



Volkswagen



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VOLKSWAGEN BOARD REPORT

team divide and conquer

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Grooming financially
qualified business leaders

Executive Summary

This board reports entails the analysis of 5 issues faced by Volkswagen AG. We have prioritised the issues in this manner:

1. Strategy and cost optimization
2. Product portfolio rationalisation
3. E-mobility strategy
4. Paris accord and environmental legislation
5. Strategic sourcing of cobalt in Africa

After evaluation of all these issues, and their anticipated implications, we have come up with the following recommendations:

1. The VW should cut their overhead costs and increase on their marketing.
2. The non-profitable products in the volume segment should be identified and production should be ceased.
3. The VW should pick supplier 4 in order to maximise production at a reasonable goal and meet their goal of becoming the number 1 e-vehicle producer.
4. The VW should replace all the engines above the $99\text{gCO}_2\text{km}^{-1}$ to avoid getting fined.
5. The VW should stop buying their cobalt from artisanals and start obtaining it through legal means.

Introduction

Based in Wolfsburg, Germany, the Volkswagen Group – established in 1937 – was the world's second largest automobile manufacturer, and the largest car producer in Europe. The group employed near 370 000 people worldwide, sold its vehicles in more than 150 countries and had 60 manufacturing facilities. The group encompassed 12 independent brands: Volkswagen passenger cars, Audi, Bentley, Bugatti, Ducati, Lamborghini, MAN, Porsche, Scania, SEAT, ŠKODA and Volkswagen commercial vehicles. Volkswagen had a strong corporate brand identity and was known for its high standards of German engineering. The Volkswagen brand stood for precision, reliability and expertise.

Prioritisation of Issues

Below is the list of problems in order of how they should be handled:

- I. Strategy and Cost Optimization
- II. Product Portfolio Rationalisation
- III. E-mobility Strategy
- IV. Paris Accord and Environmental Legislation
- V. Strategic Sourcing of Cobalt in Africa

Issue 1: Strategy and Cost Optimization

The new CEO, Herbert Diess, has suggested that certain functional units should be centralised under his authority in order to significantly reduce cost of sales, selling and administration costs.

Cost classification	Expected Savings	Source of savings
Cost of sales	1.5%	Procurement, direct factory overheads
Administration expenses	2%	Human Resources including Salaries and Wages
Selling costs	2.5%	Marketing, Distribution, Pricing and Trade Discounts

Table 1.1

The board accepted his categorisation of these 3 segments, although they gave him freedom to reconsider the best approach to long-term profitability. In the first Management Board strategy meeting, a debate broke out between the top 4 executives: Herbert Diess, Oliver Blume, Rupert Stadler and Frank Whiter. They were arguing whether to discard the volume segment due to its long-term non-profitability.

Challenges

- Discussions about centralizing aforementioned units under the authority of the new CEO, Herbert Diess are in the works.
- They are looking for methods to increase their long-term profitability.

Recommendation

These two challenges are intertwined. The CEO suggests the centralization of those units under his authority to save costs. The factory savings altogether would make 4%. These reduced costs will in turn increase the net profit,

Cost classification	Proposed savings	Source of savings
Cost of sales	1.5%	Procurement, direct factory overheads.
Selling costs	2.5%	Marketing, Distribution, Pricing and Trade Discounts

increasing profitability in the short run.

Table 1.2

As for the volume segment, it should be kept, as discarding it would tarnish the founding purpose of the VW. It was originally founded to be a ‘people’s car’ and therefore removing it totally will defeat the whole purpose of the brand which the customers have held on to all these years. Oliver Blume makes an argument that if we were to hold on to these beliefs, his segment and Rupert Stadler’s would not exist. However, if the volume segment is discarded, many customers will be lost as not a lot of people are able to afford the cars in the premium and super-premium segment and part of their brand image will be lost.

In respect to the long-term profitability issue, VW should cut their overhead costs, reduce their prices and increase their marketing in order to increase their market share. They would be operating on a loss in the short run, but they would be presenting such great offers to the customers that when the price is eventually increased, only a small percentage of customers would be lost, and it wouldn’t really put a dent in the profits.

