Student workbook

BSBSUS401

Implement and monitor environmentally sustainable work practices

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**TAFE NSW would like to pay our respect and acknowledge Aboriginal and Torres Strait Islander Peoples as the Traditional Custodians of the Land, Rivers and Sea. We acknowledge and pay our respect to the Elders, both past and present of all Nations.**

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# Icon legends

|  |  |
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| Icon | Description |
|  | **Practice activity**  Learning activities help you to gain a clear understanding of the content in this resource. It is important for you to complete these activities, as they will enhance your learning. The activities will prepare you for assessments. |
|  | **Collaboration**  You will have opportunities to collaborate with others during your study. This could involve group activities such as mini projects or discussions that will enable you to explore and expand your understanding of the content. |
|  | **Self-check**  An activity that allows you to check your learning progress. The self-check activity gives you the opportunity to identify areas of learning where you could improve. If you identify these, you could review the relevant content or activities. |
|  | **Resources (required and suggested)**  Additional resources throughout this workbook such as chapters from textbooks, online articles, videos etc. These are supplementary resources, which will enhance your learning experience and may help you complete the unit. |
|  | **Assessment task**  At different stages throughout the workbook, after you have completed the readings and activities, you may be prompted to complete one or more of your assessment tasks. |
|  | **Video**  Videos will give you a deeper insight into the content covered in this workbook. If you are working from a printed version, you will need to look these up using the URL provided. |

# Getting started

## What will I learn by completing this workbook?

This workbook has been developed for the unit of competency BSBSUS401 Implement and monitor environmentally sustainable work practices.

Successfully completing this unit of competency will give you the skills and knowledge to effectively analyse the workplace in relation to environmentally sustainable work practices and to implement improvements and monitor their effectiveness.

Each topic includes opportunities to check your progress and understanding as well as activities that will help you to complete the formal assessments.

The activities throughout this resource will assist you in your learning. These activities don’t form a part of your final assessment, however, they’ll contribute to your understanding of each topic area.

There are five topics to complete within this workbook that will help you understand all aspects of sustainability within the workplace. They are:

1. Understanding sustainability.
2. Assessing current resource usage.
3. Setting targets for improvements.
4. Implementing improvement strategies.
5. Monitoring performance.

Topic 1: Understanding sustainability

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# Overview

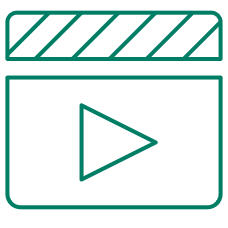
Before you investigate practices in relation to resource use you need to understand the concept of environmental sustainability; what it means for you as an individual and for your business community. You also need to understand how sustainability relates to business; the benefits and opportunities that can flow from improving environmentally sustainable work practices.

In this topic, you will learn about:

* what sustainability is
* the three pillars of sustainability
* key global and local sustainability issues
* federal and state laws and regulations protecting the environment
* industry or company based standards, guidelines, policies and procedures.

# What does sustainability mean?

Almost every day the term ‘sustainable’ or ‘sustainability’ is used to describe many issues and news items. There is the ‘sustainable economy’, ‘sustainable agriculture’, ‘economically sustainable’, ‘the need to be sustainable’, ‘sustainable work practices’ and ‘sustainable water supply’ to name a few.

 Watch

## Video: Sustainability explained

Watch the following video to gain a better understanding of environmental sustainability:

* Sustainability explained through animation (YouTube 02:00 mins)

[](https://www.youtube.com/watch?v=B5NiTN0chj0)

https://www.youtube.com/watch?v=B5NiTN0chj0

## The three pillars of sustainability

Overall, sustainability is a broad concept that includes a balance of three objectives: environmental, social (cultural) and economic (National Centre for Sustainability, 2006).

This is sometimes referred to as the three pillars of sustainability or the three P’s (planet, people and profit).

Inner circle is economy. Next circle is society. Final outer circle displayed is environment.


Figure 1 The three objectives, or pillars, of sustainability, nested.

## Ecologically sustainable development

The Brundtland Report, *Our Common Future*, is seen by many as one of the first global reports to address sustainable development. This report defined sustainable development as,

‘…development that meets the needs of the present without compromising the ability of future generations to meet their own needs.’ - Brundtland (1987).

The term ecologically sustainable development (ESD) is widely used within the Australian industry, with or in place of the term ‘sustainability’.

Sustainability is referred to in many other terms, such as:

* triple bottom line
* corporate social responsibility
* extended producer responsibility
* cradle to grave (or ‘cradle to cradle’)
* ecological footprint
* Industrial ecology.

All these terms describe the inter-relationship and interdependence of the economy and the social and physical environments.

These terms recognise the earth’s resources are finite and that we must conserve and manage these resources for our own needs so that we do not compromise the ability of future generations to meet their needs. It introduces the concepts of ‘stewardship’, or looking after the world’s resources, reducing and recycling resources and looking to nature for examples of ways to develop without using large amounts of resources (termed ‘biomimicry’).

## What are the key sustainability issues?

Unsustainable activities have led to changes in our environment or have been identified as having the potential to lead to future changes. The types of changes that are occurring or are predicted to occur form the key issues for sustainability.

Key sustainability issues can be global and/or local.

## Global sustainability issues

An example of global sustainability issues is enhanced greenhouse gas effects. The greenhouse effect happens naturally as the sun’s energy warms the earth, some of which is trapped by greenhouse gases such as water vapour, carbon dioxide, methane, nitrous oxide, ozone and some artificial chemicals such as chlorofluorocarbons (CFCs). Increased greenhouse gases from us burning fossil fuels such as coal, oil and natural gas (also known as non-renewable energy sources) are increasing this warming effect.

 Practice activity

## Activity 1.1: Greenhouse effect

*Estimated duration: 30 minutes.*

Have a look at a diagram of the greenhouse effect is available from the federal government Department of the Environment web page [Greenhouse effect.](http://www.environment.gov.au/climate-change/climate-science-data/climate-science/greenhouse-effect)

Identify the steps involved in the greenhouse effect.

## Key global sustainability issues

The following table provides a summary of some of the key global sustainability issues. They are related to changes to the physical and cultural (i.e. the way we live) environments, which in turn relate to the economic environment.

Table 1 Key global sustainability issues.

|  |  |
| --- | --- |
| Key issues | Implications – Globally and in Australia |
| Change in climate due to an increase in greenhouse gases. | Rising sea levels due to accelerated ice cap melting, agricultural losses, drought, flooding. |
| Reduction in air quality. | Increase in air pollution affecting health, vegetation loss. |
| Reduction in water quality and quantity. | Less water available for agriculture, natural environments (leading to loss of biodiversity) and human consumption and recreation, increase in soil erosion, increase in illness due to unclean water consumption. |
| Loss of biodiversity. | Loss of species, land clearing leading to erosion (which reduces water quality), changes to the food chain and ecosystems. |
| Finite resources (non-renewable). | Limited supplies of fossil fuels (e.g. oil, gas, coal), changes to transport modes, price increases for fuels and other resources, damage to the environment through resource extraction activities. |
| Loss of heritage. | Reduction in heritage values and historical reference, cultural losses – stories, traditions and values, loss of cultural diversity. |
| Generation of waste. | Increase in pollution risks due to uncontrolled landfill disposal and liquid waste disposal to rivers and oceans. Health hazards associated with uncontrolled waste disposal. |
| Increase in noise. | Effects on community and worker wellbeing, hearing damage. |
| Genetically modified foods. | Loss of species diversity, loss of local traditions and small scale methods of food production, the potential for larger-scale disease/pest epidemics due to reduced crop diversity. |
| Loss of community and social values. | Increase in crime, reduction in family support and reliance on external financial support mechanisms, loss of links to the natural environment through traditional values (see Loss of heritage), isolation from the community. |

You may have heard the term ‘renewable resources’ or ‘renewable energy’. A renewable resource or energy source is one that can be replaced or replenished at a rate equal to or above demand and usage. A great example of a renewable energy source is solar power. Our usage of this resource will not have any impact on the amount of solar energy produced by the sun, not even close!

 Collaboration

## Activity 1.2: Clean energy

*Estimated duration: 30 minutes.*

Read through the following links and discuss the contents with your class.

* The Federal government Department of Environment website [Cleaner environment section.](http://www.environment.gov.au/protection/air-quality/national-clean-air-agreement)
* The [Clean Energy Regulator website](http://www.cleanenergyregulator.gov.au/) details Federal programs such as the Emissions Reduction Fund, National Greenhouse and Energy Reporting and Renewable Energy Target.

## Local sustainability issues

Your local community will be influenced by the key global sustainability issues but will also have some local sustainability issues unique to your area. Examples of these might include things such as:

* new proposed housing development in an ecologically sensitive area
* coal seam gas exploration proposal
* the existing quarry expansion project
* new airport site.

## Determining your own sustainability

* How do sustainability issues affect you? Take a look at table 1 above, have you implemented any management options yourself to reduce your impact in any of these areas (e.g. purchasing local produce)? This reduction in impact is also referred to as your ‘footprint’. Your ‘footprint’ is the size of your impact on the environment.
* An Ecological Footprint Assessment provides ‘a measure of how much productive land and water an individual, a city, a country or humanity requires to produce all the resources it consumes and to absorb all the waste it generates, using prevailing technology’ ([www.footprintnetwork.org](https://www.footprintnetwork.org/))There are many web sites that can guide you through the identification of your own ecological footprint (you could try [this quiz](https://www.footprintnetwork.org/) at the Global Footprint Network).

# Workplace sustainability issues

Just as your local community will have their own unique sustainability issues, so will your workplace. The issues your workplace face will depend on many factors including the:

* nature of the business conducted
* number of staff
* location of the business
* distance from services such as transport
* access opportunities to local renewable energy suppliers.

Imagine the different environmental issues of a website development company with three employees compared to a high school campus with 1,000 students.

## Workplace environmental sustainability policy

Many workplaces will already have an existing environmental sustainability policy, procedural document, guidelines and/or mission statement. Improving environmental sustainability can often have a dual effect of long term financial rewards, for example, investing in solar energy infrastructure will usually pay itself in a very short time period. Using less paper is good for the environment and great for your workplace budget.

 Practice activity

## Activity 1.3: Sustainability policy

*Estimated duration: 30 minutes.*

Check out the [TAFE NSW Sustainability Policy](https://www.tafensw.edu.au/about/environmental-sustainability).

1. Find out what commitment or policy your workplace has already put into improving their environmentally sustainable practices. If you are not currently in a workplace, research online to find one from any organisation.

## Environmental laws and regulations

There are numerous Commonwealth (federal) and state environmental laws and regulations designed to protect the environment and all those that inhabit it.

It’s likely that laws and regulations will be at the levels provided in the table below, which are listed in order of importance. Determining laws and regulations that apply to your organisation can be quite complex, and you may need to refer to a lawyer or consultant for assistance. If you’ve had planning studies done for new buildings or additions, the documentation may list your relevant laws and regulations.

Table 2 Levels of laws and regulations.

|  |  |
| --- | --- |
| *Level of law or regulation* | *Comment/example* |
| International | For example, if you manufactured aerosol sprays, you would be required to comply with international ozone protection laws. |
| Federal | *Environment Protection and Biodiversity Conservation Act 1999* requires particular activities such as those in sensitive ecosystems to obtain federal planning approval. |
| State/territory | In Australia, the majority of environment-based law is state/territory-based.  Planning laws in your local state/territory will require you to seek approval for most new buildings or extensions.  Pollution laws require certain standards for your air emissions, wastewater quality and hazard management. Industries, which may supply your products, may be required to hold environmental pollution, water use, dangerous goods or hazardous materials licence. |
| Local council | Your local council will most likely have requirements for your building, such as height, window or awning size, car parking restrictions, use of footpath, etc. They may also have guidelines relating to water or energy efficiency for new or existing buildings. |

 Practice activity

## Activity 1.4: Legal information

*Estimated duration: 30 minutes.*

The legislation is generally provided on various government and law websites. A good starting point to locate a particular piece of legislation or check its content in the [Australasian Legal Information Institute](http://www.austlii.edu.au/) website.

