing the boat”. The window of opportunity is only that big and the longer the planning takes, the more likely rivals will sieze the opportunity or market circumstances change. The longer planning takes the higher the risk become. The total risk regarding time taken for planning is a combination of the two types of risks (Morris *et al.*, 2008:65-66).
2.3.4 Autonomy

Autonomy refers to actions of individuals and groups to identify an opportunity and take all the necessary steps to bring the process to completion (Lee & Sukoco, 2007:551). Lassen, Gertsen and Riss (2006:361) described autonomy as a valuable tool for an organisation to leverage its existing strengths and to improve its business practices. The effect of autonomy increases competitiveness and effectiveness of an organisation. An organisation with a climate that encourages innovation will lead to promotion and launches of new ventures, products or services (Raugh et al., 2009; Mumford, Scott, Gaddis & Stange, 2002:724).

Organisations use both “top-down” and “bottom-up” approaches to encourage autonomy. Autonomy that is encouraged from the top management down by giving support and incentives is an indication that the management appreciate autonomous decision. This will encourage a climate of entrepreneurship (Lumpkin, Cogliser & Schneider, 2009:49; Dess & Lumkin, 2005:149). Dess, Ireland, Zahra, Floyd, Janney and Lane (2003:355) believed that the “top-down” approach is as important to the success of the rest of the organisation as it is to autonomy. By initiating autonomy from the “bottom-up” requires special incentives and a supportive organisational structure (Lumpkin et al., 2009:49).

Organisations that are dedicated to create an environment where entrepreneurs can be developed prefer a flatter business structure where it is easier to encourage autonomy (Memili et al., 2010:330). Although the structural changes are designed to encourage autonomy, and it is easy to monitor autonomous initiatives, it is not sufficient enough to encourage autonomous thinking. Autonomy should be granted to individuals and they should be encouraged to act autonomously in order to increase the behaviour (Mumford et al., 2002:724).
2.3.5 Competitive aggressiveness

Competitive aggressiveness refers to the propensity of an organisation to directly challenge their rivals in order to increase its market share (Lumpkin & Dess, 1996:148; Chang, S.C., Lin, Chang, F.J. & Chen, 2007:1000). Competitive aggressiveness can take on two forms of confrontation. Direct confrontation: an organisation directly markets its products and services in a market identified by competitors. Reactive approach: an organisation lower prices or analyse and attack competitor’s weaknesses (Lee & Sukoco, 2007:550). It further refers to the reaction on competitors’ actions and threads generated in the existing market place. These reactions can take on unconventional forms in order to weaken the competitors’ strategy (Lotz, 2009:53-54).

The terms competitive aggressiveness and pro-activeness are closely related to each other, but there is a significant difference that needs to be clarified. Pro-activeness relates to the actions taken to obtain new markets, while competitive aggressiveness relates more to defending existing markets (Lumpkin & Dess, 1996:147).

Competitive aggressiveness has been discussed less frequent in literature (Lumpkin & Dess, 2001:431) and there are mainly two reasons. The terms competitive aggressiveness, and autonomy, was not part of the first dimensions of entrepreneurial orientation. Researchers sometimes treat the two terms: pro-activeness and competitive aggressiveness as interchangeable (Lumpkin & Dess, 2001:431).

In conclusion the five dimensions were discussed separately, but collectively they indicate the decision making styles of an organisation and the level of entrepreneurial orientation in a business.

In this study entrepreneurial orientation was measured against perceived success of the organisation which will be discussed in the following sections.
2.4 PERCEIVED SUCCESS OF AN ORGANISATION

Perceived success of an organisation due to change of management’s behaviour, vision and strategy, will foster more innovation, creativity and lower bureaucratic barriers. Entrepreneurial climate is seen as a key driver for future success of an organisation (Thornberry, 2003:340). The research instrument used in this study was designed to measure financial status, customers, markets, processes, employee development (people) and future success of an organisation (Lotz, 2009).

Entrepreneurial behaviour has a strong influence on the attitudinal and financial measures of an organisation (Thornberry, 2003:340). The financial results are the overall indication of an organisation’s combined efforts. All the actions taken aim to secure the sustainable success and value of an organisation (Van der Post, 1997:75). Over time the entrepreneurial organisation will outperform their competitors, who don’t have an entrepreneurial climate. Financial gains can directly be linked to the entrepreneurial behaviours inside the organisations (Zahra & Covin, 1995:47). It is suggested by Enslin (2010:54) that financial measures of entrepreneurial behaviour should be indicators like market share escalation, growth in profits and growth in turnover.

Internal efficiency of an organisation is a non-financial indicator of the wellbeing of an organisation (Teo & King, 1996:312). Although entrepreneurial organisations have less control measures in place, there still is a need to measure the processes to ensure good products and services (Burns, 2008:183). Dess et al. (2003:370) identified the following two aspects namely: efficiency, “doing the right things”, and effectiveness, “doing things right”. This should be measured by organisations to ensure quality and improved products and services.

True entrepreneurial organisations are learning organisations that require unitary. A believe that the individuals interests and that of the organisation are the same. Shared values are at the core of this, making the employees feel empowered to affect the
direction of the organisation. Employees truly believe that continuous learning, development and acquiring knowledge is essential to an organisation (Burns, 2008:70-71). Successful organisations value the asset that they have in their human capital and treat their employees with importance (Kreitner & Kinicki, 2008:4)

To ensure future success, the organisation should have a forecast of what the future holds and put measures in place to adapt to the changes needed. It is important to have an intellectual stock from which new ventures can be selected when needed in order to ensure a long-term level of sustainable advantage (Ahuja & Lampert, 2001:529).

A study done by Lotz and Van der Merwe (2013) investigated the influences of entrepreneurial orientation and perceived success on agri-businesses in South Africa. Lotz and Van der Merwe (2013) treated the perceived success measurement collectively as one variable. They investigated two new variables namely: Business growth and Business development and improvement as possible variables measuring perceived success. The study concluded that there is a positive relationship between Business growth, Business development and improvement and perceived success. They concluded that the two identified variables for perceived success is reliable and can be used as a measurement.

The two new variables namely: Business growth and Business development and improvement will be used as the two variables for perceived success in this study.

2.5 ESTABLISING ENTREPRENEURSHIP

With the background of entrepreneurship and different dimensions on the subject discussed, it is now possible to discuss the aspects involved implementing entrepreneurial behaviour in an organisation. One of the secondary objectives of this study was to formulate practical recommendations that will assist in developing entrepreneurial behaviour in an organisation. In order to obtain this objective it is important to understand the factors which influence the establishment of
entrepreneurship. The barriers to entrepreneurship will be discussed in the following section.

2.5.1 Barriers to entrepreneurship

Traditional management techniques can discourage employees to behave in an entrepreneurial way and inhibits entrepreneurial development in an organisation. Examples of these techniques are listed below (Burns, 2008:175-177).

- **Focus on efficiency or the return on investment**: An entrepreneurial organisation focuses its efforts on developing new products and entering new markets. There is a need to move swiftly and penetrate new markets before their competition has time to react. The focus of the organisation should be more on achieving these goals. Matured businesses can gain from efficiency improvements (Burns, 2008:175).

- **Long term planning and controlling**: Entrepreneurial organisations need to have a vision and set goals. The organisation is moving in an uncertain future and needs to learn from a changing reality. Interim milestones should be set and the progress should be re-assessed after each milestone is reached (Burns, 2008:175).

- **Enforce standard procedures, rules and regulations**: Strict rules and regulations tend to block innovation and can lead to missed opportunities. Entrepreneurial organisations need to be flexible and establish a culture that is constantly challenging the rules. Rules are only used in situations where it’s to the advantage of the organisation (Burns, 2008:175).

- **Avoid risks**: Risks will always be present in an entrepreneurial organisation. Avoiding risks means that opportunities will be missed. Calculated risks should be taken, new risks should be identified all the time and measurements to manage the risks should be set in place (Burns, 2008:175).

- **Decision making based on past experience**: The entrepreneurial organisation is operating in a changing environment and the past is not always a good
measure to predict the future. The entrepreneurial organisation should take small steps and testing its assumptions against the changing reality (Burns, 2008:175).

- **Promote individuals who conform:** Conforming to the system places inhibits creativity and it’s a sure way to lose inventors. Entrepreneurial organisations should accommodate “ideas people” who not necessarily conform to the systems. They should encourage the “doers” and reward them for their inventions (Burns, 2008:175-176).

Morris (1998:97) had a more systematic approach to the barriers of entrepreneurship which he classified into six groups. Examples of the six barriers of entrepreneurship: systems, structures, strategic direction, policies and procedure, people and culture are listed with examples below.

- **Systems:** Inappropriate evaluation and reward system, excessive and rigid control systems, inflexible budgeting systems, overly rigid and formal planning systems and arbitrary cost allocations (Morris, 1998:97-98).

- **Structures:** Too many hierarchical levels, top-down management, overly narrow span of control, responsibility without authority, restricted communications and lack of accountability (Morris, 1998:98).

- **Strategic direction:** No formal strategy for entrepreneurship, no vision from the top, no entrepreneurial role models at the top, no innovation goals, lack of senior management commitment (Morris, 1998:98-99).

- **Policies and procedures:** Long, complex approval procedures, executive documentation requirements, unrealistic performance criteria and over-reliance on established rules of thumb (Morris, 1998:99).

- **People:** Fear of failure, resistance to change, parochial bias, complacency, protection of own sphere of activity, short-term orientation, inappropriate skills and talent (Morris, 1998:99-100).

- **Culture:** Ill-defined values, lack of consensus over priorities, lack of congruence, values that conflict with those of an entrepreneurial culture (Morris, 1998:100).
The barriers identified by Morris (1998:97-101) are well ordered and also includes the aspects identified by Burns (2008:175), but with a broader application. The factors identified by Morris (1998) can be taken into account when addressing entrepreneurial aspects within an organisation.

2.6 A FRAMEWORK AND STRATEGY TO ESTABLISH ENTREPRENEURSHIP

There is empirical evidence that entrepreneurial behaviour increases innovation and willingness to take on risks which leads to new products, processes and service development (Kuratko, Montagno & Hornsby, 1990). There is a definite link between entrepreneurial orientation and financial results of an organisation (Ramachandran et al., 2006:87). The challenge for organisations is to create an entrepreneurial structure, vision and culture to transplant entrepreneurial characteristics, leadership and management styles into the business (Burns, 2008:65).

Most organisations act entrepreneurial by identifying and pursuing new opportunities. Normally after the “start-up” the ventures become more structured and the entrepreneurial orientation decrease as well as the ability to identify opportunities. (Ramachandran et al., 2006:87). In order to maintain some entrepreneurial orientation in an organisation action should be taken to keep an innovative and exiting environment (Jacobs & Kruger, 2001:1). An environment where innovation is part of solutions should be created with economic and political structures in the organisation that should support this culture.

There should be a shared sense of meaning and purpose among all employees (Kuratko & Hodgetts, 2007:63) where the organisation’s culture should influence individuals to accept entrepreneurial change. An organisational culture which supports entrepreneurial behaviour could mean a sustainable competitive advantage over competitors. Ramachandran et al. (2006) have identified two approaches which encourage an organisation namely: “focused entrepreneurship” and “organisational-wide entrepreneurship”. These two approaches correlate to the approaches Cooper, Alvarez,
Carrera, Mesquita and Vassolo (2006) have identified. Firstly Cooper et al. (2006:88) suggests that a separate department should be establish which encourage entrepreneurship and this approach aligns with the “focused entrepreneurship” approach of Ramachandran et al. (2006). Cooper et al. (2006:88) also have an approach that followed the study of Farrell (1993:223-226), where the entire organisation is challenged to form a culture that is more flexible, innovative and accept risk-taking including failure. This approach by Cooper et al. (2006) and Farrell (1993) aligns with the approach of Ramachandran et al. (2006) for “organisation-wide entrepreneurship”.

The two approaches to establish entrepreneurship in an organisation i.e. “focused entrepreneurship” and “organisation-wide entrepreneurship” will be discussed in the sections below.

2.6.1 Focused entrepreneurship

The focused entrepreneurship approach is normally followed by more mature organisations; where there is a need to investigate new ventures or to launch new products or services. The focused entrepreneurship approach can be implemented without upsetting the established organisation’s structure (Ramachandran et al., 2006:88). A fundamental of this approach is that entrepreneurship should be promoted and form part of the corporate strategy (Ireland, Covin & Kurakto, 2009:21).

Individuals are identified which have shown some entrepreneurial behaviour such as: initiative, innovation, pro-activeness or leadership (Ramachandran et al., 2006:88). This statement was supported by Kuratko and Hodgetts (2004:68), whom placed a strong emphasis on strategies’ need to assist innovative-minded people to reach their full potential. In some cases entrepreneurs are “injected” into an organisation, by appointing one or more proven individual entrepreneurs to drive the new venture, product or service development. The chosen entrepreneur is mostly selected to lead the efforts. These initiatives are often rewarded with steep financial incentives to mach potential efforts by individual entrepreneurs (Ramachandran et al., 2006:88).
During this process new products or services are introduced to the market. Some individuals have built their entrepreneurial skills, but the whole organisation has not become entrepreneurial. By changing certain sections of an organisation to be more entrepreneurial, it can form the basis of an organisation-wide change. This approach has a lower risk, as there are fewer challenges than changing the entire organisation, but there are some limitations to this approach (Ramachandran et al., 2006:88).

With this approach, entrepreneurs should be appointed and it might be that a good manager is appointed as the identified entrepreneur, but this person might not possess the necessary skills. In these circumstances obscured methods are followed in an attempt to achieve the objectives. As an example: these managers might be able to construct an excellent business plan, but based on a poor idea (Ramachandran et al., 2006:88).

In the case where external entrepreneurs are appointed, these entrepreneurs may not have patience or even skills to deal with the political- and cultural-challenges of a structured organisation. It is difficult to sustain the “injection” of entrepreneurs in the organisation as entrepreneurs are mostly successful and have ventures of their own (Ramachandran et al., 2006:88).

The normal steps of controlling a system are to set objectives, motivate personnel, assist them in achieving objectives, and monitoring the system and control based on measurements. By the nature of entrepreneurs, this approach is not always accepted. Steep financial incentives associated with participation in the entrepreneurial activities, can create a feeling of inequity among employees. Barriers are created between the entrepreneurial activities and the ongoing organisation. With strong negative feelings, the ability to implement entrepreneurial initiatives in the operational environment may be obstructed (Ramachandran et al., 2006:89).
2.6.2 Organisation-wide entrepreneurship

Implementing entrepreneurship in an organisation requires commitment of an entire organisation. Organisation-wide entrepreneurship can initiate a vast variety of outputs, ranging from small improvements in processes or products and even in larger activities such as diversification into unrelated products and services. Iacobucci and Rosa (2010:370) stated that although the organisations performance is important, the development of the entrepreneurial team's managerial and entrepreneurial skills are just as important to retain vital skills and to exploit new ventures. Normally organisation-wide entrepreneurship is implemented in young organisations, while there are still little structure and bureaucracy build into the organisation. This does not mean that matured organisation cannot become entrepreneurial (Ramachandran et al., 2006:89). Methods to implement organisation-wide entrepreneurship will be discussed.

Organisational culture is a key element in creating an entrepreneurial environment and there should be an urge to create a corporate environment where anybody is encouraged to explore new opportunities. This process should not be forced and a form of self selection should be used. Willing candidates should not be forced to participate in any activities, but the system should be able to identify willing candidates. Entrepreneurship involves a high level of uncertainties; therefore the trust in an entrepreneur or an entrepreneurial team should be of a high level (Ramachandran et al., 2006:90). In order to minimise uncertainty, an organisation should have rapid information processing abilities in order to provide correct and in-time information to project teams.

One of the main focuses of entrepreneurial activity in an organisation should be directed to identify and solve ineffectiveness and inefficiencies in the system. These activities can be directed to any section of the value chain and is not bound to certain divisions. One of the more difficult parts in the process to encourage entrepreneurial behaviour throughout the organisation is to allow entrepreneurial behaviour to the lowest level of employment in an organisation. Management must be able and willing to appreciate
everyone’s perceptions and trust their judgement, regarding the activities that they have been granted to investigate (Ramachandran et al., 2006:91).

McGrath and McMillan (2000) identified four broad sets of practices to identify and exploit the opportunities: 1) Correct allocation of one’s attention, resources and talent can set the right tone for innovation. 2) The identification of opportunities is important and the possible options should be measured against reasonable ballpark figures. Here the discipline of parsimony can be applied; where the funds, investment costs and resources are minimised, until the upside potential of the opportunity is exploited. 3) The involvement of top management is crucial in this process. Top management should be hands-on. Involved in the process and effectively analyse the opportunities at hand. Management should match the opportunities to the strong features of the organisation, increasing their chances to success. 4) Managing possible failure of the process is important. The climate created after a failure should create an atmosphere which will sustain and encourage entrepreneurship. Constructive post-mortems should be done and all the failures should be discussed, in a manner that will build the organisation and apply the findings in different business divisions (Ramachandran et al., 2006:91).

The advantages of an entrepreneurial organisation are great. Competitive advantages can be created for an organisation and new markets can be explored, but there are also risks involved in this process. Employees should be allowed to think and act in unconventional ways, but there should be mechanisms in place to minimise the risks and to control irresponsible behaviour. Creating separate legal entities are one method to allow entrepreneurs to develop while lowering the risk to the company (Iacobucci & Rosa, 2010:371). To keep the entrepreneurial spirit high and also contain the organisation’s risks, systems should be in place to control the process and not the specific initiatives (Ramachandran et al., 2006:91). A learning-base innovation strategy is appropriate to manage the process of innovation and to ensure that the created knowledge can be used to enhance and develop capabilities (Lynn & Akgun, 1998). The focus should be to manage the process of articulation, sharing and transferring of obtained knowledge. If the focus is on knowledge sharing, knowledge will be obtained
in the organisation. Communicating the project will prevent irresponsible actions and feedback to the participants. The project should increase the knowledge base and ensure a better outcome. Small and big projects should be evaluated in the same manner, in order to evaluate the quality of the process that was followed. If the correct process was followed, a certain percentage of success should follow (Ramachandran et al., 2006:91).

Success of an entrepreneurial organisation depends largely on the skills and collective leadership of the top management team. Iacobucci and Rosa (2010:371) punctuated the effect employee-involvement and tutoring from senior management has on the development of entrepreneurial behaviour in an organisation. Top management who truly believe that entrepreneurial behaviour can have an advantage on their organisation pursue an entrepreneurial strategy, which will seek competitive advantage through sustained innovation. This will involve: 1) Creation of structures and a culture that will encourage entrepreneurial behaviour and autonomous generation of initiatives. Entrepreneurial organisations will consider innovation as an appropriate method to address an organisation’s challenges. 2) Entrepreneurial visions will be created and communicated to ensure an overall sense of innovative initiatives. 3) Application of needed resources to promising ventures in uncertain phases of development. The role of top management team should be to create and communicate clear and shared goals, stimulate information exchange, solve problems on the entrepreneurial process, stimulate knowledge creation, encourage constructive confrontations, create a sense of trust and believe in individuals and teams.

2.7 SUMMARY

This chapter covered the literature study regarding entrepreneurship and more specific the five variables of entrepreneurial orientation and the two variables measuring perceived business success. The entrepreneurial field is very broad so a couple of aspects were explored to gain insight regarding the topic.
The term entrepreneurship was defined by highlighting aspects of entrepreneurship from a number of authors. To assist in understanding entrepreneurship some typical characteristics of entrepreneurs were discussed. Bygrave and Zacharikis (2011:53) summarised the characteristics of entrepreneurship as the 10 D’s, where each D indicated a typical characteristic of an entrepreneur. Defining entrepreneurship was done to put the study into context. The main focus of this study was to measure the entrepreneurial orientation and perceived success of NWK as an agri-business.

To define entrepreneurial orientation the variables thereof was investigated. There are different opinions regarding the variables of entrepreneurial orientation. Miller (1983:770) determined three dimensions namely: innovation, pro-activeness and risk-taking as the main variables of entrepreneurship. Dress and Lumpkin (2005:147) added two dimensions to the term entrepreneurial orientation, namely: autonomy and competitiveness. For the purpose of this study the five variables of entrepreneurial orientation namely: Innovativeness, Pro-activeness, Risk-taking, Autonomy and Competitive aggressiveness were described.

