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Introduction

It is increasingly important for businesses to focus on long-term sustainability in order to take advantage of growth and opportunity in today's business environment. In the absence of long-term growth and sustainability initiatives, companies may encounter substantial difficulties. For this reason, strategic managers of an organization put up a wide range of activities, including corporate social responsibility, simplification of operations, and more. Effective plans for implementing these practices should be developed by organizations in order to achieve excellence in respective business marketplaces.

Big Green Tractor is a well-known Indonesian company in the tractor manufacturing business, as seen in the case study. It's been discovered that the organization has been experiencing significant growth challenges over the previous few years. As a result, significant efforts are made to streamline processes at Big Green Tractor. An appropriate strategy must be put into place for these activities. In the presented example scenario, challenges linked to low environmental compliance of the organization are also emphasized.

There are various concerns and challenges that Big Green Tractor is now facing, and this suggestion report aims to propose a number of solutions. The recommendations in the paper are geared on making the manufacturing process more cost-effective. Big Green Tractor production process faults are also highlighted in the paper, along with alternative strategies and techniques for reducing these issues. Many 21st-century technologies relevant to Big Green Tractor have been mentioned. Aside from these points, a report also stresses the need of environmental-friendly methods for tackling difficulties inside the organization. The research sheds light on how important it is for the firm to grasp its social responsibility. It also discusses how to keep chemical waste under control while also presenting greener alternatives to existing production processes

Q1

Operational industrial streamline procedural guide for Big Green Tractor

Manufacturing processes that are cost-effective: As a result of Big Green Tractor's efforts to streamline its production processes, the organization can now focus on improving its bottom line. As a result, the following procedures might be taken into consideration.

Lowering of the cost of materials of Big Green Tractor's cost-cutting measures is a reduction in material costs. Different research indicates that the organization is focused on collecting high-quality materials and spare components that may be used to manufacture tractors. Due to Big Green Tractor's skillful negotiations with suppliers, this enormous cost can be reduced significantly. It's possible to get bids from suppliers, and then hand over contracts to the lowest-bidding one. Analysis suggests that other providers may be considered for procuring the same components and materials. Therefore, suppliers are more likely to lower the cost of their product. In this manner, the procurement costs may be decreased, resulting in low-cost tractor manufacture.

Automation: Automation is another suggestion for Big Green Tractor to optimize its production operations and achieve cost effectiveness. Many automation software programs are available now that may be utilized to control all production processes in businesses. For production and assembly lines, Big Green Tractor may use automation technologies. In this way, robotic robots may be used to paint and assemble tractors, speeding up the manufacturing process and increasing efficiency. Apart from that, automation technology has the potential to reduce a company's labor intensity, resulting in lower pay costs.

Manufacturing in a lean manner: Practices of lean manufacturing can be explored in Big Green Tractor, along with other techniques, to control production costs. Low-value work and insignificant procedures might be eliminated from the company's manufacturing facility in this way. It may be concluded that lean manufacturing will enable Big Green Tractor to concentrate on the practices and

procedures that are critical for tractor manufacturing. This reduces the likelihood of the organization incurring additional costs.

Vendors of scrap metal: Big Green Tractor has made it a point to save costs wherever possible when doing business in Indonesia. Various studies have shown that businesses' manufacturing and production divisions create a lot of scrap, which is typically thrown away (Henriques, Pecas & Silva, 2013). Scrap generated in the tractor production process may be sold to appropriate suppliers by Big Green Tractor in the future. A group of devoted employees may help the company connect with vendors and sell the scrap at a fair price. This is a good idea. Big Green Tractor's profitability can be improved as manufacturing costs are lowered.

Energy use reduction: One of the most important factors to consider in businesses is energy consumption, which leads to a large increase in a company's operating costs. Big Green Tractor's production and manufacturing department uses a lot of power and other energy sources including gasoline, diesel, and gasoline, among others. The company may lessen its reliance on energy by implementing innovative alternatives like solar and wind energy, which are both easy and cost-effective.

Prioritize your ROI goals (Return over Investment): Setting priorities for ROI is one of the primary tasks that can be undertaken to target cost efficiency in Big Green Tractor. The strategy department and managers can then assign priority and grades to various processes connected to tractor manufacture. Decisions to invest can be made in the organization based on the priority assigned to a certain procedure. As a result, the company will only invest in procedures that have a high return on investment. Similarly, old tractor manufacturing might be halted, resulting in a low yield for the corporation.