The websites of the various federal and state/territory government departments should also provide useful overviews of laws relevant to various types of industry sectors.

Research the Australasian Legal Information Institute website and find the Sustainable Planning Act 2009 to answer the following question.

What is the meaning of **ecological sustainability,** as defined in Division one – Dictionary eight of the Sustainable Planning Act 2009?

## Federal laws protecting the environment

The Australian Federal Government department overseeing the protection of the environment at the time of writing is the Department of the Environment. This department is responsible for administering a long list of acts (or legislation) but some key overarching environmental federal laws include:

* Environment Protection and Biodiversity Conservation Act 1999 (EPBC) – This Act protects and manages nationally and internationally important plants, animals, ecological communities and heritage places.
* Renewable Energy (Electricity) Act 2000—reforms to the Renewable Energy Target (RET) scheme are still ongoing at the time of writing.

The Federal (or Commonwealth) laws that apply to your work will depend on what type of business you work for.

 Practice activity

## Activity 1.5: EPBC

*Estimated duration: 20 minutes.*

Research the [Environment Protection and Biodiversity Conversation Act 1999](https://www.environment.gov.au/epbc) (EPBC Act) web site and answer the following question.

1. What is the objective of the EPBC Act?

## State laws protecting the environment

Each state in Australia has its own suite of laws and regulations to more closely manage and protect the environment. They also have their own state department to administer these laws and regulations and these departments are continually being merged, separated, renamed and reshaped. At the time of writing, in NSW, the government department responsible for legislation pertaining to the environment is the NSW Environment Protection Authority (EPA).

Once again, the legislation that applies to your work will depend on the nature of the business, but some of the broader state environmental laws include:

* Protection of the Environment Operations Act 1997 (POEO)—this Act protects, restores and enhances the NSW environment. This Act administers such acts as releasing waste, leaks, spillages into the environment, cigarette smoking, litter and much more
* Pesticides Act 1999—prohibits the misuse of pesticides that harm people, property, animals or plants
* Environmentally Hazardous Chemicals Act 1985—related to the reporting, management and disposal of chemicals deemed harmful to the environment.

You could also contact your local state or territory environment department to discuss what may be relevant, such as:

* [Department of the Environment (Federal department)](http://www.environment.gov.au/" \t "_blank)
* Environment Protection Authority (EPA) in your state ([NSW EPA link provided](https://www.epa.nsw.gov.au/)).

There may also be local council regulations or policies that govern how the workplace you are in conduct their business. Your local council should be able to provide a list of required laws and regulations governing your geographical area.

 Practice activity

## Activity 1.6: Clean energy council

*Estimated duration: 30 minutes.*

Google the [**Clean Energy Council**](https://www.cleanenergycouncil.org.au/resources/resources-hub/clean-energy-australia-report) website and download the Clean Energy Australia Report 2019. Find the State Policies New South Wales and answer the following question.

1. What is the aim of the Climate Change Fund Strategic Plan?

## Industry or company-based standards, guidelines, policies and procedures

There may also be regulations, standards, policies, procedures, compacts, agreements or covenants set by your workplace, government or industry. These are generally voluntary but compliance will ensure that your workplace is following ‘best practice’. For example, there may be energy efficiency standards set for your business sector, a company environmental policy or purchasing guides published for your industry.

You can locate information about standards, guidelines, policies and procedures by the following methods:

* Asking your relevant work department—compliance, human resources, strategic planning or procurement for relevant company policies and procedures.
* Contacting your industry-based association or relevant environment/sustainability government department.
* Undertaking a search of the Internet, for example, typing in ‘energy efficiency guidelines for financial institutions’ will provide lots of links to industry initiatives and guidelines.

After you have identified the appropriate documents, you would need to review them to identify relevant items and then determine if your own work practices follow the recommendations.

Topic 2: Assessing current resource usage

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# Overview

In this topic you will learn about:

* legislation and corporate social responsibility
* environmentally sustainable work practice
* environmental audits and management systems
* measuring, documenting and monitoring current resource usage
* the supply chain and purchasing practices.

# Complying with legislation

It’s likely that your organisation is required to comply with various laws and regulations, including the environmental regulations discussed in the previous section. The relevant laws and regulations need to be identified and examined to determine compliance.

Complying with federal, state and workplace sustainability laws and policies protects the environment and also reduces the risk of litigation and fines. Pollution fines in many states of Australia are quite large and can include jail time clauses for offenders, including the individual offender and company management.

If you identify that your company is required to hold an environmental licence, you should check the date of the licence, as many are required to be renewed each year. They may also require an annual report to be provided, or they may require regular monitoring to be undertaken.

While it’s unlikely that a business services-based company would need an environmental licence, if you were auditing your supply chain, one of your suppliers, for example, a paper manufacturer would probably be required to hold a licence.

## Corporate social responsibility

Corporate social responsibility, or CSR, is a term used by the business community to broadly describe their sustainability principles. The Social Venture Network defines nine principles of CSR:

1. Ethics. The company deals with all stakeholders ethically.
2. Accountability. Stakeholders need to know takes precedence over inconvenience and cost to the company.
3. Governance. The company balances the conscientious management of resources with the interests of all stakeholders.
4. Financial returns. Profits sustain long-term growth and shareholder value.
5. Employment practices. The company fosters employee development, diversity, empowerment, fair labour practices, competitive wages and benefits and a safe, harassment-free, family-friendly work environment.
6. Business relationships. The company is fair and honest with all business partners and monitors the CSR of business partners.
7. Products and services. The company offers the highest level of service and quality.
8. Community involvement. The company has an open, honest, transparent, proactive relationship with the community.
9. Environmental protection. The company protects and restores the environment by minimising the use of resources and energy, decreasing waste and harmful emissions and embedding these considerations into day-to-day management decisions.

Source: Social Venture Network website www.svn.org in Willard 2002.

## What is environmentally sustainable work practice?

Many of the key sustainability issues discussed in Table 1 can be related to environmentally sustainable work practice. For example:

* more efficient use of electricity in a workplace can reduce the potential impacts of climate change
* ensuring fresh airflow in a workspace can improve indoor air quality
* purchasing recycled paper products could reduce the loss of biodiversity from forest clearing
* recycling waste could reduce the amount of waste sent to landfill.

Environmentally sustainable work practice is a practice that:

* identifies its key sustainability issues and procedures to reduce these issues
* implements these identified procedures
* monitors and reports on the procedures to ensure they continue and have the most effective outcome
* reviews the procedures to ensure continuous improvement.

## Undertaking an environmental audit

An environmental sustainability audit is an examination and verification of current work practices that relate to environmental sustainability. It can be a ‘desktop’ audit, where practices are investigated through reviewing invoices, company policies, regulations and laws and discussions with leaders, employees and customers. The audit can also be a ‘practical audit’ where you actually measure such things as electricity, water and fuel usage. This can be done to verify discussions for items where more accurate data is required. For example, you may have fuel invoices but need to determine how many cents per kilometre a vehicle is using to determine its fuel efficiency.

The elements of an environmental sustainability audit are:

* identifying what is to be audited (scope and objectives)
* collecting information
* verifying information and
* documenting and reporting information
* scope and objectives.

Before undertaking an audit, you need to determine the audit scope and objectives. The scope is the geographical or administrative boundaries of your audit. For example, you may decide to audit your entire company, your branch office or the activities of your work team.

The larger the **scope** the more complex the audit will be. Imagine how large an audit would be for a global company such as Apple. They would need to examine not only their head office in the United States but also all of their administrative branches throughout the world, their many suppliers and perhaps even a sample of their retail outlets and customers.

You must set **objectives** for your audit before you start. This is so that you know the ‘boundaries’ of your audit and also so that you can refer back to your objectives (together with your targets) when you are monitoring your sustainability practices at a later date, to make sure you are achieving your objectives. Setting audit objectives is when you ask ‘What do I want to achieve from this audit?’ Setting these preliminary audit objectives is different from setting **targets**. The objectives are broad statements that define the boundaries of the audit to be completed.

For example, an audit **objective** could be ‘determine electricity usage in the Brisbane office’. Whereas a **target** would be ‘reduce electricity usage by 20% per year in the Brisbane office’.

## Reporting breaches of compliance

Just as with Work Health and Safety (WHS) laws and regulations, ignoring a breach of environmental regulations is not acceptable and you may even be charged as negligent or complicit if you ignore a clear breach.

If you become aware of a breach of company policy or other environmental regulations, depending on the severity of the breach, report it directly to your supervisor in the first instance. If it was a major environmental incident or contamination, call 000 in the first instance and then the contact your local EPA.

# Resource efficiency systems and procedures

The first step to becoming more efficient in your use of workplace resources is to plan and organise an operational assessment of resource use. Start researching what resource efficiency systems and procedures are already out there on offer to businesses. You will find extensive support through government departments and relevant industry bodies such as:

* OEH NSW – [Sustainability in business](https://www.environment.nsw.gov.au/grantsandfunding/business.htm)
* Department of Industry and Science – [At work – what can we do? Resources](http://www.footprintnetwork.org/en/index.php/GFN/?page=5)
* Sustainability Victoria – [Resources and tools](https://www.sustainability.vic.gov.au/Business/Efficient-business-operations/Energy-efficiency-for-business/Energy-efficiency-tools)
* South Australia Government – [Energy efficiency for businesses](https://www.sa.gov.au/topics/energy-and-environment/using-saving-energy/for-businesses)

It is important to let staff know that you are commencing a resource efficiency program and assessment so they feel included and know what is happening. You will probably find many staff very keen to help who have an interest in resource management.

 Practice activity

## Activity 2.1: Global Footprint Network

*Estimated duration: 10 minutes.*

Visit the [Global Footprint Network](https://www.footprintnetwork.org/) website and click on the **Dive into data!** link to answer the following question.

1. What are the biocapacity per person and the ecological footprint per person for Australia in 2014?

## The National Australian Built Environment Rating System (NABERS)

The National Australian Built Environment Rating System (NABERS) Program is just one example of a government program that is available to help you measure and verify performance information and resource efficiency. It is a national rating system (managed by the NSW Office of Environment and Heritage) that ‘measures the energy efficiency, water usage, waste management and indoor environment quality of a building or tenancy and its impact on the environment’ (source: [www.nabers.gov.au](http://www.northcoasttafe.edu.au/about-us/sustainability.aspx) ).

As with any government program, they are dynamic and ever-changing over time depending on policy and funding priorities.

## Environmental Management Systems (EMS)

Resource use and the impact of a business on the environment is now an integral part of workplace management and needs to be considered and managed like any other workplace issue, such Workplace Health and Safety (WHS).

Just like WHS, many large businesses have set up Environmental Management Systems (EMS).

What is the ISO?

The International Organization of Standardization (ISO) is an independent membership organisation based in Geneva, Switzerland that develops voluntary international standards, which outline specifications for services, products and systems to be used as an international benchmark for quality and safety.

The ISO has published nearly 20,000 international standards, but this section will only look at one.

## ISO 14000—Environmental Management

ISO 14000 is what is called a ‘family’ or umbrella of standards providing practical tools for workplaces to set up an environmental management system (EMS). Some examples of the standards nested within ISO 14000 are shown on the table located on pages nine and ten in the Environmental management [The ISO 14000 family of International Standards pdf](https://www.iso.org/files/live/sites/isoorg/files/archive/pdf/en/theiso14000family_2009.pdf) document.

 Practice activity

## Activity 2.2: ISO

*Estimated duration: 30 minutes.*

You can read more about the ISO, ISO 14000 from the references below.

* [About ISO](https://www.iso.org/about-us.html" \t "_blank)
* [ISO 14000 – Environmental Management System (EMS)](https://www.iso.org/standard/60857.html" \t "_blank)
* Brochure – [Environmental Management – the ISO 14000 family of International Standards](https://www.iso.org/iso-14001-environmental-management.html)

The ISO does not provide certification, you engage a certified assessor to gain ISO accreditation. Imagine the marketing advantage you will have if your workplace managed to gain ISO 14000 certification!

