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# **A Basic Guide of Sustainability Practices Small & Medium Enterprises**

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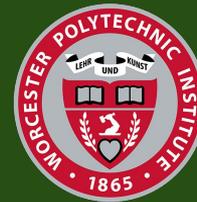


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# 01

# LOGISTICS & OPERATIONS

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- **Analyze financial situation**

- *It's crucial to get an economic and financial assessment to see if a company is profitable enough to undertake the initial investment into sustainable practices (Figure 1)*

- **Internal assessment of resource usage**

- *This can range from tracking carbon emissions of each individual product to looking at what current activities are being done to avoid or reduce waste.*

- **Employee education**

- *Train employees internally on sustainable practices or seek outside training by qualified groups*

- **Unified company culture**

- *Break down habits into small milestones so employees get a sense of accomplishment which could lead to greater motivation. Reward sustainability in your company.*

- **Triple bottom line**

- *This can be done by conducting surveys and interviews to measure social impacts, evaluating financial statements and tracking carbon emissions or product life cycle assessments.*
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**Figure 1: The three different sections within analyzing the business. All three sections are relevant to ensure the success of your company**

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# 02

# ENVIRONMENTAL INDICATORS

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# ENVIRONMENTAL INDICATORS

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- **Energy recovery**

- *To track energy usage within the company, examine the energy usage report through your company's supplier and discuss possible ways to minimize single-use energies. As a long term goal, implement a yearly impact assessment in comparing these usage reports across all varieties of used energies.*

- **Water consumption**

- *Tracking water consumption can be seen through water usage statements provided by the supplier to eliminate areas that use excessive water. Identifying potential areas where water consumption is unnecessary or can be reduced will significantly impact the total water waste.*

- **Waste products**

- *Properly disposing of chemicals and storing hazardous materials safely makes the potential for dangerous waste slim.*

- **Recycling percentage**

- *Separate different items that can be recycled will aid your company in tracking recycling progress.*
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# 03

# ELECTRICITY

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# ELECTRICITY

*Managing electricity use effectively can help reduce the yearly cost of operations*

- **Natural light diffusers**

- *Installing skylight diffusers in the ceiling of the workspace can help reduce electricity consumption during the day by utilizing natural sunlight. (Figure 2)*

- **LED lights**

- *Changing your traditional light bulbs for LEDs can help reduce electric costs since LEDs are more energy effective and last longer. (Figure 4)*

- **Motion sensor technology**

- *Motion sensor devices can be a useful tool in any workspace to regulate electricity consumption by turning devices off when activity in a room is not detected. They can be used for lights and AC units to reduce unnecessary usage.*

- **Solar panels**

- *Solar panels can help you save money on electricity internally. Depending on your system's size, it is possible to save from 30% up to 95% in electricity bills using solar panels. (Figure 3)*

- **Solar water heaters**

- *A solar water heater can raise the initial temperature of the water before being used in manufacturing. These heaters put less load on a boiler, drawing less energy to get to the boiling point or necessary temperature for production.*



Figure 2: Natural Light Diffuser



Figure 3: Solar Panels Installed on a roof

EFFICIENCY	Least		Most	
BULB TYPE				
LUMENS	<i>STANDARD</i>	<i>HALOGEN</i>	<i>CFL</i>	<i>LED</i>
450	40 W	29 W	9 W	8 W
800	60 W	43 W	14 W	13 W
1100	75 W	53 W	19 W	17 W
1600	100 W	72 W	23 W	20 W
RATED LIFE	1 year	1-3 years	6-10 years	15-25 years
SAVINGS	×	up to 30%	up to 75%	up to 80%

Figure 4: The comparison of Incandescent, Compact fluorescent lights, and LED. LED is a long term investment with a quick Return on Investment

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# 04

# WATER

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# WATER

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- **Water efficient appliances**

- *There are many water-efficient fixtures and appliances on the market currently, with inexpensive options such as low-flow toilets, urinals, and faucet aerators. On a larger scale, businesses can invest in water-efficient equipment like high-efficiency boilers and cooling towers.*

