



**Telwiedrè (Pty) Ltd
trading as
Telwiedrè Voere**

**Compiled By
Bluebean 6 Consultancy**

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the requirements for the module
MBAC 812 – Company Project**

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SOLEMN DECLARATION – GROUP ASSIGNMENT

Module: Company Project

MBAC 812

Solemn declaration by students

We hereby declare that the assignment which we herewith submit to the North-West University as partial completion of the requirements set for the MBA degree, is our own work.

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EXECUTIVE SUMMARY

Telwiedrè Voere is a successful family-owned animal feed manufacturer situated in the north-eastern Free State. The company recently celebrated its 21st birthday, marking two decades during which the company grew from infancy to maturity.

The company faces all the risks typically associated with ventures operating in the agribusiness space, which Telwiedrè has managed to weather with relative ease. A prominent contributing factor is the strong business ethics upon which the business model is based.

Telwiedrè is performing well from a financial perspective. Its low operating and financial leverage are key characteristics that allow the business to adapt to a changing macro-environment.

Ters and Lollie Pretorius have a hands-on approach and are ably assisted by key members of the management team. The business has been focusing on manufacturing and sales, but with the operations ballooning over the last ten years, administrative processes and regulatory compliance will now receive more attention. Being a first-generation family business, aspects such as succession planning are also being considered.

Bluebean 6 Consultancy compiled this report for presentation to the board of directors and senior executives of Telwiedrè. The report aims to provide a background and understanding of Telwiedrè's operations, finances and market-related information. It also provides an in-depth analysis of both internal and external factors affecting Telwiedrè along with insights into its strengths and weaknesses. It was found that Telwiedrè currently follows a broad differentiating strategy.

Finally, a winning strategy is recommended, which aims to focus on specific matters, make recommendations, and provide an implementation plan that could address the proposed strategic objectives.

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- Sincere thanks to Ters and Lollie for providing us with the opportunity to be involved with Telwiedrè and entrusting us with privileged information to compile this report;
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"You ain't gonna achieve much in this game unless you keep your customers' customers happy"

Prof. Goldberg

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LIST OF ABBREVIATIONS

AFMA	Animal Feed Manufacturers Association
BI	Business Intelligence
BOM	Bill of Materials
bps	Basis Points
CEO	Chief Executive Officer
CFO	Chief Financial Officer
D/E	Debt-equity Ratio
ERP	Enterprise Resource Planning
FY	Financial Year
HR	Human Resources
ISO	International Organization for Standardization
JSE	Johannesburg Stock Exchange
M&A	Merger and Acquisition
MMT	Million Metric Tons
NIRS	Near Infrared Spectrometer
NPM	Nett Profit Margin
NPV	Nett Present Value
R&D	Research and Development
ROE	Return on Equity
SIC	Standard Industrial Classification
STEEPL	Social, Technological, Economic, Environmental, Political and Legal
SWOT	Strengths, Weaknesses, Opportunities and Threats
USA	United States of America
USD	US Dollar
VRIO	Value, Rarity, Imitability and Organisation
VSD	Variable Speed Drive
WACC	Weighted Average Cost of Capital

BLUEBEAN 6 CONSULTANCY

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1 SECTION A – CASE STUDY

Introduction

Telwiedrè (Pty) Ltd, trading as Telwiedrè Voere (Telwiedrè), is a successful first-generation, family-owned and run animal feed manufacturing business situated in the small town of Heilbron in the north-eastern Free State. The key persons in the company are Mr HL Pretorius (Ters) and his wife, Mrs SC Pretorius (Lollie), who started the business more than two decades ago.

The company manufactures a comprehensive range of animal feeds, which is sold into a highly competitive market where quality and price are key considerations. Forming part of the wider agribusiness value chain, the company is exposed to risks and opportunities typical to the sector. These include exponential technological advancement, severe climatic conditions, commodity price movements, dynamically changing consumer preferences and a changing regulatory environment.

The micro- and macro-environment are complex. To successfully navigate and achieve its medium- and long-term business objectives, Telwiedrè requires a competent and focused management team. Ters and Lollie are keenly aware of these challenges and have decided to give this matter careful thought.

Background and Company History

The Telwiedrè name was crafted in 1977 by the late Mr Pretorius when he combined the names of his four children – “T” (Ters), “el” (Elzette), “wie” (Gawie) and “drè” (Andrè). The name encapsulates the strong foundations and values upon which the business was built.

In November 1995, Ters completed his final exams and obtained a national diploma in agricultural management. Soon thereafter, he joined the family farming business, focusing on the pig farming side of the operations. In June of 1996, Ters’ father passed away and Ters took over the pig farm while his brothers concentrated on crop farming.

Compared to today, a piggery was fairly simple to manage in 1996 as limited science was applied, especially on the feed side. The pig feed was prepared manually on the farm using existing farm labour and mechanical implements. Telwiedrè used its own maize and mixed it with other off-the-shelf ingredients to create its own pig feed. This

approach and methodology were commonly used among pig farmers at the time. These farmers also formed study groups who shared best practices and compared production results. Ters belonged to this group, which allowed him to benchmark his operations and results.

The South African government abolished its various agricultural marketing boards, including the maize board, in 1996. This suddenly left farmers exposed to the free trade of their commodities, which they did not have the experience or expertise to deal with. However, the South African Futures Exchange was founded in 1996, which gave farmers the opportunity to trade and hedge their respective commodity positions. Again, farmers had limited knowledge and understanding of these markets and many farmers lost fortunes during this time of uncertainty. These developments, combined with other factors such as a large local crop, saw the South African maize price drop to extremely low levels. At these prices, it was not possible to farm maize profitably. In contrast, Telwiedrè's piggery was performing well financially, which encouraged Ters to devise a plan to improve his piggery venture further.

The Emerging Phase

Following on the success of the piggery, Ters decided to enter into a barter transaction with Mr Dalein Heyl, an old family friend, and his company called Dalein (Pty) Ltd (Dalein). Dalein was involved in engineering services and manufactured implements and equipment for the agricultural industry. Through negotiations it was agreed that Dalein would erect a small feed-milling plant in exchange for maize and other products. The new feed mill came into production in February 1998 and was used to mix feed for the piggery.

The new, more automated feed-manufacturing process made it possible for Telwiedrè to mix feed from different recipes. Soon the production results of the piggery surpassed those of his peers in the study group. By December 1998, the feed mill was manufacturing 100 tons of feed per month, supplying the 300-sow piggery unit.

After reporting their results to the study group, members asked Telwiedrè to also mix feed for them on an informal basis, thereby marking the start of Telwiedrè as a commercial venture. Being informal, Telwiedrè was largely oblivious to the regulatory aspects governing the manufacturing of animal feeds. This being said, Telwiedrè did start to use the services of renowned animal feed scientist, Mr Rick Kleyn.

In June 1999, a neighbouring cattle farmer experienced labour issues and subsequently could not mix his own feed as before. As a result, the farmer asked Telwiedrè to manufacture feed for his cattle. While Telwiedrè had never manufactured feed for ruminants before, Ters accepted the challenge and started mixing feed for the cattle farmer's 2000-cow strong herd. This triggered the creation of the Mispah lick product range. Named after the neighbour's farm, this new product range, with its biblical association, catapulted Telwiedrè into a new league as far as animal feed manufacturing was concerned. The Mispah lick range remains a core product in the Telwiedrè product range. Not only did this feed form the basis upon which many other products were eventually developed, but it also created an opportunity for Telwiedrè to enter agricultural regions as far as Kuruman to the west and Barkley East to the south.

At the end of 1999, Telwiedrè's mill was manufacturing about 350 tons of ruminant and non-ruminant (referred to as multi-species) feed per month and had the capacity to manufacture up to 500 tons per month on a single shift. Manufacturing multi-species feed using one plant presented specific challenges and risks, such as the residue of ruminant feed being poisonous to non-ruminants. Also, while the plant capacity was adequate at the time, supporting services such as weighbridges and laboratories were lacking. Although Telwiedrè improvised, it was overstretched in terms of capacity. Between 1999 and 2000, and mainly through word-of-mouth marketing, Telwiedrè sold to ten local farmers, including five piggeries, three cattle farmers and two new poultry farmers.

In 2001, nearly three years after inception, Telwiedrè realised its first profits.

The Master Plan

In order to keep up with its growing operations, the plant was upgraded and expanded five times between 1999 and 2005. Records show that in 2003, Telwiedrè employed 25 people in each of their daily double shifts, which were then increased to a triple shift. Through plant expansions and triple shifts, it managed to increase capacity to about 1 300 tons a month. By 2005, Telwiedrè had about 40 customers with depots in Heilbron, Frankfort and Reitz. At this stage, it also appointed its first marketer.

Telwiedrè already realised in 2004 that being headquartered on the farm was not going to be commercially practical as the remoteness of the farm presented many

challenges. By 2006, Telwiedrè was manufacturing a wide range of animal feeds for all ruminants and non-ruminants. Its production peaked at 2 200 tons per month, which were sold to about 70 customers. Now on the radar of the local agricultural cooperatives, it started to sell the products via these channels. Local competitors, today known as AFGRI Feeds, NUTRI Feeds, Voermol, Sernick and Meadow Feeds, started to take note of Telwiedrè. Logistically, Telwiedrè targeted farmers in a radius of 150 km from Heilbron but its Mispah lick product range could be sold further afield. With both business and operations getting more complex, Telwiedrè invited Dr Marthinus Hermann, ex-chief executive officer (CEO) of Clover, to become a director. Dr Hermann assisted with the master plan to position Telwiedrè as a major player in animal feeds in the traditional Riemland region. This plan, which was finalised in the same year, included:

- Purchasing a property in Heilbron from Clover and relocating its headquarters and primary manufacturing operations from the farm to Heilbron.
- Increasing the capacity of the new plant to manufacture 6 000 tons per month.
- Expanding Telwiedrè's product range with the new mill, which included a pelleting plant, and dividing the ruminant and non-ruminant manufacturing processes to avoid any cross-contamination.
- Improving operational and logistical layouts to cater for bulk delivery and product handling.
- Considering its logo, branding and trading name.

Expansion and Diversification

This bold strategy of building a new plant was financed by obtaining a bank loan to the amount of R3.8m. Telwiedrè saw this as a huge leap of faith. Telwiedrè approached its reliable partner, Dalein, to construct the new plant. Having been involved with Telwiedrè for about a decade at this stage, Dalein had a firm understanding of Telwiedrè's operational requirements. The new plant was commissioned in 2007.

A market research company did extensive research regarding the logo, branding and trading name of Telwiedrè. They recommended that the trading name should remain unchanged because the Telwiedrè brand name had become synonymous with quality, excellence and personalised customer service and was also well established among

its wide customer base. They did, however, recommend minor changes to the logo and signage.

Furthermore, 2007 saw Telwiedrè landing its first mega-customer, which by definition is a customer who orders more than 500 tons of feed per month on an ongoing basis (i.e. not a special order). The first weighbridge and first bulk-loading capability became operational in 2008, which allowed Telwiedrè to accommodate its bulk customers effectively; therefore, paving the way to land more mega-customers in time to come.

Telwiedrè's much-anticipated pelleting plant was commissioned in 2009 and immediately presented game-changing possibilities. It made it possible to manufacture feed for the poultry sector – a horizontal shift and unrelated business. In doing so, Telwiedrè's total product range expanded to 45 product lines. While Telwiedrè's overall profit margin did not benefit, the fact that it had a much broader basket of products to offer turned the company into a major local player. Telwiedrè exceeded the R100m turnover level for the first time in 2009.

With production volumes ballooning and customer service flagged as being of prime importance, Telwiedrè decided to buy back its logistics business, Bloemdrè Vervoer, which was sold to another contractor two years before. This vertical integration made it possible for Telwiedrè to render better customer service with quality products being delivered on time. Logistical efficiency further allowed Telwiedrè to carry less buffer stock and indirectly had a positive impact on the trade debtor collection period as backorders and sales returns reduced. Even today, Telwiedrè's working capital management is probably industry leading, which offers a major competitive advantage with the cash conversation cycle being an impressive eight days.

In 2010, Ters embarked on a fact-finding mission to Europe. It was generally accepted that Europe was the global leader in the field of animal feed manufacturing. A major breakthrough came when Ters returned to Telwiedrè with the firm intention to build the first full-fat soya processing plant in South Africa. Using full-fat soya in animal feeds made it possible to improve feed quality significantly. Telwiedrè commissioned this full-fat soya plant in the name of Extrotech (a wholly owned subsidiary of Telwiedrè).

In order to improve its feed quality further, Telwiedrè identified the need to ensure that all raw products going into the production process meet minimum quality standards. At this stage, Telwiedrè was indeed setting its own, very high standards. To do so,

Telwiedrè purchased a near infrared spectrometer (NIRS). This device analyses raw materials on delivery, ensuring that only products meeting the specific requirements found its way into the silo storage facilities. In the past, specimen raw materials had to be couriered to laboratories with a general waiting time of three days for results. Having biohazard risks in mind, the lick plant was also finally divorced from other operations where feed for non-ruminants were manufactured.

By the end of 2010, Telwiedrè was satisfied that all the major objectives of its 2007 strategic plan had been achieved. The significant changes made since 2007 were endorsed in 2011 when full International Organization for Standardization (ISO) 2008 accreditation was obtained. All the disciplined hard work reaped its intended reward when Telwiedrè landed its second mega-customer in 2011.

Telwiedrè was committed to expand its operations even more. The next opportunity arose in 2012 when Telwiedrè formed a partnership with the Botha family in Trompsburg to set up a micro-production plant. This production plant is owned by the Botha family who manufactures feed under contract from Telwiedrè. These partnerships mean that Telwiedrè provides the raw material and recipes and that only the manufacturing is outsourced. Therefore, Telwiedrè retains responsibility and oversight on quality and price. The Trompsburg plant only manufactures feed for sheep and cattle, hence the reference to a micro-production plant. While micro in size, it does allow Telwiedrè access to the southern regions of the Free State and is thus of key strategic importance. The Trompsburg plant is located 500 km from the primary operations at Heilbron; therefore, it significantly expands Telwiedrè's viable geographic reach. Johan Botha, the owner of the plant, has his own trucks. To ensure an equitable arrangement, the distribution of Telwiedrè's product was sub-contracted.

The expansion of the production plant necessitated more space for an administration building, and Telwiedrè purchased a 3 000 m² office and storage building from Clover in 2013. In 2014, Telwiedrè and the Van Zyl family in Bothaville concluded a similar arrangement as the arrangement already in place in Trompsburg with the Botha family. Only this time, another mega modern plant was envisaged. The plant belongs to the Van Zyl family and manufactures feed using recipes provided by Telwiedrè. Likewise, being a mega-facility and operating out of Bothaville, it provided an excellent logistics hub and access into central and western Free State.

In the same year, Telwiedrè gained its third mega-customer and was now firmly entrenched as a reputable animal feed manufacturer. But these expansions brought increased food safety compliance requirements. Telwiedrè was now exposed to large South African retailers wanting to inspect its manufacturing facilities. Although stringent additional requirements were set, Telwiedrè passed all the checks with ease.

The year 2015 brought further capital expenditure and production expansion for Telwiedrè as it imported a second pelleting machine from Switzerland and installed a second weighbridge and a second bulk-loading facility. These expansions not only enabled Telwiedrè to gain its fourth and fifth mega-customers, but it was also the first time that Telwiedrè exceeded the R500m turnover mark. The expansions did not stop there: to increase production in Bothaville, a new pelleting machine was purchased, and larger storage facilities were built in 2017. At this stage, Telwiedrè was generating almost R1bn turnover per annum.

Looking Beyond the Horizon

With these capital expansions and production changes, Telwiedrè is currently able to produce the following volumes (Table 1):

Table 1: Telwiedrè production volumes

Plant	Current production	Current capacity
Heilbron	9 000–10 000 tons/month	12 000 tons/month
Bothaville	4 000–6 000 tons/month	12 000 tons/month
Trompsburg	700–1 000 tons/month	1 400 tons/month

These production volumes solidified Telwiedrè as a major animal feed manufacturer in central South Africa. Over the space of 21 years, it grew exponentially and today competes head-on with national conglomerates such as AFGRI, Meadow, Voermol and Molatek. Telwiedrè has implemented best-in-class technologies and prides itself in producing quality products and providing excellent customer service. To show their dedication, Telwiedrè's production plants all became ISO 2015 accredited in December 2018.

Telwiedrè has the proprietary services of one of the world's leading animal feed nutrition scientists at its disposal. Coupled with the personalised services and involvement of Ters and the technical capabilities to manufacture to individual

specifications, Telwiedrè has a competitive edge second to none. With continued foresight and quest for excellence and automation, Telwiedrè's manufacturing operations in Heilbron underwent further modernisation when all manufacturing processes were digitised in April 2019.

The Telwiedrè Experience

Telwiedrè's excellent customer service is something to be experienced. It includes personalised interaction with Ters and the purchase of top quality, bespoke animal feed products. With a relatively low profit margin intrinsic to the sector, the business model is based on high volumes and low margins, making it a volume play. However, the Telwiedrè experience is aimed at changing the product from what could have been considered a commoditised product to a bespoke product range and thereby trying to achieve better margins.

The Telwiedrè experience is a unique value proposition. Telwiedrè values its business relationships, which can be described as partnerships for life. This is evident as once Telwiedrè gains a business customer, the customer rarely leaves. Telwiedrè's 20-year partnership with Dalein is another example. The company has a very low staff turnover, and the animal feed scientist contracted in the 1990s is still Telwiedrè's primary scientist today. Telwiedrè also has not changed auditors or bankers since its humble beginnings. This unique organisational culture signals reliability and trust, which underpins the financial performance of the company. Modern business ventures often do not exhibit these characteristics, making the Telwiedrè experience unique and rare. This organisational culture, as described, can only be achieved by constant delivery over a prolonged period of time.

In retrospect, the strategic plan developed in 2007 and executed meticulously thereafter achieved remarkable results. However, Ters and Lollie currently wear many hats in the business and carry huge responsibilities, which bring along several risks. This aspect is being given thought by Ters and Lollie, but no firm decisions have been taken yet.

Market and Industry

South Africa is ranked 22 globally (and number one in Africa) in terms of the size of its animal feed manufacturing sector. In 2017, South Africa produced 11.1 million metric tons (MMT) of animal feed; the value of production was estimated to be R50bn. China is ranked globally as the number one feed manufacturer, producing 187 MMT per annum (Bosman, 2018).

Figure 1 shows South Africa's national feed sales for the years 2011 to 2017. The chart reveals that poultry (broilers and layers) and beef/sheep are the major users of animal feeds. It is evident that during drought periods, national feed sales increase. Given the overall generally flat trend, the industry is not seen as a growth industry. Forming part of the wider agribusiness value chain, the low growth trajectory is possibly as a result of the very low business confidence currently being experienced in the agriculture as depicted in Figure 2 (Agbiz, 2019).

