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## **Introduction**

Businesses have many moving parts that must all function properly together for them to be successful. Companies use processes to simplify this collaboration. Business processes are the precise actions and procedures taken to finish a task or reach a goal. Putting up a job listing, examining resumes, holding interviews, and presenting an offer of employment are a few examples of steps involved in hiring a new employee. Businesses may guarantee that activities are executed quickly and effectively by defining and documenting these processes explicitly. Businesses everywhere strive for continual development, and those who are most successful at integrating this principle into their corporate cultures and daily operations are the ones who have the best chances of surviving on the global market.( Davidsson, S., & Gustafsson, V. 2011)

Many businesses may find it challenging to streamline their value chain and improve their processes, but these tasks can be facilitated by using a variety of improvement approaches. Numerous various approaches may be discovered, and depending on the business, they might be suitable and applicable. The supporting (administrative) tasks inside the organization are not the primary focus of many of the many techniques; rather, the improvement of actual production is.

Big Green Tractor is one of the well-known companies that works in the tractor manufacturing business. The organization has significant operational streamlining procedures as a result. Creating a suitable plan is crucial for such procedures. In addition, problems with the organization's limited compliance with environmental standards and regulations are also emphasized in Big Green Tractor company.

## **The industrial operational streamlined procedure guide:**

To save a significant amount of money and time while increasing overall productivity and profitability, manufacturers are eager to simplify complex operations. Especially when they seek to simplify complex procedures to save a significant amount of money and time while increasing overall productivity and profitability. Running an eco-friendly company also helps to lessen its negative effects on the environment and saves natural resources.( Niels. 2020).

- Purpose:

In the current, highly competitive world, practically every assembling firm is racing to increase profits at the risk of contaminating and hurting the environment. The use of lean manufacturing has improved processes, reduced measure waste, obtained the highest yield, and generated profit. To increase an organization's benefit, assembling organizations are concerned with converting materials and labor into products and endeavors as efficiently as is practical. Together, it is to create updated versions that use resources without affecting the delivered services or produced goods.

An assembly method that minimizes waste and contamination is known as "green assembling." Lean manufacturing is a practice that focuses on eliminating loss from the system in a purposeful and continuous manner. The frameworks for lean manufacturing and green manufacturing have been taken into consideration and this operational industrial streamline procedural guide is intended to address the recent decline in growth and to simplify "The Big Green Tractor" operations to be more effective and environmentally friendly. .( Niels. 2020).

## **Standardized methods of operation**

### o Prerequisites

- Big Green Tractor's productions ought to include a complete handbook.
- Employ cost-effective manufacturing techniques
- Reduce flaws as much as possible during the production process.
- Create a greener process using tools from the twenty-first century.
- Low-cost production techniques

## **cost-effective manufacturing techniques**

For all assembly organisations to function, the assembling region is essential. To ensure sustainable growth, it's critical to maintain spending at high levels.

No matter how astounding the demand for a product may be, if its production method is ineffective, the company will not profit from selling it. Instead of raising the product's rate, manufacturers will typically cut their manufacturing costs to raise their profit margin. (Couto, V., Plansky, J., & Caglar, D. 2017).

**Various cost-saving techniques are handy to minimize the value of the manufacturing process.**

- Build up an essential arrangement and create and survey the essential arrangement on customary premise.
- Dissect the climate, the market, the contenders and the accessible inside assets.
- Robotize redundant cycles.
- Present the arranging of the assets, methods for creation and materials and think about mechanical advancement and venture, as key components to accomplish fabricating cost decrease.

- Present consistent improvement rehearses to ensure that the company works under worldwide norms, like ISO accreditations, ecological principles, item and Work force security guidelines and neighborhood guidelines.
- Provide ongoing quality assurance practices to guarantee that the business complies with international standards, including ISO accreditations, ecological principles, worker and product security standards, and local ordinances.
- Involve the staff in the operation of the organization to boost their success and the way they do business. Offer the goals using standard gatherings and internal distributions, such as sheets, publications, and mailings.
- Provide arrows that indicate in the direction of improvement, and look for them, as the organization's members need to know where to go, and the exhibition markers are the catalyst.
- Create key performance indicators (KPIs) that directly impact your business. All people will be driven in the right direction by it as well.
- Organize departmental and interdepartmental pointers together. It will encourage the association's large number of members to cooperate.
- Eliminate the unnecessary. Possess some business knowledge and appropriate the rest.
- Keep things simple and avoid complexity. Exercises that don't improve organization should be discarded.
- Reduce planning and burdensome administrative tasks. Repurpose exercises for a few corporations. in addition to doing any sub cycle that makes use of explicit work, cleaning services, building maintenance, counselling services, unfamiliar exchange, and transportation and dissemination.