The effect of entrepreneurial orientation was measured against perceived success of an organisation. Variables of perceived success were previously identified as: financial measures, customer and market measures, process measures, people development and future success. A study done by Lotz and Van der Merwe (2013) analysed perceived success as one variable in order to define two different variables for perceived success namely: Business growth and Business development and improvement. These two variables as defined by Lotz and Van der Merwe (2013) were used in this study.

To conclude the literature study the factors that have an influence or create a barrier to entrepreneurship have been discussed. In order to encourage entrepreneurial behaviour in an organisation factors influencing entrepreneurial behaviour should be taken into account. Lastly recommendations on how to establish entrepreneurial behaviour have been discussed.
In the following chapter the agri-business, NWK, will be discussed in more detail to gain more insight to the business, different divisions and business strategies.
CHAPTER 3
AN INTRODUCTION TO THE
INDUSTRIAL DIVISION WITHIN NWK

3.1 INTRODUCTION

NWK Limited is an agri-business located in Lichtenburg, North-West province. NWK has a rich history and was established in 1909. Today NWK is a major role player in the agricultural sector.

This chapter discussed NWK’s history as well as some historical milestones. The mission and vision statements were discussed in order to provide an insight in the strategy which the organisation is pursuing. Different business divisions and their functioning were reviewed. The Industrial division of NWK: Epko Oil Seed Crushing, Noordfed, Opti Chicks and Opti Feeds were discussed in depth, as these specific business units were investigated.

NWK is pursuing a growth strategy. New systems, “Investment in Excellence” (IIE) and “20 keys” were implemented. These systems have valuable properties and might assist in increasing entrepreneurial activity in the organisation.

3.2 A SHORT HISTORY OF NWK

Farmers in the North-West province were plundered in poverty after the Second Anglo Boer War (1902). A group of farmers decided to form a co-operative where they can collectively market their grain in order to obtain better prices. On 24 April 1909, a meeting was held in Lichtenburg’s city hall, where the establishment of the co-operative was discussed. On 4 May 1909 the co-operative was formally registered as: “De
Lichtenburg Coöperatieve Landbouw Maatschappij” under the Co-operative Societies Act no.17 of 1908 of Transvaal, with Mr. Edward Henry Mathews as the first chairman (NWK, 2009a:12-14).

The cooperation showed a good initial growth and on 25 April 1912 took over the “Eendracht Vereniging” which included grain depots in: Klerksdorp, Coligny, Vermaas, Barberspan and Bodenstein. This take-over increased the members to 700 (NWK, 2009a:15-16). On 1 February 1939 the co-operative changed to a Limited co-operative in order to remove the liability from the shareholders. The co-operative was then known as the “Lichtenburg Kooperatiewe Landbou Vereniging” (NWK, 2009a:25).

The time 1940 to 1949 was known for mechanisation of the grain industry. The trade department showed good financial results with sales of tractors and agricultural implements (NWK, 2009a:28-29). This revolution increased grain production and the first mass shed for maize was erected in Lichtenburg during 1953. The demand for mass handling of grain increased rapidly and the first conventional grain silo was erected in Sannieshof during 1960. The mass handling facilities assisted the North-West Co-operative to achieve a turnover of R17,700,000 in the financial year of 1967 to 1968. (NWK, 2009a:32-38).

Overtime the focus of the North-West Co-operative changed to broaden their support to their members. Their services include financing, insurance, processing of primary products, supply and maintenance of modern equipment as well as care for animals. This changed focus lead to investment in processing industries. During 1981 the North-West Co-operative acquired 50% interest in Noordfed, which at the time was milling maize in Lichtenburg, Mahikeng and Delareyville. Noordfed expanded its industry and erected a wheat mill during 1996 then added dog food to its product range in 1999.

The investment in industries continued and during 1983 NWK invested in a liquid fertiliser factory at Lichtenburg. This factory could produce 10,000 ton of liquid fertiliser per annum (NWK, 2009a:57-58). North-West Feeds was completed during 1984 with a
capacity to produce 9,000 tons of animal feed per month. Epko Oil Seed Crushing was erected during 1996 which can process 10,000 ton of sunflower per month into crude sunflower oil and sunflower oilcake (a product used in animal feeds). During 2000 Epko expanded its operations with a refinery in Aeroton, Johannesburg to produce refined sunflower oil (NWK, 2009a:70).

The North-West Co-operative changed their business entity to a public company which was known as NWK Limited during 2008 (NWK refers to NWK Limited in this document). The new business structure was believed to serve the interests of members and industry better.

As a public company NWK’s industries grew steadily. NWK invested in the poultry industry, supplying day-old chicks to chicken growers. NWK erected a broiler unit on the Boschpoort farm in the Ottosdal-district and a hatchery in Lichtenburg. These units were designed to deliver 100,000 eggs per day. Both these production units started production at the beginning of 2009 (NWK, 2009a:82).

NWK celebrated its 100th year of existence during 2009 and changed their corporate identity in 2010. Part of the corporate identity was the launch of the new NWK logo. The new identity accentuated the organisation as structured and ready to tackle future challenges. This was expressed with NWK’s slogan: “Your grip on the market”. NWK is proud of its history and will remember its roots in order to continue delivering value to their shareholders. These values are expressed with the principle of: “Co-operative values…Corporate principles” (NWK, 2010:10). NWK has grown to an organisation to be reckoned with and is well established in the agricultural sector. NWK employs about 2000 employees (Kriel, 2010:1) and during 2011 NWK’s turnover was over R 3,000 million (NWK, 2011:13).
3.3 MISSION AND VISION STATEMENT

NWK’s mission and vision statements have changed over the years, as the organisation adapted to economic and shareholders’ needs. Until 2010 the mission and vision of the North-West Co-operative was as follows:

**Vision:** NWK is a business venture which structures its actions to be valuable to its shareholders in the agricultural sector as well in the broader economical and social-economical sector, where NWK is functioning.

**Mission:** NWK is committed to deliver: a fair return on its assets, strive to obtain client satisfaction, create a stable working environment where its employees can develop and function optimal and to maintain the highest ethical norms (NWK, 2007:2-3).

During 2010 NWK’s approach to business changed radically and the vision and mission statements were altered. NWK’s positioning statement is more compact and states the values to be implemented in order to maintain business.

**NWK’s positioning statement:** NWK has experience in the agricultural sector for over a century and possesses knowledge, services and products which are adaptable to modern business to serve the diverse needs of their clients which are mutually beneficially in a co-operative culture. This positioning statement is summarised by: co-operative values…corporate principles, which emphasises that the organisation acknowledges the fact that it emerged from a co-operative where the main focus was to serve the interests of the shareholders, growing to a modern company where business principles are applied (NWK, 2010:1).

**NWK’s slogan:** Your grip on the market supports their positioning statement. The board of directors are committed to implement secure policies to deliver value to shareholders (Krüger, 2011).
3.4 BUSINESS DIVISIONS OF NWK

NWK focuses on delivering services to its clients in the agricultural sector. The different business areas have been divided into different business divisions. This is to ensure focused management systems in diversified business entities. NWK’s businesses are divided into: Grain-, Trade-, Corporate services- and Industry-divisions. The different divisions are discussed in the following sections.

3.4.1 Grain division

The need for grain handling and storage was one of the major reasons why NWK was founded in 1909. Today the Grain division consist of 37 grain silo depots, scattered over the North-West province. The Grain division is significantly contributing to NWK’s success, which makes this division an integral part of NWK’s overall business. During the financial year of 2011 the grain division had a turnover of R 186.3 million which contributed to 63% of NWK’s total profit (NWK, 2011:20-21).

3.4.2 Trade division

NWK’s trade division consist of: General Trade, Mechanisation, Fertiliser Marketing, Liquid Fertiliser Factory, Seed and NWK Transport. General Trade consist of a number of retailing outlets, which includes a number of Landmark Franchises. Landmark is the name of the franchise NWK invested in. Landmark stores are retail outlets with a strong focus on agricultural requirements, which also include camping and hardware sections. Mechanisation is trading in agricultural machinery, equipment and the maintenance thereof. Mechanisation has a number of branches where they are selling equipment which includes well known manufacturers like: New Holand and Case. ATC a supplier of spares is also part of Mechanisation (NWK, 2011:16-17).

Fertiliser plays a huge role in the agricultural sector. NWK has a subdivision to service this specific sector in the market. The fertiliser industry is a very dynamic market and as
fertiliser is an integral component to a large number of NWK’s clients, it is very important to provide an exceptional service. The NWK group is trading in two types of fertiliser namely: dry fertiliser (pellet fertilizer) and liquid fertiliser. Both types of fertilisers are used in the agricultural sector to fertilise agricultural crops, but the applications differ. Dry fertilisers are mechanically spread over the fields, while the liquid fertilisers are pumped and sprayed over the crops. To better service NWK’s clients both the fertiliser and liquid fertiliser are functioning in separate subdivisions, where each division markets, distributes and give technical support to their clients. Liquid fertiliser is produced at the Liquid fertiliser factory where all the functions of this division are centralised (NWK, 2011:17-18).

Trading in commodities is an incremental part of NWK. Trade forms part of the Seed division. Trade in commodities also include semi-processed seeds which include products like birdfeed. Sales of birdfeed provided a welcome increase in revenue during 2011 (NWK, 2011:19). Trading in commodities is kept separately from grain handling. Commodity trading is part of NWK’s Trade division.

The trade outlets of NWK are distributed over a wide geographical area where logistics play an integral part of the value chain. NWK Transport is a transportation business which forms part of NWK’s trade division. NWK Transport consists of 29 trucks, which include: semi-trailers, low-beds and tankers to transport a wide variety of products. Grain transport is the largest section of NWK’s transport business. They also transport: packed products, fertiliser, raw materials and liquids like vegetable oil (NWK, 2012). NWK transport renders services to all NWK divisions, as well as external clients (NWK, 2011:19).

During the 2011 financial year the Trade division had a turnover of R 1,576 million and its profit contributed to 22.2% of NWK’s total profit.
3.4.3 Corporate services division

The Corporate service division is mainly a non-profit supporting structure to the organisation. This division incorporates divisions namely Corporate Marketing, Property Management, Office Supplies, Agricultural Management Systems, Legal Support, Information Technology, Internal Audit and Secretariat (NWK, 2011:28-29).

The Agricultural Management Systems are providing support to agricultural management, services products to producers and other divisions in NWK. This division is constantly analysing economic climate. Managing financial impacts which changes in the economy might have on the organisation as well as the producers are important. Research programmes are conducted and chemical monitoring of production areas are some of the services provided. Geographical information and mapping forms a major supporting element to precision farming clients (NWK, 2011:30).

Corporate Marketing has played a major role in the launch of NWK’s new identity and growth strategy. This division is responsible for internal- and external-marketing of the organisation. They coordinate marketing events, publications, advertising and brand identity (NWK, 2011:28). NWK is committed to support the local community and have launched a number of projects. The Ikateleng project is driven in association with the North-West University, where proposed students are assisted to qualify for tertiary education. The School shoe project gave shoes to learners at under privileged schools in the North-West province. NWK assisted in the revamp of the main street and the central park in Lichtenburg. These are only a few of the projects that were conducted by NWK’s Corporate Marketing division (NWK, 2012).

3.4.4 Industry division

NWK established Noordfed, Epko, Opti Feeds and Opti Chicks as industries to focus on value adding to primary agricultural products. This division made NWK an integral part to the broader value chain of products and these activities provided a better service to
their clients. The industry division are continually focusing on implementing new technologies and improving current activities (NWK, 2012).

3.4.4.1 Noordfed

Noordfed is a milling industry also producing dog food. Noordfed are producing and marketing products made from maize, wheat and sorghum. The products are marketed under different brand names: Goal, Super goal and Vita (maize meal products), Hay-Day (wheat product) and Superior and Brakenjan (dog food).

Products produced by Noordfed are sold at NWK’s branches and are also marketed and sold at Noordfed’s depots in Lichtenburg, Mahikeng, Welkom and Vryburg. Noordfed’s main markets are the North-West province and Gauteng (NWK, 2012).

3.4.4.2 Epko

Epko was established during 1997 in Lichtenburg to crush sunflower. A fair amount of sunflower is being produced in Lichtenburg and surrounding areas. Epko’s crushing factory is situated in a favourable location between Lottiehalte silo depots, (which are storing and supplying grain to Epko) and Opti Feeds (whom are using the oilcake produced by Epko as a raw material in their animal feeds).

Epko consists of two crushing plants combined with two solvent extraction plants which can process 400 ton of sunflower and 100 ton of maize germ per day. The crushing plants are producing crude vegetable oil and de-fatted oil cake which is a raw product used in animal feeds. Additional to the crushing plants are two refineries to purify crude oil. The maize oil refinery is located in Lichtenburg and the refinery responsible for refining sunflower oil is located in Aeroton, Johannesburg (NWK, 2012).
3.4.4.3 Opti Feeds

Opti Feeds are producing animal feeds and are located in Lichtenburg and also expanded to Botswana. Opti Feeds’ main focus is producing well formulated animal feeds for cattle, sheep, pigs, ostriches, chickens and horses. In addition to the products, Opti Feeds is offering professional services to clients to help them achieve optimal results with their feeds. Opti Feeds are managing their own fleet of trucks to deliver their products directly to their clients in bulk.

Opti Feeds products are marketed by NWK’s branches as well as their own sales personnel (NWK, 2012).

3.4.4.4 Opti Chicks

NWK diversified to the chicken industry by establishing Opti Chicks. Day-old broiler chickens are supplied to growers in the area. The production farm at Ottosdal and the hatchery in Lichtenburg started production during 2009. The production farm can supply the hatchery with 100,000 eggs per day, allowing the hatchery to produce 600,000 day-old chickens per week.

Opti Chicks are supplying the market with cobb 500 broiler chickens. The cobb 500 chicken was developed over the past 30 years and are very cost effective to grow. Opti Chicks are following very strict bio security principles and have a disease free status up to date. In collaboration with Cobb SA, Opti Chicks provides technical advice and support to their clients (NWK, 2012).
3.5 MANAGEMENT STRATEGY

NWK has a drive to grow its business, differentiate its products and services and become a cost leader in the market. Systems to assist the overall strategy are focused on customer offerings, improving internal business processes and improving learning and growth at the organisation (NWK, 2012).

NWK’s Board of Directors together with executive management are committed to the wellbeing of the organisation, subsidiaries, shareholders, personnel, clients, suppliers and the general public. The organisation is governed by good corporate governance, with steady management practices and internal business measuring systems. Principles of responsibility, accountability and transparency form part of NWK’s corporate culture (NWK, 2012:7).

In order for NWK to position itself to obtain growth, the organisation’s structure was streamlined. Initiatives were implemented to improve talent management and succession planning. Training employees through the “Investment in Excellence” programme assisted NWK to align their personnel. The implementation of the “20 keys” system improved production efficiencies (Marais, 2011).

3.6 IMPLEMENTED SYSTEMS TO SUPPORT THE STRATEGY

Investment in excellence and the 20 Keys programmes are valuable tools to the organisation’s overall strategy. The specific programmes were selected based on the organisation’s own criteria. Considering the content of the programmes the implementation thereof may have a positive influence on entrepreneurial orientation in the organisation. This statement has not been scientifically validated and may be a research topic on its own. The different programmes will be discussed below.
3.6.1 Investment in excellence

“Investment in Excellence” (IIE) is training material developed by The Pacific Institute. This programme focuses on unlocking personal potential and increasing the organisation’s performance and corporate culture. NWK is continually training employees, using the IIE training programme.

The fundamentals of the IIE training programme are based on cognitive science to establish change in the human mind. Changing ones believes and paradigms results in higher results and greater performance. The IIE programme guides participants to identify real growth opportunities in their personal, professional and organisational environment. IIE explains the essence of quality improvement, performance enhancement and employee engagement. IIE assists in creating a constructive culture and a creative environment (The Pacific Institute, 2003:iv).

The IIE training is divided into three phases to systematically work through the study material:

**Phase 1:** Provides an overview to the student and explain terms such as efficacy or causative power and the importance to have an internal locus of control (The Pacific Institute, 2003:1).

**Phase 2:** Building on the fundamentals studied in phase 1 and expanding the concepts to a group situation. Studying the effects that feedback has on a group and methods setting goals to stimulate creativity. Interesting terms such as teleological nature and goal-setting are explained during this phase (The Pacific Institute, 2003:133).

**Phase 3:** Focuses on principles which have an effect on culture of organisations. The last phase of the training programme brings all theory into perspective. Aspects to change and sustain cultural changes in an organisation are discussed in the last phase of the study material (The Pacific Institute, 2003:245).
The layout of this training programme was designed to start by explaining the principles from the viewpoint of an individual, expanding the concepts into a group relation and ultimately links the principles to organisational culture changes.

3.6.1.1 STEPS Training course

In addition to “Investment In Excellence” (IIE), NWK has also implemented the STEPS training course. The STEPS training course provides students with basic life skills which involves teaching skills to improve self efficacy, better self esteem, management locus of control and self motivation. The STEPS training course contributes to the effectiveness of IIE (Hayword, 2006).

3.6.2 20 Keys

The 20 Keys training programme consists of 20 topics where each key (topic) focuses on different aspects which can improve efficiency and effectiveness of an organisation. Delivering better services to clients, improving products and implementing effective business processes. The 20 Keys system focuses on energising the workplace, producing better work, delivering faster service and reducing costs in all facets of an organisation. These principles are summarised by the terms “better”, “faster” and “cheaper”.

Each key addresses specific topics. The figure below illustrates the relationship between the different keys.
Keys: 1, 2, 3 and 20 act as pillars to the 20 keys system which support the organisational change. These four keys are normally implemented first in an organisation to form the basis for development. The rest of the keys are affecting the three principles: “better”, “faster” and “cheaper”, which leads to “energising the workplace”. The term “energise the workplace” refer to the term used by the Organisational Development Institute (ODI) to illustrate the improved results obtained from implementing the 20 key system. Keys: 14, 7, 9, 11, 12, 16 and 5 support better service delivery (“better”), keys: 5, 4, 8, 15, 13 and 10 support a faster service delivery (“faster”) and keys: 14, 6, 17, 18, 19 and 10 support cheaper service delivery (“cheaper”).
A brief overview of the 20 keys system follows.

- **Key 1: Cleaning and organising in order to make work easy.** The main focus of this key is to clean all business areas and to organise the working processes. Unnecessary items are removed from the premises to make the workplace neat which will also simplify the working processes. The workplace will be rearranged to streamline the workflow throughout the working processes (ODI, 2007:13).

- **Key 2: Rationalising the system/goal alignment.** This key focuses on streamlining the organisational structure and communicating the organisation’s vision and mission to all employees. The important aspects of each employee’s job will be described and communicated. A crucial aspect of this key is to align each employee’s job description to the overall strategy of the organisation (ODI, 2007:15).

- **Key 3: Small group activities.** The focus of this specific key is to solve operational problems as quickly as possible. Small groups at the point where the problem develops have been identified to be the most effective way to solve problems. This key focuses on giving employees enough autonomy in their small groups to address relevant aspects at the starting point where work is generated. Employees will be trained in different aspects to analyse problems, coordinate a team and monitor the results of implemented solutions (ODI, 2007:17).

- **Key 4: Reducing work in progress.** Key 4 focuses on methodologies which will assist in reducing work in process. By reducing the work in process it will reduce stock needed to produce the final product. This will also reduce the production time by eliminating bottle neck effects in the process. These actions will have a positive effect on financial results of an organisation. This key provides the employees with analytical tools to identify bottle necks and techniques to streamline the process and monitor effects of their actions (ODI, 2007:19).

- **Key 5: Quick changeover technologies.** This key focuses primarily on reducing time needed to change over from one product to another. The employees are trained in methodologies needed to identify problem areas with a
changeover and stimulate actions which can assist in reducing changeover times (ODI, 2007:20).

- **Key 6: “Kaizen” of operations.** The term “Kaizen” is a Japanese word which means continuous improvement. The main focus of this key is to stimulate continuous improvement in all business processes. This key allows employees to experiment with improving ideas and provides necessary resources to test their ideas. Employees in essence are empowered to solve problems or implement improvements to the processes (ODI, 2007:21).