Plans to reduce faults as much as possible throughout the production phase

The following methods make up Big Green Tractor's goal to reduce faults throughout the production process.

Quality management system implementation: Big Green Tractor's managers are responsible for developing and implementing an effective quality management system. It is necessary to create a distinct department dedicated to assuring the manufacturing of high-quality tractors. Tractor inspection techniques, both manual and robotic, can be carried out in this manner. In addition, management should arrange frequent meetings with personnel working on Big Green Tractor's production and assembly lines to identify the major sources of reported faults. In such discussions, approaches to resolve problems and realistic remedies can also be suggested, which may eventually improve quality and minimize the likelihood of defects occurring. It is clear that measures such as inspecting produced tractors and organizing meetings may be quite helpful in correcting issues in a timely manner.

Material sourced from vendors is audited: Conducting audits of material obtained from suppliers and vendors is another exceptional method that can be advised to Big Green Tractor for decreasing flaws in the production process. Internal and external audits are required of the company to assess the quality of material acquired from various vendors (Dimian, Bildea & Kiss, 2019). In this way, it may be determined whether purchased material, such as spare parts and other items, are free of defects or issues. Not only that, but there should be a strong focus on determining if the usage of acquired material would result in any issues with the operation of tractors sold by Big Green Tractor after they have been sold. It's understandable that performing audits allows management to concentrate on potential areas of flaw or issue in the content. As a result, suppliers may be informed about material quality, and possible flaws can be discovered and corrected during the manufacturing process.

Individualized training: In addition to conducting audits and other measures, personalized training may be quite successful in reducing flaws in the Big Green Tractor production process. It has been determined that not all procedures involved in the production of tractors can be automated. In the production sector, employees and laborers are required to perform manual labor. Employees at Big Green Tractor may benefit from tailored training to improve and polish their present abilities.

According to several research, training and development sessions result in fewer mistakes, which reduces the likelihood of manual faults. As a result, human resource managers and other experts in the company may conduct a skill gap analysis for staff working on the production plan and schedule customized training sessions appropriately.

Standardization: The following standards are another amazing technique to reduce the chances of a failure in the Big Green Tractor production process. Many studies have revealed that ISO 9001 standards apply to the production, manufacture, and assembling of items in businesses (Dimian, Bildea & Kiss, 2019). These standards must be followed by the organization to guarantee that manufacturing is on track and that all rules and regulations are adhered to. In this method, the likelihood of faults arising in Indonesian tractor manufacture might be decreased.

Using 21st-century instruments to build a more environmentally friendly approach There are a number of tools and technology that have arisen in the twenty-first century that can help Big Green Tractor create greener processes. The following is a discussion of these tools and technologies.

Process mass intensity calculator: The process mass intensity calculator is a prominent tool inside Big Green Tractor that may be used to design greener industrial processes. This tool is very effective at calculating how much less material is needed when creating things in production locations. This technology might be used by Big Green Tractor to recognize the demand for materials such as tractor spare parts and so on. It may be deduced that the tool's PMI value will suggest the requirement for the business to invest in a given acquisition (Sharma & Bandichhor, 2017). If the PMI value is determined to be low, the organization may lower the number of tractors purchased and change the tractor specs appropriately. It is understandable that reducing material purchases would result in less processing, which would reduce harmful material emissions and energy usage. As a result, the process mass intensity calculator is the major tool that Big Green Tractors may use to construct greener processes in their Indonesian production and manufacturing plants.

software and robotics: In the twenty-first century, robotics is one of the most important technologies that corporations are incorporating into their production strategies. According to various studies, today's organizations use sophisticated tools and software systems, which may represent the company's green practices. The use of a mix of robots and software to assess carbon emissions from Big Green Tractor's production plans can be quite successful. Smart software systems may also suggest specific activities that may be performed to reduce emissions. Not only that, but Big Green Tractor can benefit greatly from robots and automated technologies and tools in harnessing greener processes. The employment of machines in manufacturing and assembly lines may help the company to handle waste management challenges and implement more environmentally friendly practices. Smart software, for example, may be used to analyze cutting operations for materials such as iron sheets and other materials in order to reduce waste. In this approach, robots and software tools may be able to assist Big Green Tractor in overcoming existing challenges.