- Survey-related costs and putting together overhead and improving man-machine workouts to use the work more effectively. Think about versatile workers who can do various tasks. Offer agents who propose innovative ideas and raise money for investments driving factors.
- Reduce material costs where they are a major expense and look for ways to use less materials. Make sure the materials are appropriate and can accommodate huge groups. It will cut down on the unitary cost. Search for material waste at each stage of the production cycle, including sourcing, creation, internal developments, final or temporary storage, transportation, and dispersion.
- Reduce energy misfortunes as there are numerous energy sources within the company, including power, steam, and fuel. The supplies that need to be inspected include pipes, sheets, transformers, generators, engines, and blowers.
- Provide preventive assistance and consider the implementation of preventive and visionary maintenance within associations. Don't wait around for equipment letdown. Create a maintenance plan to maintain all equipment during plant shutdowns.
- Avoid going on as much of a vacation, as it will increase chances of experiencing financial loss. Execute a preventative maintenance schedule with the maintenance team, including replacing any consumables and excess components; replacing channels; changing orientations; and doing specialist cleaning. (Davim, P. 2012).

## **The plan to minimize defects throughout the manufacturing process**

The following steps make up the plan for Big Green Tractor's production process to reduce errors.



1. Putting in place a quality management system

Big Green Tractor managers must create and put into place a successful quality management system. It is necessary to create a distinct department with the sole purpose of guaranteeing that only high-quality tractors are produced. Tractor inspection procedures, both manual and robotic, can be carried out in this way. Along with this, the management of Big Green Tractor should organize regular meetings with the staff who work on the production and assembly lines to pinpoint the main sources of defects that have been reported.

2. Material purchased from suppliers was audited:

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.

The firm must carry out internal and external audits to evaluate the caliber of the supplies obtained from various vendors. 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. In addition to this, a strong emphasis should be placed on determining if the usage of purchased materials would result in any problems with tractors' functionality after their sale, which are produced by Big Green Tractor.

It can be understood that practices of conducting audits may allow the management to focus on probable areas of defects in the material. Suppliers can be notified about the quality of material, and potential defects can be identified and resolved during the manufacturing process. ( Neu, F. H. 2013).

3. Customized training:

Personalized training can also be extremely effective in reducing errors in the production of Big Green Tractor, along with conducting audits and other procedures. Analyzing the situation

reveals that not all tractor production procedures can be automated. Manual labor is a requirement for both employees and laborers in the production department. The use of individualized training techniques could improve and hone the talents that these Big Green Tractor personnel already possess. Less errors are made because of training and development activities, which reduces the likelihood of manual faults. A skill gap analysis for personnel working within the manufacturing plan may be conducted by human resource managers and professionals in the firm, and tailored training sessions may be scheduled as a result. (Neu, F. H. 2013).

#### 4. Standardization:

The application of the following standards is yet another amazing technique to reduce the likelihood of a fault during the Big Green Tractor's manufacturing process. Numerous studies have discovered that firms' production, manufacture, and assembly of goods are all subject to the ISO 9001 requirements. 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 problems appearing during the production of tractors may be decreased. (Lee & Loyalka, 2014)

### **The use of 21st century tools to create a greener process**

The 21st century has brought about several new technologies and techniques that can be incredibly helpful to Big Green Tractor in developing greener procedures. The following discussion focuses on these devices and technology.

#### 1) Process mass intensity calculator:

This tool from Big Green Tractor is one of the most useful for developing more environmentally friendly industrial procedures. This technique is extremely effective at estimating the material need reduction.

while producing goods in designated production regions. Big Green Tractor might use this tool to acknowledge the demand for resources like tractor spare parts and other things.

When assessing the reduction in material requirements during product production in production locations, this methodology is highly useful. Big Green Tractor may employ this technology to determine the demand for products like tractor replacement parts and other items. To decide whether the company must invest money in a certain acquisition, the PMI value of the tool can be examined. The company may reduce the purchase and modify the tractor specifications if the PMI value is found to be low. It seems sense that reducing material purchases will lead to less processing, which could ultimately mean reduced energy use and emissions of hazardous materials. (Aithal , 2016)

## 2) software and robotics

Robotics is one of the important technologies that businesses are implementing in their manufacturing plans in the twenty-first century. Numerous studies have shown that organisations nowadays use sophisticated software and tool systems, which may be a sign that they are implementing green business practices. In assessing the carbon emissions from Big Green Tractor's manufacturing plans, the use of robotics and algorithms can be quite helpful. Like how intelligent software systems may suggest specific activities that might be taken to reduce the emission. Big Green Tractor may greatly benefit from the use of robotics, automated technology, and other tools to harness greener operations.