- **Water collection methods**

- *You can harvest rainwater from the roof through a gravity-fed system into a supply tank. Capture excess water that is produced by air conditioning units or dehumidifiers. Businesses can use this recycled or reclaimed water for non-potable purposes such as landscaping, cleaning, and other industrial processes. ( Figure 5)*

- **Water system upkeep**

- *Well-maintained systems operate more efficiently, using less water and energy to deliver the same level of service. Companies should conduct regular system checks to ensure water is not wasted by faulty equipment. Another option is to implement a leak detection and repair program.*
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Figure 5: This tank is a rainwater collection system. It can be used in different manufacturing processes.

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# 05

# WASTE

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- **Hazardous waste disposal**

- *In order to dispose of hazardous waste, you must identify the type of hazardous waste that is being produced. Next, you must contact a waste management company to properly dispose of the hazardous materials. The following is a short list of types of hazardous waste:*

- *Batteries*
- *Used oils & lubricants*
- *Refrigerants*
- *Home appliances*
- *Medical appliances*
- *Chemical waste*

- **Recycling center**

- *A company can either send their recyclable waste to a waste management company that will process and recycle the waste, or they can reuse their waste in their processes. If a company recycles its own waste, it is key to have a recycling center or protocol in place. The waste needs to be sorted and cleaned before it is reused or repurposed. (Figure 6)*

- **Composting**

- *Composting is an easy and cost-effective process that SMEs can use in their sustainability processes. By composting, companies can repurpose their organic waste into compost that can be used by the employees or donated to local farmers and families*
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Figure 6 : An example of how all recycled products can be sorted into different categories.

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# 06

## SOCIAL IMPACT

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*The social aspect of sustainability is often neglected but is necessary for a healthy work environment.*

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# SOCIAL IMPACT

*The social aspect of sustainability is often neglected but is necessary for a healthy work environment.*

- **Develop a healthy working environment for employees**
  - *To have a positive social impact on the community outside the business, you must ensure that things are running smoothly internally. Make sure your employees have a healthy and happy working environment where they are treated with respect.*
- **Donate old equipment to schools, libraries, or other public organizations**
  - *Old computers, monitors, and other office supplies don't need to be thrown away. They can instead be donated to others who need them.*
- **Work with schools, universities, and local education providers**
  - *Offer to give tours of your facility to students or to speak to students on-site to engage with the community and education in the area.*
- **Volunteer for or organize environmental cleanup campaigns**
  - *Lead or participate in efforts to clean trash from beaches, forests, and city streets.*

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# 07

# ENVIRONMENTAL IMPACT

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*Every company has an impact on the environment, and by becoming sustainable your company can positively aid the environment.*

- **Carbon offset**

- *Carbon offsetting is a process in which companies invest in initiatives that can compensate for their own carbon emissions. The UCC-FONAFIFO program by FONAFIFO manages carbon offsetting, and provides resources to reduce carbon footprints.*

- **Environmental certifications**

- *Environmental certifications dictate a guideline for companies to follow that can facilitate the process of setting up an environmental management system. Some of the most common certifications in Costa Rica are the ISO 14001, the Certificacion Carbono Neutral, the Bandera Azul Ecológica and INTECO. Hiring a consultant can also reduce the time to get the certification, which can often be from six months to a year depending on the company's current sustainability structure.*

- **Ethical sourcing from sustainable supply chains**

- *Ethical sourcing requires businesses to ensure that products and raw materials are made by suppliers who adhere to environmental and social standards, such as fair labor practices and responsible resource management. These supply chains seek to minimize environmental impact during the entire lifespan of a product: Production, transportation and disposal.*

Thank you.

Gracias por su tiempo.

Sustainability Guide Document

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Figure 1: Triple bottom line diagram

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Figure 3: Water collection system

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Figure 4: The comparison of Incandescent, Compact fluorescent lights , and LED. LED is a long term investment with a quick Return on Investment(*LED vs CFL vs Traditional Bulbs*, 2023)

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