Other tools that may be utilized inside Big Green Tractor to adopt greener processes in the company's production plants include reagent guides and solvent selection tools. Reagent guides and solvent selection tools, for example, may enable the company's research and development department to assess the toxicity of various chemicals used in the production of tractors, such as paints, acids, bases, and many others. These instruments' outputs may be examined to find the substances with the lowest toxicity and the fewest negative impacts on the environment and humans.

In this approach, Big Green Tractor may employ technologies like solvent selection tools, Process mass intensity calculators, robotics, and software to produce greener processes while working in Indonesia.

Q2

Advice on how to live sustainably

Big Green Tractor's corporate social responsibility

Big Green Tractor must establish and improve corporate social responsibility in addition to simplifying production procedures. The following suggestions might be made in this regard.

Investing in machinery that is low-energy efficient: This is the most exquisite corporate social responsibility plan that Big Green Tractor may contemplate. The company might concentrate on replacing obsolete machinery with newer models or technology that uses less energy. Such acquisitions, however, might be costly for the firm and may have a substantial impact on Big Green Tractor's sales; nonetheless, this one-time expenditure may assist the company to improve its corporate social responsibility and image in the targeted business market (Couto, Plansky & Caglar, 2017). It may be calculated that new machines will need less fuel to run, allowing the government of Indonesia and international organizations to meet pollution limits. As a consequence, the company's corporate social responsibility may improve, and an environmentally friendly strategy may be implemented.

Electrification is another important practice for Big Green Tractor in terms of corporate social responsibility. Many studies have showed that using electricity rather than fossil fuels reduces carbon emissions significantly. It is one of the main reasons why all businesses are concentrating on electrifying their operations and production lines. Big Green Tractor may look at replacing old, inefficient technology with new electric-powered models. For example, the company may acquire electric vehicles for employees to use in order to visit various departments of the massive manufacturing plant. Internal access locomotive cars powered by batteries can be quite helpful in boosting company social responsibility standards. As a result, Big Green Tractor may explore altering its production facility by lowering the usage of fossil-fuel-powered trucks and machinery and facilitating the use of electricity.

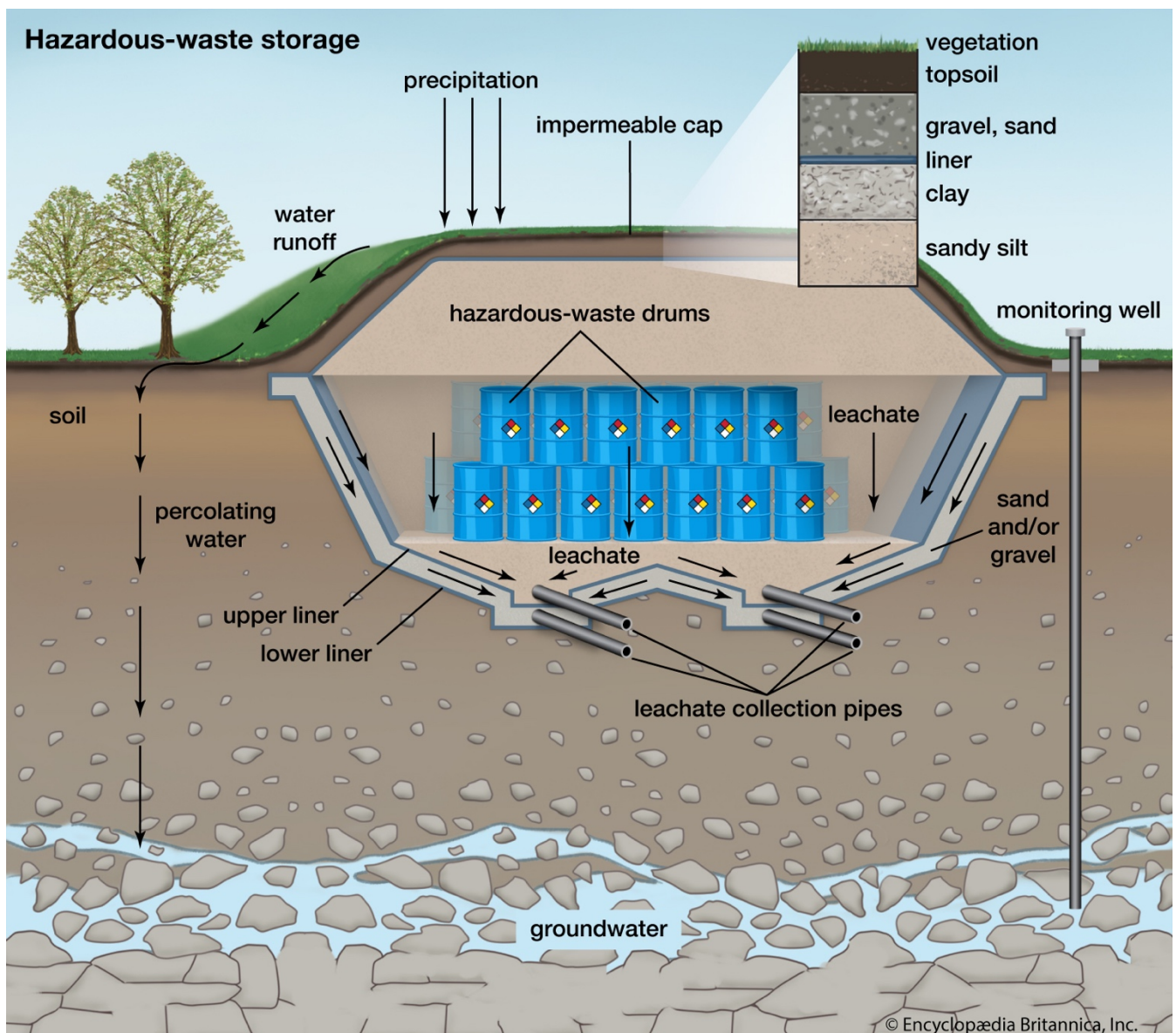
Minimize carbon emissions: When it comes to corporate social responsibility guidelines for Big Green Tractor, it can be noted that the company must set high aims and objectives to reduce carbon emissions from its manufacturing and production facilities. As a result, specific strategies may be devised with a strong emphasis on lowering carbon-containing compound emissions from the Indonesian manufacturing facility (Lee, Speight & Loyalka, 2014). The company's environmental sustainability will be enhanced if annual objectives are met. A range of activities, including the replacement of obsolete machinery and technologies with new, might be explored for this goal. Furthermore, if necessary, a fossil fuel with a high octane number may be utilized in the manufacturing plants, which is more environmentally beneficial. Given that reducing carbon emissions is a time-consuming process, Big Green Tractor is necessary to set yearly targets to ensure that all efforts are directed in the same direction.

