COVER PAGE AND DECLARATION

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Introduction

In today's commercial market, companies aim to pursue opportunities and progress while competing, making organizational sustainability a critical factor. Failure to develop and implement plans to ensure long-term sustainability and growth can lead to significant issues and challenges for firms (Davim, 2012). Consequently, strategic managers in organizations must perform a variety of tasks, including optimizing operations and practicing corporate social responsibility. Effective plans to put these concepts into action are expected of organizations to excel in their respective commercial markets.

The case study demonstrates that Big Green Tractor is one of Indonesia's well-known companies that works in the tractor manufacturing sector. It has been discovered that the organisation has had serious problems with growth slowdown during the past few years. Big Green Tractor has significant practises in place to streamline operations as a result. A suitable plan must be created for such practises. Also, the offered case scenario highlights problems with the organization's limited compliance with environmental standards and norms.

This recommendation report's goal is to offer a wide range of suggestions that can be used to deal with the problems and difficulties that Big Green Tractor is now facing. The paper has a strong emphasis on making recommendations for manufacturing processes that are economical. Also, the study discusses several strategies and procedures to reduce errors throughout the production of Big Green Tractor. For this, a number of tools from the twenty-first century that are comparable to the Big Green Tractor are emphasised. Also, the study places a focus on environmentally responsible strategies that the business might use to manage its current difficulties. The paper helps readers comprehend the importance of corporate social responsibility to the business.

The paper also includes methods for upholding industry requirements for the disposal of chemical waste as well as environmentally friendly alternatives to conventional manufacturing processes.

Operational industrial streamline procedural for Big Green Tractor:

Cost-efficient manufacturing process

Cost-effectiveness may be a consideration for reaching Big Green Tractor's objectives given the company's focus on reducing its manufacturing processes. This prompts us to think about a number of strategies, which are listed below.

Reduction in material cost: Big Green Tractor can enhance its cost-effectiveness by considering a reduction in material costs. Research suggests that the organization places significant emphasis on acquiring top-quality raw materials and replacement parts for tractor construction. Effective negotiation with suppliers can help Big Green Tractor achieve this cost-reduction objective (Von Geibler, 2013). To accomplish this, strategic managers may request bids from multiple vendors and then award contracts to the vendor with the lowest bid. This approach enables the business to compare suppliers and find similar components and materials at lower prices. As a result, suppliers may be motivated to lower the price of raw materials, facilitating low-cost tractor manufacturing through procurement cost reductions.

Automation: Automation is another another suggestion for Big Green Tractor to optimise its production processes and achieve cost effectiveness. There are numerous automation tools available today that can be utilised to control all business manufacturing operations. Big Green Tractor might use automation technology for assembly lines and manufacturing . In this way, the painting and assembly of tractors can be done by robotic machines, which is likely to speed up production and increase efficiency. Moreover, automation technologies may lower the company's labour intensity, resulting in a reduction in salary costs.

Implementing lean manufacture: Big Green Tractor may take into account lean manufacturing techniques in addition to other methods to reduce the cost of production. By this strategy, the company's manufacturing unit can minimise low-value tasks and less critical procedures.. Big Green Tractor may be able to focus on the processes and methods that are truly crucial for the manufacture of tractors thanks to lean manufacturing, it has been concluded. In this approach, the corporation may cut back on potential future expenses

Selling scrap to vendors: Big Green Tractor also makes a significant effort to reduce costs when operating in Indonesia's commercial sector. According to several research studies, manufacturing and production departments generate a significant amount of scrap material, which is often dumped by organisations (Henriques, Pecas & Silva, 2013). As a viable option, Big Green Tractor could propose selling scrap generated during tractor manufacture to relevant providers. The company might send out a group of hardworking employees for this task who can establish contacts with buyers and negotiate a fair price for the scrap. This will lower the overall cost of production and increase Big Green Tractor's profitability.

Reduction in energy consumption: The energy usage within a business is a crucial factor to take into account since it significantly raises a company's operating costs. Big Green Tractor's production and manufacturing division uses a lot of electricity and other energy sources, including gasoline, diesel, and other fuels(Shafaei et al., 2019) By implementing novel approaches like cost- and convenience-efficient solar and wind energy, the company may lessen its reliance on energy.