### Go to the [ISO 14001 Key Benefits](https://www.iso.org/files/live/sites/isoorg/files/archive/pdf/en/iso_14001_-_key_benefits.pdf) publication and answer the following question.

1. What benefits will ISO 14001 will bring to a business or organisation?

## Environmental Management Systems (EMS)

There are so many examples, manuals and templates online to help you plan your EMS. But stop first and check if you need an entire EMS or do you just need a three-page procedure? Every workplace has so many variables likes the size, location, nature of the business, budget, time, etc. One size will not fit all.

 Practice activity

## Activity 2.3: EMS

*Estimated duration: 30 minutes.*

Check out the following EMS examples and manuals and answer the following question:

* University of Wollongong – [Environmental Management Plan](https://www.uow.edu.au/content/groups/public/@web/@environment/documents/doc/uow245661.pdf)
* University of Queensland – [Sustainability](https://sustainability.uq.edu.au/files/1203/pbs_TrngChklst.pdf)
* View EMS templates online, Department of the Environment – [EMS](http://webarchive.nla.gov.au/gov/20170816103703/http:/www.environment.gov.au/node/20494)

1. What is the main purpose of having EMS in place?

Many large businesses have integrated environmental risk assessment and monitoring into their Work Health and Safety (WHS) management systems. This is a very efficient way of ensuring sustainability is considered in a structured system and process. If this is the case, it is important to clearly separate risks that are health and safety risks from those that pose a risk to the environment. Sometimes they may pose a risk to both areas, but ensure both aspects are covered adequately (not just WHS).

## Get some professional help

If you have the time and budget, you can always engage a sustainability company or program, to develop your EMS, undertake a full-scale audit, make recommendations or all three.

 Resources

## Additional resources on assistance

Just one example of many, many companies and programs out there ready to help you is [Grow Me the Money](https://www.bulletpoint.com.au/grow-me-the-money/).

To receive a NABERS star rating you would need to engage an accredited assessor but the website does contain a number of excellent rating tools to give you an estimate of resource efficiency.

## Finding information on improvement opportunities

While preparing to measure current practices in relation to resource usage you will need to consider collecting information, what type of information and how you will gather the information.

## Collecting information

Information can be collected either by ‘desktop’ methods, where existing documents are examined to determine information or by ‘practical’ methods, where data is measured.

This section provides information on where to find information, what form it may take and how to interpret units of measurement.

You may find it easier to develop a checklist of audit items, linked to the scope and objectives of the audit. You may also find that some practices have already been measured for the purposes of previous studies, or as part of an environmental management system, for example. You should try and locate any relevant past studies first so that you can update these rather than starting from scratch.

## Types of information

The information you will need to collect could take many forms including:

* invoices
* spreadsheets
* industry publications
* website information
* manuals
* booklets
* verbal information
* resource measurement tools
* visual information
* client feedback forms
* surveys
* social media activity’
* reports
* staff interviews.

In working out how you will collect resource usage data, think about whether you will seek assistance from other staff or departments. You should make it very clear to them what sort of information you need, for example, rather than sending an email to the purchasing team asking for ‘electricity invoices’, you could ask for ‘the last 12 months of invoices for electricity usage in building C. If there are multiple electricity meters or invoices for this building, could I please have all the data for this building for the past 12 months’.

## Recording your information

It is best practice to plan ahead as to how you will record the information you collect during your resource assessments. Some common methods of recording information form some of the sources above include:

* spreadsheets—this makes calculations and data analysis an easy next step
* word documents—you can use the table function for data recording
* video files—for visual and audio collection
* Camera—a picture says a thousand words and it is likely you will want to use photos in your final report.

## Quantitative versus qualitative data

Most of the data you will be collecting will be **quantitative**, for example, it will take the form of a number which is able to then be used to undertake calculations. **Qualitative** data may be gathered from surveys or client and staff feedback. This should be taken into consideration when planning the method you will choose to record your data. You may also choose a blend of more than one method of collection.

 Resources

## Additional resources on sustainability for business

Have a look through the following website for more information for businesses:

* OEH NSW – [Office of Environment and Heritage](https://www.environment.nsw.gov.au/).

# Measuring current resource usage

The time has come to measure what resources are being used.

## What is a resource?

A resource is quite simply an input into your workplace, whether that is staff, money, petrol or paper. You need to consider how these can be reduced so the workplace is using fewer resources, i.e. using resources more efficiently.

While the resources and the way they are used will be unique to your own workplace, some examples of resources that could be used more efficiently include:

* Asking all work colleagues to bring a mug to meetings and training courses so paper and Styrofoam cups are not needed.
* Cancelling printed reference materials that are being sent and not used such as catalogues or procedural manuals; are these available and accessible to all electronically?
* Using furniture sourced from local op shops or reuse centres.
* Ensuring environmentally friendly cleaning products are used, including the dishwashing tablets and liquids in the lunchroom.
* Buying only 100% recycled paper content (*closing the loop* involves purchasing products that are made from recycled content).

Resources likely used in your workplace include:

* **Energy**—including electricity, gas and fuels such as petrol or diesel.
* **Waste**—this needs to be categorised. For example, office waste (e.g. recyclable and otherwise), process waste (e.g. paper offcuts from a printing company), putrescible waste (e.g., lunchroom waste), liquid waste (e.g. toilets and hand basins).
* **Water**—used in any industrial processes, taps and toilet flushing.
* **Materials**—which are the things you use, for example, paper, cars, office equipment and furniture.

The aim of collecting resource usage information is to identify whether the use of these resources can be more efficient. Large savings have been made by companies that have implemented resource efficiency savings.

Other questions you could find the answer to may include:

* Does the organisation recycle paper?
* Recycle toner cartridges?
* Do workers use public transport?
* Is a paperless office encouraged?

You can collect information about resources by obtaining the invoices for services such as water, gas, electricity and waste collection. These invoices generally show amounts used in both dollars and a unit of measurement, and, increasingly, will also provide a greenhouse gas emission calculation. An explanation of how to read the units of measurement on these invoices is provided later.

Collecting information about general resources can be obtained from the purchasing department or you can just count the number of and types of office equipment, furniture, stationery, etc. To do this, you could develop a table like below.

Table 3 Resource usage audit.

|  |  |  |  |
| --- | --- | --- | --- |
| Item | No. | Location | Type |
| Photocopier | 2 | Admin Department | Fuji Xerox colour PQ-45 |
| Colour printer | 4 | Front office | Kyocera Ecosys FS – 12D |
| Office tables | 10 | HR | Officemaxi – lamipanel |
| Fridge | 1 | Lunchroom | 500 L frost free – Kelvinator PRQS |
| Computer chairs | 45 | Total count | Officemaxi – gas lift 56G |
| Fluorescent lights | 120 | (in doubles) total count | T12 fluorescent tubes |
| Copy paper | 4 | Reams per day used | Recyclo brand |

The energy usage of items is often written on the equipment or in the user guide. You could make up another column noting this information and the amount of time the equipment is switched on/in use so that you can calculate energy usage later if required.

Depending on the detail of your audit (determined by your scope and objectives), you may even identify the types of coffee/tea you supply, stationery supplies (pens, pencils, etc.), copy paper and so on. A Green Office program can assist you to identify and categorise these items.

For each of the four main resource areas (assuming these four are appropriate for your business) you need to analyse the inputs and outputs. Check out this handy guide from Sustainability Victoria at [Conducting a resource assessment](https://www.sustainability.vic.gov.au/~/media/resources/documents/Services%20and%20advice/Business/SRSB%20EM/SRSB%20EM%20Conducting%20a%20Resource%20Assessment%20Dec%2013.pdf)

Let’s now look at the four main resource areas to measure and how this might be achieved.

## Energy usage

Energy is the major input for most businesses and one of the easiest to monitor.

Air conditioning is a large energy user and details such as the size of the system, temperature setting, wattage, etc. should be taken from the system so that any improvements can be investigated. You could also note whether vents and filters are clean, what temperature the unit is set at and when the system was last serviced. Is the system switched off at night or over weekends or does it run all the time?

For lighting, office equipment and general power you could make a note of whether the equipment is left on all the time or when it is switched off. For computers, check how many have energy-saving functions activated.

* Collect electricity bills or ask for access to the amount of money spent on electricity each quarter.
* Try to get a breakdown of the energy bills if possible so you can ascertain where the most energy is being used.
* Conduct an audit to see what lights are left on, when, air conditioner usage, etc.

Another method of calculating energy usage is to use a ‘power mate’ that measures the amount of electricity used by various appliances.

 Practice activity

## Activity 2.4: Power mate

*Estimated duration: 10 minutes.*

Read the information provided on the ESIS website and answer the following question:

[Power Mate for power measurement](https://www.esis.com.au/products/data-loggers/power-mate/power-mate.php)

1. What Power Mate product can be useful for home and small office use?

There are various types of fluorescent lamps used for overhead lighting in most offices. As technology has advanced, the lamps have become smaller in diameter. The 38 mm lamp (known as a T12 lamp) was superseded 20 years ago by the 26 mm lamp (known as a T8 lamp). The T8 lamp requires 10% less power to produce the same light output. Most recently, new buildings are installing 16mm lamps (T5 lamps) which provide even greater efficiency.

Try and identify what type of lighting you have. Note that in reception areas there are often halogen downlights, which use more power. The number of lights and their type should be identified if this is part of your audit.

When considering energy use, you might also want to investigate the transport usage of staff vehicles and also how staff travel to and from work. Are work vehicles booked efficiently or are staff taking multiple cars to the same location regularly? Do staff carpool or use public transport? Can the business utilise technology to reduce the need to travel such as web conferencing software?

### Commercial building energy efficiency

Owners of large commercial buildings may be required by law to meet certain energy targets and disclose their usage. Is your workplace located in a large office block?

 Resources

## Activity 2.5: Commercial buildings

Estimated duration: 15 minutes

Check out the Department of the Environment and Energy’s website and read the information about the [Commercial buildings](https://www.energy.gov.au/government-priorities/energy-productivity-and-energy-efficiency/commercial-buildings) then answer the following question:

1. List the five energy efficiency measures that the Australian Government designed.

## Waste

Invoices from your waste collection contractor will provide you with details of the amounts of waste generated by your organisation. Determine whether there are separate waste collections for general rubbish, other materials (for example, timber off-cuts or ink cartridges), scrap paper, aluminium/ steel or recyclable plastics.

To verify what waste is being generated, you could undertake a waste audit. This can be as simple as identifying the contents of one bin or several bins in order to categorise the waste as percentages (Don’t forget to wear gloves or wash your hands afterwards!).

For example, you may determine that an office waste bin may have 40% scrap paper, 10% food scraps and 50% plastics.

 Practice activity

## Activity 2.6: Waste audit

*Estimated duration: 20 minutes.*

More information on how to undertake a waste wise program and waste audit can be found at the following websites:

* [NSW EPA](https://www.epa.nsw.gov.au/)
* [Source separation systems](https://www.sourceseparationsystems.com.au/)

1. Ask questions at your workplace about what items are recycled and how often. Are desk rubbish bins sorted for recyclables or does this all go into general waste?

## Water usage

Water supply invoices will provide information on water usage, which if you are in an office situation will roughly equal your wastewater output as most water is used for toilet flushing and hand washing.

You can also calculate your water usage by determining the number of toilets, the size of the cistern (e.g. 9/6/4/3, etc. litre) and whether they are single or dual flush. Calculate how many times a toilet would be flushed per day and you have your per day toilet usage amount.

For example:

Two toilets flushed approximately five times per day on half flush (six litres).

= 60 litres of water per day.

Water supply invoices will provide information on water usage, which if you are in an office situation will roughly equal your wastewater output as most water is used for toilet flushing and hand washing.

## Materials

Identify the most common resources and material used in your workplace and determine how much is purchased each year (e.g. reams of paper). Two important considerations for consumable materials are:

* Can the consumption of these items be reduced (e.g. making printing double-sided default print option on all office computers)?
* Is the most sustainable item being purchased initially (e.g. 100% recycled paper)?

