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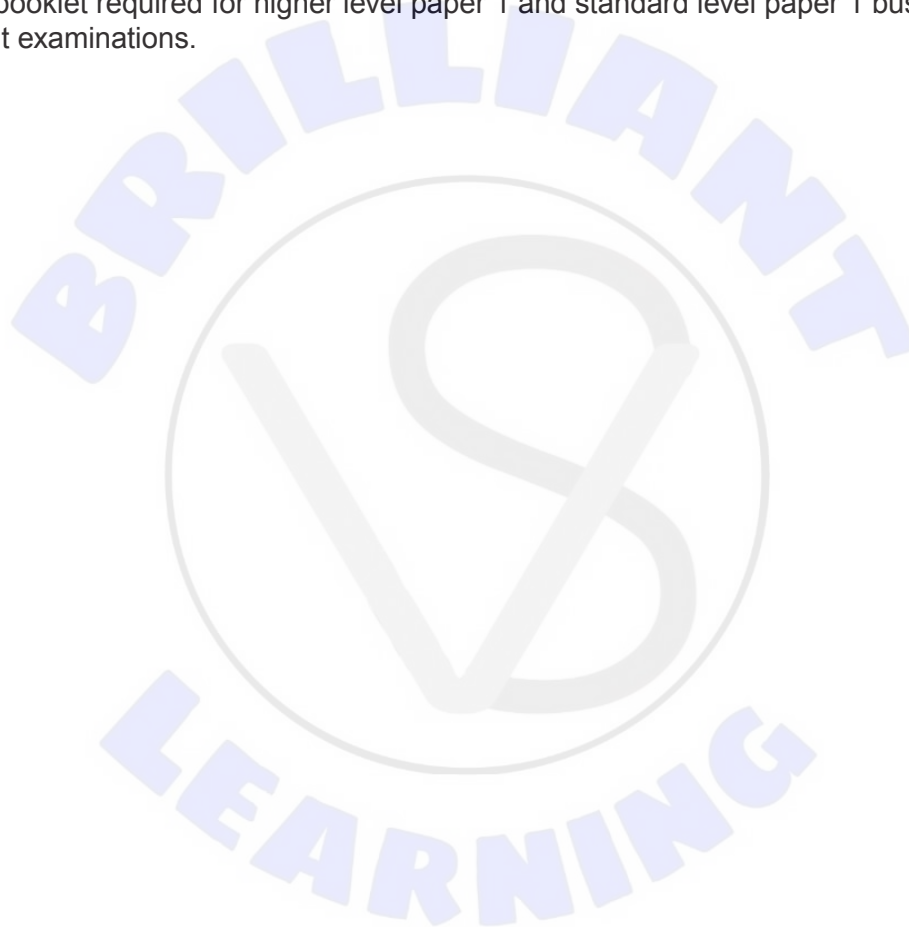
Business management

Case study: Skandvig Terra PLC

For use in May 2023

Instructions to candidates

- Case study booklet required for higher level paper 1 and standard level paper 1 business management examinations.



Skandvig Terra PLC (SVT)

Skandvig Terra PLC (SVT) initially specialized in producing and delivering potable water in Norway. Its vision statement, “Making the world a safer place”, has remained unchanged since the founding of the company.

5 *SVT* currently supplies potable water to over one million people in Norway and to millions of households in over 20 other countries. *SVT* builds and operates water treatment plants to purify the water and is responsible for maintaining the regional water supply networks in these countries. *SVT* has a regional monopoly in each country in which it operates. In the 1980s, *SVT* expanded into other business sectors, including desalination and household water treatment products, by acquiring other companies.

10 *SVT* is organised into four divisions based on product:

- The Fresh Water Division, which supplies potable water
- The Desalination Division, which constructs and operates desalination plants
- The Engineering Division, which manufactures water treatment equipment and power turbines
- The Consumer Products Division, which manufactures home water filters

15 Each division is headed by a director with operational and tactical authority, enabling quick decision making. For example, in response to climate change causing shortages of potable water in some countries, Yannick Pedersen, the director of the Fresh Water Division, was able to quickly find alternative sources of potable water.

