

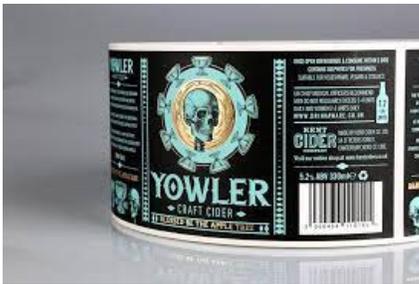
Sustainable Supply Chain 010 Assignment (2022 - Tri 2)

This is fictitious company used for this assignment, all information is used as information only. This is not a question & answer assignment, and you are required to complete a formal professional report, in-line with the marketing criteria.

Introduction

GA-Tagliente is a privately owned printing company established in 1962 by a farmer's son Francesco, who had a talent for drawing and creating unique labels for products on sale in the family farm shop. With the help of Francesco's brother, they developed and assembled a high-quality printing press, one of the first printing presses that would print on self-adhesive paper.

Over the past 40 years, Francesco has built up the company to offer a design service and provide printed labels to a global market. These include the food and fashion industry (examples of the labels are below). At times GA-Tagliente has struggled and was very close to going bankrupt due to new competitors. GA-Tagliente is still a family-owned business, but has constant change in higher management due to conflicting views on the future of the business.



GA-Tagliente has had mixed success with funding start-up companies and gaining new leading market products. A major success story was a start-up company that designed a lightweight, high-quality colour industry label printing machine (See the picture below). There have been significant failures, including over €1M loss on a company to produce an eDisplay which could be used on shelves as a small, low-cost display.



Sadly due to the competition and start-up [of](#) investment GA-Tagliente, this can cause a lack of investment in the offices, warehouse and manufacturing facilities. The rapid expansion of new customers pushes the need for lower-cost suppliers in the Far East.

You have been hired as a market expert to provide a formal report on recommendation for future improvements. An independent external investigation into GA-Tagliente found severe sustainable problems. This is a summary of the inspection report:

Summary

GA-Tagliente has an annual turnover of just over €6m, which has slightly increased over the past five years, which shows the business is slowly growing, despite intense market competition. The overall profits over the same period have remained low at 1.5%, but there has been a recovery of paying off previous debt. Customer feedback is that GA-Tagliente products are higher than the competition and best in class for quality.

In January 2020, GA-Tagliente created a small sustainable task force to understand how the company can become net-zero and develop a suitable roadmap, including timing, activities, impact and potential risks.

There is an overwhelming challenge for the team from the initial inspection, and there is a growing demand for customers requesting Corporate Social Responsibility (CSR).

Facilities

The complete facilities are currently being refurbished in various phases. The original construction company faced financial difficulty and had to stop building works. The offices were built in the 1980s and did not offer any insulation, and the office workers complain that it is too cold in winter. The original plumbing has several water leaks and daily emptying of buckets. Repairing the plumbing would require removing walls and floors; the estimated wastewater is 100ltr per day (it could be more). Moving the office team at this time would be challenging, as the other offices still need to be repaired and rebuilt.

General feedback from staff is that its life working on a building site, with a high amount of dust, open holes in the walls, lifts do not work, toilets are dirty, and the on-site restaurant food could be of better quality.

The warehouse recently had a considerable investment for racking and shortage, which has been a significant help in storing products. The original store manager retired and never used any stock control system, as he knew where to store the products. Today products can be stocked in any random location, and early signs of rankings are starting to bow due to the high loads of boxes of labels. There has been a couple of incidents of warehouse staff being trapped between containers as they have to climb over boxes and pallets to find products.

A severe recent accident was discovered while the investigation was conducted. A lorry arrived with a 1-tonne pallet of ink at lunchtime. The lorry driver was in a rush and persuaded one of the warehouse staff to use the manual box lifter, which has a maximum lift of 250kg. The only on-site forklift is constantly breaking down and has been repaired with cheap or second-hand parts.

Once they started lifting the pallet, the manual lifer arm snapped and dropped it to the ground, rupturing the ink container and leaking over the floor. The operator began to hose down the ink into the drains, as the ink was highly toxic if mixed with water, and it was only the warehouse staff who quickly diverted the water into a storage container. If the water had

not been diverted, this contaminated wastewater would have poured into a local river and killed marine life.

Energy

Due to the increasing energy bills, the sustainability team have installed smart meters across the facility. In May, the electrical usage was 26 kilowatt-hours (kWh), with a similar warehouse being 6.1 kilowatt-hours (kWh) of electrical energy. The team are investigating the power uses, and they found that in the warehouse, they will run constantly run the air compressors (24/7). In the main production facility, the leading printers are 20 years old, consume nearly 5kWh and continuously run for eight hours daily. At a recent trade show, the management talked about a company selling printing machines, and the energy consumption was 2kWh. (With energy costs at the time of publication @ €0.32/kWh and the Italian power source is mainly from coal-fired power stations 1,000g CO2/kWh)

The company was recently fined €60k due to the lack of recycling cardboard, plastics and wooden pallets. The sustainability team implemented multiple colour bins for the factory staff to sort the various waste materials. Sadly this strategy has not been fully understood by the factory staff, with a high turnover of agency staff who are never trained. There is a growing problem with plastic waste used in the packaging of incoming products, and it is hard for the factory team to understand what can and cannot be recycled.

The company have a large wood burner to provide heat to one of the workshops in winter, but this has now turned into a general waste incinerator for any waste. With the increase in sales, more products are arriving on wooden pallets, and each week they are a mass burning of any waste. It is typical for black smoke to be seen from the chimney and the waste ash to be transferred into landfill bags.