## Units of measurement

To identify where efficiencies can be made, and to monitor usage over time, you will need to identify consistent units of measurement or metrics. The following table provides a brief description of the most common units of measurement and how to convert measurements if required.

Table 4 Identifying and converting common units of measurement.

|  |  |
| --- | --- |
| Item | Common units of measurement |
| Electricity | J = Joule = unit of energy  W = Watt – unit of power (rate of energy usage)  1 watt = 1 joule/second  1000 watts = 1 kilowatt (kW)  3600-watt seconds = 1-watt hour  1000 watt-hours = 1 Kilowatt-hours (kWh) |
| Water | L = litres  ML = megalitres (1000 litres)  GL = gigalitres (1 million litres) |
| Gas | MJ = megajoules |

*Green to Gold* (Esty and Winston 2006) notes the importance of making the data interesting and relevant so that it focuses on the employee’s attention. For example, you could talk about energy use per employee or work section, which brings the challenge down to the individual level and can grab someone more than seeing a grand total.

## NABERS rating calculator

Don’t forget, the National Australian Built Environment Rating System (NABERS) program has four environmental rating tools and an assessor can be engaged to provide a star rating for your workplace. The website also has a self-rating calculator you can use.

 Resources

## Activity 2.7: Rating calculator

*Estimated duration: 15 minutes.*

To access the NABERS self-rating assessment for your workplace, refer to the following website:

[NABERS rating calculator](https://www.nabers.gov.au/ratings/estimate-your-rating)

1. Explain what information needs to be included in Step 1 of the rating details.

## Documenting resource usage results

Once you have conducted your audit, you will compile the results and report them to your workplace supervisor. Keep your report short and to the point and use tables and graphs where possible. This will ensure it is read and understood by as many staff as possible. Ideally, you might ask for five minutes to present it to the staff during morning tea or lunchtime.

Environmental hazards or evidence of non-compliance with legislation or company policy may have been uncovered during your audit - these must be reported immediately to your supervisor. Your workplace should have an incident reporting procedure.

Examples of what might need to be reported include:

* discovering that disposable batteries are being thrown into general waste
* finding a toilet cistern that is stuck on and requires a plumber
* noticing the office cleaners are using a chemical that has been banned.

## Documenting and reporting information

Once you have collected all the information you need to present it in a form easily interpreted by others. Think about using a table based on the checklist that you may have previously prepared. Document as much information as you can and don’t delete any until you have finished the report, as you may find you need a small piece of information at a later date to confirm an efficiency detail, for example.

If you uncover some amazing facts, for example, that the air conditioner has not been serviced for 10 years, or that several taps are constantly leaking, note these down as they can serve as your attention grabbers later when you want action!

If you uncover an issue with compliance, for example, that a licence has not been renewed or that there is a new piece of legislation that you think should be complied with, you should bring it to the immediate attention of your management team.

## Verifying information

It is important to verify the information you have collected to ensure it is correct.

* If you have obtained information from an existing report check the facts. If the report says there are 20 single-flush toilets, do a quick check to make sure this is still the case.
* Discuss your findings with others (remember the saying ‘two heads are better than one’) you may find that you have made a simple calculation error.
* Do not just check one bill. Ask for 12 months of data. This ensures you are accounting for seasonal variations or changes to the workplace or workforce over a period of time.
* Contact suppliers to verify details supplied (or not supplied) with equipment.

 Resources

## Additional resources on energy savings

Check out the [Energy savings measurement guide](https://www.energy.gov.au/sites/default/files/energy_savings_measurement_guide.pdf) on the EEX website to learn more about how you can save energy.

# Analysing current purchasing practices

As the aim is to improve resource efficiency, the audit process has been looking at inputs and outputs, for example, paper in, paper out (recycled, non-recycled). One important consideration during the assessment of current practices phase is to assess your workplace purchasing strategies. Some of the questions you need to consider are:

* Are your suppliers local? Using a local product?
* Are the procedures used by your suppliers and product produced of an acceptable environmental standard?
* Are you purchasing products that are recyclable?
* How will you dispose of the product when it is no longer needed or used?
* Have you conducted a life cycle analysis on the product?
* How can you reduce your requirement for this product?

 Collaboration

## Activity 2.8: Sustainability concepts

*Estimated duration: 15 minutes.*

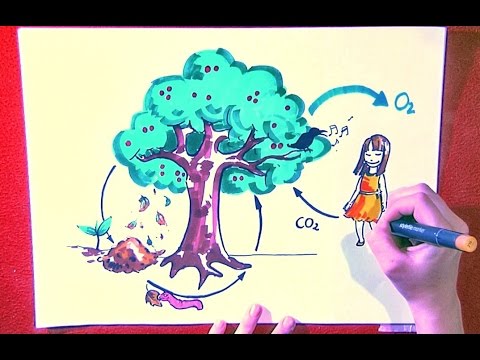
Watch the following videos on life cycle analysis and cradle to cradle so you understand what the terms mean. Discuss the concepts with your class.

[Life cycle analyses](https://www.youtube.com/watch?v=6RNnzfUHwY8) (YouTube 02:57 mins)

[](https://www.youtube.com/watch?v=6RNnzfUHwY8)

<https://www.youtube.com/watch?v=6RNnzfUHwY8>

[What is Cradle to Cradle?](https://www.youtube.com/watch?v=fP8PRA-OajU) (YouTube 04:33 mins)

[](https://www.youtube.com/watch?v=fP8PRA-OajU)

https://www.youtube.com/watch?v=fP8PRA-OajU

EPA Victoria has assembled a range of [Hints and tips for improving resource efficiency in your business](https://www.epa.vic.gov.au/about-epa/publications/1255). These tips will help identify ways to improve business environmental performance while increasing productivity and reducing costs of production.

## The supply chain

You will most likely want to collect information from your suppliers as part of your audit process. These include those businesses which may supply equipment, stationery, printing services, computer hardware, etc. A good way to collect this information is to provide a standard questionnaire to all your suppliers. In this way, you can also use the questionnaire to compare potential suppliers. The questionnaire could ask questions about the sustainability of their products and services, or what actions they are undertaking.

Be careful not to ask questions that could be considered commercial-in-confidence. For example, ask about electricity use in terms of units used rather than invoice amounts.

You could also design a supplier checklist, with sustainability items listed down a page with room for the supplier or your audit team to complete details.

## Purchasing strategies

Various examples have been provided in previous sections of ways you can improve your environmental sustainability through your purchasing decisions. When considering your purchasing, you should consider not only your own purchases but as much of your supply chain as you can.

You can influence your supply chain by placing sustainability requirements on tenders and quotations and asking questions from your suppliers about their products and services.

As well as the purchasing strategies previously mentioned, you should also consider:

* Marketing and promotions. What is the environmental sustainability of your promotional materials such as stickers, flyers, banners, posters, carry bags, pens, etc.
* Events. Think about the environmental sustainability of your client meetings.
* Events The facilities you use and the catering you provide.

There are various programs that can assist you to select more environmentally sustainable products for your organisation. These include the Victorian-based [Eco-Buy](https://www.regupol.com.au/about-us/environment/eco-buy/) which provides an extensive range of service and resources to assist organisations in developing and implementing green purchasing programs. [Good Environmental Choice Australia](http://www.ecolabelindex.com/ecolabel/good-environmental-choice-australia) provides accreditation to green products and services.

 Resources

## Additional resources on buying office equipment

Read through the [Green Office Guide](https://epa.tas.gov.au/documents/green_office_guide%5b1%5d.pdf), which offers guidance in buying and using environmentally friendly office equipment:

## Procurement policy

Many large businesses and government departments have a procurement policy, procedures and preferred supplier list.

Your resource usage assessment should include a review of any existing procedures and lists and recommendations for improvements and adjustments.

 Resources

## Activity 2.9 EMS

*Estimated duration: 15 minutes.*

Check out the procurement guidelines from the University of Queensland EMS and answer the following question.

* [Sustainable procurement guideline](https://sustainability.uq.edu.au/files/4866/SPGlabs.pdf)
* [Standards for suppliers](https://sustainability.uq.edu.au/files/796/SustProcGuideSupp.pdf)
* [Procurement assessment form](https://sustainability.uq.edu.au/files/4869/SPGformfurniture.pdf).

1. What are the five essential standards for suppliers of the University of Queensland?

# Analysing current work processes

Part of your resource usage will also involve analysing current work processes to assist in identifying areas for improvement. Some questions to consider and attempt to answer are:

* How are we doing things?
* Is it the most efficient way of doing things?
* Are staff following workplace policies and procedures?
* Are there other businesses doing this more efficiently?
* How can we improve our processes to improve resource use efficiency?

Access any workplace policies and procedures for review but also observe and interview staff to see which procedures are working and identify those that need improvement. If staff are not complying with existing workplace procedures you should talk to your supervisor.

 Practice activity

## Activity 2.10: Resource usage

*Estimated duration: 130 minutes.*

Answer the following questions pertaining to current resource usage practices in your workplace.

1. Building on your understanding from Topic 1, complete the third column in the table below with examples of possible management options for some key sustainability issues that could be implemented in your workplace.

The first one (change in climate) has been completed for you.

|  |  |  |
| --- | --- | --- |
| Key sustainability issues | Implications – Globally and in Australia | Management options that could be implemented in your workplace |
| Change in climate due to an increase in greenhouse gases. | Rising sea levels due to accelerated ice cap melting, agricultural losses, drought, flooding. | Example: Reduce greenhouse gas emissions and energy use through efficiencies, e.g. increasing thermostat temperature of the office air conditioner in summer by two degrees. |
| Reduction in water quality and quantity. | Less water available for agriculture, natural environments (leading to loss of biodiversity) and human consumption and recreation, increase in soil erosion, increase in illness due to unclean water consumption. |  |
| Finite resources. | Limited supplies of fossil fuels (e.g. oil, gas, coal), changes to transport modes, price increases for fuels and other resources, damage to the environment through resource extraction activities. |  |
| Generation of waste. | Increase in pollution risks due to uncontrolled landfill disposal and liquid waste disposal to rivers and oceans. Health hazards associated with uncontrolled waste disposal. |  |

1. Choose one international protocol, one federal law and one state law, list them and then provide one to two sentences on what each one protects or covers.

|  |  |  |
| --- | --- | --- |
| Jurisdiction | Name | What it protects or covers |
| International. |  |  |
| Federal. |  |  |
| State. |  |  |

1. For each of the programs or systems below, describe what it is and how this relates to your workplace.

|  |  |
| --- | --- |
| Sustainability program | What is it? |
| EMS. |  |
| ISO 14000. |  |
| NABERS. |  |

1. List some environmentally sustainable work practices

|  |
| --- |
| Sustainability work practices |
|  |
|  |

1. What does it mean to improve your resource efficiency? Give two reasons why you would do this.

Topic 3: Setting targets for improvements

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Overview

After collecting your resource usage data in Topic 1 it is now time to set targets for improvements. You know what the workplace is currently using, now to work out what it should be using and how to get there.

In this topic you will learn about:

* seek input from stakeholders, key personnel and specialists
* access external sources of information and data as required
* evaluate alternative solutions to workplace environmental issues
* set efficiency targets.

# Set targets for improvements

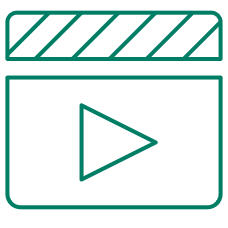
## Getting input from stakeholders

It is time to seek input from stakeholders, key personnel and specialists in your industry field or resource efficiency.

It is important to identify the key stakeholders in the process, so they can participate in setting the targets for improvement. Consider involving the following stakeholders in the process.

