

# Operation Planning of Automobile Industries with Reference to Volkswagen Group for its Excellence

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**Abstract:-** “Operation Planning” class that designing operations processes aims to reduce cost; reduce complexity; additional standardization of components; improvement of functional aspects of the product; and improved maintainability of the product. Furthermore, manufacturing and value engineering procedures are concerned with improvement of design and specifications at the research, development, design, and production stages of product development. Organizations develop a strategy plan to set their expectations of achieving missions and goals. All carmakers are grappling with how to plan and respond to the technological, social and economic changes that are expected to affect their products and businesses. We can see that, connected devices and the potential of the ‘industrial internet of things’ could make major changes in many manufacturing and distribution processes. It is better to choose the right investments and focusing is difficult for any original equipment manufacturer(OEM), especially as new players and disruptors enter the market. For the Volkswagen Group, the challenge is in some ways multiplied, as it must confront how to manage change across 12 brands with different market positions and functions, from economy cars to luxury marques and commercial vehicles.

**Keywords:-** Operation Planning, Value Engineering, Original Equipment Manufacturer.

## I. INTRODUCTION

Volkswagen Group is a German multinational automotive manufacturing group headquartered in Wolfsburg. It is the world’s second-largest motor vehicle manufacturer by 2011 units sales and the largest based in Europe. The Group is made up of various big brands: Volkswagen, Audi, Porsche, Bugatti, Lamborghini, Bentley, Skoda, SEAT, VW Commercial Vehicles, Scania and Man. Volkswagen has the beginning coordinate as the medium term planning which is scheduled once in a year which takes in consideration of coming five years & forms a crucial interior part of operations

planning of the company. At Volkswagen the company specifies systematically and looks for necessity of accomplishing strategic projects designed in order to reach the set bar both at economic and technical fronts in order to acquire liquidity effects. It is also used to correlate all business areas in line to strategic creation. The sectors kept in mind while formulating this are product, process and markets.

The history of Volkswagen dates back to 1937 Germany, where a company called “Deutsche Arbeitsfront” was tasked with creating a vehicle affordable enough for every German family. After sometime, during WWII, workers from concentration camps built cars for the German army. After the war, the factory took over by the British military and used to produce “Volkswagen” vehicles, which in German means “People’s Car.” For the next ten years, control of the company switched hands while the “Beetle” model became increasingly popular. The next seven decades for Volkswagen were full of additional benefits and several legal battles that ultimately resulted in an automobile empire including 12 worldrenowned brands: Audi, Bentley, Bugatti, Lamborghini, Porsche, Ducati, Seat, Skoda, Scania, Man, VW Commercial Vehicles, and Volkswagen. In 2014, Volkswagen became one of the largest automobile firms with a 13% global market share for passenger cars. It produced 41,000 vehicles every week-day in its 119 production plants. The Volkswagen Group is making the foundations for lasting success in tomorrow's world of mobility and its evolution into a world-leading provider of sustainable mobility too. In order to achieve these goals, the Board of Management – with the approval of the Supervisory Board – has adopted a future program, “TOGETHER – Strategy 2025”. By this approach and its programmes, it has also launched the biggest change process in the Volkswagen Group's history. The new Group strategy comprises a raft of far-reaching strategic decisions and specific initiatives essentially aimed at safeguarding its long-term future and flourishing profitable growth. This is to be achieved by comprehensively transforming the core automotive business, rapidly establishing a new mobility solutions business, significantly increasing efficiency as well as strengthening

innovation power and entrepreneurial mindset and approach in the Company.

## II. LITERATURE REVIEW

As per *Nham Tuan, Nguyen Nhan, PhamGiang, Nguyen Ngoc (2016)* In order to improve the innovative and firm performance, those firms in supporting industry should highly concentrate on process, marketing, and organizational innovation activities, rather than product innovation activities. More specifically, the higher the level of innovation activities is, the greater the innovative performance is. *Martina Prochádzková, Oto Hudec (2013)* sees business expenditures on research and development as one of the factors that determine the firm's innovative performance, which in turn may contribute to the growth of the country's innovative capacity. The results show, that there exists a strong influence of expenditures on research and development, while the influence of the number of employees is not statistically significant.