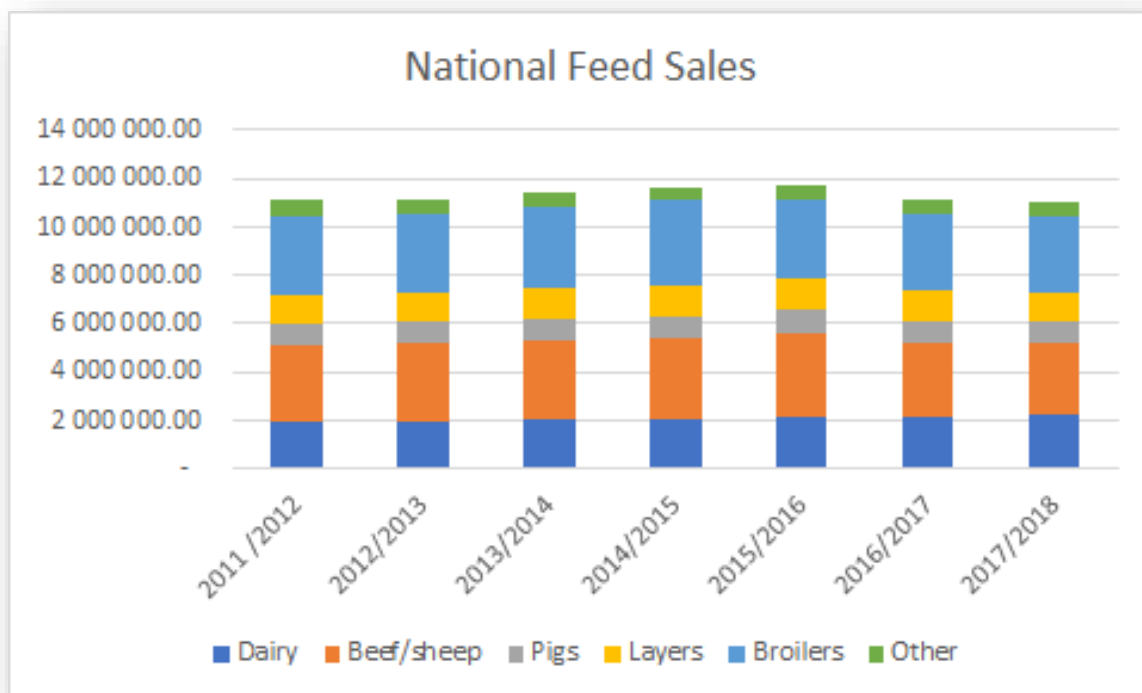


Figure 1: South African national feed sales (2011–2017) (Dunn, 2018)

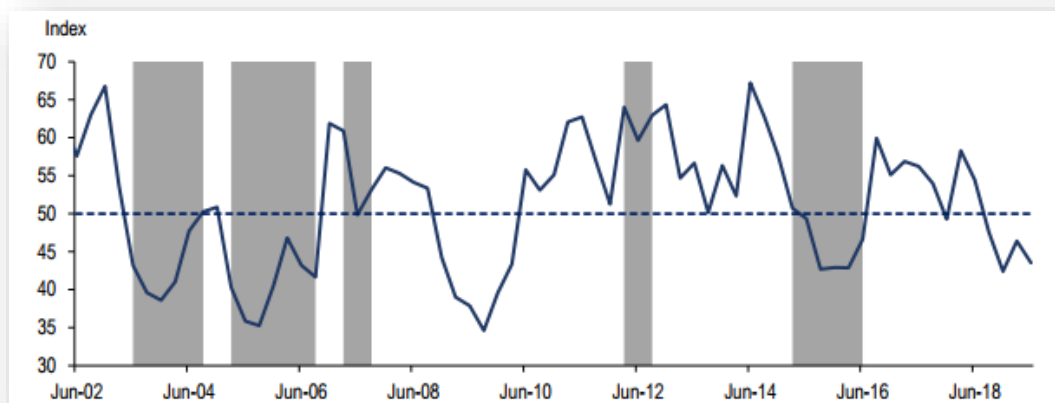


Figure 2: Business confidence in agriculture (Agbiz, 2019)

The Animal Feed Manufacturers Association (AFMA), the representative industry body for feed manufacturers, maintains the sales information. AFMA members are committed to acting responsibly by ensuring feeds are safe for consumption. Further, from an economic classification perspective, the Standard Industrial Classification (SIC) Code 30330 applies, which is described as “manufacture of prepared animal feeds and pet foods” (Dunn, 2018). The industry is therefore well defined and understood by all stakeholders, including analysts, regulatory authorities, economic planning agencies and other practitioners.

AFMA states that they have 71-member mills, and that their top eight members collectively operate 38 of these listed mills. AFMA reported in 2017 that the combined production of Meadow Feeds, Quantum Feeds and RCL Feeds came to 2372 MMT or 21.5% of the total production. From this perspective, the industry seems to be concentrated, but also vertically (forward) integrated as these conglomerates also principally sell to their own poultry farming operations. AFMA further has 33 associate members who supply premix, feed additives and veterinary products. Table 2 reflects the regional distribution of AFMA’s full mills (where the member’s head office is registered).

The industry is subject to ongoing regulatory review. Most recently, the new Feeds and Pet Food Bill was drafted and published in the January 2019 Government Gazette. Consultation on the Bill commenced in March 2019 and promulgation thereof is expected in the distant future. The Bill was drafted to regulate the feed and pet food industry to cover aspects such as feed ingredients, and licensing and registration of

facilities used in the manufacturing process. It makes provision to appoint a registrar to administer the regulatory process. The Bill's purpose is to protect the consumer and users of feed and pet food by ensuring compliance with food safety standards (Bosman, 2018).

Table 2: Regional distribution of AFMA's full mills

Province	No. of feed mills
Eastern Cape	5
Gauteng	8
Free State	10
KZN	8
Mpumalanga	8
Northern Cape	5
North West	5
Western Cape	11

Over and above regulatory bodies and government legislation, additional factors affecting the feed manufacturer industry in general include (Bosman, 2018):

- New water, carbon tax and labour legislation, which will place additional administrative and financial burdens on industry players.
- Manufacturers are generally located in rural areas where socio-economic problems, coupled with lacking infrastructure and services present ongoing challenges.
- Operating costs are starting to escalate (e.g. utilities, labour, environmental taxes).
- Local research capabilities have deteriorated, thus there is more reliance on foreign research results. Furthermore, local manufacturers must invest and develop their own laboratory capabilities.
- Changing consumer preferences mean that new requirements are continuously put on animal feed manufacturers.

The number of commercial farmers is declining as smaller farming units are absorbed by larger farming units. Therefore, the target market is getting more concentrated, which leads to strong competition among animal feed suppliers to sell to these large

farming units. Consequently, large commercial farmers have very strong buying power. To overcome some challenges, newer technologies being investigated include:

- Investigating energy and water efficiencies.
- Pursuing advanced processing technologies such as fine grinding, optimum mixing uniformity to improve feed utilisation, pelleting and high-shear conditioning.
- Using information technologies such as linear programming and recipe management software to calculate optimum nutritionally balanced feed formulas and create innovative feed products.
- Applying block chain technologies to enhance farm-to-fork traceability.
- Identifying new sources of protein. The protein content in animal feeds is an important measure. More recently black soldier flies, larvae, silkworms and mealworms have been identified as potential sources of protein. The commercial viability thereof is yet to be tested.

There is strong emphasis on the raw materials going into the manufacturing process. These raw materials are soft commodities that can be subject to dramatic cyclical price movements. In turn, these movements have a direct impact on the manufacturing cost of the final feed product. It is not always possible to pass these price movements to customers, thus profitability in the sector can vary significantly over a period of time.

Larger competitors with adequate capital reserves have the benefit of being able to buy raw materials in advance, thereby creating certainty of the unit cost of production. This predictability makes it possible to secure more favourable offtake agreements. The ability to eliminate price risk seems to be a competitive advantage. However, this does mean that more capital is invested in physical stock or hedging instruments in order to reduce these risks. Additionally, the transport costs associated with the movement of animal feeds has a major impact on the all-in cost to the offtaker.

South African animal feed manufacturers do not receive any government support (i.e. subsidies or grants). It is often cheaper to produce raw materials such as soya and grain in regions such as Brazil. The combination of these factors suggests that it will be difficult to export South African animal feeds competitively to the rest of the world.

In an effort to eliminate as much of these costs as possible, animal feed manufacturers tend to serve a particular local market or region as transport costs tend to destroy

profitability. It is believed that the consistent supply of animal feeds of a high quality at competitive prices are the main drivers of supplier/buyer relationships. To achieve this, scalability is of the essence and industry experts believe that the sector would need to follow a path of integration to extract efficiencies and synergies.

The majority of animal feed manufacturing operations are forward integrated into primary farming operations such as broiler-farming operations. There are various examples of this integration happening, all of who are major competitors of Telwiedrè, for example;

- Q-Pro Animal Feeds, which originated from a merger between TripleV Animal Feeds and Nu-Pro. Free State Oil is a major supplier of protein (soya oil cake) to Q-Pro. Grain Fields Chickens is the major offtaker to Q-Pro. It is therefore strongly backward and forward integrated.
- Meadow Feeds is a subsidiary of Astral Foods, a major listed company. Meadow Feeds has a major national reach and with Astral as its primary offtaker is strongly forward integrated.
- NUTRI Feeds is part of previously Johannesburg Stock Exchange (JSE) listed company Country Bird Holdings. As such, NUTRI Feeds is also strongly forward integrated.
- Serfco Animal Feeds is part of the Sernick Group and is also strongly forward integrated.

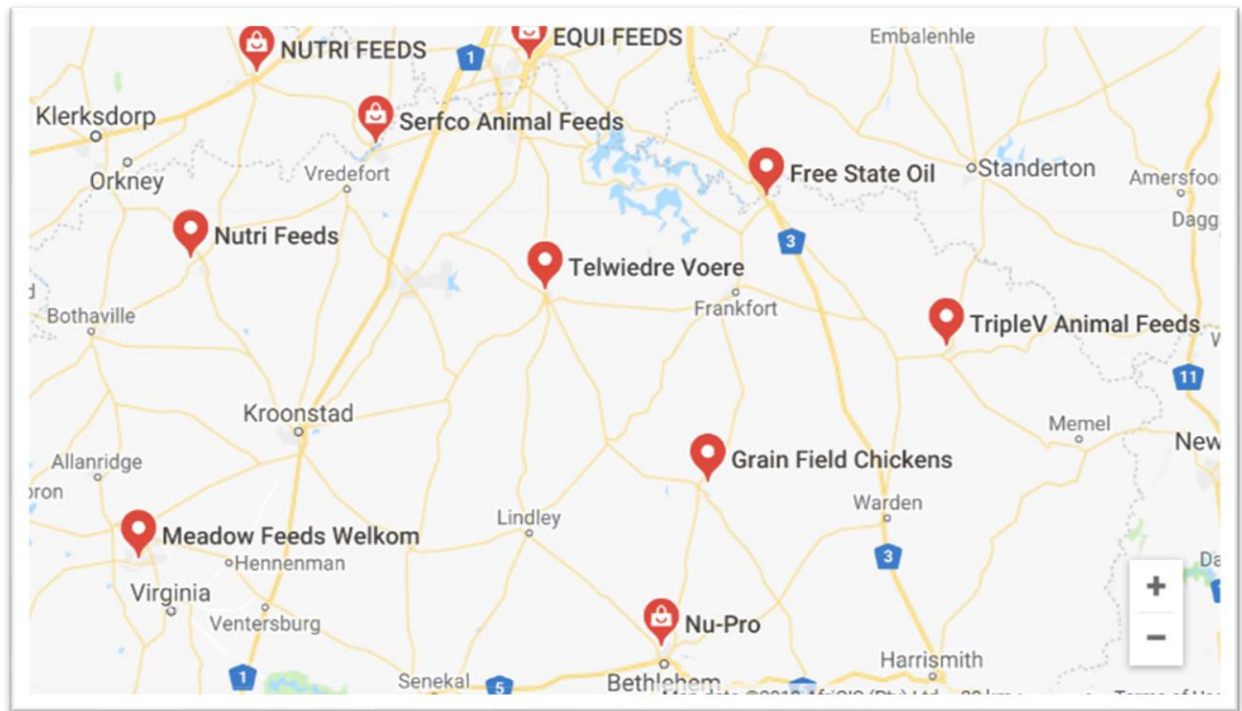


Figure 3: Geographic locations of key feed mills

The question being asked is if it is realistically possible to backward integrate into the supplier base. For example:

- Grain-milling operations are the major suppliers of chop and bran to animal feed manufacturers; however, this is a by-product for grain-milling operations. At the same time, these grain millers are renowned for their ability to manage commodity price risk. Perhaps there are synergistic benefits to this common need?
- Similarly, sugar-milling operations produce molasses as a by-product. These by-products are produced and sold in bulk. There may be opportunities for these suppliers to integrate into animal feeds as they can participate in the value chain at higher margins.

Animal feeds are often manufactured to a particular specification set by the offtaker. If the emphasis moves from being a generic supplier of animal feeds to becoming a business partner to the offtaker, it may be possible to create a strong affinity.

Strong alliances and integration exist in the broiler industry, but less so in layers and even less so among the rapidly growing piggeries.

Financial Overview

Table 3 provides a financial overview of Telwiedrè, using the 2016 financial year (FY'16) as the base.

Ters and Lollie are conservative when it comes to financial matters. They are generally debt averse but realise that continued investment in property, plant and equipment is necessary. This will ensure that the operations are set up in an optimal manner and in doing so will ensure long-term sustainability. Similarly, liquidity management is extremely important and receives considerable attention.

The quality and collectability of trade debtors are evaluated continuously. The reason for the keen focus on these matters is because the operating margin in 2017 was as low as 1.90%. Consequently, there is no room for error. The low operating margin (which is intrinsic to the industry) brings concepts such as overtrading to the fore, thus new business is scrutinised carefully.

Table 3: Financial overview of Telwiedrè

	2016	2017	2018	Comment
Sales growth	Base	Up 23.75%	Flat	FY'17 growth linked to Bothaville capacity increase.
Gross margin	Base	Down 288 basis points (bps)	Up 316 bps	Sales growth was achieved through aggressive pricing. Normalised in FY'18.
Operating margin	Base	Down 162 bps	Up 243 bps	Mainly because of movements in gross margin.
Change in operating cost	Base	Flat	Flat	Operating costs are fixed.
Debt/equity	45.57%	51.21%	35.87%	Interest-bearing debt to equity.
Current ratio	1.74:1	1.69:1	1.70:1	
Quick ratio	1.49:1	1.40:1	1.50:1	
Total asset turnover (days)	89	74	91	Number of days in which total assets are turned over.
Fixed asset turnover (days)	30	25	27	Number of days in which fixed assets are turned over.

	2016	2017	2018	Comment
Debtor collection (days)	41	31	36	Number of days it takes to collect trade debtors.
Creditors period (days)	32	25	34	Days in which creditors are paid.
Stock turnover (days)	9	8	8	Number of days it takes to turn over stock.
Basic earnings power	14.41%	9.38%	17.35%	Sales generated by fixed operating assets.
Return on total assets	8.80%	5.85%	12.73%	
Return on equity	19.3%	13.21%	26.12%	
Interest cover (times)	10.64	6.81	16.15	

The Future

In 2019, Telwiedrè met with a group of consultants to evaluate the company's potential risks and opportunities. Evidence suggests that the business has an acceptable level of operational agility. It can adapt to changing customer demands and the favourable internal working relationship between unit heads means that production flexibility is possible.

Currently, Telwiedrè mainly interacts with customers on a personal basis with limited digital means and related capabilities. Telwiedrè has in the past and still is investing heavily in its manufacturing processes. The aim is to optimise business operations to achieve cost competitiveness.

Telwiedrè has some key matters to debate:

- Should it consider a stronger integrated model?
- Given the industry complexities, is its board and management suitably capacitated?
- How should it think about succession planning?
- How will uncertainty and low investment confidence affect its customer base?
- What are the next strategic and operational moves of its main competitors?

2 SECTION B – INTERNAL ANALYSIS

2.1 Why Animal Feed Matters

The Futures Centre publishes various reports on a wide range of topics, including sustainable nutrition. According to the Centre, animal feed is gaining pivotal importance for the reasons set out in this section (The Futures Centre, 2019).

During the last 30 years, agricultural production systems have expanded and intensified. At the same time, biodiversity has plummeted. It is believed that the world's fish, bird, mammal and other vertebrates declined by about 60% between 1970 and 2012, mainly as a result of human population growth and the consumption demands placed on natural resources. The natural environment changed to accommodate human settlement needs. Now, land use to support biodiversity and increase carbon storage must be prioritised. Feed production systems can support this goal (The Futures Centre, 2019).

Feed nutrition has a major impact on animal health and welfare, and also greatly affects the end product (meat, milk, eggs and other animal products). Cost associated with animal feed is a major expense for the farmer, representing up to 60% of the total production cost. Therefore, there is a correlation between animal health and costs to producers and animal feed suppliers who can ensure animal health at a lower cost will gain a competitive advantage (The Futures Centre, 2019).

Research suggests that more than 280 million hectares of extra agricultural land will be needed by 2030 to cater for the increase in demand for animal protein. This area is roughly the size of central Europe. Thus, more efficient protein sources and ways to convert these into consumable forms must be found (The Futures Centre, 2019).

Figure 4 shows that there is a correlation between world population and meat production. To meet this demand, more intensive farming operations are expected, which will affect animal feed production (The Futures Centre, 2019).

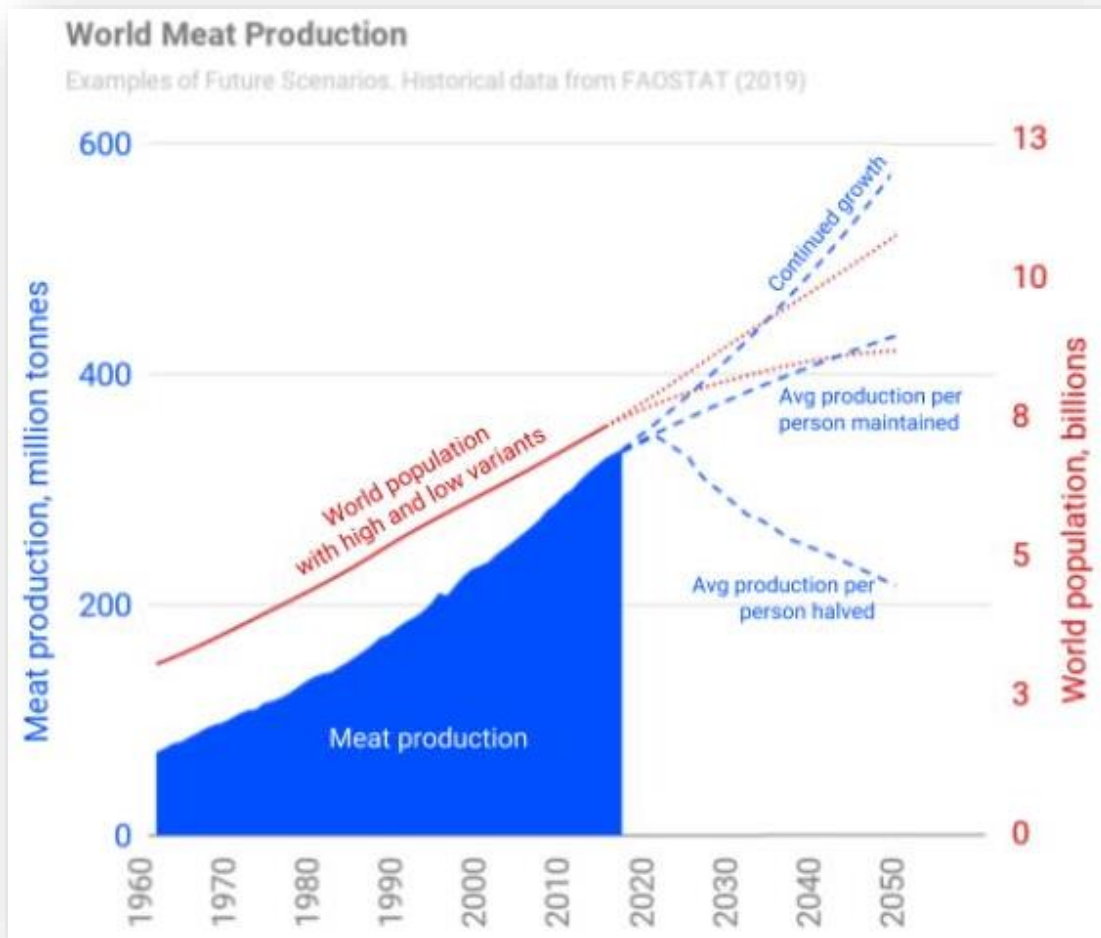


Figure 4: World meat production graph (The Futures Centre, 2019)

Experts interviewed by The Futures Centre sketch the following scenarios (The Futures Centre, 2019):

- Lower demand for animal feed – by optimising animal feeding programmes and shifting human diets towards less and better animal protein. An important aspect of this scenario is a shift towards healthier human diets that include “diverse plant-protein sources, grown in more regenerative or agro-ecological farming systems”.
- Increased innovative/ground-breaking feed ingredients – which deliver improved land usage and lower greenhouse gas emissions. These ingredients can include single-cell proteins, algae, insects and amino acids.
- Better sustainability of existing feedstocks. Examples include improvements relating to the traceability and transparency of supply chains, ingredients that do not promote deforestation, increased use of regenerative agricultural

processes, and feed solutions which improves feed-to-food conversion efficiency.