Table 5 Identifying and converting common units of measurement.

|  |  |
| --- | --- |
| Stakeholder | Why they’re involved |
| CEO, the board of directors or managers | for commitment, strategic direction and sign-off |
| Procurement or purchasing department | for objectives relating to supply chain and resource efficiency |
| Marketing department | for objectives relating to market opportunities, branding and promotion |
| General staff | to identify items relating to day-to-day operations |
| Contractors | for external relations and supplies/purchasing |
| Customers or clients | for their external view of the company and values important to them |

 Watch

## Videos: Communication skills

The following video collection and courses from LinkedIn Learning include information about communication strategies that you can use when communicating with your stakeholders about sustainable practices. You can watch the whole course or just the parts that you need:

* [Effective listening and questioning techniques](https://www.linkedin.com/checkpoint/enterprise/login/57684225?pathWildcard=57684225&application=learning&redirect=https%3A%2F%2Fwww.linkedin.com%2Flearning%2Fcollections%2F6585328392747446272%3Fu%3D57684225&auth=true) (LinkedIn Learning 07:32 mins)
* [Communication Foundations](https://www.linkedin.com/learning/communication-foundations-2/welcome?u=57684225&auth=true) (LinkedIn Learning 01:24 hrs).

## Reviewing industry standards and benchmarks

How do you know what ‘best practice’ sustainability is as it applies to your workplace? You can find out by:

* Having some background knowledge of sustainability principles (e.g. You know that using less fuel in a car is better for the environment as there are less greenhouse gas emissions)
* Undertaking research via the internet, journals or books
* Asking organisations or government departments for information (e.g. See [nsw oeh – government programs and financial assistance)](https://www.environment.nsw.gov.au/grantsandfunding/business.htm)
* Reviewing case studies of other organisations to see what they have done.

Always remember when you are undertaking research, what might be considered a sustainable option elsewhere may not be in Australia. For example, if a product is only available in Europe, the environmental impact of the product being shipped to Australia for use would need to be considered.

Best practice can often be defined by looking at your own policies and procedures. If your company has an environmental policy or an accredited environmental management system, these documents will provide information on your company’s ‘best practice’ in its aims and objectives.

The following points provide some basic background information on best practice sustainability issues related to the type of work undertaken by the business services industry.

## Green office

Green Office is a management system that promotes environmental efficiency in an administrative-type office. It includes aspects such as:

* office equipment selection and use
* paper selection and use
* energy usage
* general purchasing.

Green office practices could include:

* Considering energy efficiency, consumables and packaging when you purchase new office equipment. For example, a photocopier may consume tens of thousands of dollars’ worth of electricity, toner and paper in its lifetime.
* Reducing paper usage by using electronic document storage, printing only when necessary and purchasing recycled paper.
* Considering packaging and recycled products for every purchase – for example, you can purchase mouse mats made from recycled car tyres, pens made from car parts and pencils that do not have a plastic coating and you can use paper clips instead of staples so that they can be reused and paper more easily recycled.

### Did you know?

Australia uses 1.5 million toner cartridges per year releasing 1500 tonnes of non-biodegradable waste (enough to cover the MCG to a depth of one metre.)

The average organisation, which does not have efficient paper recycling techniques, uses the equivalent of 20 large rainforest trees per day.

A desktop computer, used eight hours per day, generates over 600 kilograms of greenhouse gases each year.

## Energy efficiency

Energy efficiency initiatives can save your business large amounts of money, and some, particularly if they reduce electricity consumption, have a relatively short timeframe for a positive return-on-investment. Simple measures include:

* Turning off lights and equipment when not in use.
* Minimising the use of air conditioning.
* Switching off computers (and the screen) when not in use, such as overnight, and enabling the energy-saving mode (note that some screen saver packages disable the energy-saving mode so that the computer does not hibernate after a period of time).
* Selecting energy (efficient) equipment such as copiers and computer screens.
* Placing a timer on the drinks fridge (if it’s only used occasionally say for client functions or on Friday afternoons). This could save around $200 per year in energy which could go towards the Christmas party!
* Instant hot water systems in the kitchen could be placed on a timer to switch off at night, or you could switch to gas hot water heating, which is more efficient.
* Making sure dishwashers are full before switching on.
* Avoiding small fan heaters and coolers (try and resolve air conditioning issues between staff without them resorting to their personal energy-inefficient solutions).
* Undertake light meter checks to determine light intensities of workspaces, warehouse, reception etc. to see if they might be overlit.
* Using compact fluorescent globes means the globe is using 80% less energy than a ‘normal‘ incandescent light bulb.
* Replacing tube fluorescent lighting with tri or quad phosphor tubes, which emit more light, so for the same amount of energy, you may be able to remove some tubes completely.
* Purchasing ‘green power’ from renewable energy sources.

## Water efficiency

Sustainable water usage has two main principles:

* using less water (water efficiency)
* reusing or recycling water (water reuse).

You can use less water in your work practices by investigating anything you do with the water in the workplace and determining how to reduce this use. In an office situation, this could be by installing dual flush toilets, tap aerators, spring-loaded taps and selecting water-efficient dishwashers (all water-using appliances now have water-saving star systems, similar to the energy efficiency star system on electrical appliances).

If your amenities have handwashing sensors, they can be checked to ensure they do not stay on for too long.

Water reuse is difficult to achieve in high rise office buildings or where you have a lease, however, there may be scope in other facilities to install rainwater tanks for toilet flushing.

## The waste hierarchy

The **waste hierarchy** is adopted by the majority of waste management authorities as to the most acceptable approach to waste management. Figure 5 shows this hierarchy, with the most preferable option for waste management, avoidance and minimisation, located at the top and the least preferable, disposal, located at the bottom.

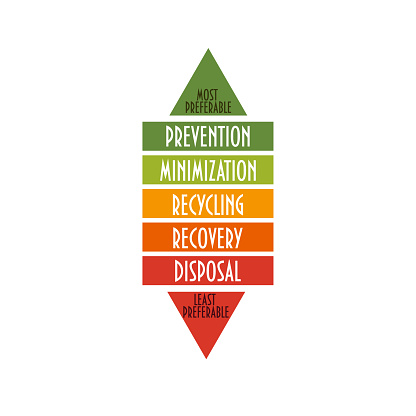


Figure 2 The waste management hierarchy.

Some ideas for applying the waste hierarchy to your organisation include:

* Avoid purchasing items with excessive packaging, and consider buying in bulk to reduce individual packaging, use duplex printing whenever possible and consider electronic methods of document storage.
* Reuse packaging, blank sides of office paper, presentation folders, printer cartridges (many can be refilled), kitchen cups/cutlery and plates.
* Recycle office paper and cardboard packaging, glass bottles, aluminium cans, printer cartridges, computer equipment, office furniture and organic waste by organising contractors to pick up these materials.
* Recovery involves recycling materials into their base components e.g. commercial composting systems are an example of recovery.

There are many excellent waste-wise business programs available from state and local government departments as well as other organisations. These provide information to assist you to implement a program in your organisation. A quick Internet search will provide details.

## Transport

Environmental sustainability can be increased by reducing vehicle emissions. This can be done by choosing more fuel-efficient fleet cars or providing incentives for employee leases for more environmentally-friendly vehicles.

Your organisation could also introduce incentives to encourage the use of public transport, walking or bike riding to work. Providing showers and bike storage will assist. You could also replace cab vouchers with public transport funds. Some cities in Australia now offer an ‘eco’ chauffeur car service, using fuel-efficient cars, and there are even rickshaw services being offered for short trips in Central Business Districts. You could also reconsider your use of door-to-door courier services. Various companies offer an ‘offset’ service where a company can fund tree planting or other similar projects to offset vehicle emissions.

This unit is not an exhaustive guide on best practice sustainability. Technology and best-practice thinking in the sustainability arena are constantly changing and new products and services are emerging all the time. Can you recall the debate during early 2007 over carbon offset schemes? Many companies are offsetting their carbon emissions by paying money to schemes to ‘soak up’ their carbon emissions. One of the most popular methods is by tree planting. Recent debate has centred on whether this is sufficient to offset the emitted carbon, and the time taken for the tree to grow.

## Accessing external assistance and programs

There are a number of programs you can join to assist with your implementation. Several states run waste-wise and energy efficiency programs for businesses, which your company can join. Once you have joined these programs you will have access to a large number of resources and assistance. You could be monitored with implementation, which assists with keeping to deadlines!

There are also software programs that can assist you, for example, Energy Tracker is a software program that monitors energy consumption, greenhouse gases and assists you to minimise your energy costs. Similarly, smart meters can be installed to monitor your energy consumption on a real-time basis.

There are programs to collect your scrap paper and other waste products for recycling.

You can engage external consultants to assist with the development and implementation of your environmentally sustainable work practices. Remember though that a program is often more successful if as many people in a workplace as possible have been involved in its development.

There are standard methodologies you can use to prepare your action plan or similar document. If your workplace already has ISO14001 Environmental Management System procedures in place, you can use this system as the basis for investigating your environmentally sustainable work practices. There are also programs such as Life Cycle Analysis, the Global Reporting Initiative (GRI), Greenhouse Challenge programs, sustainability covenants and partnerships and LEAN Manufacturing programs that can assist you or can form the basis for your investigations.

# Evaluating alternative solutions

Part of setting targets for resource usage improvement involves evaluating alternative solutions to workplace environmental issues. It is recommended to take a standard risk management approach and consider the hierarchy of control (which has been adapted here for environmental management considerations).

Imagine the high volume of paper used in a printing warehouse and step through the hierarchy of control from the top (best solution) to bottom (least desirable solution).

* **Elimination**. The first and most desirable alternative to consider. Can you eliminate the use of paper completely? This would be the ideal solution and would ‘solve’ the problem of paper usage. But this would not be an option as some paper would still be required.
* **Substitution**. Can you substitute the existing paper for a more environmentally friendly product? What is the recycled content of the paper currently being used? If not 100%, can you substitute for 100% recycled content paper? What is the cost difference? This is certainly a likely option for this scenario, depending on the price difference.
* **Engineering**. This involves redesigning the procedure or equipment in question. How old is the printing machine? Can it be replaced with a more modern machine? Do the machine jam and waste paper? Can that be fixed to reduce waste? How about the recycling procedure? Can an engineering solution improve recycling rates?
* **Administration**. This will often be used in conjunction with one of the strategies above. What procedures can be put in place to reduce the amount of paper used? Are these being adhered to? Do you need to review the supplier's list for paper suppliers?

Using a hierarchy of control like above to consider alternative solutions will ensure you have considered a range of options to improve resource efficiency. A well-researched implementation plan can then be formulated and a range of options outlined for management to consider and choose from.

# Setting efficiency targets

Resource usage has been measured, now it is time to ask some questions like:

* This is where we are (you have done the audit—Topic 1).
* This is where we should be (set some targets).
* How do we get there? (Write an implementation plan—Topic 3).
* How do we know when we get there? (KPIs).
* Can we do even better? (Monitor performance and reassess targets—Topic 4).

## Setting targets

Once you have collected information on current work practices in relation to the key sustainability items you identified, you then need to determine a ‘benchmark’ against which to set the results.

This ‘benchmark’ is a target, which should be measurable and achievable.

* How do you determine the benchmark or target?
* How do you know whether what you currently do is ‘quite sustainable’ already?
* How do you determine what actions to take to improve sustainability?

A target is something you have decided to aim for. It is the best practice that you or your team have decided will make your work practices more sustainable. Once you set a target, you can compare your audit of current practices against the target to see how much needs to be done to achieve the target. If you provide a unit of measurement in your target (for example, 25% reduction in water usage over 12 months), you can then monitor practices at regular time intervals to see whether they are meeting the target.

## Setting SMART objectives and targets

If you have been involved in any project management work or learning you may have heard the phrase to set SMART goals. Your targets and goals need to be:

* specific
* measurable
* attainable
* relevant
* time-based.

Compare the following two targets.

* Target one: Use less paper.
* Target two: Reduce paper use in the company by 20% from 50 reams per month to 40 reams per month within 6 months.

Target two is very specific, measurable, attainable (not 80%), relevant and includes a time frame.