*Alexandru RĂDUȚEANU (2012)* presented the general characteristics of the motor car industry in Europe and how it was influenced by the global crisis, and then to review the evolution of this sector in Romania and how they are feeling the crisis. Global technical harmonization is considered a drive to international competitiveness of the European automotive industry, by improving global competitiveness. The global economic crisis, the European Union had to take some measures to protect the automotive sector, using the investment in innovative technologies to facilitate consumer credit, and financial incentives for people who choose to sell old car and buy a new one. By referring to the importance of the issues examined in Europe today, automotive industry become very substantial, competition is fierce and the pace of change is emphasized.

From an industry-level perspective, the winners in the automobile industry from 2010 and onwards is recognized to be those who can organize long-term collaboration partnerships between the automakers, their suppliers, and the political stakeholders, and who also can outsource a large part of the technical development to the suppliers in areas close to the core competences. The automaker is accepted that their suppliers have competing automakers as their customers and search for synergies in their product portfolio. One the whole there is a need for conceptual development through deeper studies of the firm's relational capability and its implications *Brandes, Brege, Brehmer (2013)*

Operation planning means it is a process which minimizes inventory, reduces customer lead time, keeps manufacturing rates constant and provides top management an edge to handle on the business in order to give customer life time value of the product consumed by him. Operation planning is integrated approach from different departments of the organization in

order to maintain the operational plan on the same track with business plan. It involves a series of meetings at the top level which determines the budget and production activity for the near future. *Chase, Shanker (2011)*

The proper scheduling of workforce is capacity management, which means it shouldn't kept idle. If it not scheduled properly there is a huge chance of revenue losing and incurring high operating cost. Basically capacity management includes capacity planning that helps in determining demands for analyzing future technological implications. It helps in converting prediction into reality and mitigating loses. It helps in determining needs and economic effects that helps in easily implementing operation planning and strategy too *Buffa (1984)*.

To have an efficient management for capacity Volkswagen uses two concepts namely, modular toolkit and turntable. Modular toolkit strategy has created a thunder in automotive sector. It decides flexible platforms which are called MQB; Modular Transverse Matrix. Volkswagen's rivals Toyota and Ford have appreciated its benchmarking in MBQ. It gives Volkswagen a competitive edge by minimizing cost as much as possible and making different parts of their market as far as possible. The modular concepts have 3 components including MQB, MSB, and MSL. These all helps in placing power trains, diesels and gas engines to batteries and electric motors. *Johnson (2013)*. Modular toolkit also helped to design the production site flexible as far as concerned. It uses single platform for different brands which helps in capacity managing. For taking an example of skodakvasity in republic of Czech manufactured an automobile seat in 2016 out of forty passenger car locations of Volkswagen, nineteen are multiple brand plant of Volkswagen. Now coming to turntable which is also a part of capacity management is mainly used when there is a sudden changes in demand or there are frequent fluctuations in and out and when there are sudden shifts from one segment to another segment etc *Aktiengesellschaft (2015)*

The ultimate goal referred by *Fox, J (2015)* "Strategy 2018" was to "position the Volkswagen Group into a global economic and environmental leader and best automaker in the world within 2018. In an interview with Forbes in 2013, Winterkorn said the goal was to make Volkswagen "the world's most profitable, fascinating, and sustainable automobile manufacturer" by 2018 and highlighted the goal of having the most satisfied customers and employees in the industry. Until recently, Volkswagen was well underway to achieving these goals, having achieved over 10 million unit sales in 2014, more than half of which were attributed to the Volkswagen Passenger Cars brand.