20 The leadership styles of the directors differ between the divisions. Yannick has a situational leadership style that works well in a division that has to respond quickly to unexpected changes in the external environment. His leadership style contrasts with the style adopted by Ariadne Johansen, the director of the Engineering Division. Many employees view Ariadne’s leadership style as autocratic, a style that may have led to the Engineering Division being one of the industry leaders in productivity per employee. However, Yannick has clashed with Ariadne on several occasions, as he feels that machinery needed to update water treatment plants has been delayed due to Ariadne having different priorities.

Fresh Water Division

30 This division sources, treats, stores and transports water from the environment (surface water deposits, rivers and subterranean aquifers) for distribution to populations. The water is collected and stored in large manufactured reservoirs. The division, which supplies potable water to nearly 200 million people around the world, has increased in size through both internal and external growth strategies. Its most recent acquisition was *Geng PLC*, a major water supplier in the United Kingdom (UK).

Desalination Division

35 Desalination is a process that removes salts and other minerals from sea water to produce water that is suitable for human consumption or irrigation on farmland. *SVT*’s Desalination Division manufactures and operates desalination plants around the world, providing two income streams. The division provides 15% of the world’s desalination capacity.

40 The market for desalination is growing rapidly, and some estimates suggest that the global water desalination market will double in the next 10 years. *SVT* currently operates desalination plants in 19 of the 120 countries that use such plants, including Australia, China, Greece, India, Japan, Portugal, Saudi Arabia, Spain and the United Arab Emirates.

The Desalination Division also manufactures much smaller desalination plants, which are installed on seagoing vessels. The large increase in the demand for cruise holidays in the last 20 years has boosted SVT's sales of these plants by 300% since 2015.

Engineering Division

This division manufactures equipment and machinery for SVT's water treatment plants, with factories in Norway, Germany and the UK.

To broaden its product range, SVT completed a takeover of a rival engineering company, H4 PLC, in 2015. H4 manufactures steam and gas turbines in four factories in the UK. These turbines produce electricity. Originally a family-owned business, H4's board of directors had been reluctant to embrace change. Its factories operated five days per week, with a single shift that ran from 8.00 am to 5.00 pm each day. H4 employees were paid competitive salaries, similar to those offered by rival businesses, but the company never made use of any other financial or non-financial methods of motivation for its employees.

Following the takeover of H4, SVT undertook a modernization programme and reorganization of the operations of H4's UK factories, achieving economies of scale. SVT wanted the H4 factories to operate 24 hours a day, every day of the week, with three eight-hour shifts per day. However, SVT's human resources (HR) department met resistance to this change from a significant number of long-serving employees. To overcome this resistance, SVT offered a one-time incentive payment to employees who agreed to sign a new flexible-working contract, which would include accepting a new shift pattern every six months. Employees who did not want to sign this contract were offered generous payments to leave SVT. Approximately a quarter of the employees, with an average age of 61, turned down the flexible-working contract and left the company.

As a result of this significant exodus of former employees from H4, SVT's HR department organized recruitment to fill the 300 vacancies that were created. SVT wanted to appoint employees who worked well within a team environment. These vacancies were for a variety of different jobs, but all required highly skilled and specialized employees. People with these skills were in very short supply in the UK. The HR department chose carefully where to advertise the vacancies, and all vacancies were filled within three months. New employee induction training included a visit to SVT's flagship factory in Norway, which utilizes innovative technologies to enhance the speed and quality of production.

The modernization programme of the former H4 factories was completed successfully in 2016. The objective—to operate these factories 24 hours a day, seven days a week, with three shifts per day—was met. In the last six years, labour productivity has improved, unit costs have fallen, and labour turnover figures in these factories have been consistently below the national average. In 2022, the smallest of the former H4 factories manufactured SVT's first wind turbine. Wind turbines can be located on land or in the sea (offshore) and generate electricity from the wind. This factory has the capacity to manufacture 10 large (2.5 megawatt) turbines per year and already has a full order book for 2023. The demand for wind turbines is expected to grow each year as more countries seek methods of generating electricity that do not rely on burning fossil fuels.

