

Report

Visual Analysis Paper: Implied Lines in Art

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YFC Shareholder: Business Car Simulation

Introduction

We resolved to complete a simulation on an affordable car company, with the vision of becoming the go-to affordable car company globally for families of low income. The company's mission was to make the most affordable cars for our customers by striking a balance between reducing costs where necessary and increasing customer satisfaction rates. Specifically, we pursued the following SMART objectives to attain the vision and mission.

Strategic Objectives

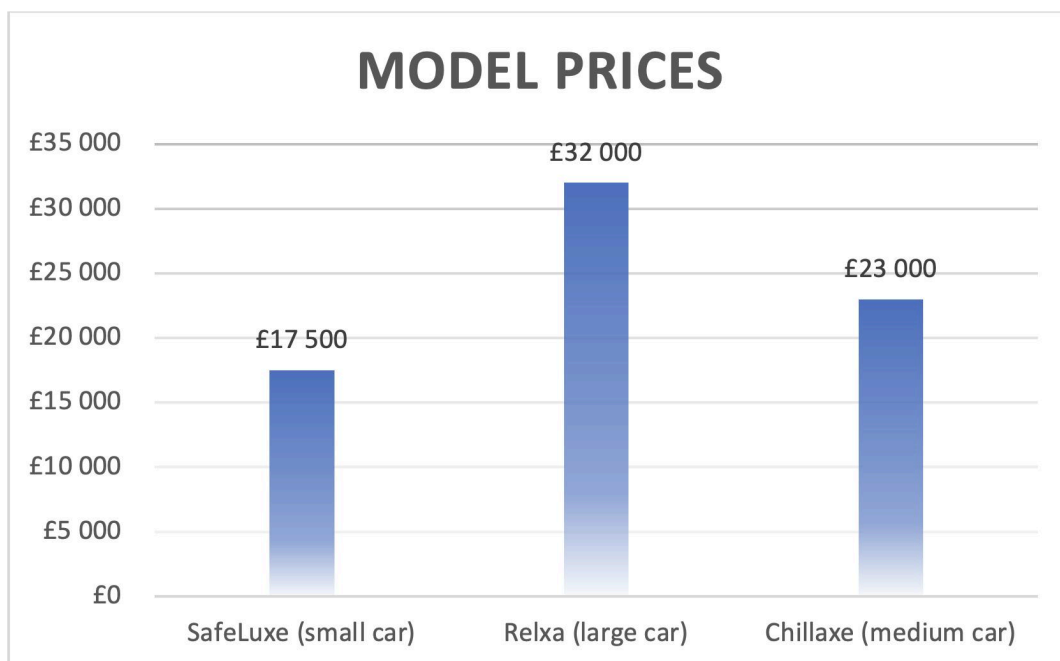
- Reduce strike days to zero by year 4
- Increase productivity score to above 1 by year 4
- Increase automation by a minimum of 20% year on year.
- Increase our sales by a minimum of 50% year-on-year
- Have a 5% float of stock remaining at the end of each year
- Increase our investment into product and design by 5% each year

Competitive Strategy

We operated on a cost-focused strategy. We aimed at attracting potential customers, including those with low incomes, primarily based on low pricing and minimizing costs.

Critical Evaluation of the Company's Performance

We started our operations with two car models: SafeLuxe and Relxa. SafeLuxe was a small car (SUV 4x4) with a petrol engine designed for age groups 25-40 (smaller families). Relxa was a large car (2/4 Door Saloon Estate) with a hybrid engine designed for the age group 41-55. In year 3, we began producing Relxa with a petrol engine, and in year 4, we produced the model for potential customers aged over 55. In year 4, we started producing Chillaxe, a medium-sized car (3/5 hatchback) with a hybrid engine targeting potential customers aged 41-55 (medium size families). By year four, the prices of these brands were as follows:



We committed resources to human resource management, marketing, operations and product management, and financial management to realize revenues and profits. The following table presents the performance measures.

