CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Smart Office Toolkit – Audit Guidelines

The Smart Office Toolkit includes a scoping audit, which provides a quick overview, as well as audit sheets for more detailed auditing around energy, waste, water and biodiversity. You are advised to first do the scoping audit and then decide which area you want to focus on.

This document provides an overview of how to do a comprehensive audit. It should be read together with the audit sheets (for data capturing) and cheat sheets (quick reference guides for data gathering). The results from the audit will help you compile an implementation or retrofit plan, which outlines the actions that can be carried out to improve environmental sustainability in your workplace.

Eco-audit

An eco-audit, or green audit, is an evaluation of how efficiently something is working. By doing an eco-audit at the office or home, you can determine how your actions impact on the environment, either in a positive or negative manner. In this way an eco-audit can help you determine what you can do to help our planet, save money and live a more sustainable lifestyle.

It is essentially a "snap shot" of the environmental resources being used at a specific venue (i.e. the office) during a specific time. Such a "snap shot" can be used to motivate for funding and implementation of energy efficiency, water conservation or waste reduction projects at the office.

This document provides additional information to guide you when doing your audits, while a full set of audit sheets and cheat sheets have been developed to assist you to conduct the following:

- Energy audit
- Waste audit
- Water audit
- Biodiversity audit

Scope of audit

The scope of the audit needs to be defined so that it can be compared to other offices (benchmarking) or compared to other audits to be done in the future. There are two common ways to organise an eco-audit, either by specific areas or by different activities.

The first thing to decide is how thorough the audit should be. For example, a 'cradle to grave' life cycle assessment looks at the environmental impacts of a product or service from the extraction of raw materials, their transport to site, activities at site, the environmental impacts of use and the product's final disposal. It's a very thorough analysis but not easy to do and certainly time-consuming.

The following information should then be used to define the scope of the audit:

- Does it include all of the facilities, or focus on a few key activities and facilities?
- Does it focus on office areas only, or include other auxiliary functions, if applicable?
- Does it only look at the actual resource management on the office property, or does it look at the whole life cycle (cradle to cradle)?

It is best to start small and get your process in place, and then expand over time.

Methodologies for collecting data

There are different methodologies that can be used for the data collection depending on the situation. You will most likely need to use a range of different methodologies as outlined below to obtain the information that you will need for your eco-audit.

It is important that the project is communicated within the office. Ensure that employees are informed about the process. Key people such as the caretaker should get involved, and can help provide the important information as required.

Surveys

You will need to start by doing a survey: walking through all of the different facilities, and determining the different types of appliances (lights, taps, toilets, fridges, etc.) as well as measuring the usage per item (watts indicated on the appliance or measuring water from a tap); try to identify the relevant consumption patterns (such as how often an appliance is used).

> Audit sheets have been developed for use in the office, but might need to be adapted depending on the local situation.

Interviews

Details around usage or general characteristics of certain appliances (such as fridges) can be gained through conducting interviews with staff members. Surveys are useful tools for measuring less quantitative activities, such as determining the impact of training.

Review utility bills

Utility bills (municipal accounts) usually include energy and water consumption, with associated costs, and can be very helpful. It is essential that this type of data is collected over a period of time (preferably about 12 to 36 months). This information is generally only given to the owners or managers of property, so you would have to request this. You can then interpret the information and provide a summary about the amount of water (kilolitres) and energy (kilowatts) used, which will need to be compared to the audit calculations. Note that an office could have more than one metering point or more than one invoice (utility bill).

Review policies

Where policies exist (e.g. waste separation or landscaping policy) they need to be listed and, if possible, copies need to be obtained (if a formal written policy) or described in short (if verbal or informal). Also make note of any awareness raising or training programmes that might be in place. This can reflect anything that the office is already implementing that could have a positive impact on the audit.

Capture assumptions

It is important that any assumptions that are made during the audit are recorded and transparent to give credibility to the process. Assumptions need to be constant throughout the process of the audit; the audit team needs to work together to ensure this – due to this reason it is best to have a small audit team.

Analyse and collate data

Once the data has been collected it needs to be collated and analysed to ensure that the right conclusions are reached. These conclusions will then be used to make recommendations for implementation through a retrofit plan.

Implementation plan

Once you have your recommendations you need to consider how this can be implemented. Some of this could be done by simply adapting your current system or replacing certain components, while other things might require a full retrofit.

Retrofitting involves adding new technology or new features to an existing system. This usually has a cost implication, for example the replacement of light bulbs might require that the light fitting also needs to be replaced.

There are generally three cost categories:

1. No cost: things that can be done through behaviour or system changes – such as setting the printer to print default double sided.
2. Low cost: adapting to a similar system that does not cost much more – such as replacing light bulbs as part of a maintenance programme.
3. Invest to save: expensive options that need to be budgeted for, but once implemented should save money - such as the installation of a solar water heater.

A retrofit plan will outline all the areas within the office that need to be addressed over the short, medium and long-term, attached to an associated budget and indicating pay back times. Through determining the installation cost and possible savings on the operational cost, a motivation can be made for funding of projects that will actually save the office money over the longer term. This retrofit plan should be compiled in such a way that it could be presented to obtain budget allocation for the implementation thereof.

You might also need to revise your sustainability policy and objectives. This is not unusual, and will likely happen several times throughout the process. In fact, you will continue to update your plan as you improve the way you do things, or as you find new products or services.

Get going

The next step is to download the various audit sheets and ‘cheat sheets’ so that you can do a detailed audit at your office.

You will also require the following additional information for your audits:

- Utility bills for energy and water
- Any information on waste collection or recycling

- Summary of other energy sources purchased (gas, diesel, petrol, etc.)
- Any relevant existing policies, such as an environmental policy.

As part of your baseline study it is also good to capture the following information:

- A brief overview of the business and key activities
- A brief overview of the office facilities, including location and shared facilities (such as being located in an office park where the landlord does the waste management)
- A brief overview of the ownership status (leased, owned)
- A summary of the number and type staff that use the facilities
- A summary of the operational hours and business holidays (i.e. if they are closed a certain time of the year)
- Any other relevant information such as the potential for influencing any future retrofits with cost implications if the building is leased.

Once you have done your baseline audit and initial retrofit plan you can start to look at the next steps, such as doing your carbon footprint or Global Reporting Initiative (GRI) sustainability reporting.

Good luck!