Issue 2: Product Portfolio Rationalisation

Product rationalisation is the process of reviewing the products to decide on whether to retire, combine, maintain or improve each. In line with its new strategy, the VW is assessing the profitability of each of its volume, premium and super premium segments based on its 1st quarter results and published forecasts for the current financial year, with a view to make one or several product portfolio rationalisation related decisions.

Challenges

- They are looking for ways to increase their development and engineering synergies and increase their competitiveness.
- They need to identify the non-profitable products in their brand.

Recommendations

To increase their competitiveness, they can increase on the marketing of their products, or introduce new developments to the cars.

According to Table 2.1, the volume segment is the only one that is making a loss. The non-profitable segments from here should be identified and the production should be ceased in order to reduce or possibly eradicate the loss altogether, which would fulfil the needs of the business to 'slim down'.

Brand categories (ranges)	Volume	Premium	Super-premium	TOTAL
Units produced and sold (million cars)	2,105	549	186	2,75
Sales value (€ millions)	23,273	16,871	20,533	60,677.00
Total Gross Margin (€ millions)	3,490.95	1,269.10	8,623.86	13,383.92
Direct Factory Overheads (€ millions)	3,550.45	637.73	890.57	5,078.75
Gross Profit (€ millions)	(59.50)	631.37	7,733.29	8,305.16

Table 2.1

Also, it is evident from the table that the loss is only a small one, so if some extra costs can be reduced, the gross loss could be turned into a profit.

Profit Forecast

Assuming the cost optimization of 1.5 % (Cost of sales) as stated in Issue 1 is achieved and all other cost remain the same, the direct factory overhead can

be reduced by €53.26, which might make the company break even and subsequently make profit at the short run.

Since the units of the Volume brand is in the excess of 2 million, there is an element of brand loyalty and an inelastic demand for the brand. A slight increase in the price of the 'volume brand' may not significantly reduce the quantity of cars bought by customers.



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Issue 3: E-Mobility Strategy

As more and more countries publish new laws to eliminate traditional and combustion engine cars, some as early as 2030, the group’s first fixed 5-year Panasonic contract for the supply of electric vehicle batteries (EVBs), a key component for the manufacturing of electric cars (ECs) is coming to an end. The group had failed to anticipate the pace of the EC trend and diverted away from its e-mobility strategy, until the “diesel issue” forced a reconsideration: “don’t let a good crisis go to waste.” By this time however, Tesla Motors had taken the lead, by investing in a Gigafactory in Nevada (USA) through a Joint Venture (JV) with the group’s hitherto, only supplier, Panasonic.

Challenges

- The VW wants to become the number 1 electric vehicle producer, advancing over Tesla.
- The VW needs to decide on which supplier to use.

Recommendations

	S1- Panasonic	S2- Supplier 2	S3- Supplier 3	S4- Supplier 4
Location of plant	Japan, Germany, USA, China	Germany, USA, China	Germany	China & US
Length and nature of contract	Was 5 years with no break clause; Now 3 years (6-month rolling) with break clauses and with JIT	6 months (short term) with no contract break clause	5 years (6-month rolling) with break clauses	5 years (long-term) with JIT but no break clause
Quality of production (from sample tests)	Excellent	Reasonable	Very good	Very good
Maximum capacity per annum (million units)	Was 25; now 5	15	5	10
Average cost	Was 400	400 (to be)	450 (to be)	500 (to be)

per unit	(invoiced in €); Now €390 (to be invoiced in US\$)	invoiced in €	invoiced in €	invoiced in US\$
Shipping and transport cost per unit (€)	5.0	5.0	5.0	7.5
Battery range before charging is required (per km)	125	110	125	125
Battery lifespan (per km)	160,000	160,000	160,000	160,000
Battery lifespan (years)	8	8	8	8

Table 3.1

The VW should go with Supplier 1 and Supplier 4. This will make them have excess EVBs for cars, as they are trying to become the number 1 electric vehicle producer, and the maximum capacity per annum for Supplier 4 is 10 million units, with their quality being very good and supplier 1 being 5 million units with their quality rated excellent. The length and nature of the contract also happens to be convenient. Although the average cost per unit is quite high, as well as the cost of shipping and transport, the maximum capacity and the quality makes up for it, and this would be the best option in the long run.