For many years Volkswagen has focused on what it considered its strength and competitive advantage: an attractive and environmentally friendly range of automobiles. The Company's 2014 annual report includes initiatives to reduce CO2 gases and to be responsible stewards of the

environment, for that they have tried to increase ride sharing in countries such as China and to increase the number of electric vehicles on the road. The annual report also dedicates sections to corporate and social responsibility and needs in management's commitment to ethical practices. To support its "environmentally friendly" emphasis, Volkswagen has aired commercials that claim its vehicles emit less greenhouse-gas emissions while maintaining a satisfactory level of acceleration. In the 1960s, the first U.S. ad campaigns persisted potential buyers to "Think Small" and buy the Beetle. In 2010, Volkswagen launched the "Think Blue" campaign as a way to "promote eco-friendly driving and green initiatives" and introduced environmentally friendly products, including "clean diesel," and other technologies under the "Blue Motion" label.<sup>21</sup> Other recent ad campaigns further showcased the company's "clean-diesel" technology, and such Volkswagen was awarded the "Green Car of the Year" award by the Green Car Journal in 2009 and 2010 for the Jetta TDI Clean Diesel and Audi A3 TDI Clean Diesel, respectively; the first non-electric and non-hybrid models to be selected for the award *Biesecker, M(2015)*.

### III. FINDINGS AND SUGGESTIONS

- Volkswagen intends to deploy intelligent innovations and technologies to become a world leader in customer satisfaction and quality.
- Volkswagen intends to capture an above-average share of growth in the major growth markets
- To ensure the Group's solid financial position and ability to act guaranteed Volkswagen aims to a sustainable return on sales before tax of at least 8% .
- . To build a first-class team Volkswagen aims to become the top employer across all brands, in all companies and regions.
- To achieve the goal of being number one among the world's automobile manufacturers, they must act responsibly, for the benefit of customers, shareholders, and employees
- They should consider compliance with international conventions, laws, and internal rules to be the basis for sustainable and successful economic activities
- Act in accordance with declarations
- Accept responsibility for actions
- The key achieving group task are in efficiency and profitability of VW group
- The company will focus on transforming the core business and grabbing the potential new segments
- VW has evolved in creating synthetic fuels which are replicable to fossil fuels and are 100% drop in.

### IV. CONCLUSION

One of the goals of the Group's "Strategy 2018" is to be a top employer. The company has defined being a "top employer" as 1) attractive employment, 2) job security, 3) good working climate through leadership and cooperation, 4) remuneration in line with performance, 5) personal development opportunities, and 6) product and company image according to December 2014, almost 113,000 associates were employed at the site of Volkswagen AG and 480,000 were employed world-wide under the Volkswagen Corporation which increased to 4.7% from 2013. As per the Company website, females make up 16.2% of the workforce, 3.5% are part-time workers, and the average age of an employee is 42.8 years.

In order of motor vehicle production, the five largest competitors in the global automobile industry are Toyota (10.4 million units), Volkswagen (9.8 million units), General Motors (9.6 million units), Hyundai (8.0 million units), and Ford (5.9 million units).<sup>32</sup> Each of these companies, like Volkswagen, has been the subject of at least one major public controversy in the past.

The maturity of the automotive industry has fostered the creation of brands and strong customer loyalty. The automobile industry is capital intensive, and current capital investments tried to focus on automated processes and operational efficiencies, including the retooling of factories and equipment to accommodate for tighter regulations and changing customer demand.

For the end-consumer, the car-buying process has changed dramatically. With the accessibility of the Internet and the ability to shop online for a vehicle, the car salesperson were less relevant, especially for Volkswagen's target demographic. Efficiency-conscious consumers are focused on getting the right car for the right price. Today customers find the car first, and then the dealership. This shift

process has given the consumer the advantage, as they have access to the same "inside" knowledge as salespeople such as invoice price, reliability, and consumer ratings, which car salespeople historically have been able to leverage. This shift has made it harder for dealerships to sell cars at their ideal price, leaving them scrambling to make a profit on their vehicles.

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