- **Key 7: Zero monitoring manufacturing/production.** This key provides employees with necessary insights and analytical tools which will stimulate change in processes which will minimise monitoring of manufacturing processes. These actions will save time on the process, increase reliability and increase capacity (ODI, 2007:22).

- **Key 8: Coupled manufacturing/production.** This key focuses on the links between different actions in production and manufacturing processes. The overall processes are evaluated as well as links between the processes which are visually presented. Improvements on the processes are made to optimise product flow through the value chain. Bottle necks are removed from the processes, automatic links are made where possible and the communications between the different actions in the process are improved (ODI, 2007:23).

- **Key 9: Maintaining machines and equipment.** The actions of key nine focus primarily on maintenance of machines for optimal use and reliability of assets. Systems to monitor and identify tendencies in the processes are implemented and employees are trained to evaluate results from systems. Preventative maintenance actions to support production and manufacturing processes are scheduled based on data obtained through monitoring actions. This will also assist in delivering quality products on time (ODI, 2007:24).

- **Key 10: Workplace discipline.** This key focuses on disciplines followed specifically by the 20 keys system. The responsible persons will monitor the implementation process and maintenance of each key that has been
implemented. Credit will be given to areas that are performing well and corrective actions will be initiated in underperforming areas (ODI, 2007:25).

- **Key 11: Quality assurance.** This key provides the employees with measures and control systems to evaluate products and services. The aim of this key is to ensure acceptable quality. These actions will reduce production time, waste and rework in the process (ODI, 2007:26).

- **Key 12: Developing suppliers.** The focus is on suppliers of products, materials and services to an organisation. This process aims to assist in the development of suppliers where employees are made aware of the value chain and are stimulated to generate ideas which will improve products and services delivered to an organisation. Generated ideas are communicated to suppliers aiming to improve productivity and profitability of the entire value chain (ODI, 2007:27).

- **Key 13: Eliminating waste.** This key focuses on eliminating waste created through the processes of an organisation. The employees are provided with measures and controls to identify and eliminate causes of waste (ODI, 2007:28).

- **Key 14: Empowering employees to make improvements.** Cultures where employees are authorised to make improvements in their working environment are encouraged. This key focuses on supplying employees with sufficient skills and authority to effectively improve their working environment (ODI, 2007:29).

- **Key 15: Skill versatility and cross training.** It is important for an organisation to have skills versatility, where more than one employee knows how to perform certain tasks. Cross training, where skills are transferred from one employee to another is very important. The focus of this key is to monitor and provide job training to personnel in order to maintain consistency in an organisation by developing skills versatility (ODI, 2007:30).

- **Key 16: Production scheduling.** This key provides employees with skills to schedule production effectively. Time is saved through the scheduling process and inefficiencies of rescheduling are minimised (ODI, 2007:31).

- **Key 17: Efficiency control.** The control measurements and parameters for all different areas in the business process are identified. This key focuses primarily
on designing and establishing realistic goals. Motivating through rates or measurements which measure production and work (ODI, 2007:32).

- **Key 18: Using information systems.** Information systems are developing at a rapid pace and have improved over the years. The use of effective information systems can assist an organisation in capturing data, producing relevant data, transferring information throughout the organisation and delivering swift services. Information systems can be beneficial to any of the 20 keys. This key is designed to utilise information systems to present relevant information on time. Employees are stimulated to investigate advantages of information systems in their working environment. They are provided with needed methodologies to implement information systems effectively (ODI, 2007:33).

- **Key 19: Conserving energy and materials.** This key aims to create an organisational wide culture for conservation. Conservation should be understood by all levels in an organisation. This culture should not only conserve resources, but also make big cost improvements to operations (ODI, 2007:34).

- **Key 20: Leading technology/site technology.** This key assists an organisation to create a pro-active and well thought through technology strategy. The technology strategy should keep an organisation’s technology relevant. This should provide a competitive advantage. The strategy consists of hardware, information technology, know-how, intellectual property and patents, combined (ODI, 2007:18).

### 3.7 SUMMARY

This chapter provided a brief overview of NWK as an agri-business. NWK has a rich history and has developed over a century to become a well-established agri-business primarily in the North-West province. Recently the organisation uplifted its corporate identity and is pursuing a growth strategy, with the aim to increase their market share. A number of initiatives have been implemented to support the organisations overall strategy. These initiatives are focused on developing employees and might have a positive influence on entrepreneurial orientation.
NWK was registered on 4 May 1909 as an organisation as “De Lichtenburg Coöperatieve Landbouw Maatschappij”, under the Co-operative Societies Act no. 17 of 1908 of Transvaal. The main aim of the organisation at that time was to collectively handle and market grain produced by members. The organisation expanded in the North-West province and more grain depots were required. The organisation grew and in the 1940’s large scale mechanisation took place in agriculture and grain handling systems. Later mass handling systems for grain were erected, which provided a good infrastructure for the organisation. As the industry grew, NWK increased the number of services to their customers. Financing, insurance of production costs, processing of primary agricultural products, supply and maintenance of modern equipment and implements all became part of the new services rendered.

A momentous moment in history was when the formerly known North-West Co-operative changed to a public company known as NWK Limited. The change in business entity created a platform for a new corporate identity and growth strategy, with the aim to create a sustainable organisation which will deliver value to their shareholders. This strategy is emphasised with NWK’s slogan: “Your grip on the market”.

NWK has divided its organisation into different business divisions in order to maintain focus on diverse support provided. The Grain, Trade and Corporate services were briefly discussed and more focus was placed on the industries as this was the main focus of the study. The Industries include Noordfед, Epko, Opti Feeds and Opti Chicks. Noordfed is active in the milling industry for over 50 years and established brand names such as: Goal, Super goal, Vita, Hay-Day, Superior and Brakenjan. Epko is an oil crushing plant, mainly focusing on the production of sunflower and maize germ. Opti Feeds are producing animal feeds for cattle, sheep, ostriches, chickens and horses and Opti Chicks supplies day-old broiler chickens to chicken growers.

The change in corporate identity and strive to establish growth in the organisation requires certain supporting programmes. NWK has implemented the Investment in Excellence (IIE) and 20 Keys training programmes to support the organisation’s
strategy. Investment in Excellence is a training programme aiming to unlock personnel’s personal potential and increase the organisation’s performance and corporate culture. 20 Keys is a system aiming to energise the workplace which leads to better work, faster service delivery and reduction in costs. The system is constructed of 20 focus areas (keys), which are interacting with each other. This information on NWK as agri-business assists in the understanding of the study.

The next chapter presents the analysis of data collected in the Industrial division of NWK.
CHAPTER 4
EMPIRICAL RESEARCH

4.1 INTRODUCTION

The primary objective of this study was to investigate entrepreneurial orientation and perceived business success in the Industrial sector of NWK Limited, and to make practical recommendations to enhance entrepreneurial behaviour in the specific divisions, the organisation and other corporate organisations.

The empirical study was conducted by means of a self-completion questionnaire distributed to employees within the selected business divisions of NWK. The questionnaires were sent to the department heads in an electronic format via e-mail, from where it was distributed further. The questionnaire consisted of a section capturing demographics of participants and two sections measuring entrepreneurial orientation and perceived success as constructed by Lotz (2009). An example of the questionnaire is presented in Annexure A.

The completed questionnaires were analysed through PHStat 2, an add-in version of Microsoft (MS) Excel. The mean values ($\bar{x}$), standard deviations (s) and Cronbach alpha coefficients were calculated through SPSS (SPSS, 2010) and Statistica (Statsoft, 2010). Multiple regression analysis between entrepreneurial orientation, perceived success as well as the relationship between selected demographic data and the different variables of the measuring instrument were determined by the Statistical Consultation Services (SCS) of the North-West University, Potchefstroom campus.

This chapter provides insight in the methods and procedures followed to determine the study population, sampling method and size, questionnaire compilation, gathering of
data, demographic compilation of the sample group, presentation and discussion of the researched results.

The reliability of the questionnaire and the different variables will be tested by evaluating the Cronbach alpha coefficients. The responses to the survey will be evaluated by investigating the mean values ($\bar{x}$) and standard deviations ($s$) of all statements and variables.

The statistical significance between gender of participants, entrepreneurial orientation and perceived success will be tested. Lastly multiple regression analysis will be done to determine the relationship between entrepreneurial orientation and the variables of perceived success.

4.2 GATHERING OF DATA

Prior to the study being conducted, necessary permission was obtained. The study was explained to the executive management of NWK. Permission was granted to distribute the questionnaires to the different divisions, conducting the study as well as disclosing the results. The heads of departments were also informed of the process and were asked to distribute the questionnaire to their personnel.

The questionnaire was available in three different formats: an electronic format created through survey software, called Sureveymonkey, electronic copies in MS Word format and a hardcopy of the questionnaire. The questionnaire was available in Afrikaans and English. The questionnaires were distributed via e-mail with a cover letter explaining the purpose of the study and instructions to complete the questionnaire.

The participants had to follow the instructions, and complete the survey by selecting the appropriate options. Section A captured demographic information of participants, section B and C captured the opinion of respondents through statements which were rated based on a five point Likert scale. The completed hardcopies of the
questionnaires were returned to the department heads, while the electronic questionnaire’s responses were captured online. The hardcopies of the questionnaires were collected from the department heads on a predetermined date.

There were not sufficient respondents after the first predetermined date and another attempt was launched to gather information. The researcher then drove to the different departments and with permission of the department heads distributed hard copies of the questionnaire by hand, to the employees. On the second attempt the researcher waited for the employees to complete the questionnaires and collected the completed questionnaires on the same day.

Informal interviews were conducted with the executive management Mr. D. Marais, Managing Director of NWK and Mr. P.D. Jacobs, Manager of the Industrial division of NWK. Entrepreneurship and the progress of this study were discussed. Mr. Marais and Mr. Jacobs were also requested to complete the questionnaire. The results from their questionnaires will be used to compare with the results from the rest of the respondents. Although the outcomes of the interviews were not used in this study, summaries of the interviews are presented in Annexure B in Afrikaans.

4.2.1 Study population

The Industrial division of NWK was the target population of this study which included: Epko, Noordfed, Opti Chicks and Opti Feeds. The personnel were divided into four levels of management, based on the unique post level system in NWK: top-, middle- and lower-management with workers at the lowest level. The entire population included 609 personnel.

The level of management in this survey was selected as follow:

- Top management: Post levels 15 and higher
- Middle management: Post levels 9 to 14
- Lower management: Post levels 6 to 8
• Lower level of employment: Post levels 1 to 5.

The numbers of employees working at the different business divisions, based on post level are indicated in the table below:

**Table 4.1: Distribution of Employees based on post levels**

<table>
<thead>
<tr>
<th>Department</th>
<th>Employees</th>
<th>Job grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1-5</td>
</tr>
<tr>
<td>Epko</td>
<td>130</td>
<td>102</td>
</tr>
<tr>
<td>Opti Chicks</td>
<td>190</td>
<td>172</td>
</tr>
<tr>
<td>Opti Feeds</td>
<td>130</td>
<td>99</td>
</tr>
<tr>
<td>Noordfed</td>
<td>159</td>
<td>124</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>609</strong></td>
<td><strong>497</strong></td>
</tr>
</tbody>
</table>

**Source:** NWK HR Department (2012)

There are 609 employees working at the four Industrial divisions: Epko (130), Noordfed (159), Opti Chicks (190) and Opti Feeds (130).

**4.2.2 Questionnaire (measuring instrument) used in this study**

The questionnaire used was developed by combining the measurements of entrepreneurial orientation and perceived success as developed by Lotz (2009). The questionnaire consisted of three sections: A, captured demographic information of participants, B, measured entrepreneurial orientation and C, measured perceived success of the organisation respectively.

**Section A:** Demographic information. This section captured demographical information of participants. Age group, gender, race classification, post levels, highest academic qualification achieved and work division of each participant was determined.
**Section B:** Entrepreneurial orientation. Section B, consisted of 27 statements aimed to determine entrepreneurial orientation of employees in the organisation. The statements addressed the five variables of entrepreneurial orientation namely: **Autonomy**, **Innovativeness**, **Risk-taking**, **Pro-activeness** and **Competitive aggressiveness**. The participants had to indicate to what extent he/she agreed or disagreed with the statements. The statements were measured on a 5 point Likert scale, which varied from 1 (indicating that the respondent strongly disagrees) to 5 (indicating that the participant strongly agrees with the statement).

**Section C:** Perceived success. This section consisted of 11 statements which aimed to measure the dependent variables of **Business growth** and **Business development and improvement**. This section’s statements were also measured on a 5 point Likert scale (same as section B).

4.2.3 Confidentiality

Confidentiality was ensured to all participants and this message was communicated to the participants through e-mails as well as cover letters. The respondent’s individual information was handled anonymously and will not be disclosed.

4.2.4 Statistical analysis of data

Data was generated through three sources, electronic data through Surveymonkey software and e-mails as well as completed hardcopies. Electronic data were exported to a MS Excel format and data retrieved through hardcopies were manually added to the spreadsheet.

Completed questionnaires were analysed through PHStat2, an add-in version of MS Excel. The mean values (\(\bar{x}\)), standard deviations (s) and Cronbach alpha coefficients were calculated using SPSS (SPSS, 2010) and Statistica (Statsoft, 2010). The relationship between gender, entrepreneurial orientation and perceived success were
analysed. Multiple regression analysis were done between entrepreneurial orientation and perceived success with assistance from Statistical Consultation Services (SCS), of the North-West University, Potchefstroom campus.

4.3 RESPONSES TO THE SURVEY

Responses to the survey are presented in Table 4.2 below.

Table 4.2: Responses to the survey

<table>
<thead>
<tr>
<th>Response type</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of employees</td>
<td>609</td>
<td>100.00%</td>
</tr>
<tr>
<td>Number of questionnaires received</td>
<td>79</td>
<td>12.97%</td>
</tr>
</tbody>
</table>

Quantitative research was done by means of questionnaires distributed to employees in selected divisions of NWK. A total of 79 responses were received: Epko (36), Noordfed (16), Opti Chicks (13) and Opti Feeds (14). Response to the survey was 12.97%.

The questionnaires of the executive management were collected by the researcher in person from Mr. D. Marais (Managing Director of NWK) and Mr. P.D. Jacobs (Manager of NWK’s industries) during a prearranged interview. The department heads of the Industrial divisions answer directly to Mr. D. Marais and Mr. P.D. Jacobs. Consequently these two questionnaires represent 100% of this specific population group (executive management). Executive management is not part of the target population and these two questionnaires will only be used to compare the perspective of the executive management of NWK with the perspective of the different divisions.

Response rate from post levels 1 to 5 was very low and only 13 out of a possible 497 responses came from this category. The responses from this category represent a response rate of 2.62%. As these category of post levels 1 to 5 does not represent the management levels of the organisation it is important to look at the return rate of the
post levels 6 and higher. These post levels represent the different levels of management with post levels 6 to 8 representing lower managers, 9 to 14 representing middle managers and post levels 15 to 20 top- and executive-managers.

4.4 DEMOGRAPHIC INFORMATION OF RESPONDENTS

Section A captured demographic information of respondents, where participants had to indicate their age group, gender, race classification, job level, highest academic qualification obtained and work division.

The frequency and percentage distribution of the demographic information will be discussed in the following sections.

4.4.1 Age group of respondents

The respondents were requested to indicate their age group by selecting a group: 29 years or younger, 30 to 39 years, 40 to 49 years, 50 to 59 years or 60 years and older. Table 4.3 indicates the frequency distribution per age group.

Table 4.3: Age group of respondents

<table>
<thead>
<tr>
<th>Age group</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 29</td>
<td>14</td>
<td>17.72%</td>
</tr>
<tr>
<td>30 – 39</td>
<td>32</td>
<td>40.51%</td>
</tr>
<tr>
<td>40 – 49</td>
<td>17</td>
<td>21.52%</td>
</tr>
<tr>
<td>50 – 59</td>
<td>16</td>
<td>20.25%</td>
</tr>
<tr>
<td>60 +</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Age distribution of the respondents varies up to 59 years and there were no respondents in the age group 60 years and older. The majority of respondents were in the age group 30 to 39 years, with 32 respondents which represent 40.51% of responses. The second
and third largest age groups were 40 to 49 years and 50 to 59 years which represents 21.52% and 20.25% of total responses. The smallest group (excluding the age group over 60 years) is the age group of 29 years and younger which represents 17.72% of total responses.

### 4.4.2 Gender of respondents

Genders of respondents were captured. Table 4.4 indicates the frequency distribution of gender.

**Table 4.4: Gender of respondents**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>55</td>
<td>69.62%</td>
</tr>
<tr>
<td>Female</td>
<td>24</td>
<td>30.38%</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

The majority of respondents were male; with a total of 55 replies representing 69.62% of total responses. There were 24 female respondents representing 30.38% of total responses.

### 4.4.3 Racial group of respondents

The respondents were requested to indicate their race group. Table 4.5 indicates the frequency distribution of race.
Table 4.5: Race classification

<table>
<thead>
<tr>
<th>Race</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>21</td>
<td>26.58%</td>
</tr>
<tr>
<td>White</td>
<td>57</td>
<td>72.15%</td>
</tr>
<tr>
<td>Colored</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Indian</td>
<td>1</td>
<td>1.27%</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

The largest number of respondents was White, with a total of 57 replies representing 72.15% of total responses. There were 21 Black respondents representing 26.58% of total responses. There were only 1 Indian and 2 Coloureds in the population group, of which one Indian responded. The total population consists mostly of Blacks (84.07%) and Whites (15.27%).

4.4.4 Post level distribution of respondents

Respondents were requested to indicate their post levels. Post levels 1 to 5 indicate lower level of employment, 6 to 8 indicate lower managers, post levels 9 to 14 indicate middle managers and post levels 15 to 20 include top- and executive-managers. Table 4.6 indicates the frequency distribution based on post levels of respondents.

Table 4.6: Post levels of respondents

<table>
<thead>
<tr>
<th>Post level</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 5</td>
<td>13</td>
<td>16.46%</td>
</tr>
<tr>
<td>6 – 8</td>
<td>26</td>
<td>32.91%</td>
</tr>
<tr>
<td>9 – 14</td>
<td>31</td>
<td>39.24%</td>
</tr>
<tr>
<td>15 – 20</td>
<td>9</td>
<td>11.39%</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>100.00%</td>
</tr>
</tbody>
</table>
The largest number of respondents was from the middle management level (post levels 9 to 14) representing 39.24% of total responses. Responses received from post levels 6 to 8 represented 32.91% of total responses and post levels 1-5 represented 16.46%. The lowest response rate came from post levels 15 to 20 (11.39%). The lower response rate from post levels 15 to 20 is understandable as these post levels have the least number of employees.

4.4.5 Highest academic qualification obtained by respondents

Highest academic qualification obtained by respondents was indicated by selecting one of the following categories: lower than Grade 12, Grade 12, Certificate, Diploma, Degree or a Post graduate degree. The Table below indicates the frequency distribution of highest academic qualification obtained by respondents.

Table 4.7: Highest level of education of respondents

<table>
<thead>
<tr>
<th>Highest education</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower than Grade 12</td>
<td>5</td>
<td>6.33%</td>
</tr>
<tr>
<td>Grade 12</td>
<td>32</td>
<td>40.51%</td>
</tr>
<tr>
<td>Certificate</td>
<td>9</td>
<td>11.39%</td>
</tr>
<tr>
<td>Diploma</td>
<td>14</td>
<td>17.72%</td>
</tr>
<tr>
<td>Degree</td>
<td>11</td>
<td>13.92%</td>
</tr>
<tr>
<td>Post graduate degree</td>
<td>8</td>
<td>10.13%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>79</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>

The largest number of respondents had Grade 12. A total of 32 respondents obtained Grade 12 representing 40.51% of total respondents. The second largest number of respondents had a Diploma representing 17.71% of total respondents. A Degree was obtained by 13.92% of total respondents, while 11.39% of the respondents had a Certificate. The smallest number of respondents (6.33%) did not even obtain Grade 12. Only 10.13% of respondents obtained a Post-graduate degree.
4.4.6 Divisions where the respondents are working

This study focused on four selected divisions of NWK namely: Epko, Noordfed, Opti Chicks and Opti Feeds, which collectively forms the Industrial division. Table 4.8 below represents the number of respondents per division.

