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Importance of Enterprise Product Design and Innovation

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Abstract

The vitality of the enterprise is the product, and the product is characterized by innovation. For first-class products, product design and innovation should be put in the first place, it is necessary to introduce high-end R &D (Research & development) experts to evaluate the enterprise and select new varieties suitable for the enterprise. This is the source of power for the continuous development of enterprises, is its vitality. Only continuous development and innovation can make the product function constantly updated, so that the enterprise can benefit from it, and continue to develop into a first-class enterprise, lasting for decades or even hundreds of years and in an invincible position. An enterprise without first-class product design ability will be eliminated. Because it does not have the ability to create, the product needs continuous innovation to continue to maintain its development needs. When an enterprise's creation runs into problems, a red light is flashing. Therefore, it is an important topic to excavate the top and excellent R &D personnel overseas. The rechargeable battery in new energy vehicle is proposed to occupy domestic and abroad market in future vehicle industry. Therein the searching for it has become necessary and significant to its application in the industry of new energy vehicle. Overview the hybrid electric vehicle (HEV) will be used widely in the future to substitute for traditional gear box. The government policy will induce this tendency of industrial development.

Keywords: Enterprise; Product; Speciality; Research & development (R&D); Design; Innovation; New energy vehicle; Policy

Introduction

Because many people in school only know learning, to the society after innovation. While innovation varies from person to person. Some people adapt quickly to the current social needs and enter the research-oriented stage ahead of time [1-3]. While others are slower, they do not adapt to the phenomenon. It's inevitable that society will adopt the former when there are two kinds of people. Similarly, a problem that some people find it is difficult to solve is easily solved at the top, that's the gap. Therefore, it is a shortcut for enterprises to entrust experts outside the company to develop and manufacture the required equipment and product technology. Because it centres on enterprise product development design and manufacturing industry, the stand or fall of the product function and quality becomes the kinetic energy of the development of the company and the source, so in the case of enterprise product innovation and design is very important [4-5]. Investing a lot of manpower in the research and development and design of new products is the source of whether an enterprise can lead the world. Not only the excellent talents in the company but also the experts outside the company can innovate and develop the enterprise products and equipment according to the users' suggestions on the products. To attract and utilize available talents in advance is the basis of enriching industrial chain and talent chain. The new energy vehicle has occupied in domestic and world market step by step. Therein the electric battery will be the prevail situation in current and future in world's market according to the report in TV. Who owns the battery higher technological level who wins the game earlier because it plays an important role as energy one in vehicle in the future? Many corporations have proceeded to search for short time rechargeable one for future vehicle. Its perspective will be imminent and long. Government policy is to

positively proceed the capital loan in order to advocate the new energy vehicle industrial development.

Discussions

Human being in company must be in charge of the innovation method in order to adapt to new method and invents in our working time. So the new design and innovation would start to proceed in research & development. However the adapting one will do more rapidly and correctly. They save much money for company so the innovation name will be granted to them. Because experience and knowledge have not been developed, people do not have much innovation, while the old professionals have rich experience and knowledge. They look at a problem and see if it can be solved and how it can be solved and how it will work. Therefore, the introduction of high-end talents is the most important issue in research and development. Only the introduction of high-end experts from overseas can inject decisive vitality into the enterprise's research and development. Their ability to analyse and solve problems can change the fate of a business. Chrysler is declared bankrupt before Iacocca took over because of its poor management. At that time, there are not many senior professionals like Iacocca, who knew both engineering and business, so Iacocca is chosen by the Chrysler board to be president and accepted the offer. His main problem is to tap into the many senior R &D consultants and specialists at the Ford-dominated company, which within a year or two have rocketed to the No. 3 U.S. automaker. That's where the top R &D professionals come in. To develop a new model, it takes a team of highly capable researchers to make it happen. What if the average person could build a vehicle in a year? The answer is no. You don't even know the internals of the vehicle how to build a top-quality vehicle fast enough. He didn't even know what is important, what is needed to innovate, what is the cost, how could you make a first-class vehicle? Still have to ask to understand, this can be a deputy, but it is very difficult to be the leader of the R &D talent. Because the clock is ticking, you have to rush it out before other manufacturers develop it to sell. If you fail, you lose a lot of money, like if you sell 1,000 vehicles, you sell 200 vehicles, and you lose 800 vehicles. The company has to bear the loss. But senior development experts can avoid failure by focusing on the overall performance and advantages of the vehicle, and avoid wasting time on unimportant things such as body structure and materials. These places have become standard parts and is not needed to develop. If life is the first line, the engine and transmission should be redesigned or stiffened. It focuses on the strength of longevity at the top of the agenda. Because the average person is willing to buy a long-lived vehicle and save money, he can buy other items such as houses, stocks and non-consumer goods.