 Collaboration

## Activity 3.1: SMART goals

*Estimated duration: 15 minutes.*

Read more about SMART goals at [J6design – Setting smart goals](http://www.j6design.com.au/setting-smart-goals/)

Find some examples of SMART goals at your workplace and discuss in your class.

## Key Performance Indicators (KPIs)

In Topic 1 the importance of collecting quantitative data over qualitative data was discussed. You have set your targets (e.g. reduce paper use) but the only way you will be able to assess if you meet those targets is if you give them a value. This is an example of a KPI so that when you monitor, you will know if you have achieved your objective and met your target.

Put some time into considering what you need to measure and how you can make it SMART.

Some examples of resource efficiency indicators are:

* kilowatt-hour (kWhr) electricity used/kilogram (kg) of pet food produced
* millilitre (ml) of water consumed/tonne of paper manufactured
* litre of diesel consumed/container unloaded (port operation)
* kilogram (kg) of solid waste/ metre squared (m2) floor space (commercial premise)
* litre of water/litre of milk processed.

Consider your inputs and outputs. What is going into producing the product your workplace is in the business of producing? How can that be measured?

 Resources

## Additional resources on KPIs

Read the article [Smart KPIs for Sustainability Initiatives](https://www.environmentalleader.com/2011/01/smart-kpis-for-sustainability-initiatives/) to learn more about KPIs for sustainability.

## Using graphs to represent (KPIs)

Graphs are always an excellent way to present data and are more easily digested by busy work colleagues. You can see how the inputs and outputs are being measured and then resource efficiency is graphed based against these measurable KPIs. You would need to know what KPIs and data you would be measuring to complete this type of activity successfully. An example of how you could create a graph showing an input (water) next to output (product) and a measure of resource efficiency (KL/kg) is below.

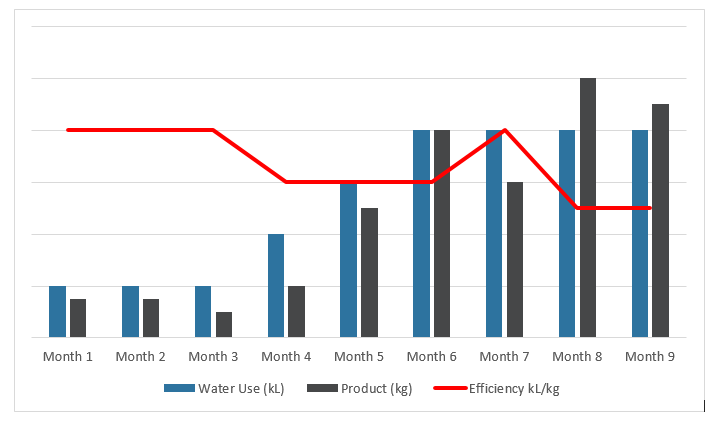


Figure 3 Graph example.

 Practice activity

*Estimated duration: 50 minutes.*

## Activity 3.2: Review

Answer the following questions regarding how to get input from stakeholders, identifying resource usage areas and evaluating alternative solutions.

1. List three types of stakeholders relevant to your workplace or a workplace you have worked for. For each one, identify the method you would use to gather input from them when planning a workplace audit.

|  |  |
| --- | --- |
| Stakeholder | Example |
|  |  |
|  |  |
|  |  |

1. Identify three areas of your workplace where resources could be used more efficiently and briefly describe how.

|  |
| --- |
| Area for improvement and how |
|  |
|  |
|  |

1. From most desirable to least desirable, list the hierarchy of control for considering alternative solutions to resource use issues.

|  |
| --- |
| Sustainability work practices |
|  |
|  |
|  |
|  |

Topic 4: Identifying and converting common units of measurement

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# Overview

In Topic 1 you planned and then measured the resource usage of your workplace. Topic 2 showed you how to gather information and set efficiency targets. It is now time to create an action plan and implement performance improvement strategies.

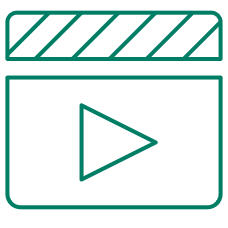
The activities throughout this resource will assist you in your learning. These activities do not form a part of your final assessment however they will contribute to your understanding of the topic area.

# Source and use appropriate techniques and tools

Researching and reviewing techniques and tools will help you to understand what will work for you in your industry with sustainable practices identified in your workplace. Look into the history of your workplace for what has been used in the past and how effective it was. Sometimes it’s not just about implementing sustainable practices but changing mindsets of the management and workers.

Processes that should be covered for a positive result should include:

* Apply continuous improvement strategies to own work area of responsibility, including ideas and possible solutions to communicate to the workgroup and management.
* Implement and integrate environmental and resource efficiency improvement plans for own workgroup with other operational activities.
* Supervise and support team members to identify possible areas for improved practices and resource efficiency in the work area.
* Seek suggestions and ideas about environmental and resource efficiency management from stakeholders and act upon where appropriate.
* Implement costing strategies to fully utilise environmental assets.

 Watch

## Activity 4.1: Video: Change management

Watch this video from Professor Messer, which outlines the principles of change management, or change control. You’ll need to understand these principles when implementing any kind of system change.

[Change Management](https://www.youtube.com/watch?v=3ILDSJ56YT0) (YouTube 08:13 mins)

[](https://www.youtube.com/watch?v=3ILDSJ56YT0)

https://www.youtube.com/watch?v=3ILDSJ56YT0

Changes need to be communicated to all levels of staff within an organisation that may be affected by the system, process or procedure change. In situations where many workers are affected, the implementation may take some time or the change being undertaken has considerable risks or lack of buy-in from some of the staff. It may be wise to create a formal planning document to be submitted to management for approval before implementation.

This document should include:

* a detailed outline of the implementation steps/process
* planned downtime and the effects on other processes or practices
* the planned benefits of the changes
* any required training
* timelines, schedules and dates for implementation
* risk mitigation strategies.

Be sure to familiarise yourself with organisational policies and procedures regarding documentation standards, layouts, templates, storage, distribution and so on. In some cases, you may be working as a contractor or working for an external client. In these circumstances, you may have to follow processes and guidelines laid out by both your company and the client company.

# Achieving efficiency targets

The efficiency targets are set, this topic deals with how to implement and achieve the efficiency targets you set in Topic 2.

 Practice activity

## Activity 4.2: Research

*Estimated duration: 15 minutes.*

Do some research on the Internet to find tools and techniques to help you achieve your efficiency targets. Start with this website and then follow links from this website and do more web searching:

* [Sustainability Victoria](https://www.sustainability.vic.gov.au/)

## The preliminary action plan

You now need to determine what actions you will implement that will lead to more environmentally sustainable work practices.

A simple way to determine this is to prepare a preliminary action plan as shown in Table 6. This plan will quickly illustrate what is achievable and what is not so that you can focus on those actions that will be the most effective. The action plan requires you to identify the environmentally sustainable practice that you want to implement, for example, encouraging double-sided copying and printing. The sample action plan has been completed to show the details of this proposed action.

As can be seen from Table 6, the table highlights the potential benefits of actions as well as the costs and payback periods and any barriers to adoption. It also helps identify which staff would be most effective at implementing the action.

You can use the completed table to workshop potential actions or present findings to staff and/or management. You could modify the plan based on further discussions and use it as the basis for your implementation, or you can use it as the basis to prepare more detailed procedures within existing programs that you may have, such as Standard Operating or Work Task Procedures.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 6 Identifying and converting common units of measurement.Action | Potential risks/opportunities (alignment with company policy?) | Estimated saving | Capital cost $ | Payback period (months) | Target | Date | Budget | Who |
| Use duplex copying and printing. | Reduction in paper use.  Need to check for legal dept. documents.  Check all printers have the capability.  Meet policy to reduce paper use. | Est. 40% reduction = $4000 per year. | Nil – all copiers and printers have a function.  New printers will need this function. | 0. | 40% reduction in paper use per year. | Two months to implementation. | 41,000 (staff time for training and promotion). | Sam P. |
| Use the percentage of recycled paper. | Fewer trees used to make paper – reduced carbon footprint.  Need to understand initial trial on all printers & copiers to ensure compatibility.  Need to undertake a cost-benefit analysis (CBA) to select the most appropriate brand/type. | $0 (use funds from paper savings – see above). | $1,200 (additional cost of paper). | N/A. | Purchase 80% recycled paper over the next 12 months. | Implement over next three months. | Nil – include in general training. | Maria G. |
| Switch off computer terminals at night. | Reduces energy use overnight. | Est. 10% reduction in electricity = $5000 per year. | Nil. | N/A. | 95% of computers switched off overnight when audited in two months. | Implement over next two months. | Nil. | Peter P. |
| Replace grass around the regional office with native plantings, install a water tank for irrigation. | Reduces current water use for grass irrigation by 100%. | Saving of $520 per year in town water costs. | Landscaping quote = $3,400.  Water tank quote = $4,200. | 14.6 years. | 100% reduction in town water use for irrigation purposes at the regional office. | 3 months for tank installation, then two months for landscaping. | $7,500. | Grounds – Dan M/Jerry W. |

## Measurable efficiency targets

You will note that Table 6 includes target and target date columns. It is important that you consider and provide a measurable, achievable target in your plan, and also a target date (SMART goals as discussed in Topic 2). This is so that you can effectively monitor the target over time. For example, if you stated your target as ‘reduce paper use’, this would be much harder to monitor over time than, ‘reduce purchases of non-recycled paper by 40% over 12 months’. For the more specific second target, you will be able to simply check purchasing orders at the end of the 12 month period to determine whether you have achieved the target or not.

You will also note that Table 6 includes a column for capital cost and payback period. You should remember that the cost here is economic, and does not consider the social or environmental consequences of environmentally unsustainable work practices. For example, consider the ‘hidden costs’ of waste disposal on the environment. You should also be considering and encouraging others to consider the combined costs and payback periods of several items. For example, while the recycled paper may cost more to purchase, it can be offset by the reduction in the use of paper by printing on both sides.

## Timeframes and responsibilities

Table 6 also shows timeframes and responsibilities. You should select a realistic timeframe for implementing work practices. If you want staff to have information about a new practice, you may need to work in with staff meeting dates so that you have time to present the information. If staff need to be trained to undertake a new procedure, you will need to consider the most effective form and timeframe for this training.

Noting who will be responsible for an action is very important as it spreads the workload and increases ‘ownership’ of the project. Try and involve staff from different areas across the organisation, and on different levels. You could have those responsible for actions form a ‘sustainability action team’ that meets regularly to discuss implementation.

# Implementation plan

You now have your preliminary action plan and have perhaps modified the plan with more detail or modified actions or targets in response to initial feedback. You are now ready to implement the plan. There are various tools that can assist you in implementing your plan.

You may wish to use tools such as Standard Operating Procedures or protocols that you already use within your workplace and that staff are familiar with. The advantage of this method is that staff will be familiar with terminologies and procedures, the new action will be more likely to be seen as a ‘standard’ workplace change, and the new action can be integrated into existing systems, such as documentation, monitoring or accounting systems.

You could also use scheduling software for your implementation plan. This type of software has the ability to document sub-tasks and track progress and responsibilities.

A simple implementation plan is provided in Table 7. This implementation plan documents how an action will be implemented, providing information on the various implementation steps, or sub-actions, who will be responsible for implementation, timeframes and any other relevant information.

When preparing your implementation plan, you should consult widely to ensure you have support and understanding of any changes from all stakeholders.

## Communication plan

Communication is an important key to successful implementation if your environmentally sustainable work practices. Consider using a range of communication strategies to ‘get your message out there’ to reach as many staff as possible. You should prepare a communication plan for your implementation that identifies your communication strategies. This could include such items as staff meetings, training sessions, leaflets, posters, signage next to equipment as reminders, switch off reminder labels on light switches and regular email reminders to staff or departments.