Table 4.8: Divisions where the respondents are working

<table>
<thead>
<tr>
<th>Division</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epko</td>
<td>36</td>
<td>45.57%</td>
</tr>
<tr>
<td>Noordfed</td>
<td>16</td>
<td>20.25%</td>
</tr>
<tr>
<td>Opti Chicks</td>
<td>13</td>
<td>16.46%</td>
</tr>
<tr>
<td>Opti Feeds</td>
<td>14</td>
<td>17.72%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>79</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>

The highest number of responses came from Epko with 36 responses representing 45.57% of the total respondents. The second largest number of respondents came from Noordfed (20.25%), followed by Opti Feeds (17.72%) and Opti Chicks (16.46%).

4.5 RELIABILITY OF THE QUESTIONNAIRE

In order to assess the reliability of the questionnaire the internal consistency between the variables of sections B and C of the measuring instrument were tested. The Cronbach’s alpha coefficient were calculated to determine the consistency, between different items measuring the variables related to entrepreneurial orientation and perceived success (Struwig & Stead, 2004:132). The Cronbach’s alpha coefficient measures the reliability of an item-specific variance in a one-dimensional test (Cortina, 1993:103). The value of the results can vary between 0, for no reliability and 1, for maximum reliability (Kent, 2007:142). A larger value means a higher internal consistency and a more reliable result (Struwig & Stead, 2004:133). For good reliability the Cronbach alpha coefficient should be equal or greater than 0.7 (Nunnally &
Bernstein, 1994:265). Although Field (2005:668) stated that when attributes, rather than abilities, are tested, an alpha coefficient lower than 0.7 can still be acceptable.

The Cronbach alpha coefficients of the variables of entrepreneurial orientation and perceived success were calculated and presented in the table below.

**Table 4.9: Cronbach alpha coefficients**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach alpha coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entrepreneurial orientation</strong></td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>0.624</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>0.843</td>
</tr>
<tr>
<td>Risk-taking</td>
<td>0.648</td>
</tr>
<tr>
<td>Pro-activeness</td>
<td>0.825</td>
</tr>
<tr>
<td>Competitive aggressiveness</td>
<td>0.799</td>
</tr>
<tr>
<td><strong>Perceived business success</strong></td>
<td></td>
</tr>
<tr>
<td>Business growth</td>
<td>0.833</td>
</tr>
<tr>
<td>Business development and improvement</td>
<td>0.811</td>
</tr>
</tbody>
</table>

Most of the Cronbach alpha coefficients were higher than 0.8 which is even higher than the recommended 0.7 by Nunnally and Bernstein (1994:265), except for Autonomy (0.625) and Risk-taking (0.648). These two variables are fairly close to the 0.7 mark and for the purpose of this study these two variables will be included as motivated by Field (2005:688).

### 4.6 ASSESSMENT OF ENTREPRENEURIAL ORIENTATION

Results relating to entrepreneurial orientation will be discussed in this section.

The entrepreneurial orientation section consisted of 27 statements measuring the five variables of entrepreneurial orientation namely: Autonomy, Innovativeness, Risk-taking, Pro-activeness and Competitive aggressiveness. The respondents indicated
on a five point Likert scale to what extend they agree or disagree with the statements measuring the variables. On the Likert scale the values varies from 1, where the respondent strongly disagrees, up to 5 where the respondent strongly agrees with a specific statement.

The mean values of all variables were calculated for all of the respondents. The mean value will indicate to what extend the sample group perceived the variables to be true or untrue. The higher the mean value for the variable, the more the respondents agree with the specific variable.

The standard deviation of each variable was also calculated to indicate the spread of responses. The standard deviation is smaller when a large number of respondents had the same perspective of a variable. If the standard deviation is larger, it indicates that the responses varied more.

The results of the individual statements will be discussed first per variable after which the combined results will be presented.

4.6.1 Assessment of individual variables measuring entrepreneurial orientation

The mean and standard deviation were calculated for each statement of the questionnaire and will be presented per variable. The statements are sorted by mean values from the largest value to the smallest to add perspective to the data

There were a total of 79 responses to the survey and each respondent completed all the questions. No questionnaire was rejected and the sample size for all the statistical calculations was 79 respondents.
4.6.1.1 Autonomy

The responses to the variable autonomy are summarised in the table below, with statements B1 to B5 sorted from the largest to the smallest mean value obtained.

Table 4.10: Results of autonomy

<table>
<thead>
<tr>
<th>Statement</th>
<th>( \bar{x} )</th>
<th>s</th>
</tr>
</thead>
<tbody>
<tr>
<td>B 1 I have enough autonomy in my job without continual supervision to do my work.</td>
<td>4.152</td>
<td>0.786</td>
</tr>
<tr>
<td>B 2 Our business allows me to be creative and try different methods to do my job.</td>
<td>3.823</td>
<td>1.047</td>
</tr>
<tr>
<td>B 4 Employees in our business are encouraged to manage their own work and have flexibility to resolve problems.</td>
<td>3.532</td>
<td>0.903</td>
</tr>
<tr>
<td>B 5 I seldom have to follow the same work methods or steps while performing my major tasks from day to day.</td>
<td>3.228</td>
<td>1.143</td>
</tr>
<tr>
<td>B 3 Employees in our business are allowed to make decisions without going through elaborate justifications and approval procedures.</td>
<td>2.633</td>
<td>1.028</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>3.473</strong></td>
<td><strong>0.625</strong></td>
</tr>
</tbody>
</table>

The average mean of the variable Autonomy is \( \bar{x} = 3.473 \) with a standard deviation of \( s = 0.625 \), which indicate that on average the respondents believe that they have some level of Autonomy in their workplace. Statement B1 (\( \bar{x} = 4.152 \)) reported the highest average score for this variable. In contrast, statement B3 (\( \bar{x} = 2.633 \)) has reported a slight disagreement and there might be a feeling that the employees have to go through elaborate approval procedures to get their work done.

4.6.1.2 Innovativeness

Responses to innovativeness are summarised in the table below, which consists of statements B6 to B14, sorted from the largest to the smallest mean values.
Table 4.11: Results of innovativeness

<table>
<thead>
<tr>
<th>Statement</th>
<th>$\bar{x}$</th>
<th>$s$</th>
</tr>
</thead>
<tbody>
<tr>
<td>B 12 Our business places a strong emphasis on continuous improvement in</td>
<td>3.810</td>
<td>0.848</td>
</tr>
<tr>
<td>products/services delivery/processes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 13 Our business has a widely held belief that innovation is an absolute</td>
<td>3.747</td>
<td>0.926</td>
</tr>
<tr>
<td>necessity for the business's future.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 14 Our leaders seek to maximize value from opportunities without</td>
<td>3.557</td>
<td>0.813</td>
</tr>
<tr>
<td>constraints to existing models, structures or resources.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 7 Our business places a strong emphasis on new and innovative</td>
<td>3.342</td>
<td>1.061</td>
</tr>
<tr>
<td>products/services/processes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 10 Over the past few years, changes in our processes, services and</td>
<td>3.127</td>
<td>0.925</td>
</tr>
<tr>
<td>product lines have been quite dramatic.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 8 Our business has increased the number of services/products offered</td>
<td>3.114</td>
<td>1.086</td>
</tr>
<tr>
<td>during the past two years.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 11 In our business there is a strong relationship between the number</td>
<td>3.114</td>
<td>0.961</td>
</tr>
<tr>
<td>of new ideas generated and the number of new ideas successfully</td>
<td></td>
<td></td>
</tr>
<tr>
<td>implemented.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 6 Our business regularly introduces new services/products/processes.</td>
<td>3.101</td>
<td>1.033</td>
</tr>
<tr>
<td>B 9 Our business is continually pursuing new opportunities.</td>
<td>3.089</td>
<td>1.168</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>3.333</td>
<td>0.656</td>
</tr>
</tbody>
</table>

The respondents showed some sort of agreement to all the statements measuring **Innovativeness**. There is a relatively strong feeling that the organisation places a strong emphasis on continuous improvement of their products, service delivery and processes. Indicated through statement B12 which have scored a mean value of $\bar{x} = 3.810$ and a standard deviation of $s = 0.848$. On average the respondents agreed with statements B13 ($\bar{x} = 3.747$), B14 ($\bar{x} = 3.557$), B7 ($\bar{x} = 3.342$), B10 ($\bar{x} = 3.127$), B8 ($\bar{x} = 3.114$), B11 ($\bar{x} = 3.114$) and B6 ($\bar{x} = 3.101$). The respondents seem to doubt whether the organisation is continually pursuing new opportunities, as indicated by statement B9 ($\bar{x} = 3.089$ and $s = 1.168$), which have scored close to the neutral score of three.

**Innovativeness** scored a mean value of $\bar{x} = 3.333$ and standard deviation of $s = 0.656$. 

79
4.6.1.3 Risk-taking

Responses to the independent variable risk-taking is summarised in the table below.

**Table 4.12: Results of risk-taking**

<table>
<thead>
<tr>
<th>Statement</th>
<th>( \bar{x} )</th>
<th>s</th>
</tr>
</thead>
<tbody>
<tr>
<td>B 17</td>
<td>Owing the environment, our business believes that bold, wide-ranging acts are necessary to achieve the business's objectives.</td>
<td>3.608</td>
</tr>
<tr>
<td>B 15</td>
<td>When confronted with uncertain decisions, our business typically adopts a bold posture in order to maximise the probability of exploiting opportunities.</td>
<td>3.215</td>
</tr>
<tr>
<td>B 18</td>
<td>Employees are often encouraged to take calculated risks concerning new ideas.</td>
<td>3.114</td>
</tr>
<tr>
<td>B 16</td>
<td>In general, our business has a strong inclination towards high-risk projects.</td>
<td>3.051</td>
</tr>
<tr>
<td>B 19</td>
<td>The term &quot;risk-taker&quot; is considered a positive attribute for employees in our business.</td>
<td>2.696</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>3.137</td>
<td>0.575</td>
</tr>
</tbody>
</table>

The variable **Risk-taking** was measured by five statements, which have collectively obtained an average mean of \( \bar{x} = 3.137 \) with a standard deviation of \( s = 0.575 \). The highest agreement was with statement B17 (\( \bar{x} = 3.608 \), \( s = 0.807 \)). Therefore it seems that the respondents believe that bold and wide-ranging acts are necessary to achieve the business’ objectives, while still considering the impact to the environment. There are also agreement to statements B15 (\( \bar{x} = 3.215 \)), B18 (\( \bar{x} = 3.114 \)) and B16 (\( \bar{x} = 3.051 \)). In contrast with the previous statements the respondents seem to disagree with statement B19 (\( \bar{x} = 2.696 \) and \( s = 0.868 \)). This is an indication that the term “risk-taker” is considered a negative attribute in the organisation.
4.6.1.4 Pro-activeness

Responses to pro-activeness as variable is summarised in the table below, with four statements from B20 to B23 sorted from the largest to the smallest mean value.

Table 4.13: Results of pro-activeness

<table>
<thead>
<tr>
<th>Statement</th>
<th>( \bar{x} )</th>
<th>( s )</th>
</tr>
</thead>
<tbody>
<tr>
<td>B 23</td>
<td>3.570</td>
<td>0.970</td>
</tr>
<tr>
<td>B 22</td>
<td>3.177</td>
<td>1.010</td>
</tr>
<tr>
<td>B 21</td>
<td>3.114</td>
<td>0.891</td>
</tr>
<tr>
<td>B 20</td>
<td>2.949</td>
<td>0.876</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>3.203</strong></td>
<td><strong>0.760</strong></td>
</tr>
</tbody>
</table>

There is an agreement with the variable Pro-activeness \( (\bar{x} = 3.203 \text{ and } s = 0.760) \), where the mean values of the statements, varies from an agreement with statement B23 \( (\bar{x} = 3.570) \) down to a slight disagreement with statement B20 \( (\bar{x} = 2.949) \). It seems that there is an uncertainty whether the organisation is first in the market to introduce new products, services or processes. It seems that there are a slightly positive agreement with statements B22 \( (\bar{x} = 3.177) \) and B21 \( (\bar{x} = 3.114) \) as well.
4.6.1.5 Competitive aggressiveness

Responses to the independent variable competitive aggressiveness is summarised in the table below.

Table 4.14: Results of competitive aggressiveness

<table>
<thead>
<tr>
<th>Statement</th>
<th>( \bar{x} )</th>
<th>s</th>
</tr>
</thead>
<tbody>
<tr>
<td>B 27 Our business knows when it is in danger of acting overly aggressive (this could lead to erosion of our business's reputation or to retaliation by our competitors).</td>
<td>3.570</td>
<td>0.843</td>
</tr>
<tr>
<td>B 25 Our business is very aggressive and intensely competitive.</td>
<td>3.304</td>
<td>0.979</td>
</tr>
<tr>
<td>B 26 Our business effectively assumes an aggressive posture to combat trends that may threaten our survival or competitive position.</td>
<td>3.228</td>
<td>0.947</td>
</tr>
<tr>
<td>B 24 In dealing with competitors our business typically adopts a very competitive “undo-the-competitor” posture.</td>
<td>3.114</td>
<td>0.947</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>3.304</strong></td>
<td><strong>0.735</strong></td>
</tr>
</tbody>
</table>

On average the respondents agree that the organisation is competitively aggressive with statement B27 which have the highest mean value of \( \bar{x} = 3.570 \) and a standard deviation of \( s = 0.843 \). Followed by statements B25 which have a mean value of \( \bar{x} = 3.304 \) and statement B26 (\( \bar{x} = 3.228 \)). The respondents agree the least with statement B24 that the organisation has a typical posture to act very competitively and to “undo-the-competitor”, with a mean value of \( \bar{x} = 3.114 \) and a standard deviation of \( s = 0.947 \).

The average mean of **Competitive aggressiveness** is \( \bar{x} = 3.304 \) with a standard deviation of \( s = 0.735 \).
4.6.2 Assessment of the combined results

The individual statements of the independent variables were discussed in the previous section. The results of the different variables were combined to generate an overall view of entrepreneurial orientation as presented in the table below.

Table 4.15: Survey results of entrepreneurial orientation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Respondents</th>
<th>( \bar{x} )</th>
<th>s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>79</td>
<td>3.473</td>
<td>0.625</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>79</td>
<td>3.333</td>
<td>0.656</td>
</tr>
<tr>
<td>Competitive Aggressiveness</td>
<td>79</td>
<td>3.304</td>
<td>0.735</td>
</tr>
<tr>
<td>Pro-activeness</td>
<td>79</td>
<td>3.203</td>
<td>0.760</td>
</tr>
<tr>
<td>Risk-taking</td>
<td>79</td>
<td>3.137</td>
<td>0.575</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>79</strong></td>
<td><strong>3.290</strong></td>
<td></td>
</tr>
</tbody>
</table>

A mean value of 3 on the 5 point Likert scale indicates a neutral opinion. The average mean of all the independent variables of entrepreneurial orientation was \( \bar{x} = 3.290 \), indicating that there is an overall positive perception towards entrepreneurial orientation, but with space for improvement.

The results of the survey are graphically presented in a bar chart which compares the different variables with each other. The figure below presents the results which are sorted from the highest to the lowest mean value.
The strongest agreement was with **Autonomy** ($\bar{x} = 3.473$) then followed by **Innovativeness** ($\bar{x} = 3.333$) and **Competitive aggressiveness** ($\bar{x} = 3.304$), all with results higher than the average mean. Agreement with variables with mean values below the average mean ($\bar{x} = 3.290$) are **Pro-activeness** ($\bar{x} = 3.203$) and **Risk-taking** ($\bar{x} = 3.131$).

A Box-and-Whisker plot was used to illustrate the range of responses. The first percentile of the Box-and-Whisker plot represents the first 25% of responses, the second percentile represent 25% to 50%, the third 50% to 75% and the last 75% to 100% of responses. The middle value represents the median of all the data related to the specific variable, which means that 50% of the values lie above the median and the other 50% lie below the median.
Below is the Box-and-Whisker plot for the five variables related to entrepreneurial orientation.

**Figure 4.2: Box-and-Whisker plot of entrepreneurial orientation’s variables**

Data in the Box-and-Whisker plot are arranged from **Risk-taking** with the smallest mean value, then followed by **Pro-activeness**, **Competitive aggressiveness**, **Innovativeness** and lastly **Autonomy** which has the largest mean value.

The diagram represents the following data for the different independent variables: a range from 1.400 to 4.400, with a median of 3.200 for **Risk-taking**, a range from 1.000 to 4.500, with a median of 3.250 for **Pro-activeness**, a range from 1.000 to 4.750, with a median of 3.500 for **Competitive aggressiveness**, a range from 1.444 to 4.667, with a median of 3.444 for **Innovativeness** and a range from 2.200 to 5.000, with a median of 3.400 for **Autonomy**. The spread of data indicates that although all of the mean values are more than 3.000 there are still a number of respondents which have indicated that they are disagreeing with the different variables. Therefore these respondents disagree with the statement that entrepreneurial orientation is present in the organisation. This opinion will have to be addressed when assessing entrepreneurial orientation.
The results of perceived success in the organisation will be discussed in the following section.

4.7 ASSESSMENT OF PERCEIVED SUCCESS

The perceived success section consisted of 11 statements measuring the two dependable variables namely: Business growth and Business development and improvement. The respondents were asked to indicate their level of agreement or disagreement on a five point Likert scale, as with the previous section.

4.7.1 Business growth

The responses to business growth are summarised in the table below, with four statements C1 to C4 sorted from the largest to the smallest mean value.

Table 4.16: Results of business growth

<table>
<thead>
<tr>
<th>Statement</th>
<th>( \bar{x} )</th>
<th>s</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1  Our business has experienced growth in turnover over the past few years.</td>
<td>3.747</td>
<td>0.759</td>
</tr>
<tr>
<td>C2  Our business has experienced growth in profit over the past few years.</td>
<td>3.709</td>
<td>0.787</td>
</tr>
<tr>
<td>C3  Our business has experienced growth in market share over the past few years.</td>
<td>3.430</td>
<td>0.812</td>
</tr>
<tr>
<td>C4  The competitive position of our business has improved over the past few years.</td>
<td>3.380</td>
<td>0.924</td>
</tr>
<tr>
<td>Average</td>
<td>3.566</td>
<td>0.672</td>
</tr>
</tbody>
</table>

There is an agreement to all statements measuring the variable Business growth. The respondents agree that the organisation had experienced a growth in turnover over the past few years with statement C1 having a mean value of \( \bar{x} = 3.747 \) and a standard deviation of \( s = 0.759 \). Followed by statement C2 with a mean value of \( \bar{x} = 3.709 \) and
statement C3 ($\bar{x} = 3.430$). The lowest agreement was with statement C4 which has a mean value of $\bar{x} = 3.380$ and a standard deviation of $s = 0.924$.

The average mean of the dependent variable Business growth is $\bar{x} = 3.566$ with a standard deviation of $s = 0.672$.

### 4.7.2 Business development and improvement

The responses to business development and improvement are summarised in the table below, with seven statements from C5 to C11 sorted from the largest to the smallest mean value.

**Table 4.17: Results of business development and improvement**

<table>
<thead>
<tr>
<th>Statement</th>
<th>$\bar{x}$</th>
<th>$s$</th>
</tr>
</thead>
<tbody>
<tr>
<td>C 6  The efficiency (doing things right) of our business has improved over the past few years.</td>
<td>3.696</td>
<td>0.722</td>
</tr>
<tr>
<td>C 5  The effectiveness (doing the right things) of our business has improved over the past few years.</td>
<td>3.633</td>
<td>0.880</td>
</tr>
<tr>
<td>C 8  Our employees are highly committed to our business.</td>
<td>3.570</td>
<td>0.943</td>
</tr>
<tr>
<td>C 10 The image (stature) of our business, relative to our competitors, has grown over the past few years.</td>
<td>3.570</td>
<td>0.901</td>
</tr>
<tr>
<td>C 11 During difficult economic periods, investments in research and development/innovative projects continue and no significant financial cuts are made.</td>
<td>3.468</td>
<td>0.845</td>
</tr>
<tr>
<td>C 9  The moral (job satisfaction) of our employees has improved over the past few years.</td>
<td>3.203</td>
<td>1.030</td>
</tr>
<tr>
<td>C 7  In our business, employees are viewed as the most valuable asset of the business.</td>
<td>3.038</td>
<td>1.171</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>3.454</td>
<td>0.641</td>
</tr>
</tbody>
</table>

The average mean of Business development and improvement was $\bar{x} = 3.454$ with a standard deviation of $s = 0.641$. In relation to this specific variable the strongest agreement was with statement C6 (of $\bar{x} = 3.696$ and $s = 0.722$) stating that the
organisation's efficiency had improved over the past few years. Sorted from the largest to smallest mean value (thus strongest agreement to weakest) were statements C5 ($\bar{x} = 3.633$), C8 ($\bar{x} = 3.570$), C10 ($\bar{x} = 3.570$), C11 ($\bar{x} = 3.468$) and C9 ($\bar{x} = 3.203$). The lowest agreement was with statement C7 which had a mean value of $\bar{x} = 3.038$ and also the widest spread, with a standard deviation of $s = 1.171$.