Human resource has been key in competition therefore the adopting fit person with speciality knowledge and experience becomes significant in R &D of enterprise. Promote the investment of R &D will raise the new innovation of product, which brings about strong competition of enterprise for current and future. Emphasizing human resource train will be dominant for the continuous expert maintaining from all aspects. The expert and potential promise engineers should not be left, that is key. Because they dominate the key technology they are important and maintained all the time. This point is very significant. How to maintain them has been first task for factory survival. Promoting the wage of engineer can motivate their positive and dynamic for completing product design and innovation smoothly. On the other side raising the quantity of engineer can stimulate the dynamic for new one. The quality and quantity for R &D has maintained the high level capability only.

In 2021 lithium vehicle material cost occupies 4% of total vehicle cost while mean each vehicle electricity is about 50 thousand Watt Hour. If the lithium vehicle price is 250 thousand yuan per ton its profit rate is about 12%. So lithium is promise materials. Hydrogen energy will exhibit according to policy too. Lithium will be estimated again. Lithium battery may become the necessity of electric vehicle by now. It has the weakness to occupy too much charge time like 12 hours for a vehicle. However the newest one can charge only 47 minutes to attain 80% capacity of battery. It saves more than 9/10 time to compare with traditional battery. High technological creation may satisfy the demand of user mostly. Now the problem has been used less time to charge battery more and more. Who can create the high efficiency one who has succeed in rechargeable battery for electric vehicle? The most rapid one has used 15-25 minutes of battery to complete rapid rechargeable course with 200Km by one recharge [6]. Therefore the optimum vehicle as developing HEV (hybrid electric vehicle) and PHEV (plug in hybrid electric vehicle) has good combination with traditional gear box and new electric rechargeable battery, which is the better one than traditional gear box vehicle and pure electric vehicle. Because the former uses contamination fuel the latter uses pure electricity with unstable rechargeable technology. Therein the hybrid electricity vehicle with traditional gear box and rechargeable battery occupies main market of vehicle in world.

If the vehicle is less than 10 years old, the cost goes up and the average consumer has a problem with purchasing power, so they are willing to buy a vehicle with a long life. And life and failure are two concepts. The former is the failure of the vehicle's engine and gears; the latter is a problem in a specific part of the vehicle. The latter can continue to be used after repair, but the former cannot. They are also related to the link, failure will affect the life of more; there are many failures in the period before the life span. So for the vehicle to correctly see what reason to determine the

failure. For example, small faults in the early stage will not affect the overall life of the vehicle, while continuous faults in the middle and late stage imply that its life is fast enough to be scrapped after it needs to be bought or driven for a period of time. The product should be designed with the mileage of the vehicle accurately marked so that the driver can see them and infer the life of the vehicle based on the transmission. You can focus on its strength and choose materials and so on to improve the life of the vehicle. According to computer simulation the impact trial should proceed in order to observe the secure capability that will reflect the ability of anti-impact in vehicle like car. From the result the complement part will be proceeded for more secure property. For example the emergent dunnage bag、car limited speed and structure materials etc... The actual trial can be done according to the simulation results by a car with false human to find the difference between them and impactive car strength. This security of car has owned the dominant matter for driver and passenger. Therefore the test may proceed completely with both simulation and actual trial. We should do enough computer simulation in virtual method for saving the trial cost in actual as we know the car price is not low.

Transmission strength is the main factor that high-end developers often encounter to control the cost of the vehicle. If the price of the vehicle cannot meet the cost needs, the strength control of the gearbox is difficult to vehicle, the need to do something on the engine is not good, because it costs more. If the purchase order of the vehicle can be predicted, then depending on how many orders are to be sold, the life of the vehicle can be increased modestly, depending on the cost. That is to say, in the moderate dynamic balance state can improve the life of the vehicle. Or, judging from the current market that a certain vehicle has a better selling point, we will try our best to produce this brand of vehicle so as to obtain large sales and capital, so as to provide capital and manpower for the continuous production of mid-range vehicles in the future. If the engine power becomes larger, it can occupy a certain market due to new technology, thus squeezing into the market of ordinary vehicles and developing fixed domestic and foreign customers to firmly enter the ranks of domestic automobile manufacturers.