Consumer Products Division

85 The Consumer Products Division manufactures and sells water filters for use at home. The filters take potable water and use carbon to remove calcium, chlorine, copper, cadmium and zinc. These filters, which do not remove bacteria or viruses in the water, are not suitable for use in countries that have problems with access to potable water.

Between 2005 and 2010, SVT's Consumer Products Division made consistently increasing contributions to SVT's overall profits. In the same time period, SVT's share price rose by 65% and annual profits doubled, enabling the company to increase its dividends each year.

90 SVT increased its market share in the home water filter industry by both external and internal growth. From 2010, SVT began to take over many small water filter manufacturers in both Europe and the United States of America (USA). SVT aims to become the brand leader in this market in both Europe and the USA. In 2018 SVT's board of directors approved a substantial five-year marketing budget.

95 Corporate social responsibility (CSR) – SVT's Outreach Programme

SVT set up its Outreach Programme as part of the company's commitment to helping people in less economically developed countries (LEDCs). The programme offers these countries free skilled labour provided by SVT employees. After 10 years of continuous employment, all employees are offered the opportunity for a three-month paid career break to take part in the programme. SVT pays the employees' travel expenses and accommodation costs and continues to pay their salary. 100 As part of the programme, employees have taught in schools, dug wells, repaired infrastructure and provided training to local people in many LEDCs around the world, including Angola, Sudan and Yemen. In the last 10 years, 6 000 SVT employees have taken part in the programme. SVT works with charities and non-governmental organizations (NGOs) to identify projects that would 105 make the best use of SVT employees.

SVT's directors can also take part in the programme. One director, Jayne Dees, spent three months teaching English in village schools in Sudan in 2019. She saw first-hand that many Sudanese people do not have access to potable water and cannot afford water purifiers that remove bacteria and viruses from dirty or contaminated water. Some of her students walked 110 miles each day to collect water from ponds and rivers, and the water that they collected was a threat to their health. On her return to Norway, Jayne recommended to the board of directors that SVT become actively involved in developing low-cost, easily transportable water purifiers for use in countries where access to potable water is limited. Her own research suggested that these purifiers would need to operate using solar power, be simple to use, cheap to purchase and last for 115 10 years.

SVT's board of directors were impressed by Jayne's idea. It fitted well with SVT's vision statement. In 2020, SVT launched a competition, aimed at inventors and entrepreneurs, to develop a water purifier that met strict criteria in terms of cost, usability and longevity. The winner of the competition would receive a prize of \$100 000. This competition attracted impressive entries from all over 120 the world. In January 2021, the winner was announced: James Azuki, a university student from Tanzania. He named his design "WF15", as it was his fifteenth attempt that finally produced potable water in sufficient quantity, and SVT agreed to retain this name for the product.

A few hours of sunlight can power the WF15 to produce enough potable water each day to meet the needs of up to four people. The water produced meets the World Health Organization 125 guidelines for potable water.

130 SVT's Engineering Division began production of the WF15 in 2022. However, board members have not yet agreed on a pricing strategy. Several directors believe the WF15 should be a not-for-profit operation, and a minority feel that SVT should go further and subsidize the product to make it affordable to as many people as possible. Two directors are against subsidizing the WF15, as they believe subsidies will negatively impact SVT's overall profitability, making other stakeholders in the business unhappy.

A secondary unresolved issue is how SVT would distribute the WF15. SVT has little experience of distributing consumer products in LEDCs and no distribution channel in place for this new product.

135 SVT's marketing department recently used secondary market research to investigate the spending patterns of low-income families in LEDCs and their access to media. The findings found that:

- only a minority of families owned a television set
- newspapers and magazines were seldom purchased
- levels of social media usage were fast approaching the levels seen in advanced economies.

140 SVT's board of directors have much to think about. They have to make decisions in key areas of the operation of SVT.

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