4.7.3 Assessment of combined results

The specific items were discussed in the previous section while the combined results from the two variables of perceived success are presented in the table below.

Table 4.18: Survey results of perceived success

<table>
<thead>
<tr>
<th>Variable</th>
<th>Respondents</th>
<th>$\bar{x}$</th>
<th>$s$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business growth</td>
<td>79</td>
<td>3.566</td>
<td>0.672</td>
</tr>
<tr>
<td>Business development and improvement</td>
<td>79</td>
<td>3.454</td>
<td>0.641</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>3.510</td>
<td></td>
</tr>
</tbody>
</table>

The average mean of all the dependent variables of perceived success was $\bar{x} = 3.510$, indicating that the organisation is experiencing a level of perceived success at present. The average mean of perceived success is higher than entrepreneurial orientation, but there is still room to improve perceived success of the organisation.
Figure 4.3: Perceived success analysis

The strongest agreement was with Business growth ($\bar{x} = 3.566$) and the weakest agreement with Business development and improvement ($\bar{x} = 3.454$).

Again a Box-and-Whisker plot was used to represent the range of data in the figure below.

Figure 4.4: Box-and-Whisker plot of perceived success’ variables

In the Box-and-Whisker plot Business growth has the largest mean value and Business development and improvement the smallest mean value. The diagram
represents the range from 1.000 to 5.000, with a median of 3.750 for Business growth and a range from 1.286 to 4.714, with a median of 3.570 for Business development and improvement. The ranges of the two variables are spreading wide, which indicate that there is not much consensus regarding these aspects throughout the organisation.

4.8 RESULTS FROM THE EXECUTIVE MANAGEMENT

Two responses were collected from the executive management of NWK: Mr. P.D. Jacobs, Manager of Industries and the Managing Director of NWK, Mr. D. Marais

The results of entrepreneurial orientation and perceived success, from executive management, are presented in the table below.

Table 4.19: Survey results from executive management

<table>
<thead>
<tr>
<th>Variable</th>
<th>( \bar{x} )</th>
<th>s</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entrepreneurial orientation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>4.200</td>
<td>0.283</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>4.056</td>
<td>0.393</td>
</tr>
<tr>
<td>Risk-taking</td>
<td>3.700</td>
<td>0.141</td>
</tr>
<tr>
<td>Pro-activeness</td>
<td>3.250</td>
<td>0.354</td>
</tr>
<tr>
<td>Competitive Aggressiveness</td>
<td>3.000</td>
<td>0.354</td>
</tr>
<tr>
<td><strong>Total for entrepreneurial orientation</strong></td>
<td>3.641</td>
<td></td>
</tr>
<tr>
<td><strong>Perceived success</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business growth</td>
<td>4.250</td>
<td>0.354</td>
</tr>
<tr>
<td>Business development and improvement</td>
<td>4.000</td>
<td>0.000</td>
</tr>
<tr>
<td><strong>Total for perceived success</strong></td>
<td>4.125</td>
<td></td>
</tr>
</tbody>
</table>

The variables of entrepreneurial orientation are sorted from the largest to the smallest mean value. **Autonomy** (\( \bar{x} = 4.200 \)) has the largest mean value, followed by **Innovativeness** (\( \bar{x} = 4.056 \)), **Risk-taking** (\( \bar{x} = 3.700 \)), **Pro-activeness** (\( \bar{x} = 3.250 \)), and **Competitive aggressiveness** (\( \bar{x} = 3.000 \)). The order of **Autonomy**, **Innovativeness**
and Pro-activeness are in the same order in relation to the survey results, but the order of Risk-taking and Competitive aggressiveness are reversed. The executive management feels that the organisation have a greater risk-taking ability and are less competitive aggressive. The variables of perceived success are in the same order as the rest of the respondents. The mean value of Business growth is $\bar{x} = 4.250$ and Business development and improvement is $\bar{x} = 4.000$.

Standard deviation is not of much value in the case of executive management, as only two questionnaires were collected. The population sample is too small. The two questionnaires represent the complete population of executive management, and have little statistical value.

4.9 RELATIONSHIP BETWEEN SELECTED DEMOGRAPHIC VARIABLES, ENTREPRENEURIAL ORIENTATION AND PERCEIVED SUCCESS OF THE ORGANISATION

An independent $t$-test was used to test for statistical significance ($p$-values) and effect size ($d$-values) between the opinions of selected demographic variables and different variables measuring entrepreneurial orientation and perceived success. The simple conservative approach was used for the purpose of this study where the $t$-test doesn’t assume equal variances (Elliott & Woodward, 2007:59).

A small $p$-value, for example smaller than 0.05, indicates statistical significance (Ellis & Steyn, 2003:51). A disadvantage of the $p$-value is that larger sample sizes tend to have smaller $p$-values, without necessarily resulting in a higher statistical significance. Therefore the effect size ($d$-value) was also calculated to overcome the effect of the $p$-value. The $p$-value can range from 0 to 1 and for the purpose of this study Cohen’s guidelines will be used where $d = 0.2$ have a small effect, $d = 0.5$ a medium effect and $d = 0.8$ a large effect. Medium effects can be visible and large effects where $d > 0.8$ are practical significant (Field, 2005:32; Ellis & Steyn, 2003:51-53).
For this study the relationship between genders, the five independent variables of entrepreneurial orientation and the two dependent variables of perceived success were measured.

### 4.9.1 Relationship between variables measuring entrepreneurial orientation, perceived success and gender of respondents

In total 55 male respondents and 24 female respondents participated in the study. Table 4.20 indicates the relationship between the five independent variables of entrepreneurial orientation combined with the two dependent variables of perceived success and the demographic variable gender. The mean values (\( \bar{x} \)) and standard deviation (\( s \)) of the different variables were calculated separately for males and females to indicate whether there is a difference in opinion based on gender. The relationship was tested with the \( t \)-test (\( p \)-value) and effect size (\( d \)-value) to determine whether there are any statistical significance between the opinions of males and females.

**Table 4.20: Relationship between variables measuring entrepreneurial orientation, perceived success and the demographic variable gender**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Male</th>
<th>Female</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \bar{x} )</td>
<td>( s )</td>
<td>( \bar{x} )</td>
</tr>
<tr>
<td>Autonomy</td>
<td>3.516</td>
<td>0.631</td>
<td>3.375</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>3.331</td>
<td>0.685</td>
<td>3.338</td>
</tr>
<tr>
<td>Risk-taking</td>
<td>3.113</td>
<td>0.602</td>
<td>3.192</td>
</tr>
<tr>
<td>Pro-activeness</td>
<td>3.141</td>
<td>0.834</td>
<td>3.344</td>
</tr>
<tr>
<td>Competitive aggressiveness</td>
<td>3.300</td>
<td>0.801</td>
<td>3.313</td>
</tr>
<tr>
<td>Business growth</td>
<td>3.614</td>
<td>0.731</td>
<td>3.458</td>
</tr>
<tr>
<td>Business development and improvement</td>
<td>3.462</td>
<td>0.708</td>
<td>3.435</td>
</tr>
</tbody>
</table>
By comparing the p-values of the demographical variable gender there are no p-value smaller than 0.05. Therefore depending on the p-value there is no statistical significance in the opinions related to gender of the participants.

When taking d-values into account there is a small effect between measurements of gender with regards to the variables Pro-activeness ($d = 0.212$), Autonomy ($d = 0.224$) and Business growth ($d = 0.212$) because the d-value is about 0.2. It seems that males ($\bar{x} = 3.516$) are experiencing more Autonomy in the workplace than females ($\bar{x} = 3.375$). The opinions regarding Pro-activeness are different in the sense that females ($\bar{x} = 3.344$) seem to be more pro-active, than males ($\bar{x} = 3.141$). The perceived success variable Business growth has been rated higher by males ($\bar{x} = 3.614$) than females ($\bar{x} = 3.458$).

By evaluating the results based on p-value and d-value there is very little statistical significance based on gender.

4.10 MULTIPLE REGRESSIONS ANALYSIS

Multiple regression analysis was done to determine the influence which independent variables of entrepreneurial orientation have on the dependent variables of perceived success. Factor scores for each participant were computed as the average of all items contributing to the relevant factors. All participants replied to all the questions and statements and no replacement of the values were needed. Business growth and Business development and improvement are the two dependent variables of perceived success. As such, the results of the multiple regression analysis are presented in two separate regression models in the following tables.

The following table present the results of the multiple regression analysis and the influence which the independent variables have on the dependent variable Business growth.
Table 4.21: Multiple regression results: Impact of entrepreneurial orientation on the dependable variable Business growth

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardised coefficients</th>
<th>Standardised coefficients</th>
<th>t-value</th>
<th>p-level</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.262</td>
<td>0.417</td>
<td>3.028</td>
<td>0.003</td>
</tr>
<tr>
<td>Autonomy</td>
<td>0.126</td>
<td>0.115</td>
<td>1.098</td>
<td>0.276</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>0.130</td>
<td>0.140</td>
<td>0.934</td>
<td>0.353</td>
</tr>
<tr>
<td>Risk-taking</td>
<td>-0.147</td>
<td>0.142</td>
<td>-1.038</td>
<td>0.303</td>
</tr>
<tr>
<td>Pro-activeness</td>
<td>0.175</td>
<td>0.129</td>
<td>1.362</td>
<td>0.177</td>
</tr>
<tr>
<td>Competitive aggressiveness</td>
<td>0.403</td>
<td>0.127</td>
<td>0.441</td>
<td>3.182</td>
</tr>
</tbody>
</table>

R² = 0.431 (* p<0.05)

The analysis indicated that a significant percentage (43.1%) of the variation in Business growth is explained by the five variables of entrepreneurial orientation i.e. Autonomy, Innovativeness, Risk-taking, Pro-activeness and Competitive aggressiveness. The multiple regression analysis further indicated a significant positive relationship between the independent variable Competitive aggressiveness (p = 0.002) and the dependent variable Business growth. To a lesser extend there is also a relationship between the independent variable Pro-activeness (p = 0.177) and the dependent variable Business growth.

The following table presents the results of the second multiple regression analysis and the influence of the independent variables on the dependent variable Business development and improvement.
Table 4.22: Multiple regression results: Impact of entrepreneurial orientation on the dependable variable Business development and improvement

<table>
<thead>
<tr>
<th>Model</th>
<th>Not standardized coefficients</th>
<th>Standardized coefficients</th>
<th>t-value</th>
<th>p-level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>0.477</td>
<td>0.363</td>
<td></td>
<td>1.312</td>
</tr>
<tr>
<td>Autonomy</td>
<td>0.380</td>
<td>0.100</td>
<td>0.371</td>
<td>3.802</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>0.133</td>
<td>0.122</td>
<td>0.136</td>
<td>1.091</td>
</tr>
<tr>
<td>Risk-taking</td>
<td>-0.054</td>
<td>0.123</td>
<td>-0.049</td>
<td>-0.441</td>
</tr>
<tr>
<td>Pro-activeness</td>
<td>0.143</td>
<td>0.112</td>
<td>0.169</td>
<td>1.273</td>
</tr>
<tr>
<td>Competitive aggressiveness</td>
<td>0.281</td>
<td>0.110</td>
<td>0.322</td>
<td>2.545</td>
</tr>
</tbody>
</table>

R² = 0.525 ( * p<0.05)

The data indicates that, in practice, a significant percentage (52.5%) of the variation in Business development and improvement is explained by the five variables of entrepreneurial orientation i.e. Autonomy, Innovativeness, Risk-taking, Pro-activeness and Competitive aggressiveness. The multiple regression analysis further indicates a significant positive relationship between independent variables Autonomy (p < 0.001) Competitive aggressiveness (p = 0.013) and the dependable variable Business development and improvement. The independent variable Pro-activeness (p = 0.207) also has a lesser positive relationship to the dependent variable Business development and improvement.

The independent variable Competitive aggressiveness was found to have a significant positive relationship to the dependent variables of perceived success i.e. Business growth and Business development and improvement. The same is true for the independent variable Pro-activeness, but to a lesser extent.
4.11 SUMMARY

A questionnaire was used to conduct an empirical study to investigate the five variables of entrepreneurial orientation as well as the two variables of perceived success in the organisation. The questionnaire used to conduct the study consisted of three sections, Section A gathered demographic data, Section B assessed entrepreneurial orientation and Section C measured perceived success in the organisation.

The target population of this study was the employees of NWK’s Industrial divisions: Epko, Noordfed, Opti Chicks and Opti Feeds. The entire population consisted of 609 employees. Demographic information was obtained from the human resources department of NWK. The questionnaires were distributed to the population group in electronic format via e-mail as well as hardcopies delivered by hand.

Demographic information of the respondents were analysed in terms of age group (≤29 = 14; 30-39 = 32; 40-49 = 17; 50-59 = 16), gender (55 males and 24 females), race (21 Blacks, 57 Whites and 1 Indian), post level (post levels 1-5 = 13; post levels 6-8 = 26; post levels 9-14 = 31 and post levels 15-20 = 9), highest academic qualification (41% of the respondents obtained Grade 12) and work division (Epko = 36, Noordfed = 16, Opti Chicks = 13 and Opti Feeds = 14). Two questionnaires were also obtained from the executive management of NWK.

The internal consistency and reliability of the responses were tested with Cronbach alpha coefficients. Only two variables had Cronbach alpha coefficient lower than 0.7 but higher than 0.6 and therefore all the variables were included in the study.

The mean values and standard deviations of all individual statements were presented, prior to the discussion of combined results of the different variables of entrepreneurial orientation and perceived success. The average mean calculated for entrepreneurial orientation was \( \bar{x} = 3.290 \), where the individual variables sorted from the largest to the smallest mean value was Autonomy with a mean value of \( \bar{x} = 3.473 \) and a standard
deviation of $s = 0.625$, **Innovativeness** ($\bar{x} = 3.333$ and $s = 0.656$), **Competitive aggressiveness** ($\bar{x} = 3.304$ and $s = 0.735$), **Pro-activeness** ($\bar{x} = 3.203$ and $s = 0.760$) and **Risk-taking** ($\bar{x} = 3.137$ and $s = 0.575$).

The average mean calculated for perceived success was $\bar{x} = 3.510$ with the variable **Business growth** having the largest mean value of $\bar{x} = 3.566$ and a standard deviation of $s = 0.672$ followed by **Business development and improvement** with a mean value of $\bar{x} = 3.454$ and a standard deviation of $s = 0.641$.

There was very little practical statistical significance when the demographical variable gender was measured. This demographical variable (gender) will have little influence on the interpretation of the data.

The multiple regression analysis indicated that 43.1% of the variance of perceived success is explained by the independent variables of entrepreneurial orientation. The variable **Competitive aggressiveness** has a strong positive relationship to the dependent variable **Business growth**. The second multiple regressions revealed that 52.5% of the variance of **Business development and improvement** can be explained by entrepreneurial orientation and that both independent variables **Autonomy** and **Competitive aggressiveness** have a strong positive relationship to the dependent variable **Business development and improvement**.

In the next chapter conclusions will be drawn from the findings in this chapter and recommendations will be made on how to improve entrepreneurial orientation and to obtain higher perceived success in the organisation.
CHAPTER 5
CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

The purpose of this chapter is to discuss implications of entrepreneurial orientation in an agri-business. Conclusions will be drawn based on the findings of the empirical study as presented in the previous chapter. Practical recommendations to improve entrepreneurial orientation will be discussed, with the aim to increase perceived success in the organisation.

This chapter consists of a number of main sections. The first two sections will focus on conclusions drawn from the empirical study, followed by recommendations based on the findings. A section formulating an action plan is included to provide clarity regarding the implementation of the selected strategy. Concluding this study, objectives will be evaluated and recommendations for future studies will be discussed.

5.2 CONCLUSIONS

Conclusions are drawn based on data presented in chapter 4. Firstly conclusions will be discussed related to demographic information of the respondents. Assessment of the Cronbach alpha coefficients evaluating the reliability of the questionnaire will follow.

The different variables of entrepreneurial orientation and perceived success will be assessed and conclusions regarding the combined results will be discussed. The relationships between gender, entrepreneurial orientation and perceived success will be discussed briefly.
5.2.1 Demographic information

Demographic information regarding age, gender, race, post level, highest academic qualification and work division were obtained from respondents. From the demographic information the following conclusions were drawn:

- The response rate from post levels 1 to 5 was very low. This population group consists of 497 employees and only 13 responses were received, representing 2.6% of the specific employment levels.
- Response from employees at post levels 6 and higher was much better. A total of 66 questionnaires were received from a possible 112 employees, representing 59% of this group.
- Employees at post levels 6 to 8 replied with 26 completed questionnaires from a possible group of 49, representing 53% of this group. Thirty one questionnaires were received from a possible 53 from employees at post levels 9 to 14, representing 58% of this group. A 90% response rate was obtained from post levels 15 and higher. Only a few employees are employed at post levels 15 and higher, from a possible 10, 9 completed questionnaires were received.
- Based on age the highest response was from the age group 30 to 39 years, representing 41% of returns. There were no responses from the age group 60 years and older. The rest of the age groups were represented fairly equal.
- The distribution of responses based on gender was 70% male and 30% female. Male responses were far more than female responses, but there was still a good representation of woman.
- More than 98% of responses were either from Black or White respondents. A total of 72% of the responses were from Whites and 27% from Blacks. The Coloureds and Indians represent only 3 out of the population which are not significant to this study.
- Most of the respondents (41%) have Grade 12 as highest academic education.
- 56% of the respondents at post levels 15 to 20 have a post graduate degree.
• Response rate from Epko was very good, with 46%. The other three divisions: Opti Chicks, Opti Feeds and Noordfed have a fairly equal distribution (16.5% to 20.3%).

There are no extraordinary effects recognised from the demographic data. The age distribution of respondents was equal and it does not seem that there is an aging effect in the organisation. The respondents were fairly well educated.

5.2.2 Reliability of the questionnaire

Cronbach alpha coefficients were measured to determine the reliability of the questionnaire. Only two variables Autonomy (0.624) and Risk-taking (0.648) had Cronbach alpha coefficients lower than 0.7, but still within the range of 0.6 to 0.7 and were therefore included in the study, based on Fields’ view (Field 2005:688). Reliability of the other variables was very good and obtained Cronbach alpha coefficients between 0.799 (Competitive aggressiveness) and 0.843 (Innovativeness).

Results of the Cronbach alpha coefficients suggest that the instrument (questionnaire) used to measure entrepreneurial orientation and perceived success in an agri-business, was reliable. This conclusion was drawn from results from the Cronbach alpha coefficients. Most variables had Cronbach alpha coefficient values higher than 0.6 with only two variables in the range of 0.6 to 0.7 and four variables higher than 0.8

5.2.3 Assessment of entrepreneurial orientation

Section B of the questionnaire measured entrepreneurial orientation in an agri-business. Twenty seven statements were presented to respondents, measuring the different variables of entrepreneurial orientation.

Replies from the respondents were measured on a five point Likert scale, with 1 indicating that the respondent strongly disagrees with the statement, 3 indicating
uncertainty and 5 indicating that the respondent strongly agrees with a statement. It can therefore be agreed that a score of 3 on the Likert scale is neutral, lower than 3 indicates that there are some sort of disagreement with the statement and greater than 3, indicates that the respondents agree with the statement. The closer the values get to the extremes (1 or 5) the stronger is the disagreement or agreement respectively.