Set priorities for ROI (Return over Investment): Prioritizing ROI is a vital duty for Big Green Tractor in order to achieve cost reductions. Several tractor manufacturing processes can be ranked and prioritised by the strategy department and management. The organisation can decide whether or not to invest in a given procedure based on its priority (Lee, Speight & Loyalka, 2014). As a result, the company can focus its resources just on procedures that are likely to generate revenues. For example, ceasing production of an obsolete tractor that generates low returns for the corporation.

Plans to minimize defects throughout the manufacturing process :

The following steps make up Big Green Tractor's strategy to reduce errors throughout the manufacturing process.

Implementing the quality management system: Managers at Big Green Tractor are responsible for creating and putting in place a successful quality management system**..** To guarantee that tractors are produced to high-quality requirements, a separate department should be established. This will enable the use of robotic and manual tractor inspection techniques . In order to pinpoint the main reasons behind reported problems, managers at Big Green Tractor should also regularly

meet with the staff that work on the production and assembly lines. These discussions can also be used to discuss strategies to address faults and workable solutions, which could ultimately improve quality and lower the likelihood of defects occurring. It is clear that techniques like inspecting freshly made tractors and setting up meetings can be quite successful in properly addressing flaws.

Audit of material acquired from suppliers: Conducting audits of the goods purchased from vendors and suppliers is another excellent method that may be suggested to Big Green Tractor for reducing manufacturing process flaws. Internal and external audits must be conducted by the business to assess the calibre of the materials it buys from diverse vendors. (Safaee & Chen, 2019). In this way, it is possible to check whether newly obtained materials, such as spare parts and many others, are free from flaws or problems. Also, a strong emphasis should be placed on determining if the usage of purchased materials will result in any problems with tractors produced by Big Green Tractor that continue to function after their sale.It is clear that auditing procedures may enable management to concentrate on likely areas of material flaws or problems. As a result, suppliers can be made aware of the material quality, and any potential flaws can be found and fixed during the manufacturing process.

Personalized training: Personalized training can be extremely helpful in reducing flaws in the production of Big Green Tractor, along with conducting audits and other procedures. Analysis reveals that not all tractor production processes are amenable to automation. Personnel and labourers employed in the production division must perform manual labour (Stefanidis & Stankiewicz, 2016). These employees of Big Green Tractor may have their existing abilities improved and strengthened via the use of individualised training techniques. According to several research, training and development sessions result in less errors, which minimises the risk of manual defects.Because of this, human resource managers and other experts within the company may carry out a skill gap analysis for workers who are part of the production strategy and arrange specialised training sessions in accordance.

Standardization: Another incredible method to lower the possibility of a problem in the production of Big Green Tractor is the adoption of the following standards.. Many studies have revealed that the production, manufacture, and assembly of goods in organisations may all be done in accordance with ISO 9001 criteria . The company must adhere to these standards to guarantee

that manufacturing is proceeding according to plan and that all rules and regulations are being observed. In this manner, the likelihood of faults appearing in Indonesian tractor manufacture may be decreased.

Using 21st-century techniques to develop greener processes:

The development of greener processes can greatly benefit from the employment of a number of 21st-century tools and technology by Big Green Tractor. The following is a discussion of these tools and technologies.

Process mass intensity calculator: The process mass intensity calculator is one of Big Green Tractor's standout tools for designing environmentally friendly production procedures. This methodology is quite effective at estimating the decrease in material requirements throughout product production in production locations. This technology might be used by Big Green Tractor to recognise the demand for materials like tractor spare parts and other things. The tool's PMI value can be studied to determine whether the firm needs to invest money in a particular acquisition. If the PMI value is discovered to be low, the business may minimise the purchase and change the tractor specs appropriately. It seems sense that cutting back on material purchases will result in less processing, which could eventually result in a decrease in harmful material emissions and energy use. As a result, Big Green Tractors should rely heavily on the process mass intensity calculator to create environmentally friendly production and manufacturing methods in Indonesia..

Robotics and software: Robotics is one of the main technologies that are being included into business manufacturing plans in the twenty-first century. Several studies have shown that organisations nowadays use sophisticated software and tool systems, which may be a sign that they are implementing green business practises. When assessing the carbon emissions from Big Green Tractor's manufacturing plans, the use of robotics and algorithms can be quite helpful (Couto, Plansky & Caglar, 2017). Similar to how intelligent software systems may suggest specific activities that might be taken to reduce the emission. Moreover, Big Green Tractor may greatly benefit from the use of robotics, automated technology, and other tools to harness greener operations.The firm may be able to handle the problems of waste management and the adoption of

greener practises thanks to the employment of machines in production and assembly lines. As an illustration, intelligent software might be used to determine the best way to cut materials like iron sheets and many others to reduce wastage. In this way, Big Green Tractor could be able to address its current issues with the use of robotics and software technology.