Performance Measures

Item		Round/Yr 1	Round/Yr 2	Round/Yr 3	Round/Yr4
Production (units) for each model	SafeLuxe	59,092.00	60,139.20	94,468.00	102,645.00
	Relxa	39,032.00	40,495.70	73,615.50	55,827.00
	Chilaxe	0.00	0.00	0.00	47,082.00
Sales (units) for each model	SafeLuxe	59,092.00	60,139.20	94,468.00	102,645.00
	Relxa	39,032.00	40,495.70	73,615.50	51,219.00
	Chilaxe	0.00	0.00	0.00	47,082.00
Unsold stock (units) for each model	SafeLuxe	0.00	0.00	0.00	0.00
	Relxa	0.00	0.00	0.00	4,608.00
	Chilaxe	0.00	0.00	0.00	0.00
Sales revenue for the company	SafeLuxe	£789,173,660.00	£992,296,800.00	£1,653,190,000.00	£1,796,294,500.00
	Relxa	£1,131,928,000.00	£1,255,366,700.00	£2,355,696,000.00	£1,786,472,000.00
	Chilaxe	£0.00	£0.00	£0.00	£1,082,886,000.00
	Total	£1,921,101,660.00	£2,247,663,500.00	£4,008,886,000.00	£4,665,652,500.00

Profits before tax (calculated from gross margins)	SafeLuxe	£13,494,869.59	£147,157,615.44	£198,052,162.00	£190,047,958.10
	Relxa	£26,713,500.80	£182,530,318.18	£289,279,468.80	£213,304,756.80
	Chilaxe	-	-	-	£90,096,115.20
	Total	£13,218,631.21	£329,687,933.62	£487,331,630.80	£493,448,830.10
Profit after tax (25% corporate tax)		£9,913,973.41	£247,265,950.22	£365,498,723.10	£370,086,622.58
Bank Balance Outstanding Loan		£240,086,026.59	£7,179,923.63	£372,678,646.73	£742,765,269.30
Shareholder Funds		£250,000,000.00	£0.00	£0.00	£0.00
		£500,000,000.00	£0.00	£0.00	£0.00

Performance Evaluation

We established the company with the primary strategic focus of producing cars cheaply to sell them at prices below market prices to ensure that even families with low income could afford cars. To attain the painstaking mission, it was within our understanding that we had to minimize costs as much as possible while at the same time ensuring that the resources at our disposal in terms of labor, raw materials, and finance were sufficient and appropriate in ensuring that the two car models were of desirable quality and met market needs (Blocher et al., 2019).

We invested significantly in market research on cars used by middle-class and low-class younger, medium, and older families to gain insights into market needs and preferences to ensure that our products precisely met market needs. The research revealed that younger families generally prefer smaller cars due to smaller family sizes and that the size of the car owned by a family is likely to increase as those families get older. As such, we decided that we would segment and target our market based on the age of families. We decided to produce a smaller car (SafeLuxe) for younger families (couples aged 25-40) and a large car (Relxa) for older families (couples aged 41-55). The research also revealed that many potential car buyers preferred petrol cars because the cars are generally cheaper.

Nonetheless, we noted a growing demand for hybrid and electric cars. This informed our decision to make SafeLuxe a petrol car (younger people would want to buy cheaper cars because they are still growing their finances) and Relxa a hybrid car. Our unit prices in year 1 (£13,335 and £29,000) were largely informed by market prices (we had to set lower prices) and partly by costs. We also had to ensure that we did not underproduce or overproduce to ensure that the market was sufficiently served and that we had limited or no inventory carrying costs due to unsold stock. We used our market share projections (5.35%) to calculate and determine the number of units to produce, which led to 59,092 for SafeLuxe and 39,032 for Relxa.

By the end of year one, we had no unsold stock, contrary to our target of having a 5% float of stock remaining at the end of each year, which we presumed to be an indication of underproduction and led us to produce more in year 2 (Ali Naqvi et al., 2016). The following information about our SMART goals also highly influenced our decisions. We had to find ways to reduce strike days, increase our productivity score, increase sales, and increase production in year 2.

SMART Objective	Year 1	Year 2	Year 3	Year 4
Reduce strike days to 0 by Year 4	Strike days at 3	Strike days at 3 No difference	Strike days at 2 - 1 day	Strike days at 2 No difference
Increase productivity score to above 1 by Year 4	0.92	0.94 + 0.02	1.13 + 0.19	1.18 + 0.05
Increase automation by a minimum of 20% year on year to improve operational efficiency	20 units	27 units + 35%	67 units + 148%	90 units + 34%
Increase our sales by a minimum of 50% year-on-year	£1921.10m	£2247.64m + 17%	£3861.41m + 72%	£4650.68m + 20%
Have a 5% float of stock remaining at the end of each year	0 stock remaining	0 stock remaining 0	0 stock remaining 0	4608 stock remaining 0.3% stock left
Increase our investment into product and design by 5% year on year	£8,386.93	£9,005.83 + 7.38%	£7,095.57 - 21%	£13,446.59 + 89%