The company can solve the problems of waste management and the adoption of greener practices thanks to the employment of machines in production and assembly lines. For instance, intelligent software may be used to assess how to cut materials like iron sheets and many others to save waste. Robotics and software tools enable Big Green Tractor to solve problems. (Couto, 2017).

3) Tools for choosing solvents and reagents:

These are additional instruments that Big Green Tractor uses to execute more environmentally friendly procedures in its manufacturing facilities. Reagent guides and solvent selection tools, enable the company's research and development division to assess the level of toxicity of various chemicals used in the production of tractors, such as paints, acids, and bases.

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.

Big Green Tractor may use several instruments, including those for solvent selection, a Process Mass Intensity Calculator, and robotics and software, to design greener processes while it is in operation. (Aithal , 2016)

## **Suggestions for environmental measures**

### **➤ Corporate social responsibility at Big Green Tractor**

Big Green Tractor must create and improvise corporate social responsibility in addition to optimizing its manufacturing procedures.

The following suggestions can be made for this reason.

a) **Buying an energy-saving gadget :**

It is the most admirable approach that Big Green Tractor can consider for business social responsibility.

The company may concentrate on replacing outdated equipment with more energy-efficient models. Such purchases, however, might be expensive for the business and may have a substantial impact on Big Green Tractor's revenues; nonetheless, this one-time expenditure enable the organization to enhance its corporate social responsibility and reputation in the chosen business market.

It can be calculated that modern machines may use less fuel to function, allowing for compliance with international agencies' emission regulations. As a result, the company may enhance its corporate social responsibility and implement an environmentally friendly strategy. (Neu, 2013)

b) Electrification:

Electrification is a practice that Big Green Tractor views as being extremely important in leveraging corporate social responsibility. Numerous studies have shown that using electricity rather than fossil fuels significantly reduces carbon emissions. It is one of the main causes for which all organisations are concentrating on electrifying their production and operational processes.

Big Green Tractor might think about substituting more modern, electricity-powered equipment for outdated, ineffective models.

For instance, the company might buy electric vehicles so that workers can access various parts of the expansive manufacturing facility's production plant. Battery-powered locomotive cars for internal access can be incredibly useful in enhancing corporate social responsibility procedures. Due to this, Big Green Tractor may think about changing the way its factory operates by lowering the number of fossil fuel-powered machines and vehicles and promoting the usage of electricity. (Couto, 2017).

c) Limit carbon emissions:

When it comes to suggestions for Big Green Tractor's corporate social responsibility, it can be noted that the company must set ambitious goals to cut carbon emissions from its manufacturing and production facilities. This makes it possible to create programs that concentrate on lowering the emission of carbon-containing chemicals from the industrial facility. The company's environmental sustainability will improve when yearly goals are met. Several methods can be taken into consideration for this goal, including the replacement of outdated equipment and technology.

Additionally, if it's essential, industrial facilities can use a fossil fuel with a high-octane rating, which is more environmentally beneficial. . (Sharma, 2017).

d) partnership with organisations

The collaboration with local and foreign organisations that promote environmental protection is one of Big Green Tractor's most notable procedures or tactics for establishing and implementing corporate social responsibility. The organization is free to carry out audits to assess its existing carbon emission levels and to abide by the standards and guidelines established by these organisations. these techniques may also aid in the adoption of new protocols to produce tractors and the improvement of assembly lines with incredibly effective techniques.

Therefore, actions like electrification, forming partnerships with foreign organisations, and buying fuel-efficient machinery can all be viewed as part of Big Green Tractor's CSR (Sharma, 2017).

## **Requirements for the industrial disposal of chemical waste**

The strategic managers of Big Green Tractor are responsible for upholding various industry standards and protocols.

The following provides examples of these policies and guidelines.

A. Safe landfills:

One of the organization's most practical options for disposing of the chemical waste generated by Big Green Tractor's production facilities is that secure landfill. Waste chemicals and materials are supposed to be containerized or stored in secure landfills when using this procedure.

Big Green Tractor is capable of containerizing chemical waste at the secure dumping site. It is possible to analyze the possibility of subjecting chemical waste to secure disposal containers below the surface. To safeguard the environment above ground from dangerous chemical fumes, these guidelines provide for the use of an impermeable top. Additionally, secure landfills must be constructed such that they do not meet the groundwater and guarantee the safety of the surrounding community's residents and the environment. (Lee, & Loyalka, S. K. 2018)

B. Treatment and processing

Big Green Tractor takes processing and treatment into account while managing waste from the production facility. Numerous research on the management of industrial waste point to the possibility of some chemicals that cannot be directly released into water bodies.