If you can predict its dynamic disequilibrium and its appropriateness then you can evaluate how much life to use based on their relationship is cost-appropriate to achieve the optimal life improvement. In this way, specific answers can be obtained from the perspective of economics. High-end economic experts can draw this kind of non-equilibrium when the output reaches a certain value according to economic principles, and give it to high-end design experts. He is able to figure out the parameters that would allow a new model to emerge at the right cost and make the best profit in the market. And I want to emphasize that the quantity produced must be the quantity when the total price of the good is sold, which is the ratio of the price to the quantity. The quantity based on the least profitable state, of course, is better than this larger quantity. Economists need to adjust from the middle, to calculate the dynamic non-equilibrium parameters. Therefore, the larger the enterprise needs engineers and economists to give advice together, and strive for the quantity and quality of enterprise products. That is to say, according to the current conditions of an enterprise input into the program can eventually get the best profit point. At this time, the optimal distribution of product quantity and labour and capital can provide reasonable scientific curve and price sweet spot for decision-making. The optimal labour force and capital can be calculated and used to draw more complex economic conclusions, so as to observe their data state and finally get a reasonable product quantity and cost. This has good implications in the automobile industry like optimal number of vehicles per unit, maximum number of vehicles, lowest cost and maximum profit. In terms of production and the cost and profit data and curve can represent the industry with the unit labour unit capital and price of the actual output and potential output. If it has considered that four minutes making one car in a factory according to the price of one vehicle the 1.8~2.1 cars will be produced there which is concluded from model calculation. There are more than 7 times capacity in the company. Therefore according to the car cost and price it might be regulated for us to make cars quantity reasonably by economics knowledge. So the subject of economics might instruct our plan with scientific deduction that would like our light to flame our plan certainly rather than a scenery. We have so many economics expert but only less ones searching for economics. Usually they said it is too difficult to attain achievement. However to try to draw a graph so easy thing they don’t will do in company. It is so pity. Maybe they are not burdening the wrong happens in course. But the motivation to new innovation will proceed continuously [7-8].

The design and innovative creation of this vehicle will been important in the view of human resource. We must adopt and train new engineers from outside by now so as to establish human resource train for future. We should develop not only the design vehicle according to the new demand from customer, but also develop innovative one in terms of the future demand from market. Therein the human resource becomes significant at all time in company who will upgrade the making technological ability and design new vehicle technology with innovation.

Conclusion

People are what make companies grow and thrive, making product development and innovation a reality, and staying ahead of their peers. The development and utilization of these talents is the main problem faced by enterprises. The ultimate goal is to achieve the advantages of product design and innovation, thereby

expanding the market and increasing the turnover of product volume.

It uses an economist to predict the best cost point, the best quantity, for a particular good to get the odds. It is to predict the dynamic non-equilibrium real time state and describe the specific change trend. Lay the groundwork for how much of an update engineers will adopt. The rechargeable battery for hybrid electric vehicle could become the future main industry, so paying attention to its development from now on has been dominated.

The appointment of engineers enables the creation of products in enterprises to be implemented. Grasp the primary purpose of the product function update can achieve the purpose, launch new products to meet the needs of the main middle and upper level of consumers in the society.

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References

1. Xu R. The cost control of motor housing process. Inter International Journal of Plant Engineering and Management. 2019; 24: 187-192.
2. Deuringa A, Wilhelmb H. Multi-domain vehicle dynamics simulation [C]. Proceedings of the 8th Modelica Conf, Dresden, Germany. 2011.
3. Jia JP, He X. Statistics [M]. Chinese renmin university press. 2015; 183.
4. Xie B. Financial markets [M]. Peking university press. 2009; 38.
5. Liu B. Microeconomics [M]. Eco Sci Press. 2017; 16.
6. Yang R. Cost and management accounting [M]. East china normal university press. 2017; 73.
7. Myron JG. Dividends. Earnings and stock prices, rev eco stat [J]. 1959; 41: 99-105.
8. Frank J. Fabozzi. Financial economics [M]. China machine press. 2015: 54.