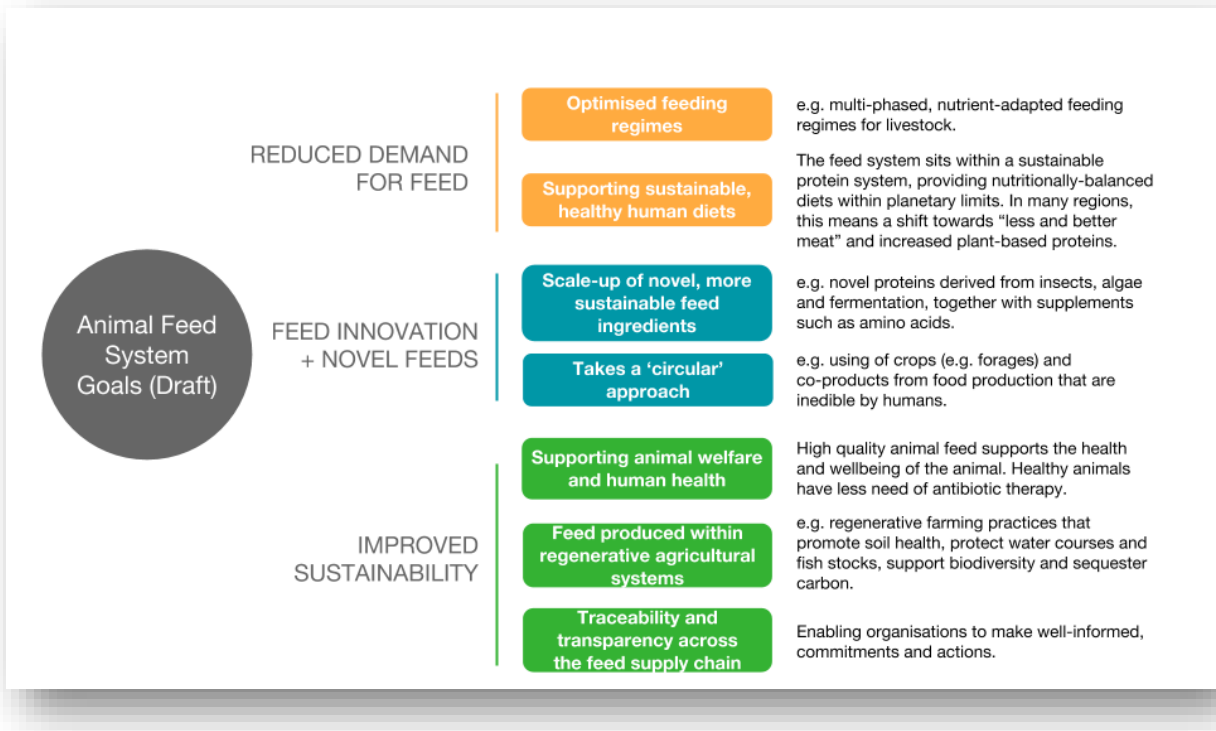


Figure 5: Animal feed system goals (The Futures Centre, 2019)

It is evident that the animal feed industry can and must play a pivotal role to make the food system more sustainable.

2.2 Introduction

This chapter covers the internal operations and practices of Telwiedrè. The analysis was performed to identify all of its resource capabilities and areas of improvement. This information can be used to assist in developing a strategy that could enhance the strategic competitive advantage (Ungerer *et al.*, 2016:159).

2.3 Current Strategy

When considering Telwiedrè business operations, including the financial results that it has achieved over the last ten years, it is evident that the company is pursuing a broad differentiating business strategy.

Telwiedrè offers its customers unique product features that a wide range of customers find appealing and are willing to pay for. This strategy has allowed Telwiedrè to gain buyer loyalty to its brand and to increase unit sales.

Telwiedrè has been able to enhance its differentiation by:

- Creating superior product features that allowed its customers to achieve better results. In this regard, having a world-renowned animal feed scientist on its team has been beneficial. The superior product features are further highlighted by Telwiedrè guaranteeing the content of its feeds.
- Enhancing vital customer service through technical support, reliable delivery and strong personal touch.
- Employing leading technologies and focusing strongly on research and development. Telwiedrè's leading full-fat soya plant is a clear example of this.
- Improving quality continuously is also a focus area and Telwiedrè's ISO accreditation bears testimony to its success.
- Increasing the intensity of marketing and sales activities substantially. While it is perhaps not that evident as Telwiedrè does not have a large marketing division, Ters plays a crucial role through his personal involvement.
- Seeking out high-quality raw materials and contracting with local farmers to produce raw materials with a higher protein content. The protein content is tested and monitored with every delivery.

This strategy has some pitfalls that Telwiedrè has been able to avoid. For example, Telwiedrè managed to pursue this strategy without overspending on overheads or capital expenditure, which the low operating and financial leverage, as well as high asset turnover, bears testimony to. At the same time, Telwiedrè realised that it cannot charge an excessive price premium.

Table 4 provides a broad overview of how Telwiedrè has executed the broad differentiating strategy.

Table 4: Telwiedrè's broad differentiating strategy

Element	Description
Strategic target	Telwiedrè has 45 products in its product range that covers a broad spectrum of livestock, game and poultry.

Element	Description
Basis of competitive strategy	Main focus is on unique product features and superior, personal customer service.
Product line	Wide selection with emphasis on differentiating features through customisation.
Production emphasis	ISO-based quality management to produce superior quality products.
Keys to maintaining strategy	Emphasis is on long-term partnerships to understand and tailor product characteristics.
Resources and capabilities	Continuously improvement of manufacturing processes and investing in research and development.

The broad differentiating strategy allowed Telwiedrè to grow its market share exponentially in the Riemland region. Telwiedrè takes pride that it has not lost any customers to competitors.

2.4 Inflection Points and S-growth Curve Life Cycle

Figure 6 graphically illustrates the strategic growth curve with the inflection points over time since the inception of Telwiedrè.

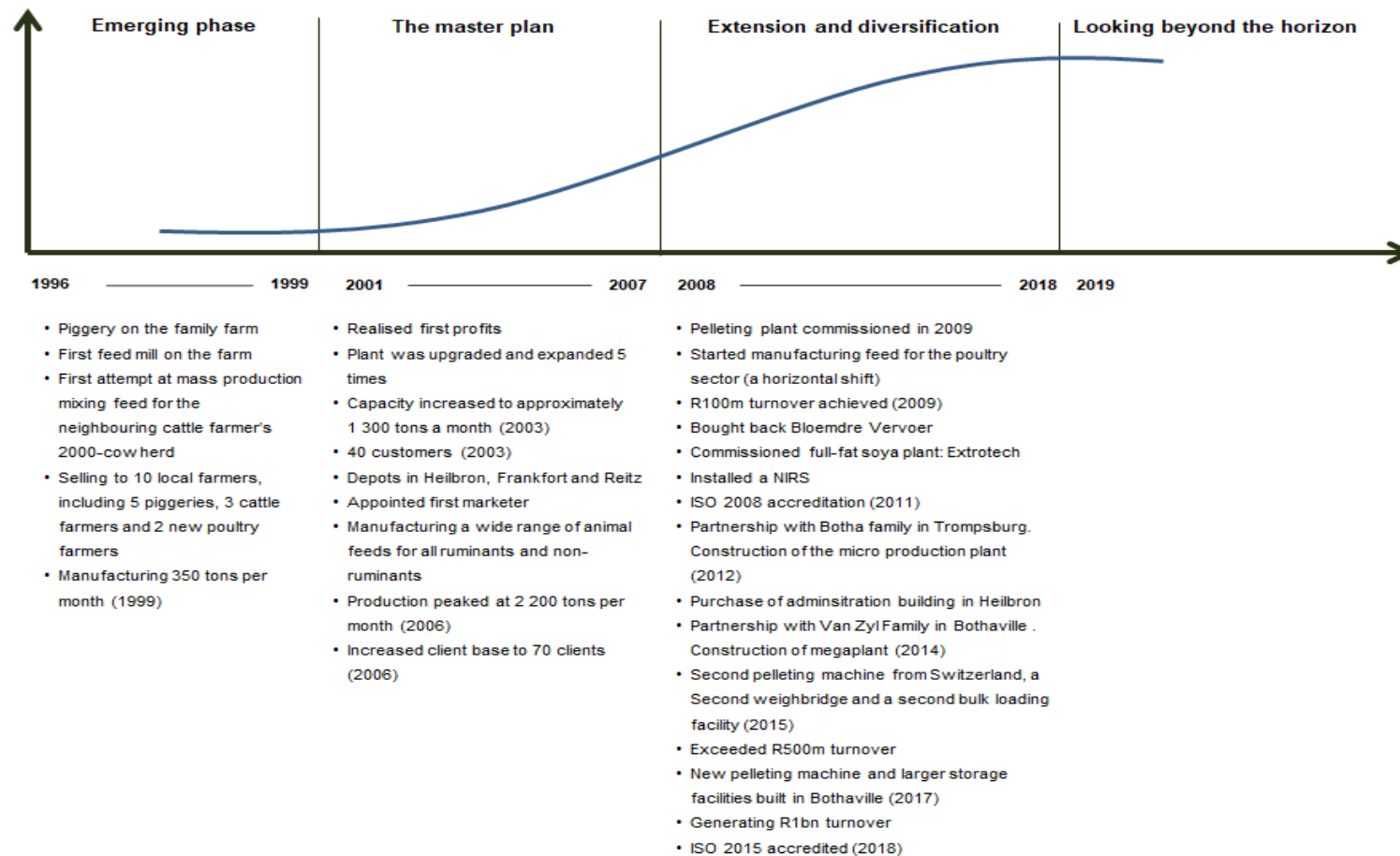


Figure 6: Strategic growth curve for Telwiedrè

2.5 Current Marketing Strategy

The CEO has always managed and executed Telwiedrè's marketing. Since inception, Telwiedrè has used word of mouth and personal meetings with farmers as an approach to sell its products. By adopting this strategy, Telwiedrè has been able to build strong business relationships with its customer base and became well-known in the local farming community. The knowledge gained from this strategy, coupled with the flexible pricing structure of its products, allowed Telwiedrè to maintain its long-term relationships and partnerships.

Telwiedrè hired a marketing manager in October 2018, who is located in Bloemfontein. This appointment brings along certain challenges such as:

- The distance could be an issue to communicate with Telwiedrè effectively; and
- The role is new in the company. There is still a handover process in progress between the CEO and the marketing manager to define expectations and ensure there is no overlap of responsibility.

Telwiedrè created a company website in 2011 that provides an overview of the company history, operational processes, product details, locations and contact details. Should Telwiedrè want to enhance its digital footprint, an update is required to allow for a more modern functionality to increase sales and brand exposure. The CEO has mentioned that he would like to provide his customers with the option of placing orders through the website, indicating the intent to streamline order processing.

2.6 Integrated SWOT¹ Analysis

2.6.1 Strengths

Table 5 details the key strengths of Telwiedrè.

Table 5: Telwiedrè's key strengths

Internal resource strengths	Reason/rationale	Impact 1 (low) – 10 (high)
Raw materials that meet the minimum	NIRS is a device that analyses raw materials on delivery, ensuring that only products meeting the	9

¹ Strengths, weaknesses, opportunities and threats

Internal resource strengths	Reason/rationale	Impact 1 (low) – 10 (high)
requirements are accepted into the plant.	specific requirements find their way into the silo storage facilities.	
Only quality products are produced.	NIRS is used on final products to ensure that required specifications are met.	9
Better recipe formulations that yield great results.	Formed part of a study group where Telwiedrè's product yielded better results than the overall group.	8
Focus is on customer needs and recipes are tailored to meet the specifications.	The feed is tailored to the farmers' needs and not just another product sold to them.	8
The leading feed nutritionist is a consultant.	Each recipe is specifically designed with the need to gain enhanced outputs for the farmer.	7
Recipe confidentiality is well maintained and is limited to two individuals.	The recipes for specific feeds are kept between the CEO and the feed nutritionist, eliminating the competition's ability to copy it.	7
CEO builds relationships with customers.	The unique selling proposition is that the CEO (Ters) is personally involved in the marketing of his product and meets with the farmers.	7
Close proximity to customers.	Telwiedrè is well positioned in the Riemland to service its market. The close proximity to customers limits the losses that can occur with transport to too distant customers.	7

Key takeaways from the identified strengths:

- Creation of a brand is important in any market. Although the farming market may have higher entry barriers than most other sectors, once you have established a brand, you need to maintain it.
- Quality inputs create quality outputs.
- The ability to protect proprietary information.
- Building of relationships with customers.
- Location of operations can be a financial benefit.

2.6.2 Weaknesses

Table 6 details the key weaknesses of Telwiedrè.

Table 6: Telwiedrè's key weaknesses

Internal resource weaknesses	Reason/rationale	Impact 1 (low) – 10 (high)
Key dependency on the CEO and chief financial officer (CFO).	The CEO has numerous responsibilities such as being the head of operations, marketing and sales, as well as doing general administration. The CFO is responsible for the financials as well as human capital. The CEO and CFO are husband and wife, thereby creating concentration risk in the event of travel.	8
Lack of an integrated enterprise resource planning (ERP) system.	The manufacturing operations are not integrated with the ordering and financial system, making it manual and susceptible to human error.	8
Commodity price risk.	Inability to transfer cost increases onto the final product.	8
Only two individuals know the recipes.	Telwiedrè has created a key person dependency with the two individuals that have knowledge of the feed recipes. Only one of those is also in the employ of the company.	7
Marketing strategy requires improvement.	Currently there is no strategy to market Telwiedrè's products, abilities and improved processes.	7
Concentration risk.	The risk of relying on one or two major customers to generate income.	5
Operations not at capacity.	Currently Telwiedrè is operating at: 83% – Heilbron 50% – Bothaville 71% – Trompsburg	5
Lack of adequate alternative energy supply.	The standby generating capacity of Telwiedrè is not adequate to maintain its operations.	4
Website outdated.	The website is outdated and requires modernisation.	3

Key takeaways from the identified weaknesses:

- Key person dependencies create issues when Ters and/or Lollie is no longer around to continue with production.
- Raw materials are traded as a commodity; they are therefore volatile and could cause higher input costs.
- Having a major part of income from a few major customers causes concentration risk as a loss of one or two customers could result in major loss in revenue.
- With operations not running at full capacity, there are unused assets, which are creating costs and lowering income.
- A website is a powerful tool for prospective customers to gain an understanding of any company. Being outdated, it could create the wrong impression of what the organisation attempts to embody.
- The national power grid has become a concern over the last few years and it has become a major issue for most companies. Having the inability to effectively run operations from alternative commodities could be a major concern.

2.6.3 Opportunities

Table 7 details the key opportunities for Telwiedrè.

Table 7: Telwiedrè's key opportunities

External market and industry opportunities	Reason/rationale	Impact 1 (low) – 10 (high)
Local expansion.	There are regions in South Africa that could be explored for expansion.	7
Vertical integration into milling operations.	Vertical integration will allow better control of the value chain in terms of quality and supply.	6
Expansion into Africa.	Local markets are attractive, but exports into Africa could be a lucrative alternative. Multi-domestic branches similar to Trompsburg and Bothaville could be established and be run autonomously using resources from foreign countries.	4

Key takeaways from the identified opportunities:

- There are still opportunities to expand into Africa bearing the associated risk in mind.
- Vertical integration is still a viable option to enhance the value chain.

2.6.4 Threats

Table 8 details the key threats of Telwiedrè.

Table 8: Telwiedrè's key threats

External market and industry threats	Reason/rationale	Probability 1 (weak) – 10 (strong)	Impact 1 (weak) – 10 (strong)	Threat rating (probability × impact)
Ability to hedge against market prices on raw materials.	A market-related movement can have a significant financial impact.	8	8	64
Compliance with legislation and quality standards.	Compliance with legislation and quality standards create additional administrative and financial burdens.	8	6	48
Threat of competitors gaining a larger market share through acquisitions.	Competitors can achieve a larger market share by acquiring and diversifying through mergers.	7	6	42
Newer technology in operations.	Competitors could obtain better technology, which will improve their operations and lower production costs; therefore, making their product more attractive in a highly financially constrained market.	5	8	40

External market and industry threats	Reason/rationale	Probability 1 (weak) – 10 (strong)	Impact 1 (weak) – 10 (strong)	Threat rating (probability × impact)
Load shedding.	Power outages cause production issues and loss of product resulting in write-offs.	6	6	36
Carbon taxes.	Increasing costs that will increase production costs.	6	6	36
Customer legal case against products.	Cross-contamination of feed for non-ruminant feeds can cause death.	4	7	28
Maintaining ISO certification.	Operations and quality standards need to be maintained to ensure ISO certification is retained.	3	8	24
Rising prices of municipal costs.	Tariff increases of the following commodities: • Electricity (13%) • Water (9.9%) • Property rates (5.5%) • Refuse removal (7%)	8	3	24
New Feed Bill.	A new regulation that has been drafted with the intention to regulate the feed industry more strictly, improve safety in feed production standards, and improve traceability in the feed industry.	3	4	12

Key takeaways from the identified threats:

- Compliance with legislation will always remain a sunk cost and burden. It is therefore important to remain ahead of changes and to adapt to the financial burden thereof.

- Eliminate the significant risk of cross-contamination by maintaining high-quality standards and separating the ruminant and non-ruminant production processes.
- Rising prices of government tariffs are a certainty, and effective cost management can mitigate against substantial loss in profit margin.
- Competitors could be identifying more efficient technologies to lower operational costs and gaining more market share.
- New carbon taxes will create increased costs of production, which will need to be considered as either a customer cost or absorbed cost.

2.6.5 Summary

Table 9 provides a prioritised classic SWOT analysis.

Table 9: Prioritised classic SWOT analysis

	Positive factors	Priority	Negative factors	Priority
Internal factors	Resource strengths: • Good recipes • Use of NIRS for quality on inputs and production • Focus is on customer needs • Have lead feed nutritionist as consultant • CEO relationship building with customers • Close proximity to customers	8	Resource weaknesses: • Key person dependency on recipe • Key person dependency on the CEO and CFO • Market price fluctuations on inputs • Loss of a major customer/s • Marketing is lacking • Operations not at capacity • Web page outdated • Inadequate alternative energy supply	6

	Positive factors	Priority	Negative factors	Priority
External opportunities	Market and industry opportunities: • Local expansion • Vertical integration into milling operations • Expansion into Africa	6	Market and industry threats: • Hedging • Compliance with legislation • New emerging legislation • Customer legal cases • Competitors gaining market share • Maintaining ISO certification • Rising municipal costs • Load shedding • New technology • Carbon taxes	6

2.7 Value Chain Analysis

Value chain analysis can be used to determine the shortest route to increase customer value while reducing costs. To understand the costs involved, the value chain activities need to be identified and the value adding activities need to be separated from the non-value adding activities. The goal would be to identify which activities to improve, which activities to leave as is, and which activities to cut altogether to ensure a synergy within the value chain.