You could also launch the program with a special event, or link the program to an existing program or idea (for example, casual Friday could be linked to a sustainable action that takes place every Friday)

Table 7 Identifying and converting common units of measurement.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Action (from Table 6) | Sub-actions | Who responsible? | Timeframe | Comment |
| Duplex copying and printing. | Need to check OK for legal documents.  Check all printers have the capability.  Include in Green Office training module for Week 1 Sept. | Sam P. | Weeks 1-4 July - Check OK with all depts.  Weeks 1-2 Aug - Check capabilities of existing printers.  Weeks 3-4 Aug - Prepare modified operating procedure for a training module. | Implement as part of Green Office training module, including an ongoing office audit program. |
| Use the percentage of recycled paper. | Prepare report & CBA on available paper options for Mgt. meeting.  Management group to select the paper for use.  Undertake trial on all printers & copiers to ensure compatibility.  Include in Green Office training module for Week 1 Sept. | Maria G. | Weeks 1-2 July – Prepare options report.  Week 3 July – Present report to mgt group.  Week 4 July – Obtain sign-off on the selected paper.  Week 1-2 Aug – advise procurement section of the new requirement and assist with modifying policy specification.  Week 3-4 Aug – prepare the modified operating procedure for a training module. | Implement as part of Green Office training module, including in the ongoing office audit program.  Monitoring program needs to check for any issues associated with the use of new paper types. |
| Switch off computer terminals at night. | Prepare modified operating procedure.  Complete training Green Office training module Week 1 Sept. | Peter P. | Week 4 Aug – modify operations manual for the new procedure.  Week 1 Sept – complete training in the new procedure. | Implement as part of Green Office training module, including in the ongoing office audit program. |
| Replace grass around the regional office with native plantings, install a water tank for irrigation. | Prepare Landscape Plan with plant specifications and schedule.  Engage construction contractors.  Engage tank installer.  Sign-off on completed works. | Grounds Dept  – Dan M /Jerry W | July/Aug – engage tank installer, install the tank.  Aug/Sept – engage landscape contractors & complete landscaping. | Notify staff of disruption to outside grounds, prepare signage for the public on disruption. |

Table 8 Sample communication plan.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Action | Who will be affected? | Who needs to be kept informed? | Who will be responsible for the action? | Who can provide useful feedback? | Key questions to ask/messages to convey | Best communication methodology |
| E.g. duplex copying & printing. | All office personnel. | All office personnel, management, the procurement team. | Sam P to supervise the implementation of the action. | All office personnel, particularly the procurement manager. | Clear instructions to use the duplex system will be provided.  Savings on paper. | Include in Green Office training module.  Reminder posters at printers & copiers.  Include as a reminder in the weekly bulletin. |

A communication plan can assist your consideration of all the relevant communication avenues. This plan can be prepared to identify the people you need to inform and engage with your plans to make the workplace more sustainable. This includes all of the stakeholders described in the previous sections and documents how the communications will take place, who will be responsible for actions, feedback and follow-up communications. A sample communication plan is provided in Table 8.

## Training plan

New or altered workplace practices need to be introduced to employees and management in a manner that maximises uptake.

Your communication plan will help you determine the best methods to communicate changes. If new skills or altered practices are required, you may need to develop a training module, new or revised operating procedure or information sheet. A training plan can assist you with planning the best training methods and could be developed in a form similar to the communication plan.

## Communication strategies for successful implementation

Communication is the key to the successful implementation of environmentally sustainable work practices. This section provides tips on communicating with management, team members and external stakeholders, including suppliers and customers or clients.

Dr Bob Willard, author of *The Next Sustainability Wave: Building Boardroom Buy-in*, sums up the issues with communicating a sustainability message:

Suppose you care about the state of the world, but you are not sure if your executive colleagues share your values. You are uneasy about being dismissed as a tree-hugging environmentalist if you suggest the company should pay more attention to its ecological and social responsibilities. Your colleagues and manager might pat you condescendingly on the head, applaud your worthy convictions, and suggest you work with like-minded NGOs in your spare time. Just broaching the subject risks your credibility as a corporate leader who has the best interests of the bottom line at heart. It could be a career-limiting conversation. Not good.

Then an opportune moment arises. It may be a chance meeting in an elevator, at a reception, at a conference, or during a break at an annual general meeting. Sustainability evangelist meets corporate non-believer. How does a sustainability champion start the conversation in such a way that it continues excitedly instead of being quickly terminated and awkward…How can sustainability champions appeal to corporate leaders’ critical priorities, handle likely objections and use serendipitous opportunities to engage their interest? (Willard, 2005)

Dr Willard’s book provides a chapter titled ‘Objection-handling Clinic in Inhibitors to the Next Wave’ which provides excellent ideas if you think you may have trouble convincing others. One of the main points he emphasises is to remember that people are not the same and that their ‘hot buttons’, or reasons that they would want to engage in the process, will vary, and that you need to identify and appeal to these reasons.

For example, the marketing manager would be focused on sales, product differentiation and customer loyalty, whereas the head of human resources would be focused on workforce development, recruitment and retention. As Dr Willard notes:

‘Language matters. Talk theirs.’

## Communication with management

Managers are busy people. They make quick decisions and you need to be ready when the opportunity arises. You need to seek input from your manager or management team to priorities your research and investigations. Some initiatives are simple and cost-neutral to implement, while others may be expensive, affect production, require extensive training and implementation strategies. You need to engage in management to support your proposals for the best outcome. You may need to provide them with the information and secure their ongoing support.

Any implementation or change will need to be approved by the manager if it requires a budget, additional resources, training or any activity that will affect production or workflow.

Be prepared, summarise and learn the main elements of your program, prepare a good attention-getting fact, for example, from your investigations into how much an unsustainable work practice is costing the company (and make sure it is accurate, do not exaggerate) and perhaps have a one-page handout ready to hand over. You are now ready to promote the program to management whenever the moment arises and to staff and others as well.

## Involving team members

Involving team/other staff members will provide a wider range of practical ideas for environmentally sustainable work practices. It will also create ownership of the program and greatly assist implementation. Seek suggestions and ideas through communication sessions, team meetings or other methods, and involve staff in the development of ideas. For example, ask relevant departments for data or to assist with monitoring. Ask managers to provide an incentive program for staff who come up with ideas that are implemented, or who contribute to the implementation or monitoring of practices.

## Communicating with external stakeholders

A move to more environmentally sustainable work practices could involve asking questions of suppliers and ultimately requesting them to supply alternative products or services. You should ensure that the questions you ask your suppliers are clear and that they understand the reasons for the questions. For example, a supplier may reassure you that their paper products are recycled, but this may mean that only some of their papers contain recycled content, and this content may be very low compared to others.

Suppliers may become defensive when they feel the quality of their products is being questioned, so be very careful to ensure they understand your program and the reasons for its implementation.

Customers and clients may also be affected by changes to your products or services when you implement environmentally sustainable work practices. You should brief your marketing staff on what these changes may be and discuss ways of promoting the changes in a positive manner. You could provide mechanisms for customers or clients to provide feedback on any changes so that you can monitor implementation and alter procedures if required.

# Applying continuous improvement strategies

Apply continuous improvement strategies to your own work area of responsibility, including ideas and possible solutions to communicate to the workgroup and managers.

A significant part of this topic is devoted to communication strategies. Implementing an environmentally sustainable work practice, just like any other workplace implementation, requires a change that needs to be carefully introduced.

## How to make suggestions to improve sustainable work practices

Before you make any suggestions to improve work practices, make sure you have:

* Done your research. Your monitoring results from Topic 1 will be very useful!
* Have all the correct facts.
* Considered all implications of any current work practices or changes.
* Done some financial comparisons if possible.

Suggestions for improving resource usage will in most cases be made to your supervisor, who may or may not be the head of the company. Either way, you need to consider the issue from the point of view of who you are presenting to (there were some excellent tips on this in the Sustainability Victoria reading on behaviour change).

# Integrating resource efficiency improvement plans

Implement and integrate environmental and resource efficiency improvement plans for own workgroup with other operational activities.

Help your workplace review and update existing policies and procedures to implement and integrate environmental and resource efficiency improvement plans into everyday operations. If you feel there is a workplace procedure that needs to be developed, ask your supervisor if they are happy for you to draft one.

 Practice activity

## Activity 4.3: Implementing plans

*Estimated duration: 15 minutes.*

Research the following websites and environmental management plan to see how they are being implemented.

* The University of Queensland - [Environmental Management System (EMS)](https://sustainability.uq.edu.au/files/1085/Mine_Emp.pdf)
* University of Queensland – [Policies and procedures](https://governance-risk.uq.edu.au/functions-and-services/governance/policies-and-procedures)
* The University of Wollongong – [Environmental Management Plan](http://www.uow.edu.au/content/groups/public/@web/@environment/documents/doc/uow080043.pdf) including sample action plans
* Department of Environment – [EMS tool](https://s3-ap-southeast-2.amazonaws.com/www.yooyahcloud.com/MOSSCOMMUNICATIONS/B6j6w/Environmental_Management_System_tool.pdf)

Research the internet and find another organisation’s environmental management plan and provide the link below.

# Supporting team members

Supervise and support team members to identify possible areas for improved practices and resource efficiency in the work area.

Getting other staff members involved in sustainability can sometimes be a challenge. It might not be something your work colleagues think is important and most employees are already stretched for the time without adding another task to their schedule.

Here are some tips on how to work as part of a team on sustainability projects:

* First and foremost, do **not** criticise another work colleague’s work practices. Making someone feel ashamed or guilty because of the way they undertake a task will not make them change their ways, it will simply make them do the task when you are not around.
* Encourage any actions of work colleagues you see that are improving resources efficiency.
* Ask your supervisor if sustainability can be placed on the weekly team meeting agenda – this will give an opportunity to discuss any ideas on a regular basis and ensure others in your team are present and given time to offer ideas and suggestions.
* Brainstorm for ideas with work colleagues. The rules of brainstorming mean all ideas are listed and considered during the initial process. Try not to discourage any suggestions from work colleagues or they may hesitate to contribute next time.
* Share the results of any progress and improvement of resource efficiency at your next team meeting if appropriate. It is always a good idea to get permission from your supervisor beforehand.
* Ask for help or volunteers from your work team.
* Always give everyone in the team the opportunity to talk and contribute.

Be the example. If others in your work team see you working at identifying resources that could be used more efficiently they may just join in.

 Resources

## Activity 4.4: Improving environmental performance

*Estimated duration: 15 minutes*

Read the following online documents on how to establish an environment team contain some great tips on working with your team to improve environmental performance:

* Sustainability Victoria - [Establishing an environment team](http://www.sustainability.vic.gov.au/~/media/resources/documents/services%20and%20advice/business/srsb%20em/srsb%20em%20set%20up%20an%20environment%20team%20sep%202012.pdf)
* Sustainability Victoria - [Encouraging behaviour change](https://www.sustainability.vic.gov.au/-/media/resources/documents/publications-and-research/publications/q---t/publications-review-of-sustainability-victorias-strategic-direction.pdf?la=en)
* Department of Industry and Science – [Office saving teams](http://www.yourenergysavings.gov.au/guides/work-what-can-we-do?items_per_page=1&page=1)
* OEH NSW – [Engaging staff in energy efficiency](https://energysaver.nsw.gov.au/business?utm_source=redirect&utm_medium=all&utm_content=&utm_campaign=environment.nsw.gov.au%20redirect)

1. Provide three examples of ways to improve environmental performance.

## The role of the individual

Regardless of your role within an organisation, you can contribute to the sustainability of the organisation by making a contribution yourself. This might be as small as suggesting to another staff member in the same workspace that you use a tray for a paper that can be recycled through to making suggestions to management about large scale changes.

Key to the success of a company’s adoption of sustainability principles is the contribution of individuals within the corporation to the development, implementation, monitoring and improvement of sustainability actions.

Individuals within a company can all identify the possibilities for improving environmental and resource efficiency in their jobs. They are often the best person to know the details of their work, including which environmental hazards exist in their own work areas and how systems and procedures operate on a day-to-day basis. They will have the best knowledge of the materials, products and processes used in their work and will often have excellent practical solutions for resource efficiency. Individuals from various sections of the company, brought together to develop a sustainability plan, will ensure that all aspects of the company are addressed within the plan.