Like this, grounds cannot be used to dump solid waste containing carcinogens.

Big Green Tractor must consider chemical processing techniques to lessen the toxicity of the chemicals. These substances are put through a reaction with additional chemicals or reagents throughout this process. The organization may incur additional costs because of these processing and treatment actions, but they are amazingly effective in raising Big Green Tractor's CSR.

C. Recycling

Recycling is a noteworthy additional step in the management or disposal of Big Green Tractor's chemical waste. Not all waste compounds are completely useless to the company. Reusing

chemicals can be accomplished through waste recycling practices. recycling techniques might also lower the price Big Green Tractor will have to pay in the future for the same chemicals. The organization may need special approval from the government for some chemicals, according to the norms and protocols related with chemical recycling. In the workplace, stringent standards must be adhered to; otherwise, the safety and health of employees and workers jeopardized. (Lee,& Loyalka, 2018)

## **Alternatives to conventional production that are environmentally friendly**

Big Green Tractor can be used as an example of one of the many green alternatives to conventional manufacturing techniques available today. In the following, some alternatives are suggested and explained.

### a) adoption of renewable energy

Big Green Tractor should replace the company's current antiquated manufacturing method because it is the most practical option. In addition to solar, wind, and geothermal energy, there are many other types of green energy. These sustainable, renewable energy sources were used to create these products. Furthermore, Big Green Tractor doesn't need to invest a lot of money because the energy generated from these sources is economical.

Rich sources of green energy are also available thanks to the government's foreign initiatives. As a result, the organization's production facility can increase its use of green energy. Big Green Tractor may emphasize the usage of this energy for the company to operate in the commercial market with sustainability and cost-effectiveness. (Lee,& Loyalka, 2018)

### b) Biodegradable substance



In addition to promoting the use of green energy, Big Green Tractor may also place a strong emphasis on promoting the use of biodegradable materials in manufacture. The organisations purchase their suppliers in non-degradable plastic packaging. The company might adjust its supply chain strategy and hunt for vendors who offer goods in biodegradable packaging and materials. In this manner, Big Green Tractor might dramatically lessen waste output and the harmful effects it has on workers' and residents' health and safety.

c) The HVAC system

Modern technology provides suitable systems, like HVAC, that can be employed to optimize the manufacturing process in businesses. HVAC, which stands for heating, ventilation, and air conditioning, controls the ambiance inside the business. The organization must invest a lot of time and effort into its ventilation and temperature management procedures. Big Green Tractor must concentrate on the energy loss scenario and other situations that jeopardize energy efficiency. The company benefit from the HVAC system's implementation, which increase sustainability. (Sharma, 2017).

d) Facility improvement:

The modernization of the tractor manufacturing facility is one of the methods that can be considered in Big Green Tractor. It is possible that the organization may put its attention on measures like insulation that can help to lessen the likelihood of energy loss. By upgrading the manufacturing facilities, Big Green Tractor will be able to reduce emissions because there will be less need for energy.

As a result, it can be concluded that Big Green Tractor can consider several environmentally friendly alternatives to the current production method. (Sharma, 2017).

## Conclusion

It may be concluded that Big Green Tractor has several severe problems with regard to sustainability and high operating costs. The organization is concentrating on streamlining operations to cut operational costs. Strategic managers within the company might concentrate on achieving cost-efficiency through automation, selling scrap to vendors, and a variety of other methods. Along with this, a number of procedures can be taken into account to minimize flaws throughout the production process, including quality management systems, external and internal audits, individualized training, and standardization.

Several additional tools, including a process mass intensity calculator, a solvent selection tool, and others, can be suggested to Big Green Tractor in order to harness greener processes.

The research further clarifies that Big Green Tractor can consider a variety of CSR strategies, including the reduction of carbon emissions, electrification, the acquisition of energy-efficient equipment, and a host of others. A reduction in the organization's legal and regulatory duties may be made possible through these procedures.

Big Green Tractor may consider a variety of industry standards and protocols, such as safe landfills, processing and treatment standards, recycling methods, and more.

Finally, it should be noted that the company is also considering certain environmentally friendly options that might eventually replace Big Green Tractor's typical manufacturing process.

The use of green energy sources like solar, geothermal, wind, and many others may be among these possibilities. Additionally, Big Green Tractor is thought to use HVAC systems and biodegradable materials.

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