Figure 7 depicts the value chain for Telwiedrè. The activities have been evaluated: the colour of the text relates to whether the activity adds value (black) or requires improvement (orange). The following sections will discuss the activities in more depth to understand the challenges and opportunities.

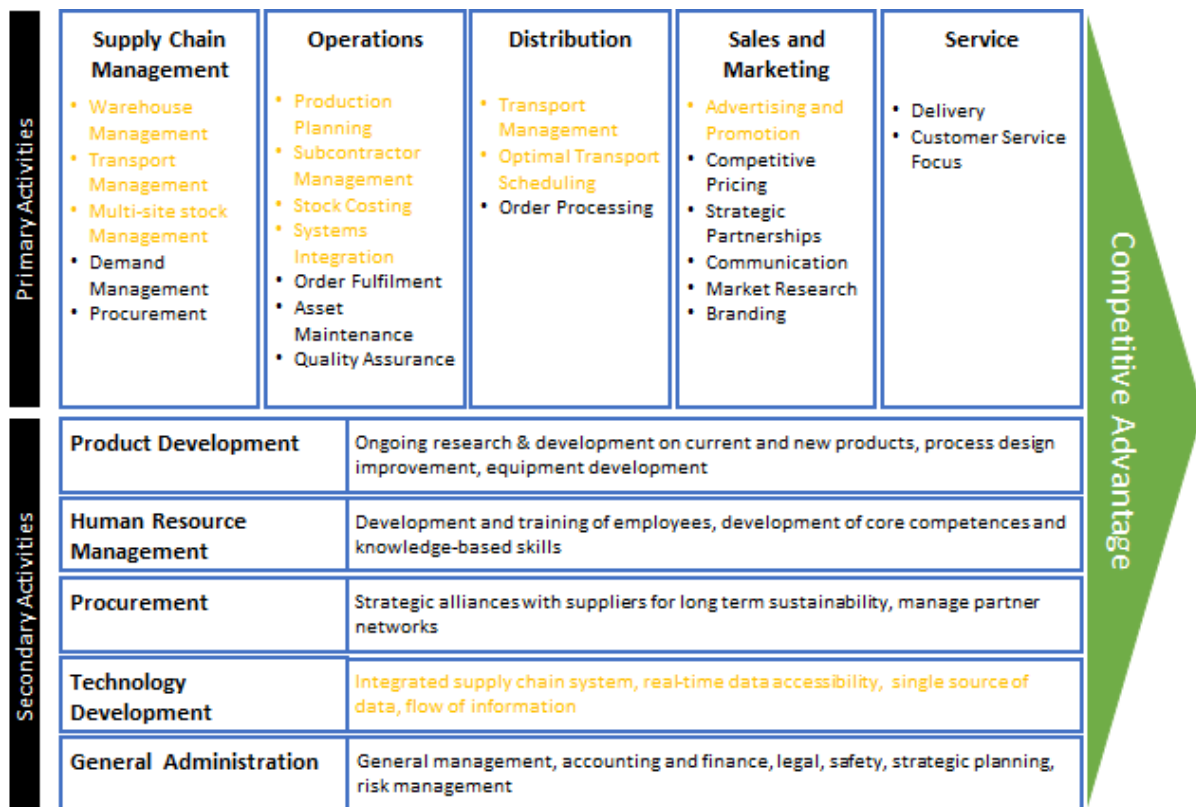


Figure 7: Value chain for Telwiedrè

2.7.1 Supply chain management

Procurement

The quality of all raw materials is tested at the on-site laboratory to ensure it complies with minimum standards before materials may enter the premises. All trucks must pass through a high-pressure disinfection sprayer before being weighed at weighbridges. This ensures that only high-quality raw materials are used and that the correct amounts of raw products are delivered.

Grain forms a significant portion of raw materials to produce animal feeds. Telwiedrè enters into agreements with some of its customers to supply their own grain as core ingredient. The customers can therefore become part of the supply chain for their own feeds. Typical animal feed producers do not provide this value proposition. Telwiedrè must, however, also procure significant volumes of grain. The price of grain is known to fluctuate significantly according to supply-and-demand patterns. Telwiedrè has risk exposure when the market price of grain suddenly drops shortly after Telwiedrè has purchased grain at a higher price. Telwiedrè is not able to push these higher prices onto customers because customers may decide to buy feed elsewhere. A similar risk

may be experienced when Telwiedrè commits to supply a product at a certain price based on the current market price of grain and then experiences a sudden grain price increase. A chief buyer, who is assisted by another buyer, handles raw material purchases.

Dalein is the preferred engineering company that supplies and installs most machinery. Dalein is also sometimes contracted to perform maintenance when needed.

Warehouse management

A significant challenge for Telwiedrè is the potential contamination of feeds for different animals. Some ingredients for ruminant animals, such as urea, are dangerous to non-ruminant animals and can cause death. The warehouses are currently managed well in general. Stocktakes are conducted on a daily basis and variances between stocktakes are investigated immediately. Telwiedrè has recently employed someone to specifically manage this aspect.

Stocktakes are recorded on a Microsoft Access database application that was developed in-house. Even though the application works satisfactorily, this application neither has direct integration with the production system (Inteqnion) nor with the accounting system (Pastel). Any new products or raw materials need to be added to all three systems, which is an error-prone process that might lead to mismatches in master data. Best practice dictates that a central system is used to maintain the master data from where all data is extracted and compared in order to ensure these mismatches are eliminated.

In addition, to simplify management of stock in the warehouse(s), barcoding of packaged goods is preferable, which may also speed up and simplify stocktakes.

Transport management and optimal transport scheduling

Transport forms a major element in the cost structure and the logistics of Telwiedrè. This was so crucial that Bloemdrè was created as forward integration to support the timeous delivery of finished goods to customers as a value creation activity. Bloemdrè is also used to deliver raw materials and premixes to the various sites.

Many factors play a role in transport logistics, making it complex to manage. Factors such as fuel economy, routes and route planning, changes in orders, different kinds of

vehicles, and optimising loads make transport logistics a challenge even for small companies. However, logistics running smoothly and timeously adds enormous value to the customer's experience and value proposition.

Currently, Telwiedrè still manages transport using spreadsheets, phone calls and a Microsoft Access application that is being tested. Given the growth over the last few years, this is a phenomenal feat. Thus, the personnel have been doing an amazing job of scheduling this manually. However, not having a transport scheduling solution in place may hinder future growth, which could detract from the good experience of customers.

A transport logistics solution enables planning staff to reveal areas of waste in their transportation strategy. This allows planners to accommodate changes in internal operations and external factors. It assists planners by suggesting the optimal routes, vehicle types and delivery windows to optimise resources and time while avoiding bottlenecks or breakdowns in the transit stages. Depending on the specific solution, a whole range of variables can be accommodated. A transport logistics solution can further allow planners to simulate specific scenarios in order to create options to fail-safe the suggested plans.

The benefits of a transport logistics solution to increase customer experience cannot be overstated. Customers need the right product, at the right time, and at the right place. A transport logistics solution will enable the company to deliver on these promises without extensive human capital and will also provide a sustainable platform as the company sales volumes grow.

It is suggested that Telwiedrè/Bloemdrè invests in a transport logistics solution that will directly integrate with its other systems to provide optimal, cost-effective solutions to the transport strategy of the company.

Multi-site stock management

Telwiedrè manages the procurement of stock for all three sites even though it does not own the sites in Bothaville and Trompsburg. This essentially means that it needs to also be aware of and manage the stock at all sites. Bothaville and Trompsburg submit a daily stocktake report in Excel to Telwiedrè for processing and replenishing of stock should the need arise. This is a manual and arduous task, which is also error-prone since recording the stock needs to happen multiple times by different

individuals. It is further not best practice since both Bothaville and Trompsburg run their own systems for capturing stock.

Multiple options are open to address this issue. Ideally, the stock should be recorded on an ERP system directly from the remote sites. This will eliminate double-capturing and will further ensure that data is available immediately. Variances could then be picked up at the remote site immediately.

2.7.2 Operations

A simplified layout of the production process is provided in Figure 8. Telwiedrè contracts Dalein for most engineering, plant design and installation. Telwiedrè takes advantage of mechanisation and system automation. Many processes have already been automated to avoid human error and to improve production output. There is still room for avoiding human error in the batching of lower volume ingredients that are weighed and added by hand. It is however not feasible to automate the addition of all ingredients since some ingredients are added in very small quantities. The option to use barcoded bins with premeasured quantities is currently being considered by Telwiedrè management. This could minimise human error.

Telwiedrè is ISO 9001 certified, which is a quality certification based on a plan-do-check-act approach. Telwiedrè uses NIRS to evaluate product quality. Quality controllers take samples of all final products and store these samples on-site. These samples are available for further analysis and inspection should a complaint be received about a product.

Production planners aim to schedule production from Mondays to Saturdays to allow scheduled maintenance to be completed from about 14:00 on Saturdays as well as on Sundays. Maintenance is therefore done frequently and as needed.

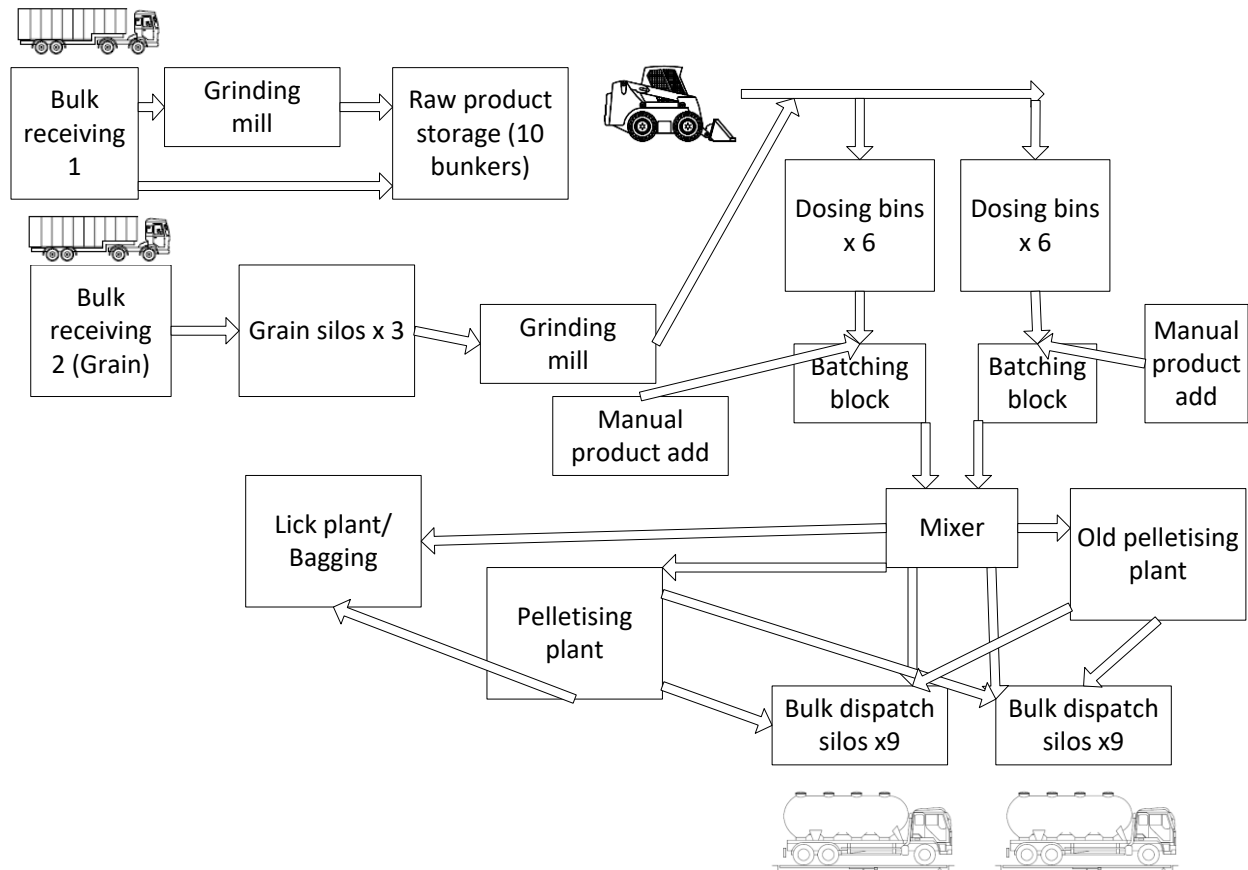


Figure 8: Simplified layout of the production process

Order processing

All orders are received via telephone or emails. Orders are entered and scheduled manually by the production planner. There is potential to use software since this process is still manual and requires a highly skilled person.

Telwiedrè does not have any form of online order processing. Telwiedrè is considering a major redesign of its website with online purchasing functionality, ERP and online web services. The company is further considering a smartphone application that customers can use to place orders. Telwiedrè will however still need to have the option to interact directly and personally with its customers.

Subcontractor management (outsourcing)

Currently, the Bothaville and Trompsburg sites produce finished goods to Telwiedrè on a subcontracting basis. The reason for the outsourcing is not only to provide products to a wider geography, but also to expand the capacity of Telwiedrè without investing capital.

Raw materials are bought by Telwiedrè and delivered and sold to its subcontractors. Premixes are produced by Telwiedrè and sold to its subcontractors. The subcontractors produce stock to the specifications provided by Telwiedrè and are paid a mixing fee for the service rendered. The subcontractors do not sell to Telwiedrè's customers.

When Telwiedrè gets a customer order for products that are outsourced to subcontractors, a purchase order is placed with the subcontractors. The subcontractors deliver the stock directly to the customer. This is generally known as drop shipment and most ERP systems support this function. The problem arises with invoicing. Because Telwiedrè sells the stock but the subcontractors deliver it, Telwiedrè cannot invoice the stock because it has not taken receipt of it yet in Telwiedrè's books.

Normally most systems can handle this situation. However, the way Telwiedrè's accounting software (Pastel) is set up, it cannot bring in the stock until such time that it receives the transport invoice (which may only be received after a few weeks or even months) to ensure a fully delivered cost is brought in. This is a limitation in the accounting software that needs serious attention. In most other ERP systems, this would not be an issue at all since it would allow receipts to be done at the order unit price, then backflush this when the invoice is captured while allowing additional costs (for example transport costs) to be added later. It seems as if this issue can only be addressed by moving to a fully integrated ERP system.

Stock costing

Costing of stock in the system is a major issue that may lead to incorrect inputs to the pricing model, which may be detrimental to the business.

The accounting system at Telwiedrè allows bringing in stock at delivered cost. In almost all cases there is a transport cost associated with the stock receipts, which may not be invoiced together with the stock itself. Due to the fact that stock needs to be receipted at the delivered cost (and the accounting system not allowing multiple

invoices against the same receipt), the cost of stock can therefore not be brought in until both the supplier and transport invoices have been received. Telwiedrè uses an average costing method. This method continually recalculates costs as transactions occur to provide a unit cost at a particular point in time for all stock. This delivered cost mechanism thus results in incorrect costing due to timing that may further affect the pricing model. By the time the transport invoice has been received and processed (which may be weeks later), the inventory linked to that receipt may no longer be in stock.

This issue is caused by internal limitations of the accounting system. The current workaround is that the true costing is calculated on spreadsheets outside of any Telwiedrè system. It would be best practice to acquire a system that incorporates a more mature costing engine that can cater for the needs of Telwiedrè.

Systems integration

Telwiedrè uses multiple systems to cater for different areas of the business:

- Pastel (v14) is used as accounting software.
- Inteqnion is used for production and other operational plant requirements such as interfacing with the weighbridges and managing plant control systems. This system also manages bill of materials (BOMs), production orders and scheduling, consumption of raw materials, and output of finished goods. It provides dashboards on all aspects of the operations including current production, transfers, stock receipts and shipments. It does not have any financial or costing information – it only handles quantities.
- Quality Control and Assurance system is used to test and manage BOMs as well as do quality testing on products.
- Microsoft Access is used for some stocktake-related applications as well as logistics scheduling. The applications are written and updated in-house to support the current business processes. This was previously done using Excel.

The above systems and solutions are not integrated. They operate standalone and interfacing between them, however necessary and critical, is a manual process. Master data is duplicated between the systems; for example, the products are duplicated between Pastel (where invoicing happens) and Inteqnion (where production orders are executed, and consumption/output occurs).

This lack of integration is a major issue that will need to be addressed. It causes double-punching of data and possibly mismatching data due to human error. It is critical that interfaces are created to facilitate the flow of information between these systems. Alternatively, some of these systems have to be replaced by an ERP system that will cater for multiple operational functions.

2.7.3 Utilities

Reactive energy charges

Electricity is the major energy carrier at the factory. Eskom supplies electricity through the local municipal distribution network. The typical electricity cost is around R500 000 per month and is escalating at values significantly higher than inflation. Telwiedrè management identified electricity cost as a risk that needs to be managed better. A high-level analysis of electricity costs of the milling operations was initiated.

Telwiedrè is billed on a fixed rate electricity cost tariff scale for energy consumed (kWh) as well as for the apparent power demand (kVA). An automated power factor correction unit is installed at the milling operations to minimise the apparent power demand. A graphical representation of the power factor at the milling plant is provided in Figure 9. A power factor of 1, also referred to as unity power factor, will result in reduced apparent power charges. It is evident from the graph that the power factor is not always maintained at the preferred levels.

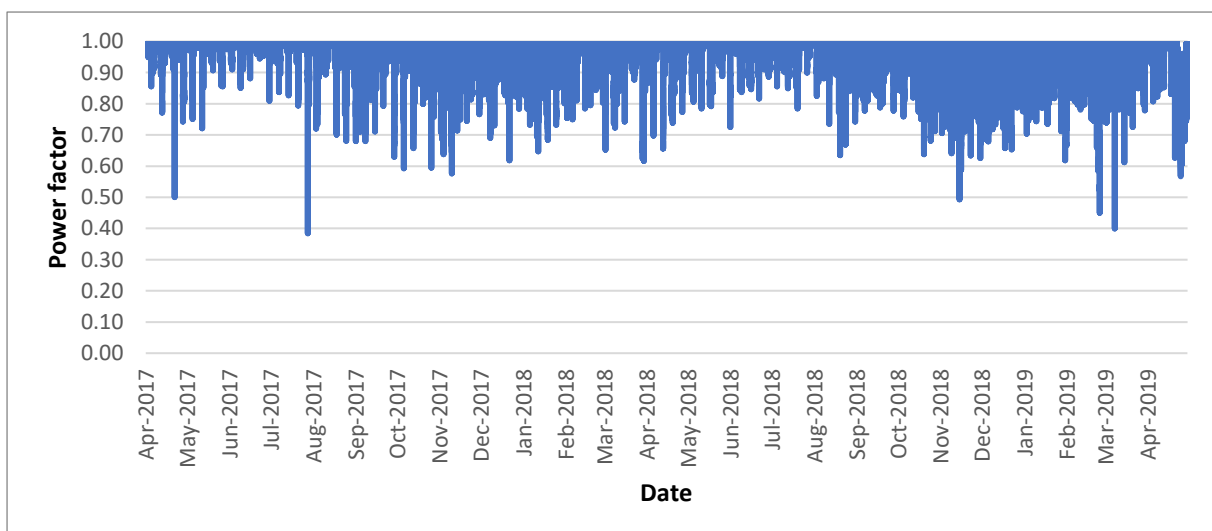


Figure 9: Milling plant power factor

Figure 10 shows a snapshot where the maximum apparent power demand was reached for a specific day. The power factor remained relatively stable up until about

17:00 when a significant increase in power consumption was observed. The power factor dipped to just above 0.8 at about 21:00 before recovering.