The regional government offers financial grants to companies to install solar energy panels and battery storage solutions. With ample roof space, this is a potential solution for GA-Tagliente to use renewable energy. There is ample open space to expand the warehouse and production facility, but the local council rejected this due to concerns about increased traffic congestion. A revised plan could be to install wind turbines which would help run the complete site from a renewable source.

Suppliers

One sales team worked in the automotive industry and started an STA (Supplier technical assists) which audits suppliers and ensures the GA-Tagliente supply chain is ethical. In the past few years, the drive has been to reduce production costs to remain competitive, and new bids for materials are always based on the lowest prices.

Today over five hundred direct suppliers are working with GA-Tagliente, and they need to understand their ethical practices fully. With the sizeable T1 supplier base, there will be an increased number of sub-suppliers, with a majority based in Asia. A university research paper found that one of the ink components has potential routes with illegal mining in the Amazon rainforest. A leading environmental protection charity investigated a supplier based in Mexico for using child labour. Luckily, there was no link between this supplier and GA-Tagliente.

Travel

The GA-Tagliente have a large sales team travelling globally and in Europe. Most travel is via aircraft due to the speed of visiting multiple customers. Initial feedback from the

investigation is that the sales team can book their travel arrangements, and there is no travel company policy.

Sales

As GA-Tagliente has evolved, a complete CRM system is connected to the SOP system, which integrates all the orders, production, stores and supplier requests for raw materials. A strong sales team works to increase orders and maintain the current customer base. Even though the system is fully open to the complete team via the mobile app, orders are missed and immediately panics to generate the labels and transport them to the customer. Due to a breakdown of orders between the sales team and the ordering system, many orders must be completed immediately, so items such as ink, paper and spare parts are flown by aircraft.

Logistics

As the suppliers and customer base have increased, GA-Tagliente has a combination of different logistics strategies. They generally use a lean strategy from various global suppliers to their central warehouse in Italy (see the map below) and then either ship directly to the end customer or via the global distribution network.

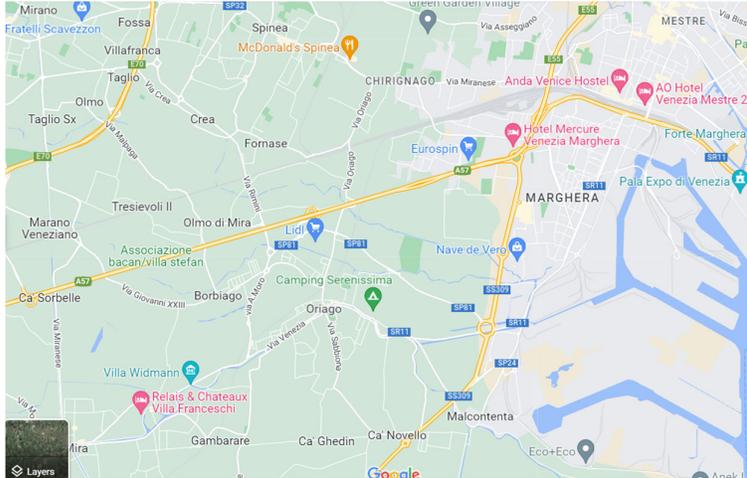
GA-Tagliente owns a fleet of vehicles, including lorries, trucks and vans, which are used for local deliveries from suppliers and customers within 100km of the manufacturing centre. There is heavy use of road transport, and it is common for large lorries to be loaded with a few boxes because the smaller vans are on delivery. Two years ago, there was a strategic plan to outsource the deliveries via DHL, which has been very successful.

The GA-Tagliente management board are concerned about the emission levels emitted and the cost of fuel wasted due to using these larger vehicles. Future low emissions zones within various European city centres require all vehicles to pay for a permit to operate in these zones and would require the company to consider using electric trucks to avoid emissions and the low emissions tax.

One idea is to use the Italian inland waterways to support the movement of goods, similar to the delivery system in Hamburg (German). Several local manufacturing organizations have started trialling this method of transport, with positive feedback from the local council in reducing air pollution. One consideration will be to change the logistics strategy to split shipment between boats, lorries and vans.

The local train distribution centre is about 10km from GA-Tagliente. With the expansion of the European train network, it is now possible for the train to deliver cargo across Europe and receive goods from China. The primary end customers are in France and Spain, and

moving from trucks to trains would increase the delivery time from 3 to 10 days.



Printers

A growing business opportunity for GA-Tagliente is selling lightweight, high-speed colour, high-quality printers, with significant interest from a major high street hamburger fast food chain. Due to the low costs of the printers' sales have nearly doubled in the last two years and there are several significant sales enquiries from existing and new customers. One problem the sustainability team foresee is the potential amount of e-waste when these printers end their life. It is clear from previous products and the customer base that there is no business case for the customer to recycle the printer, and the risk is that they end up in landfill

Consultancy report

GA-Tagliente management board would like to understand the following aspects to understand how they can implement a net zero plan. Please note you can cover more aspects in your report.

1. Use and define a single suitable sustainable framework strategy to help the company become net zero i.e. ISO14001, PDCA, triple bottom line
2. Identify a roadmap action plan to reduce the impact to the plant, ideally create a road map to net zero by 2030
3. Define the impact to the case study to implement multimodal transport
4. Consider the CO2 emissions for the company travel and factory energy consumption
5. Provide a proposal what should be contained in the Corporate Social Responsibility (CSR)
6. Develop a business plan to manage the reverse supply chain for the printer business opportunity which should consider a zero eWaste policy

Please note this is not a question and answer assignment, you are free to expand the areas of research