Collaboration with other organizations: The alliance with international and domestic environmental authorities is one of Big Green Tractor's most visible procedures or tactics for creating and executing corporate social responsibility. The organization may undertake audits to assess its present carbon emission levels and adhere to the authorities' instructions, standards, and rules (Dimian, Bildea & Kiss, 2019). Not only that, but these approaches may also aid in the adoption of new protocols for tractor manufacturing and the improvement of assembly lines through the use of super-efficient procedures. It's also possible that forming a partnership with such organizations may decrease Big Green Tractor's legal and regulatory requirements in Indonesia.

As a result, Big Green Tractor's corporate social responsibility policies include creating relationships with international agencies, lowering carbon emissions, electrification, and the procurement of fuel-efficient machinery.

Chemical waste disposal requirements in the workplace Big Green Tractor's strategic managers are responsible for adhering to a number of industry norms and processes. The following diagram depicts these procedures and criteria.

Secure landfills: When it comes to disposing of the chemical waste generated by Big Green Tractor's production plants, it can be argued that a secure landfill is one of the most viable solutions available to the company. Waste chemicals and materials are expected to be stored or containerized in safe landfills using this method (Henriques, Pecas & Silva, 2013). According to the report, the Indonesian government has built various dump sites where chemicals and materials generated by corporations may be preserved and reused in the future with minor alterations.



The diagram above shows a typical configuration of a secured landfill facility that may be utilized in Big Green Tractor for chemical waste containerization. Chemical waste may be disposed of in

safe landfill containers beneath the earth, according to research. The government has established specific guidelines for this purpose. The use of an impermeable lid to shield the environment above ground from the harmful 11 chemical vapors is one of these regulations (Lee, Speight & Loyalka, 2014). Secure landfills must also be built in such a manner that they do not contaminate the groundwater and preserve the environment and people in the surrounding areas.