Issue 4: Paris Accord and Environmental Legislation

Succeeding the 2015 signing of the Paris Agreement on the reduction of greenhouse gas emissions, the next wave of legislation to tighten emission standards for car engines kicks in 8 months, failing to comply causes charges as high as €600 million per annum for the group.

Challenges

- Reducing road engines from $125\text{gCO}_2 \text{ km}^{-1}$ to less than $99\text{gCO}_2 \text{ km}^{-1}$.
- To avoid getting fined €600 million.
- Decide on what action to take to reduce emission.

Recommendations

There are 3 options to choose from:

1. Meeting the requirements by replacing the engines. This requires a lot of research and development to design, test and replace brand new engines. It will cost about €19,500 million. The Net Present Value of this investment is in the region of -€2,000.
2. The current range of engines could simply be modified. This will cost about €11,750 million. The Net Present Value of this investment is in the region of €2,200. This would make cars more attractive to customers, although some more powerful models would still be over the emission threshold, therefore the fine would still be incurred.
3. No action will be taken. Despite this fact, they would still achieve an increase in net profit. This considers the trade discounts to motivate EU-based car dealers who have confirmed their orders to buy and export to the US, side-stepping any more severe emission standards that may come into force. If this fails, VW AG will export through car dealers in several African countries described above. The Net Present value of this has been estimated to be in the region of €1,000 million.

Option 1 is the best bet. Option 2 is out of the question completely, as one of the challenges is to avoid getting fined. Option 3 also attracts the fine. Although option 1 requires a lot of capital and has a negative NPV (meaning the cash outflow is more than the inflow), it will avoid getting fined, as well as reduce the amount of carbon dioxide emitted into the atmosphere (external costs).

Issue 5: Strategic Sourcing of Cobalt in Africa

The board is currently contemplating the strategic sourcing of cobalt from key international suppliers, including mining giants such as Glencore, Vale, China Molybdenum and Gecamines in the Democratic Republic of Congo (DRC), which holds 60% of the world's reserves. Against a background of failed talks with the major mining companies to secure supplies, the group, according to local reports, has resorted to using its local Rwanda offices, to access cobalt. Reports claim that the VW group is doing so by buying from artisanal mining operators who drain this out of the DRC.

Challenge

- They are buying cobalt from artisanal mining operators who siphon it out of the DRC, and this is giving the VW a bad reputation. The supply of cobalt is less than the demand thereby causing scarcity and making price high.

Recommendations

The VW buy their cobalt from artisanal miners who siphon it out of the Democratic Republic of Congo. When done correctly, artisanal mining can be an ethical source of low-cost, high-grade cobalt and a key mechanism in keeping the market balanced during times of supply shortage.

Although, the purchase of cobalt from artisanal may cause international human right violation; however, from commercial point of view, VW can use the excess money gotten of buying cobalt from artisanal at a low cost to subsidize the quantity of cobalt from Glencore, in the Democratic Republic of Congo (DRC) in order to increase their capacity to produce the needed 100,000 metric tons by the company.

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SWOT Analysis of Volkswagen

Strengths

- The VW Europe's number 1 car producer.
- The world's second largest automobile manufacturer.
- Sells its vehicles in more than 150 countries and has 60 manufacturing facilities.
- It comprises of 12 independent brands: Volkswagen passenger cars, Audi, Bentley, Bugatti, Ducati, Lamborghini, MAN, Porsche, Scania, SEAT, ŠKODA and Volkswagen commercial vehicles.
- Production of different brands for all classes of income group creating a larger market share

Weaknesses

- The diesel scandal still looms over them.
- The fact that they buy cobalt from artisanal presents them with a bad image.
- Frequent changing of board members leading to change of operational plans

Opportunity

- They can become the number 1 electric vehicle producer in the world.
- There is strong emerging markets in Africa

Threats

- If they do not modify their engines to the threshold requirements, they risk meeting the €600 million fine.
- The cobalt purchase from artisanal can attract legal implication from international human right organisation thereby putting their reputation at stake.