Reagent guides and solvent selection tools: These are additional instruments that Big Green Tractor can employ to create more environmentally friendly procedures in its manufacturing facilities. Reagent guides and solvent selection tools, it can be noted, may enable the company's research and development division to assess the level of toxicity of various chemicals utilised to make tractors, such as paints, acids, bases, and a variety of other materials.(Neu, 2013). The results of these instruments can be examined to choose the substances that might be the least dangerous and have negative impacts on both people and the environment.This allows Big Green Tractor to operate in Indonesia while using tools like the Process mass intensity calculator, the solvent selection tools, and robotics and software to develop greener processes.

Recommendations for environmental ways:

Corporate social responsibility for Big Green Tractor

Besides from simplifying its manufacturing processes, Big Green Tractor must prioritise innovation and the expansion of its corporate social responsibility activities. In this regard, the following suggestions can be made:

Purchase of energy-efficient machine: Big Green Tractor's corporate social responsibility would be best served by replacing obsolete equipment with more energy-efficient ones. Despite the fact that such purchases may be expensive for the company and have a substantial influence on sales, this one-time expenditure can improve the organization's CSR reputation in a competitive market (Couto, Plansky & Caglar, 2017). New equipment may use less fuel, allowing the company to meet its emission targets and comply with both Indonesian and international regulations. As a result, the company can strengthen its commitment to CSR and implement a sustainable and environmentally friendly strategy.

Electrification: Electrification is a practise that Big Green Tractor views as being extremely important in leveraging corporate social responsibility. Many studies have shown that using

electricity rather than fossil fuels significantly reduces carbon emissions. That is one of the main causes for which all organisations are concentrating on electrifying their production and operational processes (Sharma & Bandichhor, 2017). Big Green Tractor might think about switching out outdated, ineffective equipment with modern, electricity-powered alternatives. For instance, the company might buy electric cars so that workers can travel between various parts of the huge manufacturing facility. Internal access locomotives that run on batteries have a tremendous impact on how well corporate social responsibility is practised.Due to this, Big Green Tractor may think about changing the way its manufacturing facility operates by using fewer machinery and trucks that run on fossil fuels and promoting the usage of electricity.

Reduce carbon emission: It should be highlighted that Big Green Tractor is required to set challenging goals and targets to reduce carbon emissions from the production and manufacturing facilities when it comes to proposals for CSR.Due to this, plans can be created with a strong emphasis on lowering the emission of carbon-containing chemicals from the Indonesian manufacturing facility (Lee, Speight & Loyalka, 2014). The company's environmental sustainability will improve with the achievement of yearly goals.A range of procedures, including the replacement of outdated equipment and technology with newer models, may be taken into consideration for this goal. Moreover, It is more environmentally friendly to use a fossil fuel with a high octane rating in the production facilities as needed. Big Green Tractor must establish yearly objectives to concentrate its efforts in the same direction because it is obvious that reducing carbon emissions is a protracted process.

Collaboration with agencies: The partnership with national and international organisations that promote environmental protection is one of Big Green Tractor's most notable procedures or tactics for developing and putting CSR into practise. For further details on the organisation, it would be wise to visit the American Psychological Association website (Dimian, Bildea & Kiss, 2019). Also, these strategies may support the adoption of new protocols for the construction of tractors and the innovation of assembly lines through the use of very effective techniques. It may also be said that a relationship with such organisations might make Big Green Tractor's current legal and regulatory obligations in Indonesia easier to meet..Hence, Big Green Tractor can be seen of as practising corporate social responsibility through the development of alliances with international

organisations, the reduction of carbon emissions, electrification, and the purchasing of fuel-efficient machinery.

Industrial standards on disposal of chemical waste :

The strategic managers at Big Green Tractor are tasked with keeping up with a number of industry norms and practises. The following provides an illustration of these guidelines and standards.