Treatment and processing: Processing and treatment is another remarkable operation that may be included in Big Green Tractor for the management of waste from the manufacturing facility. Several research on industrial waste management imply that there may be a number of substances that cannot be released directly into water bodies. Solid waste containing carcinogens, on the other hand, cannot be placed in grounds. As a result, Big Green Tractor is obliged to examine chemical processing solutions in order to lower their degree of toxicity. Such substances are exposed to react with other chemicals or reagents in this procedure. Although these processing and treatment operations may allow the company to incur additional costs, they are astonishingly successful in boosting Big Green Tractor's corporate social responsibility. Not only that, but the government and other social welfare organizations in Indonesia may impose less legal and regulatory duties on the organization.

Recycling is an excellent way for Big Green Tractor to manage or dispose of its chemical waste. Many case studies have revealed that not all chemicals produced as waste are completely useless to the firm. Waste recycling practices can be efficient in reusing chemicals. Apart from that, recycling procedures may also assist Big Green Tractor in lowering the expense of purchasing the same chemicals in the future. In light of the regulations and norms that regulate chemical recycling, it's possible that the organization may need specific approval from the government for particular chemicals. Not only that, but the organization must adhere to specific rules, failing which the safety and health of employees and workers may be jeopardized.

Alternatives to the typical manufacturing method that are environmentally friendly There are various green alternatives to standard manufacturing techniques available today, which Big Green Tractor can examine. The following are some of the options that are suggested and discussed.

Acceptance of green energy: Big Green Tractor's most viable choice for replacing the company's outmoded production method is to embrace green energy. Solar energy, wind energy, geothermal energy 12, and a variety of other types of green energy are just a few of them. These energy items are made from renewable, long-lasting resources (Sharma & Bandichhor, 2017). At the same time, the energy provided by these sources is cost-effective, thus Big Green Tractor does not need to invest a lot of money. Furthermore, the government's international initiatives have resulted in abundant green energy supplies in Indonesia. As a result, the usage of green energy in the organization's production facility may be increased. Big Green Tractor may emphasize the usage of this energy in order for the company to achieve long-term sustainability and cost-effectiveness while functioning in the business sector.

Material that is biodegradable: In addition to promoting the use of renewable energy, Big Green Tractor may place a strong emphasis on encouraging the use of biodegradable materials in the production process. The analysis discovered that the organizations' suppliers arrive in plastic wrapping that cannot be dissolved. The company might alter its supply chain strategy and seek for vendors that can give products in biodegradable packaging and materials. Big Green Tractor may be able to considerably reduce trash output and its harmful effects on the health and safety of employees and people in local communities in this manner.

HVAC system: There are suitable systems available today, such as HVAC, that may be utilized to optimize the production process in businesses. Heating, ventilation, and air conditioning (HVAC) are three terms that describe how a company's environment is controlled. The company must invest a large amount of time and money in ventilation and temperature control (Sharma & Bandichhor, 2017). Big Green Tractor must concentrate on the scenario of energy loss, as well as a variety of

other issues that may jeopardize energy efficiency. The organization may be advised to implement the HVAC system, which may improve sustainability.

Modernization of the plant: One of the remarkable practices that Big Green Tractor might explore is the upgrading of the tractor manufacturing facility. It is possible that the organization may concentrate on insulation and other methods that might be utilized to reduce the risk of energy loss. This manner, the production plant may be modernized, allowing Big Green Tractor to reduce emissions by using less energy.

As a result, Big Green Tractor may be analyzed to show that there are numerous green alternatives to the typical production process that can be explored.

Conclusion

Big Green Tractor has a number of serious difficulties with regard to long-term viability and high operating costs. The organization's main objective is to reduce operating expenses by simplifying its processes. For example, strategic managers in the company may focus on cost-efficiency by cutting material costs, automating processes or selling scrap to suppliers. In addition, a quality management system, external and internal audits, customized training and standardization can all be considered in order to minimize faults throughout the production process. Big Green Tractor may also use a process mass intensity calculator, a solvent selection tool, and so on in order to make their operations more environmentally friendly.

In addition, the research explains that Big Green Tractor may use a variety of strategies for corporate social responsibility, such as reducing carbon emissions, electrifying, purchasing energy-efficient machinery, and more. As a result, the company may have less legal and regulatory responsibilities as a result of these actions. For example, Big Green Tractor may incorporate secure landfills, processing and treatment rules as well as recycling techniques in its consideration of industrial standards. Another thing to examine is whether or not Big Green Tractor can use greener production methods instead of the usual ones they've been using. Solar, geothermal, wind, and other forms of green energy may be among these choices. In addition, Big Green Tractor considers the usage of an HVAC system and biodegradable materials as green alternatives.

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