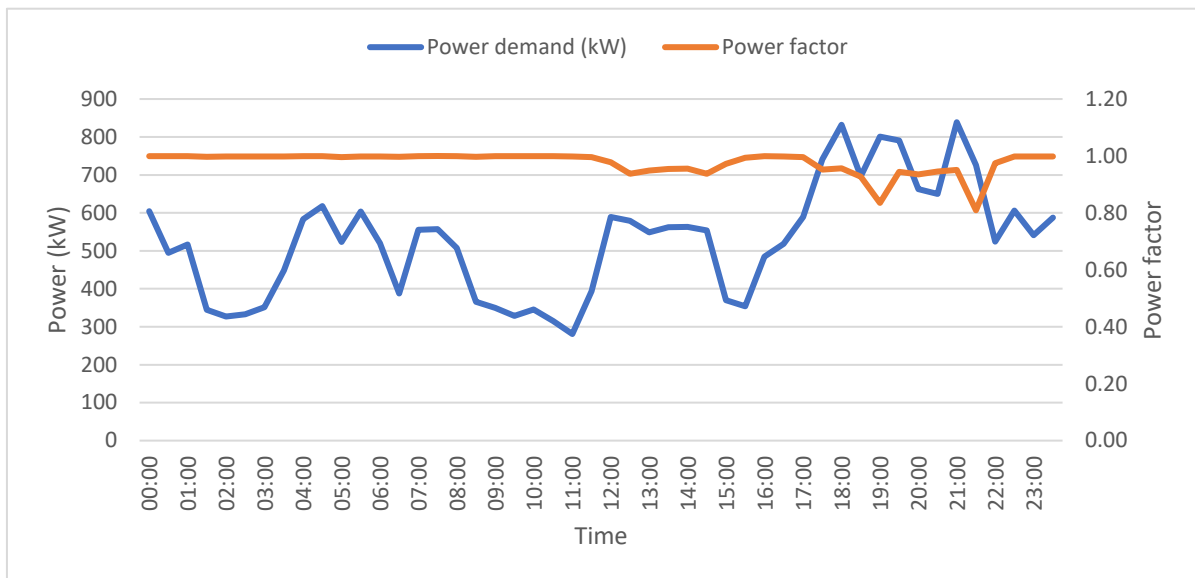


Figure 10: Influence on power factor during equipment start-up – Showcase 1

Figure 11 provides an example of the power factor control on another day. This illustrates that the automated controller is unable to control the power factor at unity effectively.

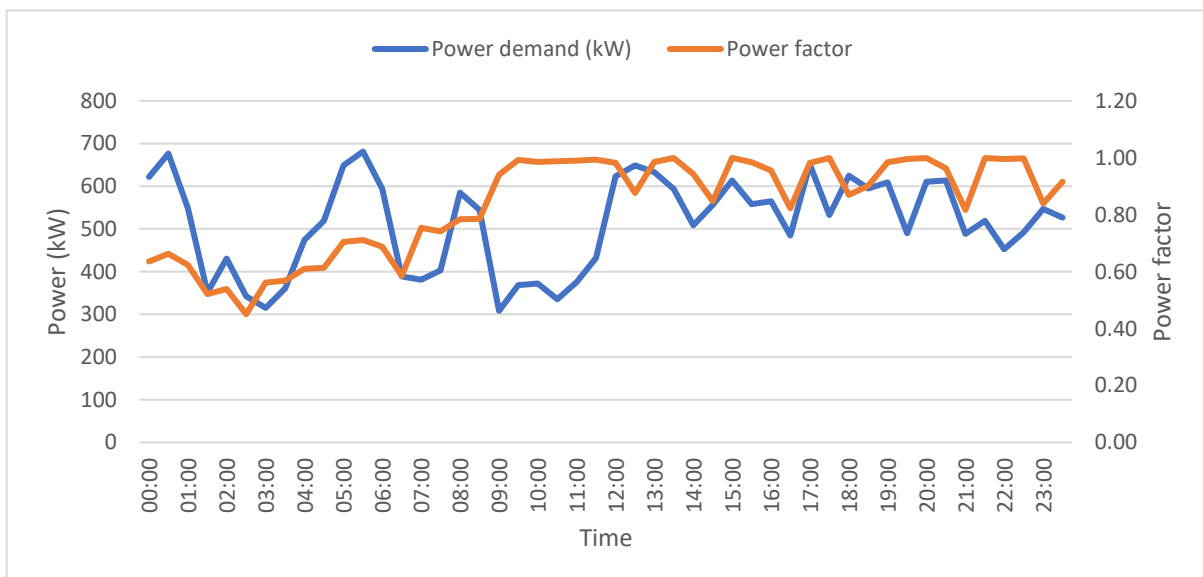


Figure 11: Influence on power factor during equipment start-up – Showcase 2

An analysis of the electricity billing for the milling plant suggests that improper power factor control can result in unnecessary costs of up to R32 000 per month. Telwiedrè

recently completed a control and instrumentation upgrade project. Power metering upgrades were implemented that allow the control room operator to monitor energy usage. Results from the recent data suggest that the power factor control can still be improved. Possible solutions will include daily power factor reports. This will empower maintenance personnel to take corrective action to minimise the risk of unnecessary costs.

Potential energy saving project

A high-level walk-through of energy was also conducted to identify potential energy savings projects. The most significant opportunities that need further investigation are the extraction fans at both pelleting machines. Dampers are used to control the airflow extracted by these fans. Advances in variable speed drives (VSDs) present a lucrative energy saving possibility. Savings of up to 88% can be achieved by using a VSD to control motor speed according to load requirements. Other advantages of a VSD include soft starting of equipment, improved power factor, and improved process control (Khalid, 2014:371).

Instantaneous current readings were measured for these cyclone fans during the walk-through. A preliminary business case was developed for the installation of VSDs on these fans. A summary of input parameters for the BOA pelleting plant preliminary business case is provided in Table 10. The nett present value (NPV) for the investment was calculated as R5 000.

Table 10: Assumptions for business on extraction fan of BOA pelleting plant

Assumptions	Value	Unit
Fan motor installed capacity	22	kW
Damper opening	50	%
Existing running capacity	12	kW
Operating time per day on weekdays	12	hours
Operating time per day on Saturdays	6	hours
Eskom tariff increases	13	%
VSD design life	5	years
Discount rate	14.56	%
VSD installation cost	67 500	Rand

Table 11 lists the assumptions for the high-level business case for the Kubex pelleting plant. The NPV for the investment was calculated as R95 000. It must however be

noted that this is a very high-level preliminary indication of the expected costs and return on investment. It is advised that a detailed investigation be conducted to confirm key assumptions. Dalein must be consulted to ensure that the VSD solution can be integrated with existing equipment.

Table 11: Assumptions for business on extraction fan of Kubex pelleting plant

Assumptions	Value	Unit
Fan motor installed capacity	75	kW
Damper opening	50	%
Existing running capacity	44	kW
Operating time per day on weekdays	12	hours
Operating time per day on Saturdays	6	hours
Eskom tariff increases	13	%
VSD design life	5	years
Discount rate	14.56	%
VSD installation cost	172 500	Rand

2.7.4 Secondary activities

Integrated supply chain

Integrated supply chain management relates to a supply chain management that is built on an ERP system. An ERP system allows all business activities to be centralised in a single company-wide system rather than having multiple loosely related systems and applications within the company. These business activities may include all aspects of the business from procurement and sales to production, logistics, debtors, creditors, bank interfaces, inventory and warehouse management, quality management, maintenance, logistics, and any other core or non-core related activity within the business.

ERP systems further facilitate standard interfaces to external entities; for example, interfacing to banks for importing and reconciling bank statements and exporting payment files for vendor payments.

In the case of Telwiedrè, an ERP system would completely replace the accounting system as well as the myriad of other in-house spreadsheets and Access databases that have been created due to the formal systems not being able to handle these business functions. The ERP system would also be able to work in conjunction with

the Inteqnion production system. This ensures that the systems complement each other so that both the production operations are handled fully in Inteqnion, while the ERP system can take care of costing and inventory management. Furthermore, interfaces can be set up to ensure that a single set of master data is used.

Real-time data accessibility

As suggested in the prior paragraphs, ERP systems are geared towards company-wide consolidation of activities and data. ERP systems inherently provide real-time access to data due its very nature.

Technology development

Technological developments in blockchain research and their use as a mechanism to raw material traceability have grown considerably in the last few years and may take a more prominent role in the future as the need to trace the origins of contaminants grow (Galvez *et al.*, 2018:13). This may affect operations in future and the need to develop mechanisms to deal with this issue.

2.8 VRIO Framework

In order to apply the four questions in the value, rarity, imitability and organisation (VRIO) framework, it is essential to list the resources and capabilities of Telwiedrè (Table 12).

Table 12: Resources and capabilities of Telwiedrè

Tangible resources	Physical resources	Financial resources	Technological
	• Heilbron plant. • Bothaville plant. • Trompsburg plant. • Pelleting machines.	Financial leverage.	Production systems.
Intangible resources	Human capital	Brands	Organisational culture
	• Intellectual capital with best feed nutritionist. • CEO meeting with farmers.	Poultry, pig feed, cattle and sheep; lick series; and game feed products.	Personalised interaction of the CEO with his customers. Changing the product from what could be commoditised to a bespoke product range and personalised to farmers' needs.

2.8.1 Tangible resources

Physical

All the plants and machinery are valuable to Telwiedrè. Although these resources are not rare and can be copied (there are other competitors with similar resources), the value of the resource is captured by the organisation as evidenced by the systems that are in place and the developed infrastructure to support them.

Financial

In the current economy, to have a strong financial position is both valuable and rare. Telwiedrè currently has a low financial leverage position with a financial leverage ratio of 35.87% (2017), a current ratio of 1.7:1, and an acceptable return on assets of 12.73%. While not necessarily inimitable, it still creates a sustainable competitive advantage for Telwiedrè. The ability to maintain such a position while still being able to meet its obligations is a sustainable competitive advantage over its rivals. Lastly, the value of the resource is captured by the organisation as Telwiedrè has strong leadership with Ters and Lollie as it is managed appropriately.

Technological

The current technological processes in the production plants are valuable. It is not necessarily rare as the systems can be copied by the competitors; however, this process is designed to streamline and improve the operations of Telwiedrè. The value is captured by the organisation as there is large support from the current staff complement to improve the current operations and ensure lowered errors in the production process.

2.8.2 Intangible resources

Brand

Telwiedrè has built an extremely valuable brand name. It has established strong poultry, pig, cattle, sheep and game feed products, which add to its sustainable competitive advantage. With the introduction of its lick series, it has further increased its advantage over competitors. These are rare assets because a brand that is both valuable and sustainable is very difficult to create. A good brand name is inimitable unless Telwiedrè is bought out by a competitor. The value of the resource is captured

by the organisation as people show a sense of pride working for the company and staff show passion and commitment to the brand name.

Human capital

Telwiedrè has a unique value proposition with its intellectual capital working for it. Currently, Telwiedrè has access to one of the best feed nutritionists in the country. Furthermore, it has a committed CEO, which is a valuable resource – a scarce commodity in the current economic climate and business overall. The CEO prides himself in knowing his customers, the farmers, by name and taking specific care of their needs. He personally meets with customers to tailor his animal feed recipe to accommodate their needs. As most of Telwiedrè's competitors are conglomerates, this is inimitable as it takes dedication and time to be committed to tailor products based on the needs of a customer. The value of this resource is captured by the organisation as the CEO is compassionate and knows his staff by name. He values his relationships with his customers/farmers.

Organisational culture

Customers of Telwiedrè always get the Telwiedrè experience. This includes Ters personally interacting with customers to tailor his product to their needs, which is unparalleled service. However, the Telwiedrè experience is aimed at changing the product from what could have been considered a commoditised product to a bespoke product range and thereby trying to achieve better margins. This is a valuable trait to possess – it is rare to have such a level of involvement and passion to their trade. When considering its business history, it becomes evident that Telwiedrè aims to set up business partnerships for life and that Ters prefers long-term sustainability and partnerships over short-term gains. This in itself indicates trust and reliability, which drives the financial success of Telwiedrè. This can only be achieved when the value is captured by the organisation – which it is in this case – and makes it almost impossible to imitate.

2.8.3 VRIO conclusion

Figure 12 summarises how the competitive advantage is gained.

	V Valuable	R Rare	I Inimitable	O Organised	
Physical Resources	YES	NO	NO	YES	Temporary competitive advantage
Technological Resources	YES	NO	NO	YES	Temporary competitive advantage
Financial Resources	YES	YES	NO	YES	Unused competitive advantage
Brand	YES	YES	YES	YES	Sustainable competitive advantage
Human Capital	YES	YES	YES	YES	Sustainable competitive advantage
Organisational Culture	YES	YES	YES	YES	Sustainable competitive advantage

Figure 12: VRIO analysis

Telwiedrè is in a status between unused competitive advantage and a sustainable competitive advantage – refer to Figure 13. It needs to ensure that it creates more competitive advantage capabilities by trying to create rarity and more inimitable resources.

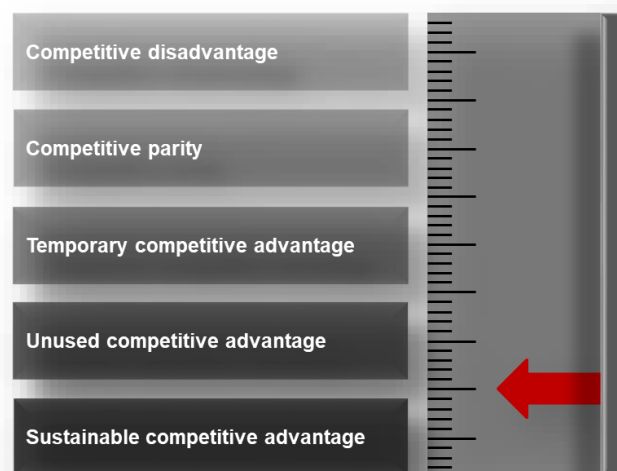


Figure 13: VRIO overall conclusion

2.9 Financial Analysis

2.9.1 Profitability

The animal feed manufacturing sector is highly competitive and will probably get even more competitive, thereby resulting in the low profit margins as observed. It is evident that profit margins varied during the last three financial years, probably as a result of Telwiedrè aggressively pursuing market share. During the 2017 financial year, the company grew sales by 23.75%, but it placed the nett profit margin (NPM) under significant pressure.

The market share gained during the 2017 financial year did, however, have longer term benefit as the company managed to claw back margin during the 2018 financial year without losing volumes previously gained.

2.9.2 Operating leverage and business risk

Operating expenses (overheads) are managed well and are restricted to 6.5% of sales, leading to a very low degree of operating leverage at 7.84%. Given the continuous risk of supply side price shocks (widely fluctuating raw commodity prices), the low operating leverage is strategically favourable and puts Telwiedrè in a competitive position.

An analysis shows that the business risk faced by Telwiedrè is low. Table 13 reflects and comments on the major variables that affect business risk.

Table 13: Variables impacting on Telwiedrè business risk

Risk Factor	Rating	Comment
Unit sales	Low	Unit sales are fairly predictable
Sales price	Low	Unit sales prices are fairly predictable
Input cost	High	Variable input cost can move dramatically
Product liability	Low	Own laboratories prevent sub quality products being sold

When considered over the period 1999–2018 (18 years), movements in revenue and movements in profit-before-tax strongly correlate with a correlation coefficient of 0.87. This strong long-term correlation suggests low business risk but probably also exceptionally good management of the factors driving business risk.

2.9.3 Asset usage and return

While the margins appear low from a profitability point of view, when put into the context of assets employed, a significantly more favourable scenario unfolds. The basic earnings power improved to 17.35%, which suggests that assets are used effectively. Return on total assets peaked at 12.73%. Compared with the equity base, Telwiedrè is performing exceptionally with a return on equity (ROE) of 26.12%.

2.9.4 Financial leverage

Ters and Lollie are generally debt averse, and this conservative approach is evident in the low financial leverage of 35.87% (but which have been as high as 51.21% in the past). Again, the low financial leverage, coupled with low operating leverage, makes it possible for Telwiedrè to adjust to prevailing market conditions, which is considered to be a key strategic strength.

Liquidity management is paramount and, in this regard, Telwiedrè is doing well. The debtor payment and creditors collection periods are matched at 35 days and stock is turned over every eight days. This leads to a current ratio of 170% and a quick ratio of 150%. Given that debtor and creditors days are matched, the cash conversion cycle is an impressive eight days. The short stockholding period and favourable liquidity scenario are also strategic strengths of the business.

2.9.5 Return on equity – scenario

Table 14 provides an indicative view of possible ROEs should the company change any of the main variables (NPM, total asset turnover, and equity multiplier).

Table 14: Indicative view of possible ROEs

DuPont variable	Current	Scenario 1	Scenario 2	Scenario 3
NPM	3.18%	4.00%	3.50%	3.50%
Total asset turnover	400%	400%	410%	400%
Equity multiplier	2.05	2.05	2.10	2.15
ROE	26.12%	32.80%	30.14%	30.10%

- While the NPM seems low, the total asset turnover especially compensates and results in an excellent ROE of 26.12%.
- If Telwiedrè is able to increase the NPM to 3.5% and take up slightly more gearing, the ROE would improve to 30.10%.

2.9.6 Indicative market (systemic) risk

A possible beta coefficient was calculated in an attempt to establish the market risk faced by Telwiedrè. It was not possible to make a direct peer comparison with any publicly listed company. As a fall-back, Telwiedrè was compared with Astral Foods and RCL. It is argued that these companies have a common, pertinent risk factor – considerable variability in raw material input cost and the inability to transfer these input cost movements to their respective sales prices.

Table 15: Beta calculation

Comparable company (FY'18)	Beta (*SB Equities)	Debt (LT)	Equity Rm	D/E	Market cap Rm
Astral Foods	0.96	R650	R3 737	17.33%	R9 567
RCL	0.52	R3 361	R11 179	30.06%	R14 987

The weighted average beta (using market cap as the weighting) is 0.69 and the weighted average debt-to-equity ratio (also using market cap) is 25.10%. With a 28% corporate tax rate and using Equation 1 (where D/E is the average debt-to-equity ratio of the comparable companies, T is the tax rate, B_u the unlevered beta, and B_L the levered beta), the unlevered beta is 0.58.

$$\beta_u = \frac{\beta_L}{1 + (1 - T) \times \frac{D}{E}} \quad [1]$$

Using Equation 2 and releveraging the equity using Telwiedrè's target debt-to-equity ratio (equal to the last 5-year average being 41%), the indicative beta of Telwiedrè is 0.74%. This is indicative of low market risk.

$$\beta_L = \beta_U \times \left[1 + (1 + T) \times \frac{D}{E} \right] \quad [2]$$

2.9.7 Weighted average cost of capital

The targeted capital structure was used together with the following assumptions to calculate the weighted average cost of capital (WACC):

Table 16: WACC calculation

Capital component	Target weight	Weighted cost	Comment
Common equity	59%	11.63%	Average ROE for last five years
Debt	41%	3.03%	Prime lending rate after tax
WACC	100%	14.65%	

2.9.8 Sustainable growth rate

Using the sustainable growth rate formula (Equation 3), the sustainable growth rate was calculated at 23.66 (FY'16), 15.21 (FY'17) and 35.35 (FY'18), which averaged out to 24.74% over the three years. The difference between the growth rates calculated for FY'17 and FY'18 is mainly attributed to a change in the NPM.