Conclusions will be drawn from the different individual variables of entrepreneurial orientation and perceived success. Combined variables will then be discussed.

5.2.3.1 Autonomy

The variable Autonomy obtained the highest mean value ($\bar{x} = 3.473$) and the second lowest standard deviation ($s = 0.625$). This indicates that Autonomy has the strongest effect on entrepreneurial orientation in this specific agri-business. The lower standard deviation indicates that the spread of opinions regarding this variable is relatively low and that most of the respondents experience some degree of Autonomy in their workplace. This argument is strengthened by the responses to statement B1 which suggests that most of the respondents have enough autonomy in their jobs, without continual supervision.

In contrast to Autonomy the responses to statement B3 were slightly negative with a mean value of $\bar{x} = 2.633$. This statement addressed the influence which justification and approval procedures have on decision-making abilities of the employees. This statement indicated that the justification and approval procedures have a negative influence on Autonomy as experienced by the employees. Attention has been given to approval procedures, but still this issue persists. The greatest effect regarding Autonomy can be obtained if approval procedures in this organisation are given further attention. This might be a stumbling block for the development of entrepreneurial orientation in the organisation as the procedures has been altered, and yet a negative effect still persists.
As **Autonomy** has the highest rating for entrepreneurial orientation this variable can have a significant influence increasing entrepreneurial behaviour in this organisation. From this study it became clear that gender had a small effect on opinions regarding the variable **Autonomy**. Males experienced slightly more **Autonomy** than female employees.

5.2.3.2 Innovativeness

The variable **Innovativeness** has the second highest rating and obtained a mean value of $\bar{x} = 3.333$. Statements B12 ($\bar{x} = 3.810$) and B13 ($\bar{x} = 3.747$) indicated that there is a strong emphasis on continuous improvement of products, service delivery and processes, and that innovation is a necessity for the future of the organisation.

Statement B9 ($\bar{x} = 3.089$) stated that the organisation is continually pursuing new opportunities, obtained the lowest mean value. This value is very close to a 3, which is close to a neutral opinion. Although **Innovativeness** obtained the second highest mean value, there are still room for improvement.

The study by Lotz (2009:284) measured different levels of management in agribusinesses in South Africa, and the variable **Innovativeness** ($\bar{x} = 3.839$ and $s = 0.194$) have ranked the highest. Lotz (2009:284) recommended a formal process to improve and manage **Innovativeness** in agribusinesses. Results of a successful **Innovative** management programme will be that innovative projects will develop from ideas and needs into concepts and launches (Lotz, 2009:284). **Innovativeness** can even have an influence on risk management of an agri-business. Burns (2008:198) suggested that a portfolio of innovations, which is constantly updated (Morris, Kuratko & Covin, 2008:199), should be created and maintained as part of the risk management system.
5.2.3.3 Risk-taking

The variable Risk-taking obtained a mean value of $\bar{x} = 3.137$ and a standard deviation of $s = 0.575$. Risk-taking scored the smallest mean value (weakest agreement) and also the smallest standard deviation. This indicates that the organisation is not fond of taking risks and that most of the participants’ opinions are more or less the same about Risk-taking. In contrast the respondents agreed that the organisation needs to act boldly to achieve its objectives (statement B17 with a mean value of $\bar{x} = 3.608$), but the term “risk-taker” was considered a negative attribute (statement B19 with a mean value of $\bar{x} = 2.696$)

Interestingly the opinion of the executive management differs significantly to the rest of the respondents. The executive management ranked Risk-taking as the third highest variable of entrepreneurial orientation with a mean value of $\bar{x} = 3.700$ whereas the rest of the respondents have ranked Risk-taking ($\bar{x} = 3.137$), as the lowest. The mean value of the respondents is close to a neutral opinion, against the executive management whom are in strong agreement. Opinions regarding Risk-taking are not unanimous and this could indicate a misalignment between executive management and the rest of the organisation. It indicates that the organisation is willing to take risks, but the employees do not feel comfortable or encouraged to do so.

There are risks involved in any new venture initiated (Dewett, 2004:258). Entrepreneurial organisations are not per se taking on high risks, but organisations need to take some level of risk to pursue new opportunities (Morris et al., 2008:62). Organisations may loose out on some opportunities if they are not comfortable in taking some risks (Morris et al., 2008:65). The variable Risk-taking measured very low and the opinions of executive management and employees differ.

Improvements can be made by encouraging employees to take on more calculated risks. Lotz and Van der Merwe (2013) have also experienced an adversity to Risk-taking in agri-businesses, which they strongly feel should be addressed. As employees
are sceptical to take risks, the risk appetite of the organisation should be clear. The rules and procedures related to risk-taking should be clear and supportive (Lotz & Van der Merwe, 2013). Training can be given to employees to educate them on methodologies to address certain types of risks.

5.2.3.4 Pro-activeness

The variable Pro-activeness had a mean value of $\bar{x} = 3.203$ and was ranked second lowest by the respondents as well as executive management. Respondents reacted negatively to statement B20 ($\bar{x} = 2.949$), they are of the opinion that the organisation is seldom first to introduce new products, services or processes.

This study indicated that the variable Pro-activeness has some effect on perceived business success. This effect is also visible in the study done by Lotz and Van der Merwe (2013) and Lumpkin, Brigham and Moss (2010), except that the variable Pro-activeness had a significant positive relationship to both the dependent variables of perceived success. This effect was not as clear in the agri-business under investigation and the reasons therefore are not clear. It may be accepted that Pro-activeness can have a significant positive relation to perceived business success in this agri-business.

Gender has a small effect on the opinion of Pro-activeness as a variable of entrepreneurial orientation. Females tend to be more pro-active than males and this effect should be used to the advantage of the organisation. When a strategy regarding pro-activeness in the organisation is formulated and implemented the opinions of females will be very valuable.

Pro-activeness can create a first mover advantage whereby the organisation can obtain a favourable market standing which will be hard for competitors to duplicate (David, 2007:200). Pro-activeness in an agri-business is an important aspect as explained above and can be a great advantage to the organisation. Focused attention should be given to increase Pro-activeness in this organisation.
5.2.3.5 Competitive aggressiveness

The average mean value of **Competitive aggressiveness** was $\bar{x} = 3.304$ and obtained the middle value for entrepreneurial orientation. The mean values of the different statements which measured **Competitive aggressiveness** varied from $\bar{x} = 3.114$ to $\bar{x} = 3.570$, which all indicate a positive agreement with the statements. The variable **Competitive aggressiveness** was not found to have any significant influence on perceived success of an agri-business, considering the study done by Lotz and Van der Merwe (2013). The rating of the variable in this study is not in line with other studies.

The opinion of executive management differs from the rest of the respondents regarding **Competitive aggressiveness**. Executive management rated **Competitive aggressiveness** as the lowest variable of entrepreneurial orientation with a mean value of $\bar{x} = 3.000$, which indicate that the organisation is neither competitive aggressive nor passive. There is a misalignment between executive management and the organisation regarding **Competitive aggressiveness**.

The findings in this study disagree with the findings of the study done by Lotz and Van der Merwe (2013), Lumpkin and Dess (2001) as well as Lumpkin *et al.* (2010). Previous studies indicated no relationship between the variable **Competitive aggressiveness** and the dependant variables of perceived success. Lumpkin and Dess (2001:441) stated that **Competitive aggressiveness** could be fundamental in maintaining a certain market position, but does not directly influence the success of the organisation. Therefore the opinion of executive management in this case may agree more with other studies than the opinions of the respondents.

5.2.3.6 Overall entrepreneurial orientation

The average mean value of entrepreneurial orientation was $\bar{x} = 3.290$, which suggests that there is some sort of entrepreneurial orientation present in the organisation. The spread of the data tends to distort this opinion as a number of participants disagreed
with the variables measuring entrepreneurial orientation. Some of the items which measure the different variables have obtained a mean value of lower than $\bar{x} = 3.0$, which indicate a level of disagreement with the specific statements. Considering the mean values and spread of the data it seems that there is a very weak presence of entrepreneurial orientation present in the organisation. A clear strategy should be implemented to improve entrepreneurial orientation in the organisation.

The highest rating of variables of entrepreneurial orientation was Autonomy ($\bar{x} = 3.473$), followed by Innovativeness ($\bar{x} = 3.333$), Competitive aggressiveness ($\bar{x} = 3.304$), Pro-activeness ($\bar{x} = 3.203$) and the lowest rated variable was Risk-taking ($\bar{x} = 3.137$). All of the mean values were between $\bar{x} = 3.1$ and 3.5, which are fairly close to the neutral value of 3, on the Likert scale. Pro-activeness, Risk-taking and Autonomy were the factors which showed an influence on the variable Business development and improvement. The study done by Lotz and Van der Merwe (2013) indicated that the variables Pro-activeness, Autonomy and Innovativeness have a positive relationship to Business growth. A negative relationship was found between Risk-taking and Business growth. Based on the results of this study and the findings of the study done by Lotz and Van der Merwe (2013) it can also be accepted that Autonomy, Innovativeness and Pro-activeness will have a great influence on perceived success of this agri-business.

Therefore improvements can be made in all of the variables. Autonomy and Innovativeness are the two strongest variables and can be used as a basis to improve overall entrepreneurial orientation in the organisation. Potential for improvement may be seen the most with Pro-activeness and Risk-taking as their rankings are the lowest and can improve the most.
5.2.4 Assessment of perceived success

Section C of the questionnaire measured perceived success in an agri-business. Eleven statements were presented to the respondents in order to measure the different variables of entrepreneurial orientation. These statements were also measured on a 5 point Likert scale.

5.2.4.1 Business growth

Business growth is one of two variables which measure perceived success of an organisation. Business growth as a variable has obtained the highest mean value of $\bar{x} = 3.566$. Statements used to measure Business growth were fairly constant, with mean values varying from $\bar{x} = 3.380$ to 3.747. In general it can be accepted that the organisation is experiencing fairly good Business growth. There are still room for improvement, although Business growth obtained the highest mean value of all variables measured in this study. Business growth is well established and indicates that the organisation is pursuing most of its objectives.

5.2.4.2 Business development and improvement

The variable Business development and improvement has obtained the lowest mean value ($\bar{x} = 3.454$). There are some variance in the results of statements measuring Business development and improvement, with mean values varying from $\bar{x} = 3.038$ to 3.696.

Statement C7 which states that the employees are viewed as the most valuable asset of the organisation obtained the lowest mean value of $\bar{x} = 3.038$ with a standard deviation of $s = 1.171$. The mean value of this statement is close to the neutral value and the large standard deviation indicates that there are a large number of respondents whom disagree with the statement and feels that the employees are not a valuable asset to the organisation. This is an important aspect which needs to be corrected in order to ensure
commitment from employees towards the goals of the organisation. This aspect is also addressed through goal alignment, key 2 of the 20 keys system (ODI, 2007:15).

5.2.4.3 Overall perceived success

Although Business development and improvement is ranked the lowest the mean values varies with $\Delta\bar{x} = 0.112$. The difference in mean values between Business development and improvement and Business growth is small. The organisation has systems in place to ensure good financial practices, performance measures and is investing in the development of employees. These systems seem to be sound and produce good results. Although the systems seem to be functioning well there are still room for improvement.

The variables Business growth was ranked first with a mean value of $\bar{x} = 4.250$ and Business development and improvement with a mean value of $\bar{x} = 4.000$ by executive management. The responses from the executive management were in line with the rest of the respondents regarding perceived business success. This indicates that the opinion from the executive management is in line with the rest of the organisation regarding perceived success.

5.2.5 Relationship between selected demographic variable, entrepreneurial orientation and perceived success of the organisation

In this study the relationship between genders of participants was measured against the variables of entrepreneurial orientation and perceived success.

A small effect was detected between the measurements of male and females with regards to the variables Pro-activeness $(d = 0.212)$, Autonomy $(d = 0.224)$ and Business growth $(d = 0.212)$. Males indicated that they are experiencing slightly more Autonomy, where females have a greater tendency towards Pro-activeness. Males are also experiencing slightly more Business growth. It is interesting to see that
females are acting more pro-actively than males. The variable Pro-activeness is ranked second lowest variable of entrepreneurial orientation and is an aspect that could improve a lot. The role females could play in the enhancement of the organisation’s Pro-activeness should be emphasised.

5.2.6 Multiple regressions analysis

Multiple regression analysis was done to determine the relationship between the five independent variables of entrepreneurial orientation and the two dependent variables of perceived success separately. From the analysis it became clear that the variable Competitive aggressiveness ($p = 0.002$) had a significant positive relationship to Business growth. Competitive aggressiveness ($p = 0.013$) together with the variable Autonomy ($p < 0.001$) had a significant positive relationship to Business development and improvement. The variable Competitive aggressiveness has a positive relationship to both dependent variables of perceived success. Competitive aggressiveness can be seen as an important variable to improve both Business growth and Business development and improvement.

The variable Pro-activeness also has some sort of positive relationship to both the dependable variables of perceived success. The $p$-value of Pro-activeness in relation to Business growth is $p = 0.177$ and in relation to Business development and improvement, $p = 0.207$. Therefore the variable Pro-activeness plays some role in the development of the organisation’s Business growth as well as Business development and improvement.

5.3 RECOMMENDATIONS

The empirical study and conclusions in the previous sections indicate that some entrepreneurial orientation is present in the organisation and that there is a sense of perceived success in the organisation. There are ample room to improve both entrepreneurial orientation as well as perceived success in the organisation. Agri-
businesses are functioning in a dynamic and competitive environment, where entrepreneurial behaviour will be crucial to explore opportunities and to secure a foundation for future success (Ireland & Webb, 2007:59).

The organisation can gain from actions which are focused to enhance entrepreneurial orientation. From the viewpoint that entrepreneurial orientation has a positive relation to perceived business success of an organisation, the following aspects should be highlighted based on conclusions drawn from the sections above:

- **Autonomy** ($\bar{x} = 3.473$) and **Innovativeness** ($\bar{x} = 3.333$) are ranked the two highest variables of entrepreneurial orientation based on this study. Some level of **Autonomy** and **Innovativeness** are already present in the organisation and can be used as a basis to improve entrepreneurial orientation in the organisation.

- The variable **Risk-taking** ($\bar{x} = 3.137$) ranked the lowest of all the variables of entrepreneurial orientation with the respondents, whereas executive management ranked **Risk-taking** ($\bar{x} = 3.700$) third highest. Therefore there is a discrepancy between the perception of executive management and the rest of the respondents. Restrictions to the implementation of new ventures can be experienced if the appetite and ability to take on business risks differs a lot in the organisation. It is therefore important to align risk appetite in the organisation and to increase the personnel's ability to analyse and handle business risks.

- According to the multiple regression analysis the variables **Autonomy** and **Competitive aggressiveness** showed to have a significant positive relation to **Perceived business success**. The variable **Pro-activeness** to a lesser extent also has a positive relation to **Perceived business success**. It is therefore important to improve the levels of **Autonomy** and **Pro-activeness** in order to increase the organisation's **Perceived business success**. **Competitive aggressiveness** can also be increased, but other studies have indicated that **Competitive aggressiveness** does not have a direct impact on perceived success of the organisation.
There is a small effect in the measurements of males and females which should be kept in mind when a strategy is developed to improve entrepreneurial orientation of the organisation. There is a tendency that males are experiencing more Autonomy whereas females are more focused on Pro-activeness. The variable Autonomy is established in the organisation and males could be used to increase the level of Autonomy in the organisation. The variable Pro-activeness has a fair effect on perceived success and females could play a significant role in an organisation’s action plan to be more pro-active.

In the study a number of aspects were addressed regarding the current status of entrepreneurial orientation and perceived success in this agri-business. All of these aspects are important as entrepreneurial behaviour is a diverse term and cannot be addressed in isolation. From the study the following aspects are regarded as important and should be addressed by developing a strategy to increase entrepreneurial behaviour in this organisation.

- The approval procedures did receive attention but is still a limiting factor to the development of entrepreneurial behaviour.
- The level of pro-activeness in the organisation should be increased and females should be included in the process.
- The aspects related to risk-taking i.e. risk appetite, rules and procedures should be clearly defined and communicated throughout the organisation.
- There is an indication that some employees do not experience a feeling they are a valuable asset to the organisation. This opinion should be corrected throughout the organisation.

The 20 keys programme that NWK has implemented in the organisation can form a solid basis for the improvement of entrepreneurial orientation in the organisation as well as the improvement of perceived business success. During the interviews with Mr. D. Marais, Managing Director of NWK and Mr. P.D. Jacobs, Manager of the Industrial
division, the 20 keys system and the variables measuring entrepreneurial orientation has been discussed and graphically represented in the table below.

**Figure 5.1: Relationship between the 20 keys system and entrepreneurial orientation and perceived success**

![Diagram](image)

<table>
<thead>
<tr>
<th>Key</th>
<th>Variables</th>
<th>Autonomy</th>
<th>Innovativeness</th>
<th>Risk-taking</th>
<th>Pro-activeness</th>
<th>Competitive Aggressiveness</th>
<th>Perceived success</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cleaning and Organising</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Goal alignment</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>3</td>
<td>Small Group Activities</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Reduce work in progress</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Quick changeover technology</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Kaizen of Operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td>Zero monitoring manufacturing/production</td>
<td>x</td>
<td></td>
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<tr>
<td>8</td>
<td>Coupled manufacturing/production</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
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<tr>
<td>9</td>
<td>Maintaining machines and equipment</td>
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<td>10</td>
<td>Workplace discipline</td>
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<td>11</td>
<td>Quality assurance</td>
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<td>12</td>
<td>Developing your suppliers</td>
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<td>13</td>
<td>Eliminate waste</td>
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<tr>
<td>14</td>
<td>Empowering employees to make improvements</td>
<td>x</td>
<td></td>
<td>x</td>
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<tr>
<td>15</td>
<td>Skills versatility and cross training</td>
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<td>16</td>
<td>Production scheduling</td>
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<td>17</td>
<td>Efficiency control</td>
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<td>18</td>
<td>Using information systems</td>
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<tr>
<td>19</td>
<td>Conserving energy and materials</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>20</td>
<td>Leading technology</td>
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</tbody>
</table>

There is a good correlation between the 20 keys system and entrepreneurial orientation and perceived success. As the 20 keys system is already being implemented in the
organisation, more emphasis could be placed on the different variables of entrepreneurial orientation.

5.4 ACTION PLAN

The action plan the researcher can propose to NWK is fourfold and addresses the aspects derived from the study, entrepreneurial strategy, identification of talent and the monitoring of the entrepreneurial process. The four aspects of the action plan will be explained below.

Aspects derived from the study: The previous sections of this chapter summarises the results of the study, where the recommendations in the previous section should receive special attention. An awareness of the study that was done should be created and communicated to the participating divisions from where it can be distributed to the rest of the organisation. Three aspects derived from the study that seems to be crucial and should be addressed, even if NWK decides against implementing an entrepreneurial orientation in the organisation. 1) There is a feeling that some employees are not a valuable asset to the organisation. This opinion can create dissatisfaction among groups in the organisation and may interfere with the management of the divisions and even boycott actions to implement innovative projects. 2) There is a misalignment between the executive management and the rest of the organisation regarding the risk appetite of the organisation. Some employees have a negative connotation to the term “risk-taker” and are scared to take risk. This misalignment may create a passive resistance towards projects that involve more risk than what the employees are used to take. These passive actions can slow down the implementation of innovative projects which can destroy the passion towards entrepreneurial actions. 3) The approval procedures have received attention in NWK, but continue to be a concern by some of the participants. This is a serious matter as attention was given to that, while the opinion that the approval procedures create a barrier still persists. This matter should, therefore, be further investigated.
Entrepreneurial strategy: Morris (1998) has identified an entrepreneurial strategy as a crucial element of the entrepreneurial orientation in an organisation. There should be a pertinent strategy to encourage entrepreneurial behaviour in an organisation and top management’s commitment to the strategy should be visible. NWK should have an overall strategy as some of the greatest gains from entrepreneurial activity may be in new areas or spread over a number of different divisions. Some opportunities will be lost if there are no overall strategy. This strategy should then be divided to the different divisions to get the inputs and commitment of all the employees. The important aspects among others, that the entrepreneurial strategy should address is as follows:

- The entrepreneurial strategy should form part of the organisations budget. Funds should be available to encourage entrepreneurial actions in the organisation and to improve the entrepreneurial skills, knowledge and self-esteem of individuals as well as the different entrepreneurial teams. Although financial returns are important and the funds should be used to address relevant issues in the organisation, the purpose of these funds should focus on the development of entrepreneurial orientation in the organisation.