Secure landfills: It may be claimed that a secure landfill is one of the organization's most practical solutions for disposing of the chemical waste generated by Big Green Tractor's manufacturing facilities. This method calls for the storage or containerization of waste chemicals and materials in safe landfills (Henriques, Pecas & Silva, 2013). According to the report, the Indonesian government has created a number of dump sites where chemicals and other materials produced by businesses can be preserved and used in the future with a few minor alterations.The government has established a few standards specifically for this use. One of the proposed solutions is to use impermeable caps to prevent harmful chemical vapours from entering the environment above ground (Lee, Speight & Loyalka, 2014). It is also suggested that the company build secure landfills to avoid any contact with groundwater and to protect both the environment and the local community.

Processing and treatment: To efficiently manage waste from the manufacturing facility,, processing and treatment stand out as a technology that Big Green Tractor can use.Several research on the management of industrial waste point to the possibility of some chemicals that cannot be directly released into water bodies. Similarly, it is prohibited to deposit solid waste containing carcinogens in grounds. Big Green Tractor must therefore take chemical processing techniques into account in order to lessen the toxicity of its chemicals. These substances are put through a reaction with additional chemicals or reagents throughout this process.The organisation may incur additional costs as a result of these processing and treatment actions, but they are amazingly effective in raising Big Green Tractor’s CSR. Furthermore, the Indonesian government and other non-governmental organisations working for social welfare may reduce the company’s legal and regulatory requirements.

Recycle: According to various examples, the recycling procedure can significantly improve the way Big Green Tractor handles or disposes of its chemical waste.. While some waste chemicals

may appear to be worthless, recycling allows the organisation to reuse them (Lee et al., 2000) Also, recycling strategies may minimise the future cost of these chemicals for Big Green Tractor. However, due to restrictions governing chemical recycling, the organisation may require government approval for particular chemicals. Furthermore, precise protocols must be followed to safeguard the safety and well-being of the organization's employees and workers.

Green alternatives to the traditional manufacturing process

There are currently a number of environmentally friendly alternatives to conventional production techniques that Big Green Tractor might be thought of. The following provides recommendations for these alternatives.

Embracement of green energy: Big Green Tractor should replace its present antiquated manufacturing method with this one because it is the most practical choice. Green energy can be produced from a variety of sources, such as solar, wind, geothermal, and many others. These energy sources are turned into sustainable, renewable products (Nunez, 2021) In addition, these sources of energy are economical, therefore Big Green Tractor doesn't need to invest a lot of money in them.Furthermore, Indonesia's abundant green energy resources can be attributed to the government's global policy. As a result, the organization's production facility can increase its use of green energy. In order for the business to operate in the commercial sector sustainably and economically, this energy source may be prioritised by Big Green Tractor.

HVAC system: HVAC mechanisms are examples of current technology that can be used to improve the production process in businesses. HVAC, which stands for heating, ventilation, and air conditioning, is in charge of changing the environment within the premises.The organisation must devote significant resources to ventilation and temperature control techniques (Seyam, 2018) Big Green Tractor must focus on the energy loss scenario as well as other scenarios that may jeopardise energy efficiency. The deployment of the HVAC system may benefit the organisation, potentially increasing sustainability.

Facility upgrade: The development of the manufacturing facilities is one of the excellent strategies presented in Big Green Tractor. It is likely that the organisation will concentrate on insulation and other methods to lessen the likelihood of energy loss. (Davim, 2012). Big Green

Tractor will be able to minimise emissions by improving its manufacturing facilities, as there will be less demand for energy.

As a result, it can be concluded that Big Green Tractor can take into account a number of environmentally friendly alternatives to the current production method.

Conclusion

In conclusion, Big Green Tractor has serious operational and sustainability problems. The firm is concentrating on operational simplicity in order to lower operational costs. The strategic managers seek to achieve cost-efficiency through strategies including automation, scrap sales to vendors, and material cost reduction. Quality management systems, external and internal audits, specialised training, and standardisation can all be utilised to reduce errors during the production process.Also, Big Green Tractor has access to a variety of Corporate Social Responsibility (CSR) initiatives, such as lowering carbon emissions, electrification, purchasing energy-efficient machinery, and more. The company can lessen its responsibilities under laws and regulations by doing this. Also, it can adhere to industry regulations and standards, such as those for secure landfills, efficient ways of processing and treatment, and recycling.Big Green Tractor is also looking into alternatives to its present production method that are more environmentally friendly, such as the usage of renewable energy sources like solar, geothermal, and wind. Moreover, biodegradable materials and HVAC systems are being examined as green substitutes.

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