$g^* = \frac{m(1-d)A/E}{\frac{A}{S} - m(1-d)A/E}$	g^*	Sustainable growth rate
	m	NPM
	d	Dividend pay-out ratio
	A	Total assets
	E	Equity
	S	Sales

The actual average annual compounded revenue growth achieved over the last five financial years was 17.25%. This however included super growth after significant capital investments aimed at generating additional revenue. In the absence of further investments (keeping the status quo), the sustainable growth rate was adjusted downwards to 9%. It is therefore recommended that the sustainable growth rate is 9%.

2.9.9 Market return

The average annually compounded market return, as measured on:

- The JSE All Share Index for the period 1 March 2013 to 28 February 2018 (five years) was 8.00%.

- The JSE Small Cap Index for the period 1 March 2013 to 28 Feb 2018 (five years) was 8.82.

Table 17 reflects the weighted return after assigning a weight of 70% to the JSE Small Cap growth rate (arguing that it is more representative of the scenario faced by Telwiedrè).

Table 17: Weighted return after weighting

Index	Return	Weight	WR
All Share	8.00%	0.30	2.400%
Small Cap	8.92	0.70	6.244%
Weighted Average		1.00	8.640%

The weighted average return of 8.64% is considered to be the market return.

2.9.10 Risk-free rate

On 1 March 2018, the 90-day Treasury Bill rate was 7.04%, which is regarded as the risk-free rate of return.

2.9.11 Expected rate of return and market value of equity

Using the Capital Asset Pricing Model formula (Equation 4), Telwiedrè's expected rate of return is 8.22%.

$E(r_i) = r_f + \beta_i(E(r_m) - r_f) \quad [4]$	$E(r_i)$	Expected rate of return
	r_f	Risk-free rate of return = 7.04%
	β_i	Beta = 0.74%
	$E(r_m)$	Market rate of return = 8.64%

- Cognizance should be given to the fact that Telwiedrè is unlisted which, generically speaking, means that a higher risk premium is expected. For this reason, the expected rate of return was intuitively adjusted upwards to 16%.
- The actual five-year average ROE was calculated at 19.72%. When compared with the adjusted expected rate of return of 16%, the stock was significantly undervalued (market value should exceed book value).
- Based on the growth rate of 9%, the WACC of 14.65% and normalised free cash flow of R16.34m, the value of operations was calculated at R261m. Note that the

free cash flow was adjusted (normalised) to cater for maintenance-related capital expenditure, and if investment in trade debtors and creditors are aligned and kept in equilibrium.

- When adding the value of marketable securities and deducting the value of interest-bearing debt, the value of equity is R311m.
- If a market value of R311m is assigned to the equity of Telwiedrè, the ROE reduces to 9.90%. The value of R315m is considered a good indication of the actual value of equity (compared with the current book value). This market value equates to a price-earnings ratio of ten times.

2.9.12 Conclusion

The asset base of Telwiedrè is used effectively to generate revenue, profit and cash flow.

The low operating and financial leverage are key strategic strengths, which allows the company to adapt quickly to prevailing market conditions. Similarly, the liquidity position is managed well.

The market value of equity significantly exceeds the book value of equity.

2.10 Risk Analysis

Ungerer *et al.* (2016:184) contend that in assessing a company's risk, one usually considers its operational agility, customer reach, cost competitiveness and stakeholder confidence. In the unique case of Telwiedrè, the consultants also considered longevity and corporate governance while analysing Telwiedrè's internal risks.

Telwiedrè had great success by applying great value to a positive company culture and building relationships on trust and mutual respect. Up to now, this multi-million-rand company has been run on a basic system of Excel, a Microsoft product.

In light of the current company strategy and to optimise operations, it became evident that a more complete operating system as well as legal compliance personnel are essential. In addition, the operations depend on key personnel, who are experts in their respective fields, without the existence of sound structures should something happen to those key individuals.

This analysis aims to show how these company risks are linked with the observed shortcomings. Table 18 illustrates the various risk factors, their impact to Telwiedrè, the probability of those factors, their risk classifications (the magnitude of these risks), and the mitigatory steps that can be considered to mitigate the risks mentioned. The winning strategy and implementation plan will elaborate to a greater extent on the area of mitigatory actions proposed and the plan of how to implement same.

Table 18: Telwiedrè's core internal risks

Risk factor	Impact	Risk classification	Probability	Current mitigatory actions
Key personnel difficult to replace.	Loss of sales and operational efficiency.	High	High	Limited sharing of knowledge, cross-skilling and job rotation.
Dependency on Ters and Lollie.	Long-term sustainability compromised.	High	High	Hands-on approach by CEO and CFO with senior staff acting in supporting role.
Legal liability claims for product and liability of personal injury.	Costly settlements or legal awards.	High	Medium	Ad hoc consultancy as and when required.
Corporate governance shortcomings.	Long-term sustainability compromised.	High	Medium	Basic procedures in place.
Product relevancy.	Loss of market share and reduced sales.	Medium	Low	Constant improvement of products.
Inefficient sales generation and order processes.	Reduced sales revenue, slower growth.	Low	Medium	Long-term relationships and market knowledge.
New lower cost entrants.	Loss of market share and reduced sales.	Low	Low	High entry barriers due to capital intensity and brand establishment.

2.11 Conclusion

The analysis was performed to focus the attention on the internal strategic decisions and value chain operations adopted by Telwiedrè. Its main purpose is to clearly understand those key elements in the strategic value chain that define the strategic make-up of the business. Understanding the generic strategy, major inflection points

and where Telwiedrè currently resides in the s-curve life cycle of a business, give a sense of the importance of how decisions can determine future outcomes.

Further insights into the marketing strategy and integrated SWOT analysis assisted in identifying some opportunities. A critical review of the internal value chain along with the VRIO framework helped to establish where the operational and cultural competitive advantages stemmed from.

The financial analysis helped to identify that Telwiedrè is effectively utilising its assets, that Telwiedrè has a strong financial leverage position, and that Telwiedrè's market value of equity significantly exceeds the book value of equity (Thompson *et al.*, 2017:144).

Lastly, the risk analysis showed that there was a need for a more complete operating system as well as legal compliance personnel. It also found that there are key person dependencies without the existence of succession planning.

The next section is aimed at analysing the external environment and factors that have a major role to play in the strategic outlook of Telwiedrè.

3 SECTION C – EXTERNAL ANALYSIS

3.1 Introduction

The animal feed industry is well defined and universally accepted by all stakeholders, including analysts, regulatory authorities, economic planning agencies and other practitioners. This can be attributed to the fact that there is a representative industry body, namely, the AFMA. The SIC Code 30330 describes the sector as “manufacture of prepared animal feeds and pet foods” (Bosman, 2018).

The sector can further be classified as being part of the agro-processing industry. In investor and government circles, the inclusion into this wider classification is popular as the South African government has a specific focus on agro-processing. According to the Food and Agriculture Organization, “Agro-processing industry is a subset of manufacturing that processes raw materials and intermediate products derived from the agricultural sector” (Dunn, 2018).

The agro-processing industry has been identified in various South African economic action plans (such as the Industrial Policy Action Plan, the New Growth Path and the National Development Plan) as having the potential to make a significant contribution to economic growth and job creation (Dunn, 2018). By being included into this wider definition, animal feed manufacturers can potentially benefit from economic stimulus associated with these government initiatives. While being part of the wider agro-processing sector can potentially provide economic benefits, the adoption of the initial stricter definition was deemed more appropriate for the purposes of this exercise.

3.2 Challenges Faced by the Industry

New water, carbon tax and labour legislation will put additional administrative and financial burdens on industry players. Manufacturers are generally located in rural areas where socio-economic problems, coupled with lacking infrastructure and services, present ongoing challenges. Generally speaking, operating costs are escalating. It is believed that local research capabilities have deteriorated, which mean that more reliance is being placed on foreign research results. Therefore, local manufacturers have to invest in the development of their own laboratory capabilities (Bosman, 2018).

Although challenges are faced by the industry, new technologies are being developed, such as (Bosman, 2018):

- Energy and water efficiencies.
- Pursuit of advanced processing technologies such as fine grinding, optimum mixing uniformity to improve feed utilisation, pelleting and high-shear conditioning.
- Effective utilisation of information technology such as linear programming and recipe management software used to calculate optimum nutritionally balanced feed formulas and create innovative feed products. It is also expected that block chain technologies could be applied to enhance farm-to-fork traceability.
- The protein content in animal feeds is an important measure, and researchers are continuously identifying new sources of protein. More recently, black soldier flies, larvae, silkworms and mealworms have been identified as potential sources of protein. The commercial viability is yet to be tested.

The industry is also subject to ongoing regulatory review (Dunn, 2018):

- The new Feeds and Pet Food Bill was drafted recently. The Bill was published in the Government Gazette in January 2019 and consultation on the Bill will start in March 2019.
- The Bill will regulate the feed and pet food industry and will cover aspects such as feed ingredients, licensing and registering facilities used in the manufacturing process, and appointing a registrar to administer the regulatory process.
- The purpose of the Bill is to protect the consumer and users of feed and pet food by ensuring compliance with food safety requirements.

South African animal feed manufacturers do not receive any government support. Additionally, it is often cheaper to produce raw materials such as soya and grain in regions like Brazil. The combination of these factors suggests that it will be difficult to export South African animal feeds competitively to the rest of the world (Dunn, 2018).

Being in the manufacturing business, raw materials are a key element in the life cycle of Telwiedrè and are soft commodities. Thus, the cost of manufacturing animal feeds is subject to cyclical price movements in soft commodities, which has proven to be

dramatic. It is not always possible to pass these price movements to customers; therefore, profitability in the sector can vary significantly over a period of time. Larger players with adequate capital reserves have the ability and benefit of buying raw materials forward, thereby creating certainty of the unit cost of production. This makes it possible to secure more favourable offtake agreements. Being able to eliminate price risk is therefore a competitive advantage. It is believed that the consistent supply of animal feeds of a high quality, which results in optimal feed conversion efficiencies, is the main driver of supplier/buyer relationships (Dunn, 2018).

The majority of animal feed manufacturing operations are forward integrated into primary farming operations such as broiler-farming operations. Telwiedrè is not integrated to this extent, and the advantages or disadvantages to this position should be explored further.

The transport cost associated with moving animal feeds has a major impact on the all-in cost for the offtaker. This being the case it would seem that animal feed manufacturers serve a particular local market or local region. Entry barriers to the formal animal feed manufacturing industry are high. The high capital costs associated with the construction and commissioning of a new plant, together with certifications and brand development, mean that major new entrants to the sector are highly unlikely. In contrast, it is believed that the sector would rather follow a path of consolidation in an effort to extract efficiencies and synergies.

While we do not believe that new entrants are likely to enter the formal industry, we do believe that further backward integration is possible. For example, grain-milling operations are the major suppliers of chop and bran, which is a by-product, to animal feed manufacturers. Similarly, sugar-milling operations produce molasses as a by-product. These by-products are produced and sold in bulk. We believe there may be opportunities for these suppliers to integrate into animal feeds as they would then have the opportunity to participate in the value chain at higher margins. The benefit to the animal feed manufacturer is certainty of supply at predictable price levels.

Animal feeds are often manufactured to a particular specification set by the offtaker. If the emphasis moves from being a generic supplier of animal feeds to becoming a business partner to the offtaker, it may be possible to create a strong affinity. Partnering with major offtakers who are not associated with any of the existing

integrated operations can be considered. Strong alliances and integration exist in the broiler industry, but less so in the layer industry. We believe even less so among the rapidly growing piggeries.

3.3 Industry Dominant Economic Features

South Africa is ranked 22nd globally (and number one in Africa) in terms of the size of our animal feed manufacturing sector. In 2017, South Africa produced 11.1 MMT of animal feed. Globally, China is ranked as the number one feed manufacturer, producing 187 MMT per annum (Bosman, 2018).

South Africa's national feed sales are reflected in Figure 1 (page 9), which shows that:

- Poultry (broilers and layers) and beef/sheep are the major users of animal feeds.
- National feed sales increase during drought periods.
- Given the overall, generally flat trend, the industry is not seen as a growth industry.

The estimated value of animal feed production for 2017 was R50 bn.

The AFMA is the industry body for animal feed manufacturers. AFMA reports that it has 71-member mills, and that its top eight members collectively operate 38 of these listed mills. In 2017, the combined production of Meadow Feeds, Quantum Feeds and RCL Feeds came to 2 372 MMT or 21.5% of total production. From this perspective, the industry seems to be concentrated, but also vertically (forward) integrated as these conglomerates also principally sell to their own poultry farming operations. AFMA has 33 associate members who supply premix, feed additives and veterinary products.

3.4 STEEPL² Analysis

Socio-cultural

An increase in worldwide population, specifically the middle class, is driving an increase in protein consumption such as poultry (Donley, 2019). This is emphasised by the worldwide production of broiler chickens growing by about 3% during 2018, while Africa saw a significantly higher increase of 9%. Donley (2019) speculates that the worldwide employment growth is expected to stagnate.

² Social, technological, economic, environmental, political and legal

South African unemployment increased from 26.7% in the first quarter of 2017 to 27.6% in 2018 (Stats SA, 2019). This is compared with a figure of 24.8% during the first quarter of 2011 (Stats SA, 2019). Unemployment in South Africa is therefore a growing concern that can potentially affect protein consumption.

Technological

The draft Feeds and Pet Food Bill was published for public comments on 15 February 2019. The purpose of this Bill is to regulate the manufacturing of the ingredients used in feed and pet food manufacturing in South Africa. Government aims to ensure that animals intended for human consumption eat feeds that are safe to eat for the animal, which will ensure that humans eat meat that are safe for humans. A key component of this Bill is traceability of the ingredients in animal feed (South Africa, 2019).

AFMA believes this Bill will align the local feed industry with international animal feed principles (Bosman, 2018). This new Bill is said to be a driving factor for development of blockchain technologies for the feed industry and as part of the entire value chain of farm-to-fork traceability (Bosman, 2018).

Feed industries are adopting new technologies to improve system efficiency to use less energy and water (Bosman, 2018). Newer processing technologies are employed to ensure better mixing ensuring better uniformity (Bosman, 2018).

Research regarding alternative animal feed ingredients such as silkworms, common housefly larvae, black soldier flies, yellow mealworms as well as other waste materials drives the development of new feed-processing techniques. Bioconversion processes recycle nutrients from waste food products, which include insect-based proteins. An example is a company called AgriProtein Technologies that established an industrial-scale plant to supply the local poultry market in South Africa with manufactured dried protein and wet larvae (Bosman, 2018).

These alternative solutions for animal feeds may potentially impact the sale of traditional feeds that do not use these processing technologies. Existing feed mills should investigate the use of these alternatives.

Economic

Maize is a primary energy source in animal feed and constitutes approximately 55% of the ingredients. Maize for animal feed accounts for about 40% of maize production

in South Africa (Bosman, 2018). Worldwide production of maize exceeded demand during recent years, which led to major surpluses and a corresponding fall in price (Dunn, 2018). Dunn (2018) expects that this situation will prevail for the next 10 years, which is good news for feed producers.

Soybean is another important ingredient in animal feed. Existing production volumes are not enough to meet demand, driving up its price (Dunn, 2018). Nonetheless, it is expected that soybean production will increase in the near future due to the higher profitability of soybeans compared with maize (Dunn, 2018). South Africa imported R2.5bn worth of soy oilcake during 2017 of which 53% attributed to animal feed production (Dunn, 2018). Prevailing climatic conditions can however change these forecasts completely, leading to the conclusion that raw material price risk remains of critical concern.

It is expected that Africa will realise feed growth of 5% during the next decade. This was mostly due to an increase in ruminant and poultry production. It is therefore expected that Africa presents the best opportunity for growth in the feed industry. It is also believed that aqua and poultry will be the proteins that could experience the highest demand. This is compared with growth rates of 1.7% for advanced economies (Donley, 2019).

The local broiler industry is affected negatively by dumping activities by countries that can produce at lower costs (Bosman, 2018). In the past, poultry imports have reached peak levels equivalent to 63% of local poultry production compared with typical import levels that are closer to 44%. The impact on feed production from dumping is equivalent to the production of 22 average sized feed mills (Bosman, 2018). It is believed that a more holistic approach to the substitution of imported broiler meat with meat that is produced locally will greatly benefit South African agribusinesses and local producers.

The South African layer and broiler industry was severely affected by culling due to the outbreak of avian influenza in 2017 (Bosman, 2018). The impact on the local feed industry from this outbreak was the equivalent of two typical feed mills. The feed mill industry has still not recovered after this outbreak (Bosman, 2018).

Countries such as Brazil can produce animal feeds at significantly cheaper prices than South Africa due to more favourable climate conditions as well as government

subsidies (Bosman, 2018). It is therefore difficult for South Africa to compete internationally.

Feed production in South Africa is highly competitive. Good feed quality is therefore imperative for feed producers. Many poultry producers consider backward integration with feed producers (Bosman, 2018).

Ecological

Weather conditions affect the supply of raw materials for animal feed. Worldwide grain production for the 2018/2019 period is expected to be at a three-year low, which is partially attributed to bad weather conditions in Russia and the European union (Dunn, 2018). This while consumption is expected to reach record levels (Dunn, 2018). Worldwide soybean production is expected to contract due to bad weather conditions in Argentina while worldwide consumption is expected to grow for the sixth year in a row (Dunn, 2018).

The effect of the long-lasting drought in South Africa resulted in the shifting of livestock to different provinces. This necessitated integration between feed manufacturers and poultry operations to improve profitability (Dunn, 2018).

Political

The United States of America (USA) and China embarked on a trade war in 2018 that is still ongoing. China hiked import tariffs by as much as 25% on products from the USA including soybean. This affects international soybean trade and led to a decrease in USA soybean prices, which is good for feed producers. It is however believed that the trade wars could severely affect international trade and growth potential (Donley, 2019).

Potential changes relating to land reform policy is seen as a key risk that influences investment in South Africa. Uncertainty relating to expropriation without compensation negatively affects the rand/USD exchange rate. It further creates uncertainty among farmers, negatively influencing investment. The weakened rand favourably influences exports from South Africa but does influence the costs of imported goods negatively (Donley, 2019).

Legal

Uncertainty regarding the implementation of the proposed Feeds and Pet Food Bill also affects the industry. It is believed that feed manufacturers may face legal action and may be held criminally liable if mycotoxin and pesticide residues exceed prescribed values. This places an onus on feed producers to ensure that raw material complies with legal requirements. Feed producers are therefore encouraged to demand guarantees from suppliers along the entire value chain that all suppliers comply with the requirements of the Feeds and Pet Food Bill (Donley, 2019).

Changes are also expected to the National Water Resource Strategy. It is likely that government will focus on water reform in the revised strategy (Bosman, 2018). This leads to additional uncertainty.

Table 19 summarises the impact of the various elements of the macro-environment.