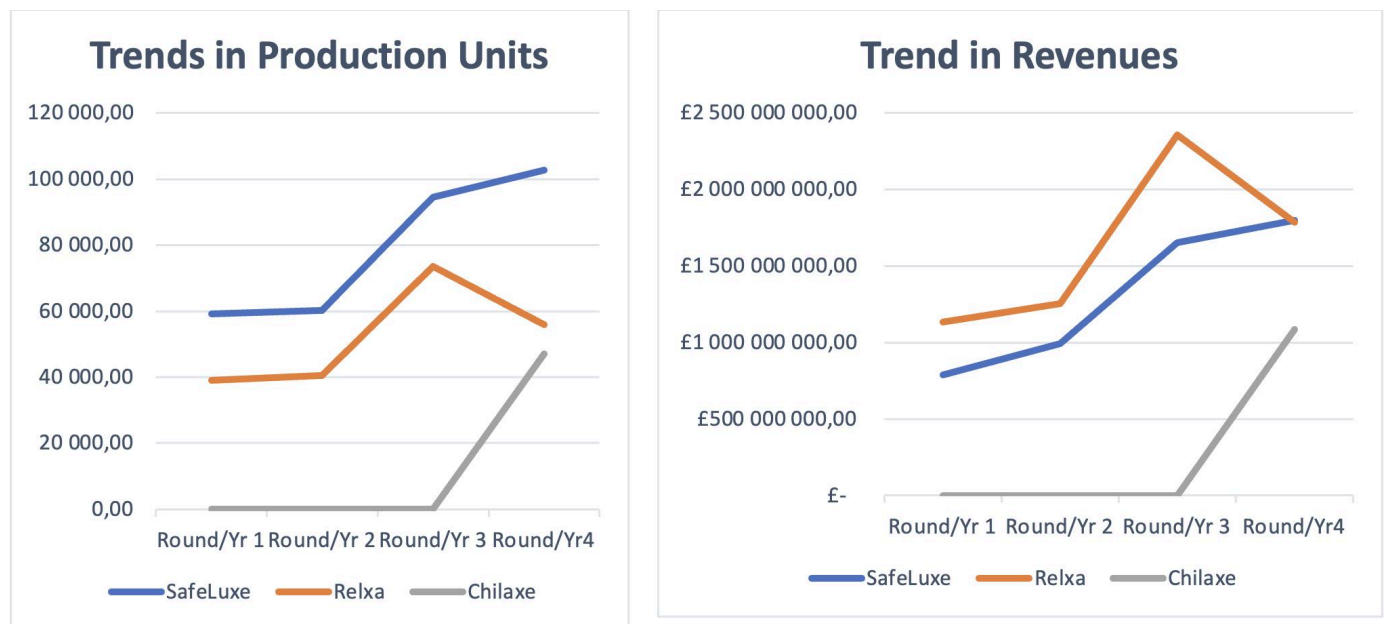
To reduce strike days and increase productivity, we invested 3% of our wage bill in training in year 2. With the right skill sets due to professional development, it was presumed that employees would be more equipped to match the various changes in the industry and commit to new ways to improve their productivity (Sustiyatik, 2023). To increase sales, we resolved to increase production volumes and unit prices to £16,500 and £31,000, as informed by market dynamics. By the end of the second year, significant improvements were noticed apart from strike days, which remained indifferent. This proved that the training did not help reduce strike days. We had to devise and implement a new strategy, and we perceived salary wage increase as a feasible strategy, increasing weekly wages from £700 to £705. This small improvement, among other labor-based decisions, significantly impacted our labor force, with strike days reducing to 2 by the end of the third round. We had no unsold stock from the previous round, implying underproduction. Due to the production decisions, we made at the end of year two, we increased our sales

by 72% year on year, surpassing our SMART objective on sales for the first time.

In our end-of-round three meeting, we decided to produce a medium-sized car (Chillaxe) in year four to give our potential customers an option between small and large cars. This model was primarily targeted to older partners with medium-sized families sold at £23,000. We also decided to increase the prices of models 1 and 2 to £17,500 and £32,000, respectively. We also increased the weekly wage to £707 to reduce strike days to zero and increase employee productivity. Although the strike days remained indifferent from round 3, employee productivity improved significantly in year four. Revenues grew by 20%, and for the first time, we had 0.3% unsold stock (Relxa). By the end of year four, we had attained three out of the six SMART objectives (Productivity score above one by year 4, Increasing automation by a minimum of 20% year on year to improve operational efficiency, and Increasing our investment into product and design by 5% year on year)

Trends over the Four Rounds of Simulation

Below are the tables showing the trends in our operations throughout the four simulation rounds.