- Employees should be allowed to focus on innovative initiatives individually and in groups over and above their normal day work. As from the study done by Ramachandran et al. (2006:91), management should be able and willing to appreciate and trust everybody’s judgement. As this aspect may involve risk, especially if the employees are not aligned with the organisations goals and strategies, the amount of freedom the employees will be granted should be clearly defined. Key 6: “Kaizen” of operations from the 20 keys system can provide valuable guidelines for this aspect of the strategy and the implementation thereof.

- The risk appetite for the organisation should be determined and revised on a continuous basis. The elements that determine the risk appetite will be influenced by a number of aspects i.e. the current market forecasts, available funds, the readiness of the employees, actions taken by competitors and other strategic actions already implemented.
- Risk taking in NWK has been identified as a crucial aspect in this study and extreme caution should be taken with this matter. Management should be trained in the topics of i.e. identifying-, reducing- and managing-risks. Knowledge should be built on the topic of risk taking and this knowledge should be shared throughout the organisation.

Management should be hands-on with the implementation of the strategy (McGrath & McMillan, 2000) and it is therefore important that the entrepreneurial strategy is clear to all the levels of management. Part of NWK’s overall entrepreneurial strategy should be the identification and prioritisation of valuable opportunities. As the employees should not be forced to address these specific issues (otherwise the entrepreneurial spirit will be damped), strong entrepreneurial leadership should be presented in order to influence employees to willingly address the specific opportunities.

**Talent identification:** Individuals and the entrepreneurial team are at the heart of the entrepreneurial culture of an organisation. Therefore the identification and correct use of talented employees is a key factor of the strategy. Typical characteristics of an entrepreneur have been mentioned in section 2.2.2 of this document. These characteristic traits can be used as a guideline to identify entrepreneurial traits among individuals. It will be strongly recommended that the ten characteristics of an entrepreneur, as identified by Bygrave and Zacharakis (2011:53), should be included as standard items to the evaluations sheet of new employees, to evaluate the entrepreneurial characteristics of individuals as part of the appointment process. Secondly it can be expected of managers to identify entrepreneurial characteristics among the current employees as part of their standard job description. The analysis of the entrepreneurial characteristics should then be used to allocate the correct human resources (the correct combination of characteristic traits) for the specific situation and to provide assistance, leadership of training to the areas where there are a shortage.
Monitoring of the entrepreneurial process: This action derives from the “organisation wide entrepreneurship” approach as identified by Ramachandran et al. (2006) in section 2.6.2 of this document. The entrepreneurial action plan allows employees to identify their own opportunities and to pursue these opportunities autonomously. This freedom to pursue the opportunities can create a risk to the organisation, in the sense that the employees can act irresponsible. This risk should be managed. The entrepreneurial process is a method to monitor the outcome of the process without dampening entrepreneurial spirit. The entrepreneurial process focuses on the process that is followed when pursuing certain opportunities and not on the results of the venture. To prevent irresponsible actions this process should be published so that the whole organisation is aware of the process.

The current newsletters in NWK i.e. “Interseksie” can be applied as support for the entrepreneurial process. The first step for an applicant will be to make a public suggestion addressing predetermined criteria. This public announcement will prevent outrageous ideas from surfacing. Once an issue is published inputs can be given regarding the specific idea and the appropriate entrepreneurial team can be formed. It is at this stage where the management should be hands-on and showcase good entrepreneurial leadership to ensure a strong foundation for the process. The process is monitored through continuous updates and organisational knowledge is built by the published post-mortem of the process. This process reduces the risk of irresponsible behaviour and also gives immediate credit to participants with the specific process.

This whole action plan will be a dynamic process and should be altered as the organisation develops.

5.5 CRITICAL EVALUATION OF THE STUDY

The success of this study can be determined by the extent to which the primary and secondary objectives (as listed in section 1.3) were met.
5.5.1 Primary objectives

The primary objective of this study was to investigate entrepreneurial orientation and perceived success in the industrial sector of NWK Limited, and to make practical recommendations to enhance entrepreneurial behaviour in the specific sectors, the organisation and other corporate organisations.

The primary objective of the study was achieved by addressing the secondary objectives set for the study.

5.5.2 Secondary objectives

In order to achieve the primary objective, the following secondary objectives were formulated:

- Define the concept of entrepreneurship.
- Obtain insight in the variables of entrepreneurial orientation by means of a literature study.
- Obtain insight in the variables of perceived success in the organisation.
- Gain insight in the business environment of NWK as an organisation.
- Assess perceived entrepreneurial orientation and perceived success within the industrial sector of NWK.
- Investigate the impact of entrepreneurial orientation variables on perceived success of the business.
- Assess the difference between the means of selected demographical variables, and the variables measuring entrepreneurial orientation and perceived success.
- Suggest practical recommendations to enhance the development of entrepreneurship in the organisation.

The literature study as presented in chapter 2 covered the first three secondary objectives by defining entrepreneurship (section 2.2), giving insight in entrepreneurial
orientation (section 2.3) and by identifying perceived success in an organisation (section 2.4).

The fourth objective, gaining insight in the business environment of NWK was obtained by providing information on NWK as an organisation (section 1.4.2). Chapter 3 provided a brief history of NWK, their approach to the market, insight in the different divisions under investigation and the programmes being implemented to enhance the organisation’s performance.

The fifth objective, assessing entrepreneurial orientation and perceived success was obtained by completing the entrepreneurial questionnaire which captured demographic information of respondents and their opinions regarding the statements measuring entrepreneurial orientation and perceived business success. The results and analysis of the data is presented in chapter 4.

The sixth objective, investigating the impact of entrepreneurial orientation variables on perceived success of the business, was achieved by the multiple regression analysis which was done on the five independent variables measuring entrepreneurial orientation and the two dependent variables measuring perceived business success. The results of this analysis are presented in section 4.10 of this document.

The relationship between gender and the variables of entrepreneurial orientation and perceived business success were measured separately to address the seventh objective (assessing the difference between the means of selected demographical variables and the variables measuring entrepreneurial orientation and perceived success). The results of these analyses were presented in section 4.9.

The last objective, suggesting practical recommendations to enhance the development of entrepreneurship, was partially addressed in the literature study and the conclusions (section 5.2), recommendations (section 5.3) and action plan (section 5.4) of this chapter.
5.6 SUGGESTIONS FOR FURTHER RESEARCH

The questionnaire used was partially designed by Lotz (2009). Lotz’s questionnaire was used to assess entrepreneurial orientation and perceived success in an agri-business. The questionnaire was only distributed to the Industrial division of NWK and not to the entire organisation. The results obtained in this study represent only the perceptions of the respondents in the preselected divisions and are not a true representation of the entire agri-business. Care should therefore be taken when interpreting the results especially considering the conclusions and recommendations. The findings of this study cannot be generalised to other agri-business. The low response rate from some of the divisions and certain job levels within the sample group may also have a negative influence on the findings.

The results of this study may be used to provide some insight in the specific divisions under investigation. Further there are not enough correlation between this study and previous studies done to draw conclusions on other divisions or even other agri-business.

The correlation between the training programme used in this organisation, the 20 keys training programme, and the development and improvement of entrepreneurial orientation is an interesting phenomenon which was only mentioned in this study. The influence which training programmes have, as well as the correlation between training programmes and entrepreneurial orientation could be an interesting topic to investigate in future.

Should NWK decide to improve entrepreneurial orientation in the organisation, it could be interesting to do the same study during and after the implementation of new strategies. Investigating growth in entrepreneurial orientation and to monitor the effect it has on perceived business success.
5.7 SUMMARY

Conclusions were drawn from the analysis which was presented in the previous chapter. The conclusions followed the same structure as in chapter 4. Conclusions were drawn from demographic information, followed by reliability study of the questionnaire, before presenting the conclusions of the variables of entrepreneurial orientation and perceived success. Lastly conclusions were drawn from the relationship between male and female respondents and multiple regression analysis.

Interesting facts regarding the demographic compilation of the respondents were mentioned and in some instances it correlated to the overall population of the study. The low response rate of the lower post levels was significant in this study. The largest number of participants was either black or white and the relation to the population group was drawn from this information. The demographic differences based on gender were further analysed.

There was a fair reliability of the questionnaire used in this study. To test the reliability the Cronbach's alpha coefficients were calculated, with all variables testing an alpha coefficient of higher than 0.6 and most of the variables tested even higher than 0.8.

Entrepreneurial orientation and perceived success were discussed in depth as well as each of their individual variables. The conclusions regarding every variable were drawn from the document and the results obtained were compared to previous studies done on the same topic. The relationship between gender and entrepreneurial orientation and perceived success of the organisation, highlighted some information regarding the data analysed. The conclusions led to the formulation of recommendations, highlighting the critical elements discovered in this study. A practical action plan was formulated for the organisation, should they wish to implement strategies to improve entrepreneurial orientation and ultimately perceived business success.
Finally the study was concluded by evaluating whether all the objectives of the study were addressed and suggestions were made for future research related to the topic of this study.
BIBLIOGRAPHY


Hayward, J. 2006. STEPS Facilitator/Psychologist in Training. HMP Cardiff.


SPSS, INC. 2010. SPSS®18.0 FOR Windows, Release 18, Copyright © by SPSS Inc., Chicago, IL: SPSS.


The questionnaire used in the study was developed into different formats namely:

- Hardcopy of the questionnaire in English
- Hardcopy of the questionnaire in Afrikaans
- Electronic version of the questionnaire created with Surveymonky

The questionnaire used on the Surveymonky software was bilingual which combed the Afrikaans and English version of the questionnaire. The example of the Surveymonky questionnaire is not presented in this annexure as it is uncomprehensive and a duplication of the Afrikaans and English versions of the questionnaire. The different hardcopies of the questionnaire are presented in Annexure A.
Dear respondent,

Thank you for your time and participation in this survey.

This survey is conducted to determine the entrepreneurial orientation and perceived success of selected divisions in NWK. This survey contributes to the dissertation as a partial completion of my MBA studies at the North-West University in Potchefstroom. The results of this study will be published after the completion thereof.

This form is filled in anonymously and the information supplied on this questionnaire will be kept confidential. The results from this survey are purely for the purpose of the study and will have no effect on anyone’s working environment.

This survey is divided into three sections.
**Section A:** is to provide geographical information
**Section B:** is statements designed to evaluate the entrepreneurial orientation of the organisation.
**Section C:** is statements designed to evaluate the perceived success for the organisation.

The completed questionnaires can be returned with the internal post to FP Dafel at EPKO.

Your honest opinion regarding the various statements will be valued.

Your sincerely,

…………………………..
FP Dafel
GENERAL INSTRUCTIONS

All questions or statements can be answered by marking the relevant block with an X.

Please answer every statement and question to ensure the validity and reliability of the study.

SECTION A: DEMOGRAPHICAL INFORMATION

This information is required for the statistical analysis of the different interest groups. Your information will be treated confidentially. Mark the applicable block with an X.

Indicate your age group

- \( \leq 29 \)
- 30 - 39
- 40 - 49
- 50-59
- 60+

Indicate your gender

- Male
- Female

Indicate your race

- Black
- White
- Coloured
- Indian

Indicate your post level

- 1 - 5
- 6 - 8
- 9 - 14
- 15 - 20

Indicate your highest academic qualification

- Lower than Grade 12
- Grade 12
- Certificate
- Diploma (Technical College or Technicon)
- Degree
- Post graduate degree

Indicate your division

- Epko Oil Seed Crushing
- Noordfed
- Opti Chicks
- Opti Feeds

Comments: ........................................................................................................................................
......................................................................................................................................................
SECTION B: ENTREPRENEURIAL ORIENTATION

This section consists of 27 statements. Please indicate the extend to which you agree of disagree with each statement. Please mark the applicable block with an X.

<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Uncertain</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>B 1</td>
<td>I have enough autonomy in my job without continual supervision to do my work.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>B 2</td>
<td>Our business allows me to be creative and try different methods to do my job.</td>
<td>1 2 3 4 5</td>
<td></td>
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<tr>
<td>B 3</td>
<td>Employees in our business are allowed to make decisions without going through elaborate justifications and approval procedures.</td>
<td>1 2 3 4 5</td>
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<tr>
<td>B 4</td>
<td>Employees in our business are encouraged to manage their own work and have flexibility to resolve problems.</td>
<td>1 2 3 4 5</td>
<td></td>
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</tr>
<tr>
<td>B 5</td>
<td>I seldom have to follow the same work methods or steps while performing my major tasks from day to day.</td>
<td>1 2 3 4 5</td>
<td></td>
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<tr>
<td>B 6</td>
<td>Our business regularly introduces new services/products/processes.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>B 7</td>
<td>Our business places a strong emphasis on new and innovative products/services/ processes.</td>
<td>1 2 3 4 5</td>
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<tr>
<td>B 8</td>
<td>Our business has increased the number of services/products offered during the past two years.</td>
<td>1 2 3 4 5</td>
<td></td>
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<tr>
<td>B 9</td>
<td>Our business is continually pursuing new opportunities.</td>
<td>1 2 3 4 5</td>
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<tr>
<td>B 10</td>
<td>Over the past few years, changes in our processes, services and product lines have been quite dramatic.</td>
<td>1 2 3 4 5</td>
<td></td>
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<tr>
<td>B 11</td>
<td>In our business there is a strong relationship between the number of new ideas generated and the number of new ideas successfully implemented.</td>
<td>1 2 3 4 5</td>
<td></td>
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<tr>
<td>B 12</td>
<td>Our business places a strong emphasis on continuous improvement in products/services delivery/ processes.</td>
<td>1 2 3 4 5</td>
<td></td>
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</tr>
<tr>
<td>B 13</td>
<td>Our business has a widely held belief that innovation is an absolute necessity for the business's future.</td>
<td>1 2 3 4 5</td>
<td></td>
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<tr>
<td>B 14</td>
<td>Our leaders seek to maximise value from opportunities without constraints to existing models, structures or resources.</td>
<td>1 2 3 4 5</td>
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<tr>
<td>Statement</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Uncertain</td>
<td>Agree</td>
<td>Strongly agree</td>
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<tr>
<td>B 15 When confronted with uncertain decisions, our business typically adopts a bold posture in order to maximise the probability of exploiting opportunities.</td>
<td>1 2 3 4 5</td>
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<tr>
<td>B 16 In general, our business has a strong inclination towards high-risk projects.</td>
<td>1 2 3 4 5</td>
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<tr>
<td>B 17 Owing the environment, our business believes that bold, wide-ranging acts are necessary to achieve the business’s objectives.</td>
<td>1 2 3 4 5</td>
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<td></td>
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</tr>
<tr>
<td>B 18 Employees are often encouraged to take calculated risks concerning new ideas.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 19 The term “risk-taker ”is considered a positive attribute for employees in our business.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 20 Our business is very often the first to introduce new products/services/processes.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 21 Our business typically initiates actions which competitors respond to.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 22 Our business continuously seeks out new products/processes/services.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 23 Our business continuously monitors market trends and identifies future needs of customers.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 24 In dealing with competitors our business typically adopts a very competitive undo-the-competitor “posture.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 25 Our business is very aggressive and intensely competitive.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 26 Our business effectively assumes an aggressive posture to combat trends that may threaten our survival or competitive position.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 27 Our business knows when it is in danger of acting overly aggressive (this could lead to erosion of our business’s reputation or to retaliation by our competitors).</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments: ........................................................................................................................................
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140
SECTION C: PERCEIVED SUCCESS

This section consists of 11 statements, related to the perceived success of the organisation. Please indicate the extend to which you agree or disagree with each statement. Please mark the applicable block with an X.

<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Uncertain</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>C 1</td>
<td>Our business has experienced growth in turnover over the past few years.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 2</td>
<td>Our business has experienced growth in profit over the past few years.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 3</td>
<td>Our business has experienced growth in market share over the past few years.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 4</td>
<td>The competitive position of our business has improved over the past few years.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 5</td>
<td>The effectiveness (doing the right things) of our business has improved over the past few years.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 6</td>
<td>The efficiency (doing things right) of our business has improved over the past few years.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 7</td>
<td>In our business, employees are viewed as the most valuable asset of the business.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 8</td>
<td>Our employees are highly committed to our business.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 9</td>
<td>The moral (job satisfaction) of our employees has improved over the past few years.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 10</td>
<td>The image (stature) of our business, relative to our competitors, has grown over the past few years.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 11</td>
<td>During difficult economic periods, investments in research and development/innovative projects continue and no significant financial cuts are made.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Comments: ..........................................................................................................................
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ENTREPRENEURIESE VRAELYS

Geagte deelnemer,

Baie dankie vir u tyd en bereidwilligheid om deel te neem aan die ondersoek

Die ondersoek word gedoen om die entrepreneuriese oriëntasie en sukses wat ervaar word, binne in sekere afdelings van NWK te meet. Die ondersoek vorm deel van my dissertasie vir die gedeeltelike voltooing van my MBA studies by die Noordwes Universiteit in Potchefstroom. Die resultate van die ondersoek gaan gepubliseer word na voltooiing.

Die vorm word anoniem ingevul en die inligting sal konfidensieel hanteer word. Die resultate van die ondersoek is suiwer net vir my studies en gaan in geen omstandighede die werksomgewing van die werknemers affekteer nie.

Die ondersoek is in drie afdelings ingedeel.
**Afdeling A:** word gebruik om die algemene demografiese inligting te versamel.
**Afdeling B:** word stellings gebruik om die entrepreneuriese oriëntasie in die organisasie te meet.
**Afdeling C:** word stellings gebruik om die sukses wat ervaar word mee te meet.

Die voltooide vraelyste kan met die interne pos terugbesorg word aan FP Dafel by EPKO.

U eerlike opinie op die volgende stellings word opreg waardeer.

Die uwe,

[Signature]

FP Dafel
**ALGEMENE INSTRUKSIES**

Al die vrae in die afdeling kan beantwoord word deur ’n X in die relevante blok te maak.

Beantwoord asb. al die vrae, sodat die studie relevant en volledig kan wees.

**AFDELING A: DEMOGRAFIESE INLIGTING**

Hierdie inligting word benodig vir die statistiese ontleiding van die data. U inligting sal konfidensieel hanteer word. Merk die toepaslike blok met ’n X.