Table 19: Summary of macro-environment STEEPL analysis

Trend	Implications	Impact	Trend	Implications	Impact
Socio-cultural	Employment levels.	Medium	Technology	Blockchain; alternative protein sources; advanced processing facilities.	Low
Economic	Worldwide demand vs supply for raw products.	High	Ecological	Weather conditions.	High
Political	USA/China trade wars; low investment confidence; land expropriation	High	Legal	Feeds and Pet Food Bill; National Water Resource Strategy.	Medium

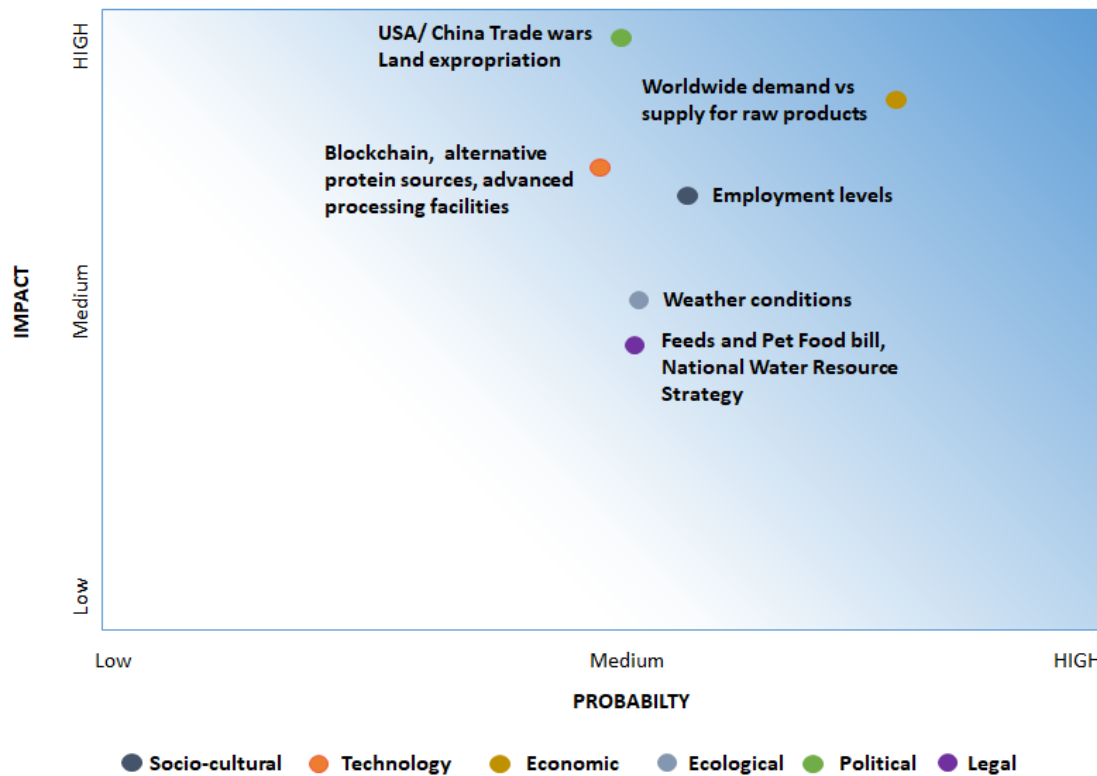


Figure 14: STEEPL impact and probability analysis

3.5 Industry Analysis

The five forces analysis in Table 20 is a summary of the external forces that could be encountered by Telwiedrè.

Table 20: Five forces analysis

Threat of new entrants	Threat of substitute products	Bargaining power of suppliers	Bargaining power of buyers	Rivalry among competing firms
Economy of scale is high.	The probability of an industry producing a substitute is low.	Concentration of suppliers relative to buyers is low.	Concentration of buyers relative to suppliers is high.	The number of competitors is medium.
Product differentiation is medium.	The rate of improvement in price/ performance relationship of substitute product is low.	Availability of substitute product is medium.	Volume of purchases is high.	Industry growth rate is low.

Threat of new entrants	Threat of substitute products	Bargaining power of suppliers	Bargaining power of buyers	Rivalry among competing firms
Capital requirement is high.	A substitute product is not readily available and priced attractively.	Importance of incumbent to supplier is high.	Product differentiation of suppliers is low.	Fixed costs are medium.
Buyers switching costs are medium.	Buyers do not see the substitute as equal or better quality, performance and features.	Differentiation of supplier's products and services is low.	Threat of backward integration by buyers is medium.	Storage costs are medium.
Incumbent's control of distribution channel is high.	Buyer's switching costs are medium.	Switching costs of the incumbent are medium.	Buyers knowledge of supplier's cost structure is medium.	Product differentiation is medium.
Incumbent's proprietary knowledge is high.		Threat of forward integration by the supplier is medium.	Buyer switching costs is medium.	Buyer's switching costs are medium.
Incumbent's access to raw material is high.		Supplier delivers medium costs saving efficiencies.	Cost savings from the supplier's products is medium.	Exit barriers are low.
Incumbent's access to government subsidies is low.			Importance of the supplier's input to the quality of the incumbent's final product is high.	Strategic stakes are high.
Newcomers cannot expect to earn high profit margins.			The percentage spent by the incumbent on the supplier's product is high.	Buyer demand is growing slowly.
Buyer demand is growing slowly.				There is little excess capacity due to stable demand.
Low	Medium	Very Low	High	Very High

Figure 15 shows the radar graph diagram of the five forces analysis applied to Telwiedrè.

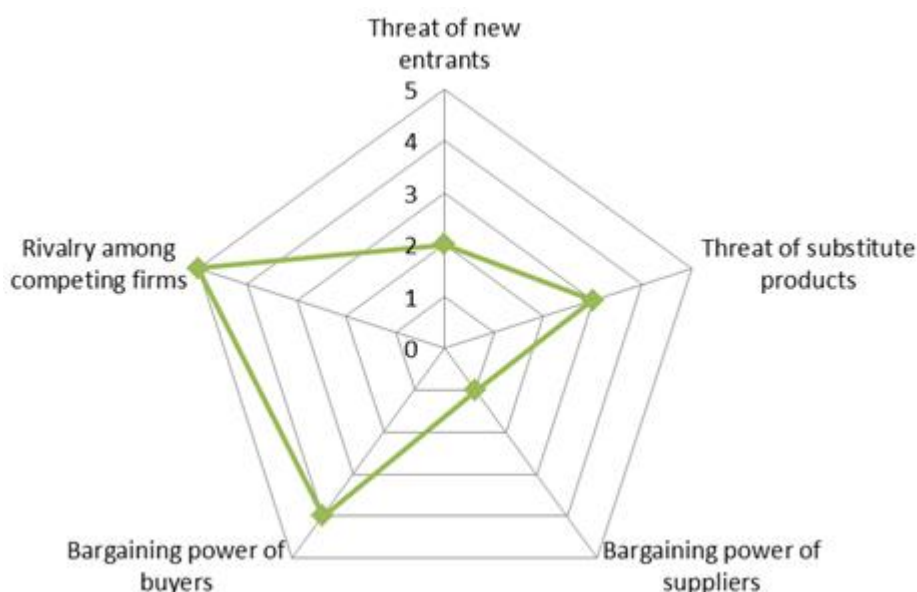


Figure 15: Radar graph representation of five forces applied to Telwiedrè

In summary, the bargaining power of buyers and rivalry among competing firms are the major forces that Telwiedrè must consider.

3.6 Drivers of Change

There are countless changes that can affect an organisation; however, it is critical that an organisation focuses on those that have the largest impact on the industry and the competitiveness in the market (Thompson *et al.*, 2017:84). Table 21 summarises the key drivers affecting Telwiedrè.

Table 21: Industry driving forces analysis for animal feed manufacturing industry

Driving force	Description	Impact on industry	Change implications	Comments
Slow industry growth rate because of national economic challenges.	Slowdown in demand for product.	Strong rivalry among manufacturers resulting in lower margins.	Possible consolidations.	Backward and forward integrations are expected.
Product innovation.	Better scientifically researched feed recipes.	Value and quality to become more important than volumes.	Invest in best possible scientists and technologies.	Costs associated with research and development (R&D) will increase.

Driving force	Description	Impact on industry	Change implications	Comments
				Should R&D be done internally or outsourced?
Manufacture process innovation.	Automation.	Improved efficiencies and cost management.	High capital expenditure. Replace manual with skilled labour.	Long-term debt levels to increase and overall capital intensity to increase.
Changing legislation/ regulatory policies.	Industry regulations.	Cost to comply and eradication of informal feed mills.	Disclosure and independent inspections.	Higher cost of compliance and possibly lower profit margins.
Changing societal concerns and attitudes.	Restriction in ingredients and manufacturing practices.	Supply chains can change.	Disclosure and independent inspections.	Potentially higher cost of compliance and lower profit margins.
Droughts.	Extensive livestock farming become more dependent on feed supplements.	Potentially large and more diverse offtakers.	Product development and formulation required.	Possibly wider spectrum of buyers.

3.7 Key Success Factors

Understanding those key elements that will lead to success is something that the company cannot overlook. While each element in Table 22 has been considered carefully, it is not an exhaustive list but the factors that need to be considered when interpreting the macro-environment (Thompson *et al.*, 2017:64).

Table 22: Industry key success factors

Origin of key success factor	Description
Technology	- Both the formulation and manufacturing process will become highly scientific with high R&D costs. - Entry barriers to the industry will increase. - Intellectual property will become the principle assets of manufacturers. - Possible franchise opportunities may arise.

Origin of key success factor	Description
Manufacturing	• Manufacturing process will not only automate to generate efficiencies, but it will also have to comply with extensive phytosanitary measures and policies. • Manufacturing may start to take place by a franchisee under licence from a franchisor. • Strong focus on energy and water efficiencies, not only to save costs but also because these are key resources that are scarce and in inconsistent supply. • Unskilled labour will be replaced by skilled labour to operate highly technical manufacturing equipment. • Implementation/advancement of total quality management.
Distribution	• Strategic alliances with major suppliers and offtakers. • Consider the possibility of distribution centres for generic animal feeds.
Marketing	• More aggressive marketing at industry and related industry events. • Consider co-marketing with non-competing value chain participants.
Skills and capabilities	• Workforce to convert to skilled labour capable of handling high-tech equipment. • Consider in-house R&D versus outsourcing or contracting.
Location of manufacturing plants	• Logistics and associated costs will become an even more differentiating factor, which makes the location decision significant.
Business model	• The business model can potentially change to a franchising model given the high focus on scientific recipe development and technology advancement in manufacturing processes.

3.8 Competitor Analysis Through Strategic Group Mapping

Figure 16 was portrayed using the strategic group mapping details. It shows the relative strength of Telwiedrè compared with its rivals in the market. This mapping is a vital tool for identifying key competitors against their competitive characteristics versus Telwiedrè's as it allows for a visual depiction of the market players as well as their relative size (Thompson *et al.*, 2017:93).

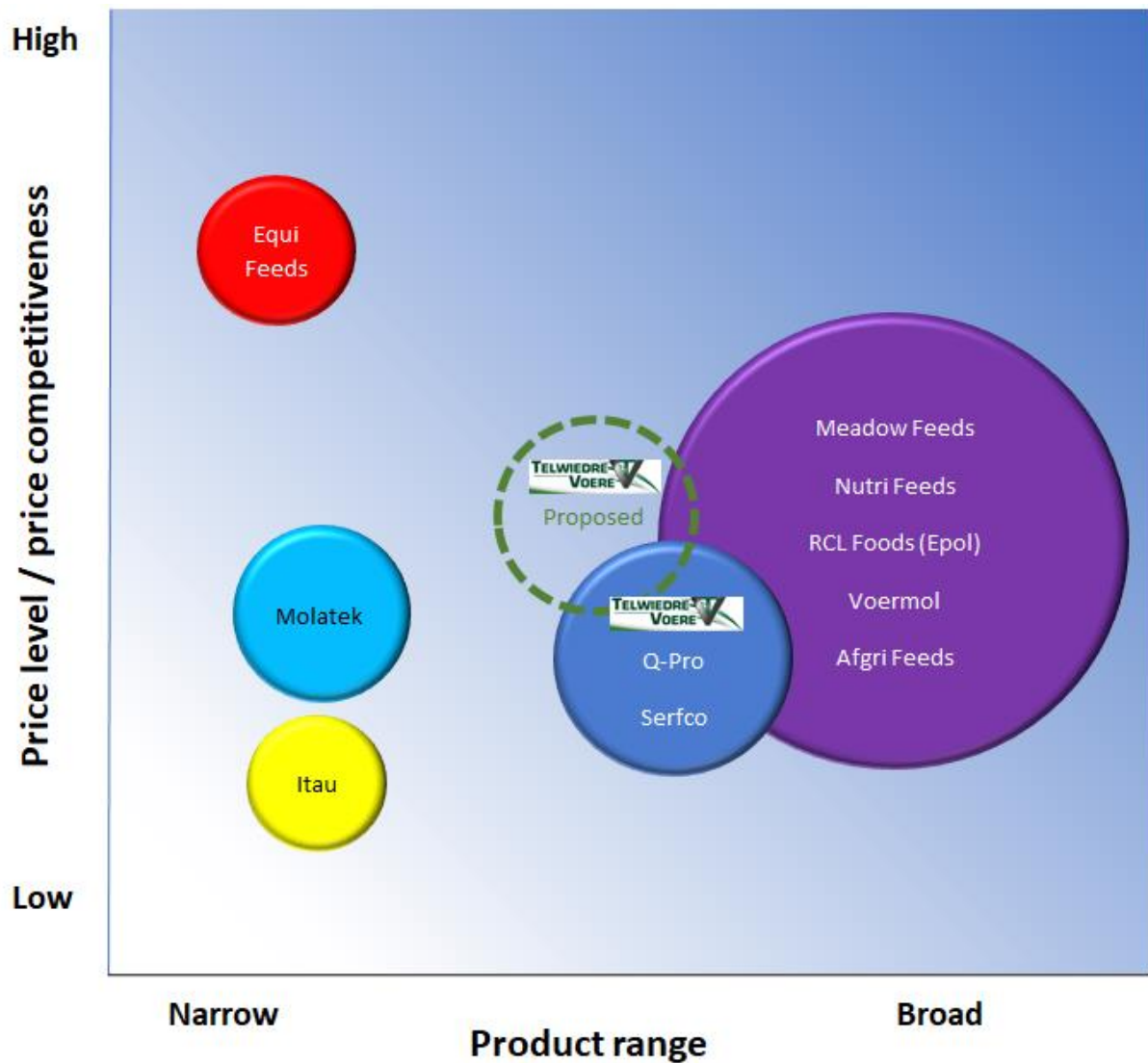


Figure 16: Strategic group mapping

All competitors shown in the strategic group map (Figure 16) are strongly vertically integrated and command strong regional presence. The map indicates that most competitors have a broad product range.

3.9 Conclusion

An external analysis is performed to identify challenges faced in the macro- and micro-environment by all competitors and not just Telwiedrè. The evaluation of the national feed market, its major competitors and legal aspects shows how external factors also affect the decisions that Telwiedrè has to consider in devising its next move.

By performing a STEEPL analysis, external factors, both local and global, were brought to the forefront of additional considerations when developing a strategy. The

Five Forces analysis showed that bargaining power of buyers and rivalry among competing firms are the major forces that the company is currently facing.

Identifying the industry driving forces and scrutinising the key success factors have also given considerable insights as to what is happening in the market.

Lastly, a strategic group mapping helped identify the key competitors of the company against their competitive characteristics and allowed for a visual depiction of the relative size of competitors (Thompson *et al.*, 2017:93).

The following section will discuss the proposed new strategy.

4 SECTION D – WINNING STRATEGY

4.1 Introduction

After an organisation has identified its resource capabilities and weaknesses, it is able to define what it should and should not be focusing on (Thompson *et al.*, 2017:7). This section will provide Telwiedrè with some recommendations that the company could consider enhancing its strategy and ultimately become more competitive.

4.2 Proposed Vision and Mission

Vision

To be the preferred livestock nutrition company in central South Africa by supplying cost-effective and comprehensive feeds enabling farmers to produce high-quality meat and eggs.

Om die voorkeur lewendehawe voedings ondernemings in sentraal Suid-Afrika te wees deur die voorsiening van koste-effektiewe en omvattende voere wat boere in staat stel om kwaliteit vleis- en eierprodukte te produseer.

Mission

We set the standard for manufacturing quality livestock feeds through specialised customer solutions and partnerships. We improve and assist communities through ethical business practices.

Ons stel die standaard vir die vervaardiging van kwaliteit lewendehawe voere deur middel van gespesialiseerde kliënte oplossings en vennootskappe. Ons verbeter gemeenskappe deur middel van etiese sakepraktyke.

4.3 Core Values

Telwiedrè's quintessential core values are:

- **Integrity** – conducting business in a trusting manner by upholding high ethical standards and integrity.
- **Partnerships** – focusing on building and maintaining long-term relationships with business partners and all stakeholders.
- **Quality** – providing quality products that satisfy our customers' needs and expectations.

- **Sustainability** – committing to sustainability and acting in a responsible way that contributes positively to the local community and environment.
- **Innovation** – striving to innovate and improve the business continuously.

4.4 Objectives

The following **strategic** objectives are proposed for Telwiedrè:

- Establishing new and maintaining current mutually beneficial long-term relationships with stakeholders.
- Growing the business to full production capacity in the short to medium term to allow for growth in market share.
- Identifying and discontinuing unprofitable product lines.
- Attaining industry leading feed conversion rates.
- Broadening technological capabilities.

The following **financial** objectives are proposed for Telwiedrè:

- Achieving a gross margin of 10.50% per annum.
- Maintaining a debt-to-equity ratio of less than 50%.
- Maintaining a current ratio of greater than 1.5.
- Containing operating expense growth to less than inflation.

4.5 New Strategy

The suggested strategic changes are based on the full analysis of Telwiedrè and the market in which it operates. Both internal and external factors have been considered, allowing for the following recommendations to Telwiedrè that could be used to improve its competitive advantage.

4.5.1 Business model canvas

Table 23 shows the Business Model Canvas with proposed strategic suggestions marked with an asterisk (*).

Table 23: Business model canvas of Telwiedrè

Key Partners • Botha family (Trompsburg) • Van Zyl family (Bothaville) • Local farmers • Logistics companies • AFMA • Raw material traders • Bloemdrè • SPESFEED • Dalein	Key Activities • Production of animal feed • Logistics • Customer relationship management • Procurement of raw materials*	Value Propositions • Top-grade raw ingredients • Real-time near infrared laboratory • Tailored recipes for animal feed including: ○ Lactation ○ Fertility ○ Growth	Customer Relationships • Personal meetings • Long-term relationships	Customer Segments • Chicken farmers • Pig farmers • Sheep farmers • Cattle farmers • Wildlife farmers
	Key Resources • Local farmers • Raw materials • Production plant/system • Logistics • Staff • Scientific formulation • ERP* • Board of directors*		Channels • Bloemdrè Transport • Consignment stock • Customer pickup • Online ordering*	
Cost Structure • Manufacturing cost • Raw material and other variable costs • Staff cost • Municipal cost • Maintenance of plant machinery • Maintenance of vehicles			Revenue Streams • Product sales • Transport and logistic revenue	

4.5.2 Enterprise resource planning

Consideration 1: Implement an ERP system

Telwiedrè is at an extremely challenging phase of its existence with ample opportunities for growing and expanding its reach. Competitive resources and capabilities are required to support such expansions. Telwiedrè has already moved forward significantly by using the latest technology in its production facilities. However, this needs to be echoed in the rest of the company by using an ERP system to integrate all aspects of the business in a centralised system and to bring about a competitive advantage, as corroborated by Lasisi et al. (2017). A positive correlation also exists between successfully implementing an ERP system, cost efficiency, and overall performance (Gupta *et al.*, 2018).

The other benefits of ERP systems include increased process efficiency and streamlining, seamless integration, accurate forecasting and budgeting, customised reporting, improved productivity, better customer service, and reliability of data. In addition, ERP systems provide access to data from any connected device from anywhere in the world (Gupta et al., 2018).

All current activities should form part of the ERP. It is crucial that the focus is on providing a single source of data to eliminate the problems associated with disparate data sets across the company (many times in the form of Excel spreadsheets). This will also facilitate the use of data for business intelligence (BI) and analytical purposes.

Furthermore, the ERP should be integrated to the existing production system in such a manner that they complement each other as they are essentially different facets of the same diamond. In addition, the integration between these two systems should eliminate any manual interaction. The current accounting software should be replaced completely and enveloped by the ERP.