The chart shows that although we produced fewer units of Relxa, it generated higher revenues. Relxa production units and revenues plummeted sharply between rounds 3 and 4. We had to shift some capital to the new model three (we did not want to request a bank loan). We did not change our competitive (cost focus) strategy throughout the four rounds because it effectively optimized business and market growth.

Critical Evaluation of and Reflection on Decision-Making

In the simulation, I was responsible for finance and guiding financial decisions. I led the team in making multiple impactful financial decisions throughout the four rounds. In year one, some of our key decisions included budgeting, the need for loans, pricing of the two car models, the number of units per model to be produced to break even, financial overheads, and corporate tax. To create the budget, the finance department closely liaised with each of the other departments to determine the amount they needed. The inputs of human resources, marketing, and operation and product management departments were all vital in determining costs.

The interdependence of these four departments revealed information on areas such as labor costs needed to produce each car, raw material costs per car, design costs per car, option costs per car, and, eventually, average direct costs per car. We applied a zero-based budgeting model to create the budget. The model assumes that departments must be able to create their own budgets and justify every single expense without any expenditure being automatically okayed (Coyte et al., 2021). This approach helped us avoid expenses that were not considered essential to the company's vision. It helped contain costs in a manner consistent with our cost-focus strategy.

Also, given our desire to minimize costs as much as possible, we were loan-averse and financially conservative. We avoided loans as much as possible to avoid interest payments. Nonetheless, we had to take a loan of £250 million in the first round as the factory costs totaled £750 million, and we had £500 million at our disposal. In his theory of competitive advantage, Michael Porter identified cost focus strategy as one of the generic strategies that companies can use to build competitive advantage (Islami et al., 2020). In the cost-focus strategy, he implies that product costing and pricing must be informed by the narrow market that is being targeted. The narrow market we targeted was low-income families, where price is the number one determinant of buying power (Blocher et al., 2019). We had to set prices well below market prices while at the same time meeting quality standards. We employed a penetration pricing strategy where low prices are used to enter competitive markets and raised consistently year over year. This strategy helped us gain a significant amount of the market share (Palmer et al., 2018). The financial decisions, informed by theory and evidence, helped to significantly improve shareholders' value. The shareholders invested £500 million. By the end of the fourth round, the shareholders had immersed wealth of £742.77 million after £250 million loan repayment, amounting to over 48.5% returns on investment.

Evaluation of Teamworking in the Business Simulation

We had a strong and highly collaborative team whose actions, reactions, and decisions were highly closely linked to the GRIP Model, developed by Richard Beckhard in 1972. According to the model, effective teamwork is determined by four interrelated components: goals (what do we want to achieve?), roles (Who does what? When? How?), processes (how do we keep records, make decisions, and take

actions?), and interpersonal relationships (how do we interact?) (Le & Duffy, 2023). Our goal was clearly defined and well elaborated with our mission, vision, and SMART objectives.

We assigned each other roles to find information and direct decisions in key business areas. One person was on human resources (Sula), another person on operations and product management (Yasmin), two people on marketing (Eva and Kawar), and two people on finance (Jothi and Julian). Each of these departmental heads took full responsibility for their departments, making plans and budgets, executing plans, allocating resources, and making critical decisions meant to improve those departments' efficiency. However, collaboration and engagement were critical parts of the processes in assessing plans, budgets, and decisions made by departmental heads and how their actions impacted the business. Meetings per round were vital in streamlining decisions and actions to engender better performance. Bruce Tuckman's team model also played a part in our team, with the team going through the five stages: forming, storming, norming, performing, and adjourning (Jones, 2019).

Conclusion

The business car simulation was generally a success. We were able to make some strategic decisions that engendered year-on-year profits and sales growth. In years 3 and 4, the business was operating at maximum capacity, engendering high production, sales, and revenues. However, there were specific decisions that thwarted the business efficiency. For instance, the decision to draw capital for Chillaxe (model 3) from the finances of model 2 adversely affected the volumes and sales of the model. Given an opportunity to rethink the decision, model 3 funds can be resourced elsewhere (from investors or loans). If we were to proceed with the business, it would be paramount to increase the production of model 3, buy another factory to increase capacity, increase the workforce, and reduce the selling price of model 2 (Relxa).

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