<table>
<thead>
<tr>
<th>Dui u ouderdomsgroep aan</th>
<th>≤ 29</th>
<th>30 - 39</th>
<th>40 - 49</th>
<th>50-59</th>
<th>60+</th>
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<td>Dui u geslag aan</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manlik</td>
<td>Vroulik</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dui u ras aan</td>
<td></td>
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<tr>
<td></td>
<td>Swart</td>
<td>Blank</td>
<td>Kleurling</td>
<td>Indiëër</td>
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<tr>
<td>Dui u posgraad aan</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 - 5</td>
<td>6 - 8</td>
<td>9 - 14</td>
<td>15 - 20</td>
<td></td>
</tr>
<tr>
<td>Dui u hoogste akademiese kwalifikasie aan</td>
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</tr>
<tr>
<td>Laer as matriek</td>
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<tr>
<td>Matriek</td>
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<td>Sertifikaat</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Diploma (Tegniese kollege of Technikon)</td>
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<td>Nagraadse graad</td>
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<td>Dui u afdeling aan</td>
<td></td>
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<tr>
<td>Epko Oil Seed Crushing</td>
<td></td>
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<td>Noordfed</td>
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<td>Opti Chicks</td>
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<td>Opti Voere</td>
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</table>

Kommentaar: ..........................................................................................................................
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<table>
<thead>
<tr>
<th></th>
<th>Stelling</th>
<th>Stem glad nie saam</th>
<th>Stem nie saam nie</th>
<th>Onseker</th>
<th>Stem saam</th>
<th>Stem beslis saam</th>
</tr>
</thead>
<tbody>
<tr>
<td>B 1</td>
<td>Ek het genoeg outonomie in my werk, sonder gedurige toesig.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 2</td>
<td>Ons onderneming laat my toe om kreatief te wees en verskillende maniere te beproef om my werk te doen.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 3</td>
<td>Werknemers in ons onderneming word toegelaat om besluite te neem sonder om omslagtige regverdigings- en goedkeurings procedures te moet volg.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 4</td>
<td>Werknemers in ons onderneming word aangemoedig om hul eie werk te bestuur en het die buigsaamheid om probleme op te los.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 5</td>
<td>Ek hoef selde dieselfde werkwyse of stappe te volg om my belangrikste take van die dag uit te voer.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 6</td>
<td>Ons onderneming stel gereeld nuwe dienste/produkte/prosesse bekend</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 7</td>
<td>Ons onderneming plaas sterk klem op nuwe en innoverende produkte/dienste/prosesse.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 8</td>
<td>Ons onderneming het die getal dienste/produkte wat aangebied word gedurende die afgelope twee jaar uitgebrei.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 9</td>
<td>Ons onderneming ontgin gedurig nuwe geleenthede.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 10</td>
<td>Ons prosesse, dienste en produkreekse het oor die afgelope paar jaar nogal beduidend verander.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 11</td>
<td>In ons onderneming is daar ’n sterk verwantskap tussen die getal nuwe idees wat geskep word en die getal nuwe idees wat suksesvol toegespas word.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 12</td>
<td>Ons onderneming plaas sterk klem op die deurlopende verbetering van produkte/ dienslewering/ prosesse.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 13</td>
<td>Ons onderneming het ’n algemene siening dat innovering absoluut noodsaaaklik is vir die toekoms van die onderneming.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 14</td>
<td>Ons leiers probeer waarde uit die geleenthede maksimeer sonder om bestaande modelle, strukture of hulpbronne te beperk.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Stelling</td>
<td>Stem glad nie saam</td>
<td>Stem nie saam nie</td>
<td>Onsker</td>
<td>Stem saam</td>
<td>Stem beslis saam</td>
</tr>
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</tr>
<tr>
<td>B 15</td>
<td>Ons onderneming benader onseker besluite gewoonlik onbeskroomd, met die doel om moontlike geleenthede ten beste te benut.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 16</td>
<td>Ons onderneming is oor die algemeen sterk op hoë risiko-projekte ingestel.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 17</td>
<td>As gevolg van die omgewing glo ons onderneming dat sterk en omvattende optrede nodig is om die onderneming se doelwitte te bereik.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 18</td>
<td>Werknemers word dikwels aangemoedig om berekende risiko's aan te gaan ten opsigte van nuwe idees.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 19</td>
<td>Die term &quot;risikonemer&quot; word as 'n positiewe eienskap vir werknemers in ons onderneming beskou.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 20</td>
<td>Ons onderneming is dikwels eerste met die bekendstelling van nuwe produkte/dienste/prosesse.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 21</td>
<td>Ons onderneming insieer gewoonlik stappe waarop mededingers reageer.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 22</td>
<td>Ons onderneming streef gedurig nuwe produkte/prosesse/dienste na.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 23</td>
<td>Ons onderneming hou gedurig marktendense dop en identifiseer toekomstige behoeftes van kliente.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 24</td>
<td>In die hantering van mededingers neem ons onderneming gewoonlik 'n baie mededingende &quot;skakel-die-mededinger-uit&quot;-houding in.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 25</td>
<td>Ons onderneming is baie aggressief en uiers mededingend.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 26</td>
<td>Ons onderneming neem 'n aggressiewe houding in om bedryfstendense wat 'n bedreiging vir ons oorlewing of mededingende posisie inhoud te bestry.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B 27</td>
<td>Ons onderneming weet wanneer dit gevaar loop om te aggressief op te tree (dit kan die naam van ons onderneming skade berokken of tot weerwraak van mededingers lei).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Kommentaar: ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………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AFDELING C: SUKSES WAT ERVAAR WORD

Hierdie afdeling bestaan uit 11 stellings. Dui asb. aan tot watter mate u met die stellings saam stem of nie saam stem nie. Merk asb. die toepaslike blok met ‘n X.

<table>
<thead>
<tr>
<th>Stelling</th>
<th>Stem glad nie saam</th>
<th>Stem nie saam nie</th>
<th>Onseker</th>
<th>Stem saam</th>
<th>Stem beslis saam</th>
</tr>
</thead>
<tbody>
<tr>
<td>C 1 Ons onderneming het oor die afgelope paar jaar omsetgroei ondervind.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 2 Ons onderneming het oor die afgelope paar jaar winsgroei ondervind.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 3 Ons onderneming het oor die afgelope paar jaar groei in markaandeel ondervind.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 4 Ons mededingende posisie van ons onderneming het oor die afgelope paar jaar verbeter.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 5 Die doeltreffendheid van ons onderneming (deur die regte dinge te doen) het oor die afgelope paar jaar verbeter.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 6 Die doelmatigheid van ons onderneming (deur dinge reg te doen) het oor die laaste paar jaar verbeter.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 7 In ons onderneming word werknemers as die waardevolste bate van die onderneming beskou.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 8 Ons onderneming is baie toegewy aan ons onderneming.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 9 Die moreel (werknemerbevrediging) van ons werknemers het oor die afgelope paar jaar verbeter.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 10 Die beeld (aansien) van ons onderneming, in vergelyking met ons mededingers, het oor die afgelope paar jaar verbeter.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C 11 Selfs gedurende moeilike ekonomiese tye word finansiële beleggings in navorsing en ontwikkeling/inoverende projekte in ons onderneming voortgesit.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Kommentaar: .................................................................................................................................
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Annexure B is a summary of interviews conducted with Mr. D. Marais, Managing Director of NWK and Mr. P.D. Jacobs, Manager of the Industrial division. The interviews were conducted in Afrikaans and are also captured in Afrikaans. The interviews were only used to guide the researcher in his study and the remarks are not directly used in the study.
Onderhoud met Mnr. P.D. Jacobs te Lichtenburg op 13 September 2012  
NWK Hoofkantoor om 08:00

’n Afspraak is met Mnr. Jacobs gemaak. Die entrepreneurship vraelys en agtergrond van die dissertasie is vooraf na Mnr. Jacobs gestuur. Tydens die onderhoud is Mnr. Jacobs gevra om ook ’n vraelys in te vul.

Tydens die onderhoud word basiese inligting oor die vraelys en die studie verskaf. Die basiese ontleiding van die resultate wat alreeds ontvang was, soos in die diagram hieronder, is aan Mnr. Jacobs getoon en bespreek.

<table>
<thead>
<tr>
<th></th>
<th>Future success</th>
<th>People development</th>
<th>Process measures</th>
<th>Financial measures</th>
<th>Competitive Aggressiveness</th>
<th>Proactiveness</th>
<th>Risk taking</th>
<th>Innovativeness</th>
<th>Autonomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary results 13 September 2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dit was vir Mnr. Jacobs verblydend om te sien dat die finansiële meting die hoogste is. Die risiko neming was nie ’n probleem nie, omdat NWK nie te veel risiko wil neem nie. Die vlak van Outonomie was ook verblydend en hoër as wat verwag was. Die stand van menslike ontwikkeling is teleurstellend aangesien baie opleiding en investerings in opleiding gemaak was en steeds aangaan. Mnr. Jacobs sal graag die finale ontledings wil sien. Hy stel voor dat die resultate aan die top bestuur voorgedra word as ook die verskillende departementshoofde.
Wat is u gevoel rondom entrepreneuriskap in ‘n organisasie?

Entrepreneuriëse gedrag binne in ’n organisasie kan baie goed wees en is noodsaaklik vir groei in die organisasie. Die hiërargiese strukture in ’n organisasie, mag ‘n demper plaas op entrepreneurs. Die stelsels en regulasies kan ‘n frustrasie wees vir entrepreneurs in die organisasie. Hierdie reëls en regulasies is nie noodwendig ‘n slegte ding nie, want dit reguleer die uitgawes van die organisasie. Daar moet verantwoordelik met die beleggers se geld gewerk word. Hierdie reëls, regulasies en strukture lei daartoe dat goedkeuring langer neem om te voltooi, maar is ook ‘n filter om te bepaal of die investerings goeie beleggings is. Hierdie was nog nooit ‘n buffer vir Mnr. Jacobs gewees nie en hy noem van uitbreidings wat NWK wel gemaak het in die hoender bedryf, bedrywe in Botswana, bemarkingsaksies en opgraderings van bestaande aanlegte.

Nadele van entrepreneuriskap kan wees dat die bestedings te maklik geskied en die kontrole oor die geld wat uitgaan misbruik of wanaangewend word. Hy vertel ook van ‘n insident waarby hy betrokke was, waar aslag te maklik toegestaan is en wat geleid het tot groot finansiële implikasies vir die organisasie.

Was daar al van tevore besluit om meer entrepreneuriëse elemente in die organisasie in te bring?

Nie direk nie, maar daar is besluit om sekere persone aan te stel wat ‘n voortvarende gedrag uitstraal en nuwe geleenthede kan identifiseer en ontgin.

Vorm entrepreneuriskap deel van NWK se visie?

Nie direk nie. Dit is wel noodsaaklik veral by die bedrywe.

Sou entrepreneuriskap as ‘n mededingende voordeel vir NWK gesien kan word in die toekoms?

Ja, daar is al reeds sekere nywerhede wat nuwe markte betree en groei. Besigheid uitbreidings veral in Afrika skep ‘n groter mark en die investering in die relatiewe nuwe markte gee vir NWK ‘n langtermyn mededingende voordeel in daardie gebiede.

Dra die opleidingsaksie by tot die ontwikkeling van entrepreneuriskap?

Dit dra by, maar dit was nie die hoof oogmerk van die opleidings aksies nie. Die opleiding gee vir die personeel die geleenthede en vaardighede om meer innoverend te
wees en die opleiding dra by om 'n gunstige kultuur te vestig, waarin entrepreneurs kan funksioneer.

Dink u die studie dra by tot NWK se ontwikkeling?

Dit dra verseker by en die resultate moet aan die relevante persone gerapporteer word.

Is daar enige interessante punte wat u graag sou wou sien in die studie?

Die ontleedings tussen die verskillende posgrade as ook die verkille tussen nywerhede.

Bespreking van die vergelyking tussen 20 Sleutels stelsel en die entrepreneurse vraelys.

'n Vergelyking tussen die 20 sleutel stelsel en die entrepreneurse vraelys is gemaak en met Mnr. Jacobs bespreek. Die vergelyking dui die korrelasies aan tussen die entrepreneurse oriëntasie en toekomstige sukses aan. Die tabel met die vergelykings word op die volgende bladsy getoon.

Mnr. Jacobs stem saam met die vergelyking en vul aan dat Sleutel 18 en 20 bydra tot die kompeterende aggressie van die organisasie (aangedui met 'n “o” op die tabel.)

Mnr. Jacobs is tevrede met die tabel en sal graag die vergelyking tussen entrepreneurse gedrag en die res van die opleidingsaksies wil sien.
<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cleaning and Organising</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Goal alignment</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Small Group Activities</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Reduce work in progress</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Quick changeover technology</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Kaizen of Operations</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Zero monitoring manufacturing/production</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Coupled manufacturing/production</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Maintaining machines and equipment</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Workplace discipline</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Quality assurance</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Developing your suppliers</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Eliminate waste</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Empowering employees to make improvements</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Skills versatility and cross training</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Production scheduling</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Efficiency control</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Using information systems</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Conserving energy and materials</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Leading technology</td>
<td></td>
</tr>
</tbody>
</table>
Onderhoud met Mnr. D. Marais te Lichtenburg op 13 September 2012
NWK Hoofkantoor om 09:00

’n Afspraak is met Mnr. Marais gemaak. Die entrepreneuriese vraelys en agtergrond van die dissertasie is vooraf na Mnr. Marais gestuur. Tydens die onderhoud is Mnr. Marais gevra om ook ‘n vraelys in te vul.

Tydens die onderhoud word basiese inligting oor die vraelys en die studie verskaf. Die basiese ontleding van die resultate wat alreeds ontvang was, soos in die diagram hieronder, is aan Mnr. Marais getoon en bespreek.

Preliminary results 13 September 2012

<table>
<thead>
<tr>
<th>Factor</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future success</td>
<td>3.5</td>
</tr>
<tr>
<td>People development</td>
<td>3.4</td>
</tr>
<tr>
<td>Process measures</td>
<td>3.5</td>
</tr>
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<td>Financial measures</td>
<td>3.4</td>
</tr>
<tr>
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</tr>
<tr>
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<td>3.2</td>
</tr>
<tr>
<td>Risk taking</td>
<td>3.1</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>3.2</td>
</tr>
<tr>
<td>Autonomy</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Dit was vir Mnr. Marais verblydend om te sien dat die finansiële meting die hoogste is. Die risiko is laag en kan verhoog, om meer entrepreneurs te wees. Die lae vlak van risiko neming kan ook spruit uit NWK se verlede waar baie min risiko’s geneem was. Die vlak van Autonomie was verblydend en hoër as wat verwag was. Dit is vir Mnr. Marais goed en kan die begin wees om mense se gedrag te verander. Die vlak van innovasie is ook bevredigend en kan positief aangewend word. Die stand van menslike ontwikkeling is teleurstellend aangesien baie opleiding en investerings in opleiding gemaak was en steeds aangaan. Hierdie punt moet meer ontleed word en daar moet gepoog word om te bepaal waar die tekortkoming is. Daar word geskat dat die gemiddelde leesig 3.4 uit 5 uit is en gee ‘n persentasie toedeling van 68%, wat vir Mnr. Marais nie te sleg is nie.
**Wat is u gevoel rondom entrepreneurskap in ’n organisasie?**

Dit is uitsluitend belangrik om entrepreneuriese gedrag binne ’n organisasie te kweek en aan te moedig. Daarvoor moet die gewende klimaat binne die organisasie geskep word.

Die hiërargiese strukture in ’n organisasie, mag ’n demper plaas op entrepreneurs. Die stelsels en regulasies kan ’n frustrasie wees vir entrepreneurs in die organisasie. Personeel moet verstaan dat ’n “nee” nie noodwendig ’n slecht teken is nie, maar wel ’n geleentheid om meer uit te vind, meer inligting in te win en ander opinies te kry.

Negatiewe effekte van entrepreneuriese ontwikkeling kan wees dat personeel opgelei word en die geleenthede gegun word, wat die persone dan gebruik vir hulle eie gewin. Misbruik van hulpbronne kan plaasvind. Indien te veel innovering geloots word, neem dit die personeel se aandag op en die persone kry nie meer hulle werk gedoen waarvoor hulle aangestel is nie. Investerings word aan personeel gemaak wat later na die kompetisie toe oorbeweeg. Ten spye van dit alles is dit nog steeds die moeite werd, want al word die individue uit die organisasie verwyn, behoort daar goeie idees in die organisasie agter te bly, waarmee voortgegaan kan word.

**Was daar al van tevore besluit om meer entrepreneuriese elemente in die organisasie in te bring?**

Ja, daar is ’n paar inisiatiewe wat ’n goeie klimaat skep vir entrepreneuriese gedrag. Geleenthede soos Stacato dra by tot die ontginning van kreatiewe idees. Die sluiting van samewerkingsooreenkomste met groter rolspelers, illustreer dat NWK bereid is om onsekerheid te kan hanteer.

**Vorm entrepreneureskap deel van NWK se visie?**

NWK het ’n visie om horisontaal en vertikaal te groei. Hierdie visie vereis entrepreneuriese gedrag om nuwe markte te ontgin en om bestaande markte te groei.

**Sou entrepreneureskap as ’n mededingende voordeel vir NWK gesien kan word in die toekoms?**

Ja, die belangrikste bate wat verkry word is “denkende mense”.

**Dra die opleidingsaksie by tot die ontwikkeling van entrepreneureskap?**
Dit dra by, dit skep die regte klimaat en stimuleer personeel om nuwe uitdaginge te aanvaar. Die kultuur binne NWK is 'n paar jaar terug ondersoek en die ondersoek het ook entrepreneuriëse elemente in die meting. Die opleiding is gefokus om aktiewe denkende personeel te stimuleer.

**Dink u die studie dra by tot NWK se ontwikkeling?**

Dit is 'n interessante onderwerp en dra verseker by en die resultate moet aan die relevante persone gerapporteer word.

**Is daar enige interessante punte wat u graag sou wou sien in die studie?**

Opleidings moontlikhede om entrepreneursekap in die organisasie te verbeter.
Verdere ontleding van die data.
Meer deurdagte tabel oor die vergelyking tussen die entrepreneursevrelys en die 20 Sleutel stelsel.
Die ontwikkeling van entrepreneursekap in 'n organisasie werk amper soos wat die "balanced score card" saamgestel is: die opleiding, interne stelsels en klantediens dra by tot die finansiële sukses van die organisasie alhoewel die finansiële resultate nie direk gedryf word nie. Entrepreneursekap is dieselfde, die faktore wat entrepreneursekap aanhelp word bevorder en nie entrepreneuriëse gedrag direk nie. Entrepreneursekap is 'n uitvloei van 'n reeks aksies.

**Bespreking van die vergelyking tussen 20 Sleutels stelsel en die entrepreneurse vraelys.**

'n Vergelyking tussen die 20 sleutel stelsel en die entrepreneursevrelys is gemaak en met Mnr. Marais bespreek. Die vergelyking dui die korrelasies aan tussen die entrepreneurse oriëntasie en toekomstige sukses. Die tabel met die vergelykings word op die volgende bladsy getoon.

Die gedagte om die vergelyking so te tref is baie interessant vir Mnr. Marais en hy stem saam met die vergelyking, maar vul aan dat Sleutel 18 en 20 bydra tot die kompetenterende aggressie van die organisasie (aangedui met 'n “o” op die tabel.)

Mnr. Marais het die tabel gehou om verder daarna te kyk en sal graag die vergelyking tussen entrepreneursevrelys gedrag en die res van die opleidingsaksies wil sien. 'n Latere afspraak moet gemaak word om die tabel verder te bespreek. Mnr. Marais stel voor dat hierdie tabel meer in diepte bekyk moet word en met ander relevante persone bespreek word.
### 20 Keys relationship diagramme

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
<th>Comments</th>
<th>Entrepreneurial orientation</th>
<th>Perceived success</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key 1</td>
<td>Cleaning and Organising</td>
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<tr>
<td>Key 2</td>
<td>Goal alignment</td>
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<tr>
<td>Key 3</td>
<td>Small Group Activities</td>
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<td>X</td>
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<tr>
<td>Key 4</td>
<td>Reduce work in progress</td>
<td></td>
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<tr>
<td>Key 5</td>
<td>Quick changeover technology</td>
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</tr>
<tr>
<td>Key 6</td>
<td>Kaizen of Operations</td>
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</tr>
<tr>
<td>Key 7</td>
<td>Zero monitoring manufacturing/production</td>
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<td></td>
</tr>
<tr>
<td>Key 8</td>
<td>Coupled manufacturing/production</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Key 9</td>
<td>Maintaining machines and equipment</td>
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<tr>
<td>Key 10</td>
<td>Workplace discipline</td>
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<tr>
<td>Key 11</td>
<td>Quality assurance</td>
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<tr>
<td>Key 12</td>
<td>Developing your suppliers</td>
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<tr>
<td>Key 13</td>
<td>Eliminate waste</td>
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<tr>
<td>Key 14</td>
<td>Empowering employees to make improvements</td>
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<td>X</td>
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<tr>
<td>Key 15</td>
<td>Skills versatility and cross training</td>
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<td>Key 16</td>
<td>Production scheduling</td>
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<tr>
<td>Key 17</td>
<td>Efficiency control</td>
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<tr>
<td>Key 18</td>
<td>Using information systems</td>
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<tr>
<td>Key 19</td>
<td>Conserving energy and materials</td>
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<tr>
<td>Key 20</td>
<td>Leading technology</td>
<td>X</td>
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</tr>
</tbody>
</table>

- **Autonomy**: X
- **Innovativeness**: X
- **Risk-taking**: X
- **Pro-activeness**: X
- **Competitive Aggressiveness**: X
- **Financial measures**: X
- **Process measures**: X
- **People development**: X
- **Future success**: X

**Comments**: Reduce risk, Knowledge resources