The typical time to implement an ERP system varies markedly between small and medium-sized enterprises. Some factors that play a role are complexity of business processes, number of users, complexity of previous system(s) being migrated from, number of legal entities involved, and whether a corporate culture of change exists. More recently, cloud-based ERP systems have significantly reduced the time to implement and roll out (Gupta *et al.*, 2018), with some smaller companies migrating in

a matter of days. However, more complex companies, such as Telwiedrè, may expect to perform a complete implementation in 4–6 months.

Finally, due to the large capital expenditure normally associated with ERP systems, companies should tread carefully when deciding which specific ERP to select. Factors that need to be considered are current worldwide user base, availability and accessibility of local partners, features of the system, extensibility of the system and whether an out-of-the-box system will be a close fit for the business, thus minimising customisations.

Consideration 2: Implement a BI system

The prospect of having a central ERP system that contains all the company's data exposes new opportunities to not only manage by exception, but also more importantly, create a data set that can and should be analysed to highlight potential risks and reveal key insights not possible with legacy systems. Many BI tools on the market exist to achieve this, many of which can be interfaced to the ERP system directly (for example, Power BI). Analytical modules are also available to make ends meet by discovering trends in the data that are not self-evident.

It is proposed that a BI tool be implemented and used together with the ERP system. Furthermore, most BI systems facilitate data extraction from multiple sources thereby enabling users to seamlessly view data and trends even across multiple systems (for example, when a new ERP is implemented, the financial analysis can be extracted from both the old and new systems and viewed as one data set).

4.5.3 Legal, corporate governance and longevity

Consideration 3: Appoint a legal advisor (attorney or advocate)

An entity such as Telwiedrè might be liable by way of delict for negligence of its employees by virtue of vicarious liability. This liability can be proven if an employee acted negligently or maliciously at the workplace when executing his or her duties, even if the exact action is not directly linked to the employee's exact duties. Furthermore, a company that owns a factory, such as Telwiedrè, can be liable for personal injuries of employees or third parties on the premises should the necessary precautions not be in place. Telwiedrè can also be held liable for defects in its

products. One can only imagine the kind of liability if a herd of cattle is to die due to an unfavourable substance in the feeds.

While discussing legal issues, one should be mindful that a company is a separate entity or legal person with its own legal status. The purpose of the governance of such a company is to be profitable and secure longevity. Even though directors might come and go, the company must live on. This notion is usually achieved if sound corporate governance practices are present in the governance of a company.

Section 86 of the Companies Act (71 of 2008) states that it is mandatory to appoint a company secretary and, appreciating the turnover of Telwiedrè, this strategic move is justified. The duties of the company secretary, who would form part of the board of the company, include:

- Having oversight of good policies to be put in place.
- Giving advice during board meetings and during general operations on issues of a legal nature.
- Optimising and advising on contracts, invoices, terms and conditions of sales and manage debtors and creditors.
- Keeping disclaimers in place and current.
- Keeping the board of directors up to date on legal and regulatory issues regarding compliance.
- Assisting the human resource department to comply with complex labour laws and regulations.
- Advising regarding insurance for key individuals.
- Mitigating several risks identified in the body of this document.

To fully understand these very technical aspects, a legal expert such as an attorney or an advocate would be an essential asset. For this reason, it will be strategically proposed that a company secretary be appointed and that this appointment be a person with a strong legal background with adequate experience in corporate law. This employee will not only strengthen the legal procedures and corporate governance but will also optimise every day operational compliance and procedures such as, among others, the terms and standard conditions of sale, employee and business contract and disclaimers. This should steer Telwiedrè into a new corporate governance high with punctual compliance. This can be achieved in a period of about three months –

from first day at the office to fully functional in legal aspects. The legal expert can use external legal practitioners should it ever become necessary. Another advantage of this strategic move is that this employee can give proper advice on how to steer Telwiedrè into a direction to sustain the longevity of the organisation.

Consideration 4: Diversify the board of directors

To maintain the strategic running of Telwiedrè, an effective board of directors needs to be in place as the board ensures the longevity of the company. The rationale is to optimise the governance structure and to have board meetings to discuss the affairs of the business.

Telwiedrè should also consider having, at the very least, monthly director meetings to discuss relevant issues regarding the management and governance of its operations.

The next step will be to diversify the board of Telwiedrè to between four and six directors. It is advised to have a diverse board. Should the owners of Telwiedrè decide not to continue with the operations at some stage, the board will be able to continue the operations for the benefit of the shareholders. To do this, the board should approach new potential board members, preferably:

- From different areas of expertise (legal, financial, technical among others).
- From different age groups, gender and racial orientations.
- A mixture of executive and non-executive status.

Lastly, a chairperson of the board needs to be nominated. This should preferably be an independent non-executive director bearing in mind that the chairperson should be nominated at the first possible meeting after the annual general meeting of Telwiedrè.

Best practice dictates that it should not be the CEO; however, considering that Telwiedrè is a family-run private business, we would recommend that Ters be selected as the chairperson in the interim. The rationale provided is that should the directors vote equally in favour and against a certain proposal, the vote of the chairperson shall be the decisive one.

If Telwiedrè functions in this fashion, it will still be able to continue with operations even if the current directors and owners, Ters and Lollie, decide to retire at some stage. Further, these suggested changes should not place any additional burden on the

already strong and positive culture of Telwiedrè – it could possibly even promote better relationships in future.

Table 24: Possible composition of Telwiedrè Board

Position	Committee	Name (if applicable)	Independent non-executive	Executive director
Chairperson	Remuneration	Ters Pretorius		Yes
CEO	Audit committee (by invitation) Social and ethics			
CFO	Audit committee (by invitation)	Lollie Pretorius		Yes
Board member (company secretary)	Nomination committee Social and ethics		Yes	
Board member	Remuneration Audit committee		Yes	
Board member	Remuneration Audit committee		Yes	
Board member	Audit committee Social and ethics		Yes	

4.5.4 Human resources

Consideration 5: Rotate jobs

It is proposed that support personnel in the departments of key individuals are rotated to enable those personnel to enhance their knowledge and expertise. This is intended to mitigate the risk of a standstill in operations should a key individual resign or retire. Further, this proposed practice has the potential to find or unlock extremely talented individuals who may be in the wrong department or field. Employees need to be stimulated by constant new challenges and this will add to their work satisfaction and the sense of feeling valued by the employer.

4.5.5 Marketing

Consideration 6: Set up online ordering and modernise website (short term)

Telwiedrè's website needs to be modernised to provide a more enhanced user experience that includes a full e-commerce platform. Suggested improvements include:

- Set up a user portal to allow customised user account management.
- Synchronise detailed product listing with stock availability information with the ERP system.
- Set up order processing including cost estimates on delivery and other associated charges.
- Implement full order tracking with automatic notifications.
- Maintenance and support services for the website should be considered.

Consideration 7: Advertise on social media (medium term)

Social media marketing has a significant impact on marketers as well business owners (Ismail, 2017:129). Social media marketing provides the ability to reach out and communicate on a personal level with the target audience on a regular basis. This is pivotal for businesses to expand marketing, sales, customer service and other business activities. Benefits of social media marketing include:

- Increasing exposure;
- Promoting branding;
- Generating leads;
- Improving sales; and
- Reaching previously untapped customer base.

The current website contains an excellent video introducing Telwiedrè, its history, products and processes to a limited degree, and its location and reach. YouTube as a social media vehicle can be used as an additional marketing tool for Telwiedrè. It is proposed that short video clips are created to showcase its products and processes. The benefit is that it becomes easier to share videos to other free social media platforms (for example, Facebook), which will further enhance the marketing footprint.

4.5.6 Vertical integration

Consideration 8: Consider backward integration

Considering the origins on Telwiedrè, its roots can be traced to a farming venture that integrated backwards into animal feed manufacturing. This has changed significantly over the years with the focus shifting to the animal feed venture, which subsequently dwarfed the farming operations. Within this context, we argue that Telwiedrè has very limited vertical integration.

When compared with its peer competitors, without exception, all of Telwiedrè's major competitors are strongly vertically integrated and, in most cases, backwards and forwards.

This independent position could have supported business expansion in the past because the customers of Telwiedrè compete with the in-house farming ventures of its primary competitors. For example, Meadow Feeds is linked to sister company Astral, and Q-Pro is linked to sister company Grain Field Chickens. We argue that not wanting to support its rivals, many primary farmers could have favoured buying from Telwiedrè. We therefore suggest that if Telwiedrè consider venturing into a more vertically integrated model, then to consider backward integration rather than forward integration.

Conceptually, backward integration into the supply chain can also benefit the possible target company. The ingredients that Telwiedrè source from suppliers are often by-products of their primary products. For example, chop is a by-product of maize milling, soya cake is a by-product of soya oil pressing, and molasses is a by-product of sugar cane milling. When integrated, the suppliers of these products benefit from the product value add, which Telwiedrè will do.

Similarly, Telwiedrè stand to benefit from such a symbiotic arrangement. Firstly, it will secure supply, probably at a predictable price and, secondly, it will aid in long-term operational and financial planning. Having a deeper understanding of the value chains (which we argue will come from such backward integration) can aid to avoid price shocks and enhance optimal stockholding. Overall, such vertical integration can enhance operational and financial stability for both parties, allowing Telwiedrè to negotiate with more accuracy with its customers. It can also potentially provide

Telwiedrè with more bargaining power in a sector which was described as being highly competitive.

But backward integration does not come without risk. For example, Telwiedrè can lose flexibility of supply, the initial integration process will take a significant amount of time and management energy to execute, and the acquisition costs can potentially be high (which nullifies the future financial benefits).

It is worthwhile noting that Telwiedrè will only be interested in the by-products produced by the target and not the actual primary product. This situation makes the possible backward integration somewhat unique and opens the door for a more down-scaled approach such as a joint venture or similar type of agreement. While it is less complex to negotiate (as a result of fewer formalities), Telwiedrè will probably also sacrifice control and perhaps even enforceability.

If a more formal merger and acquisition (M&A) is envisaged, it can take the form of a share swap transaction, possibly with a cash component. Identifying and negotiating any form of M&A place large demands on the transaction team. It can possibly cause the management team to lose focus of their actual core management responsibilities, which can result in current operations being compromised. It can also cause emotional stress and uncertainty, especially if the stakeholders have a very real vested interest, which Ters and Lollie do have. A transaction of this nature must therefore be approached with caution.

It is recommended that the following be considered, and in the sequence suggested:

1. The current operations of Telwiedrè must be valued by an experienced M&A analyst and key recommendations must be made to maximise the current value of operations and value of equity.
2. The business model, operating model, macro- and micro-environment must be articulated in such a manner that parties, unfamiliar with animal feed manufacturing, can easily understand the opportunities and risks, and how decisions are made.
3. Telwiedrè is advised to add persons to its board who are familiar and experienced with corporate actions and who can consider, in an informed and unemotional state, the opportunities being offered. The board must also be

incredibly clear regarding what it aims to achieve and be disciplined not to allow scope creeping (as discussed in Consideration 4 above).

4. Suitable target companies must be identified, and unique characteristics must be listed. In this instance, intangible characteristics such as mission, vision, management integrity, management objectives, corporate values, corporate culture and overall strategic fit must be considered carefully.
5. A transaction team should be set up, preferably with Ters only as an ad hoc member (but holding final approval/decline and providing the transaction team with a very specific and clear mandate). The transaction team should include persons with negotiation, financial, legal and general M&A skills and competencies.
6. An approach to the target(s) must be formalised and tasks should be assigned to the transaction team members. The transaction team must be clear regarding what Telwiedrè can offer and what it requires in return.
7. If Telwiedrè and the target agree that a transaction can be beneficial to both parties, Telwiedrè must issue a non-binding, unsolicited offer that the target must accept as a gesture of commitment to further discussions. This non-binding offer should set out the salient commercial terms under which Telwiedrè is willing to enter into further discussions (referring to Consideration 3: Appoint a legal advisor, will assist in the legal handling of the agreement).
8. Telwiedrè should be very clear as to its willingness to negotiate around salient terms.
9. Should negotiations proceed in a manner satisfactory to both parties and a final position is reached, a final offer should be made and accepted by the target. It is recommended that a detailed implementation plan form part of the final offer and be accepted by both parties. The detailed implementation plan must cover aspects such as:
 - A predetermined implementation team
 - Funding
 - Administration arrangements/responsibilities
 - Management control
 - Personnel matters
 - Future cooperation arrangements and minimum expectations

On fulfilment of the legal documentation, the implementation team should implement the transaction in line with the implementation plan.

On the balance of probabilities, the upside of backward integration (even if only by way of a joint venture) outweighs the risks and it is recommended that Telwiedrè considers this option. It must be noted that a transaction of this nature probably forms part of the medium to longer term planning and strategy and that it would take no less than 12 months to execute.

4.6 Action Plan

Table 25 summarises the implementation plan for the winning strategy.

Table 25: Implementation timeline for proposed strategy

Consideration	Actions	Responsible	Time frame
1. Implement an ERP system	• Investigate possible ERP options • List major ERP companies and products • Refine and recommend for match with Telwiedrè • List typical costs of implementation for each possible option • Identify possible service partners • Set up kick-off meeting • Do a functional analysis • Create a blueprint of the design and proposed costing • Produce a project roll-out plan • Implement ERP system • Do user acceptance testing • Go live • Provide support and guidance during implementation • Provide post-go-live support • Provide ongoing support	JP Botha	6–8 months

Consideration	Actions	Responsible	Time frame
2. Implement a BI system (dependent on 1)	• Investigate possible BI solutions • Identify possible service • Set up kick-off meeting • Do functional analysis • Create a blueprint of the design and proposed costing • Produce a project roll-out plan • Implement BI system • Do user acceptance testing • Go live • Provide support and guidance during implementation • Provide post-go-live support • Provide ongoing support	JP Botha	1–2 months
3. Appoint a legal advisor (attorney or advocate)	• Consult with employment recruitment agency • Leverage off relationships to identify possible references	Ters	1 month
4. Diversify board of directors	• Identify potential candidates to act as non-executive and executive directors • Appoint directors • Develop a culture of regular board meetings	Ters and Lollie	3 months

Consideration	Actions	Responsible	Time frame
5. Rotate jobs	- Identify possible rotation schedules for various departments - Develop training material to support rotations - Develop operating procedures	HR	3 months
6. Set up online ordering and modernise website	- Investigate possible development partners - Set up kick-off meeting - Do functional analysis - Provide blueprint of design and proposed costing - Produce a project roll-out plan - Implement ordering and website changes - Do user acceptance testing - Go live - Provide support and guidance during implementation - Provide post-go-live support - Provide ongoing support	Marketing manager	2 months
7. Advertise on social media	- Investigate possible marketing partners - Develop roadmap - Implement roadmap	Marketing manager	2 months

Consideration	Actions	Responsible	Time frame
8. Vertical integration	• Value Telwiedrè by M&A analyst • Create and publish business model • Build complementary board of directors • Identify target companies • Set up transaction team • Formalise task to transaction team • Issue non-binding unsolicited offer • Negotiate terms • Make final offer	Ters and Lollie	12–24 months

4.7 Scope Exclusions

This report specifically excluded the following aspects:

- Because of extreme sensitivity, Telwiedrè asked that none of its actual financial numbers, as recorded on its annual financial statements, be disclosed in this document.
- The farming operation, which led to the formation of Telwiedrè, was excluded as it does not form part of Telwiedrè (Pty) Ltd; however, it is acknowledged that an economic linkage exists, but it is argued that because transactions take place at an arm's length, it will have a minimal impact on the results of this study.
- Black economic empowerment was not addressed as the report focused purely on the commercial considerations of the business, as agreed with Telwiedrè, and it was our opinion that this area requires a specialist to make a meaningful contribution.
- The transport and logistics company, Bloemdrè, although complimentary to Telwiedrè, was excluded as the focus was specifically on Telwiedrè and its operations.
- Carbon emissions and their impact and opportunities were excluded as it was felt that it is a niche area requiring a specialist consultant to contribute meaningfully.

4.8 Conclusion

Since its inception in 1977 from pig farming, Telwiedrè has established itself as a successful billion-rand turnover animal feed manufacturing business in a highly competitive market. From early on, its relationship with Dalein helped Telwiedrè get its operations off the ground with its first feed mill in February 1998 to mix feed for its piggery.

Telwiedrè's first major breakthrough happened through its involvement in the study group when its product results were performing better than its peers, and the members asked Telwiedrè to also mix feed for them.

To assist them on their growth journey, Telwiedrè enlisted renowned animal feed scientist, Mr Rick Kleyn, who still consults Telwiedrè. Mr Kleyn is one of only two

individuals who have insights into the highly guarded recipes that Telwiedrè has used to create its competitive advantage.

By taking on the challenges presented over the ensuing years, Telwiedrè grew its market share to ten local farmers and manufacturing feed for piggeries, cattle farmers and poultry farmers. All of this resulted in its first profits in 2001 from its venture nearly three years after its humble start.

Telwiedrè's exponential growth saw it manufacturing approximately 2 200 tons of ruminants and non-ruminants' feeds to approximately 70 customers – a great deal to be asked from a mill on a pig farm. To ensure the longevity of its operations, it enlisted Marthinus Hermann to become a director and draft a strategy to take Telwiedrè to greater heights. This plan included purchasing of new property, moving its manufacturing operations, increasing its capacity output, expanding the product offering, and improving operational layouts.

Its game changer came in 2009 in the form of its highly anticipated pelleting plant, which provided a horizontal shift into the poultry sector and increased its product range to 45 product lines.

To improve product quality, Telwiedrè commissioned its own full-fat soya plant and installed NIRS into its manufacturing operations: a signal of its commitment to only producing safe, quality products.

By forming partnerships with the Botha family in Trompsburg and the Van Zyl Family in Bothaville, Telwiedrè was able to increase its reach further into South Africa and grow its market share exponentially at the same time.

This report further focused on the internal aspects to clearly understand those key elements in the strategic value chain that define its corporate make-up. Understanding what strategy it adopted, its major pivot points and its current position in the business life cycle, provided incredible insight into its strategy. While businesses need to be fair that there will always be areas of improvement, some weaknesses in the marketing strategy and integrated SWOT were important to highlight some opportunities.

A strong cultural element was identified in the VRIO framework showcasing how Telwiedrè is able to remain competitive through its valuable assets at its disposal. Its strong financial position is particularly difficult to achieve in the current economic

environment and the financial analysis showed that Telwiedrè is definitely still a strong going concern.

While the risk analysis did identify a need for a more complete operating system, a legal expert and some key person dependencies, these can be addressed, and considering the tenacious approach that Ters has to any of the challenges placed in front of him, these will be achieved confidently.

The external analysis showed what challenges are faced in the macro- and micro-environment by not just Telwiedrè, but all its competitors. This analysis also allowed for the broader picture to be seen and provided Telwiedrè overarching knowledge of its major competitors, legal considerations and the national feed market trends. These are the external factors that can have an impact on any future decisions that Telwiedrè considers.

Useful tools such as Five Forces analysis and STEEPL allow for additional deliberations that must be considered in strategy development and showcase the major forces currently being faced by Telwiedrè.

By comparing the relevant position of Telwiedrè against its major competitors in a strategic group map allowed for a good reflection of where the company is relative to major players in the same industry.

The suggested considerations in the winning strategy are a culmination of the information gathered on Telwiedrè, the analysis performed on its internal operations, and the external forces it is facing. While the team of consultants used their newly acquired knowledge and insights from the MBA course, the considerations have been meticulously thought out.

This thought process had the following objectives in mind: to show knowledge gain, knowledge application and the ability to draft a winning strategy that will be a game changer for Telwiedrè and take it beyond the owners' expectations.

Acceptance is acknowledged that these are suggested solutions. Bluebean 6 Consultancy would like to thank Ters and Lollie for entrusting us with their information and allowing us with the opportunity to experience their passion and kindness.

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