Sustainability is something that everyone can participate in and generally, the best results will be achieved when everyone gets involved.

# Seeking stakeholder input

Consult and communicate with relevant stakeholders to seek input and encourage engagement with developing and implementing sustainability improvements. Encourage feedback and suggestions, and report on outcomes.

## Seeking input from stakeholders

It is very important that you seek input from as many sources as possible while you are completing your preliminary action plan. In this way, you will increase ‘ownership’ of the actions and have a wider range of people who are responsible for implementation. You will also be surprised by a large number of good ideas staff have on how to improve practices, if you ask them.

## Evaluating options

Your preliminary action plan can be used to evaluate different options prior to selection of the most effective practice. For example, you could use it to compare the costs of new types of lighting or machinery, as opposed to implementing efficiency targets or reusing existing equipment.

# Costing and valuing environmental assets

Make sure that you implement costing strategies to fully utilise environmental assets.

## Relating sustainability to business

Business sustainability involves the following three aspects in relation to the ‘triple bottom line’:

* Economic well-being. Job security, fair wages, safe and healthy work environment.
* Environmental health. Clean air, clean water, diverse ecosystems, safe and reliable food sources.
* Social equity. Equal access to opportunities, freedom from discrimination, poverty and homelessness, protection from terrorism and wars, assistance after natural disasters.

The sustainability concept in terms of environmental sustainability and resource usage can be related to business as shown below.

Table 9 Sustainability as it relates to business.

|  |  |  |
| --- | --- | --- |
| Reduced inputs | Reduced costs, environmental and social impacts | Same or increased outputs |
| Energy.  Water.  Materials.  Human energy. | Reduced energy or use of renewable energy = reduces greenhouse emissions.  Efficient use of water = using less/reuse.  Material and human efficiency = less waste and increased productivity. | Same or more products and/or services. |

## Calculating payback

Investment in sustainability improvements can sometimes be hard to justify or quantify. It is important that you take the time to do the maths and justify the outlay of capital.

The simple payback model is:

* Payback period (years) = initial investment ($) ÷ Net annual savings ($ per year).

You must include all costs of implementing the resource-saving initiative including:

* cost of capital assets.
* installation costs.
* cost of any alterations required to implement.
* the cost to maintain/run new asset.

Let’s look at the example below about the payback calculation of replacing paper towels with an electric hand dryer. The initial investment is foremost and then the financial implications/difference of the resource efficiency initiative are listed **including** the increased electricity costs. So even accounting for the increased cost of electricity, the initial investment of $20,400 will be paid back within 1.3 years. And then there is the improved environmental outcome for the initiative.

**Simple payback example of installing hand driers to replace paper towels.**

**Initial investment.**

Purchase and Installation $20,400.

**Net annual savings.**

Reduced cost of paper towels $16,000 per year.

Reduced cost of disposal $300 per year.

Reduced bathroom servicing costs $500 per year.

Less increased electricity costs ($1,100) per year.

**Net annual savings $15,700 per year.**

**Payback period ($20,400 ÷ $15,700) 1.3 years.**

There are also often broader business impacts to consider. Let’s look at another example from EPA Victoria, the installation of a gutter guard in the meat processing facility.

**Case study.**

Installed a gutter guard at the meat processing facility. The gutter guard cost $425. This saved approximately $59,800 per year in raw materials alone.

Reduced meat waste by about 69,000kg.

In this case study alone, there is already a proven large financial and environmental gain by installing the gutter guard. However, the broader business impacts included:

* improved workplace health and safety (WHS) outcomes
* less use of raw materials
* increased process reliability
* reduced downtime
* increased production and productivity levels
* higher staff retention
* improved staff motivation.

The important point is there are additional financial, environmental and WHS gains by installing the gutter guard.

## Reducing risks

Introducing environmentally sustainable work practices can both reduce risk and increase business opportunities. It can reduce risk by:

* reducing capital costs and ongoing expenses e.g. by using less energy and being more efficient with materials
* decreasing exposure to possible litigation and costs through noncompliance with the law, pollution incidents or hazards.

Opportunities are increased through:

* retention of top talent and increase in staff productivity through improved work conditions
* identification of niche market opportunities for ‘green’ products and services and early take-up of emerging technologies
* higher customer retention.

(Based on Willard 2002)

Willard (2002) has investigated the ‘business case’ for implementing sustainable business practices. His research has quantified the business case benefits as shown in the table below.

Table 10 Seven business case benefits.

|  |  |
| --- | --- |
| Business case benefit | % improvement |
| Reduced recruiting costs. | -1.0% |
| Reduced attrition costs. | -2.0% |
| Increased productivity. | +10.5% |
| Reduced expenses in manufacturing. | -5.0% |
| Reduced water, energy and consumables expenses at commercial sites. | -20.0% |
| Increased revenue and market shares. | +5.0% |
| Reduced risk/easier financing. | -5.0% |
| Yielding a profit increase of 38% (based on a large corporation. |  |

A brief introduction to the reduced risks and increased opportunities associated with a sustainable business is provided in the next table (adapted from Willard, 2002).

Table 11 Risk reduction and opportunity increases associated with a sustainable work practice.

|  |  |
| --- | --- |
| Issue | Summary |
| Business operations and resource costs. | Ability to attract better talent and reduce the attrition of employees due to having a workplace where people want to work.  Reduces risk from pollution fines or corporate liability and identifies potential future liabilities or legislative restriction on business operations.  Improves the corporate image and reduces the risk of reputation loss from external stakeholders e.g. being subject to a campaign identifying perceived problems. |
| Emerging technologies. | Ability to take up emerging technologies to take advantage of market opportunities. |
| Material use and wastage minimisation. | Reducing the number of materials used in a process reduces the costs associated with procuring the material and disposing of the left-over waste product. |
| Water and energy efficiency. | Reducing energy and water use reduces the costs associated with purchasing these commodities. |
| Investment opportunities. | New markets assist investment opportunities and money saved can be used for investment opportunities. Some investment firms are offering incentives to companies implementing sustainability or purchasing sustainable products and services. |
| Stakeholders. | Internal and external stakeholders are increasingly aware of sustainability issues and want companies to implement sustainable practices. They will purchase from companies they feel are ‘more sustainable’ and will stop purchasing from those ignoring sustainability.  Involving staff and customers in decisions about sustainability increases these relationships and provides for more transparent decision-making. |

## Risks of unsustainable practices

A business that is identified as having unsustainable practices, or that does not respond to stakeholder inquiries into its practices, increasingly runs the risk of customer boycotts, financial penalties or negative media attention.

## Greenwash and company boycotts

‘Greenwash’ is a term used when a business promotes itself or its products or services as ‘sustainable’ or ‘environmentally friendly’ and independent research, often by non-government organisations (NGOs), discovers that their claims are false or misleading.

A company boycott can occur when a company either engages in greenwash or does not address its sustainability issues, with particular practices being targeted by external stakeholders. These external stakeholders can encourage a ‘company boycott’, where customers are encouraged not to purchase from the business in question.

### Case study

Ribena, a popular children’s blackcurrant drink for many years, was exposed in 2004 by two students from New Zealand who measured the Vitamin C content of this drink and found that it did not have ‘four times the vitamin C of oranges’ as claimed by its advertising. Its vitamin C content was also found to be lower than other fruit juice drinks.

Charges for misleading representations were made under the New Zealand Fair Trading Act and the company was fined NZ$217,500. In Australia, the company that manufactures the product issued a statement confirming labelling discrepancies to the Australian Competition and Consumer Commission and undertook to remove all references to vitamin C from its labels. (Wikipedia 20 May 2007) The company has since gone to considerable effort and expense to rebuild its market after this damaging exposure.

Some companies that produce recycled paper have also been targeted over greenwashing. For example, some companies promote their paper as ‘recycled’ but have much less than 100% recycled content. Some companies indicate on packaging the percentage of recycled paper, while others do not. Web-based campaigns by NGOs such as Greenpeace can quickly spread the message around the world about a particular company, and many advocacy groups now have researchers who are able to expertly assess a company and its sustainability (and sustainability claims). It is, therefore, becoming increasingly important for companies to not only identify and measure their sustainability but to correctly represent its achievements so that it is not branded as greenwash.

 Collaboration

## Activity 4.5: Discussion

*Estimated duration: 90 minutes.*

The following websites will provide additional information on how to implement performance improvement strategies:

* Sustainability Victoria – [Energy efficiency best practice guides](https://www.sustainability.vic.gov.au/Business/Energy-efficiency-for-business/Business-energy-efficiency/Energy-efficiency-best-practice-guidelines)
* Case study – [Sustainability a factor in business growth from Business Victoria](http://www.business.vic.gov.au/case-studies/sustainability-a-factor-in-business-growth)

Discuss in your class how to implement those performance improvement strategies in your workplace.

 Practice activity

## Activity 4.6: Review

*Estimated duration: 50 minutes.*

Answer the following questions pertaining to the environmental action plan, communicating the plan to staff and supporting staff.

1. List six columns that should exist on your action plan.

|  |
| --- |
| Jurisdiction |
|  |
|  |
|  |
|  |
|  |
|  |

1. What is an elevator speech and when would you use it?
2. List three ways you could support staff to implement resource efficiency practices in the workplace.

Topic 5: Monitoring performance

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# Overview

Having implemented what you believe are appropriate strategies to improve your organisation’s sustainability it is important that you monitor the solutions on an ongoing basis to ensure that they are as effective as you expected them to be. You should also be monitoring your situation on an ongoing basis to see whether there are changes that might again require you to initiate further improvements in your work environment.

# Monitoring tools and technology

You have implemented your environmentally sustainable work practices, you or your implementation team feel that practices are working well and you have developed measurable targets so that you can determine whether this is, in fact, the case.

## Elements of a successful monitoring program

Monitoring the program will require developing a system that makes monitoring an easier task to complete. You could consider preparing checklists that can be used to do a visual count of lights that are switched off, equipment in use, the amount of single-sided waste paper or other work practices.

There are various methods of monitoring that may be suitable for your workplace. These include:

* questionnaires or surveys of relevant staff
* visual counting or calculating e.g. amounts of waste in particular bins
* checking supply records/invoices to determine how much of an item has been purchased
* audits by an audit team which should be representative of the participants.

Table 12 Sample monitoring plan.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Action | Sub-action | Target | Monitoring method | Results/ compliance | Comment |
| Duplex copying and printing. | Need to check OK for legal dept. documents.  Check all printers have the capability.  Include in Green Office training module for Week 1 Sept. | 40% reduction in paper use per year.  (100 reams/mth purchased pre-implementation – 40% reduction is 40 ream reduction). | Purchasing records to be checked monthly. | Sept – 70 reams purchased (30% reduction achieved). | Provide a graph of results near printers & copiers to promote further use of duplex. |

 Practice activity

## Activity 5.1: Tracking templates

*Estimated duration: 15 minutes.*

Check out Sustainability Victoria’s track and monitor targets website below and the associated monitoring and evaluation tool and example.

* [Track and monitor targets](https://www.sustainability.vic.gov.au/-/media/SV/Publications/About-us/What-we-do/Corporate-reporting/Measuring-our-impact/Acil_Trifold.pdf)
* [Example data collection plan](http://www.sustainability.vic.gov.au/~/media/resources/documents/publications%20and%20research/knowledge%20archive/resource%20smart%20government%20program/archive%20rs%20data%20collection%20plan%20word.doc)

There are various monitoring or tracking templates that you could develop to assist you with this task, for example, you could develop a simple monitoring table

1. What other information would you include in a tracking template for your organisation?

## Evaluating your monitoring results

Monitoring information, once collected according to a schedule, needs to be analysed and reported. This analysis is important so that you can identify where adjustments and/or improvements can be made so that the work practices can be continually improved.

Table 12 shows that a 40% reduction in paper use was the target. By September, 70 reams of paper were purchased in that month which is only a 30% reduction. It is still a reduction, which is important to remember, but the target has not quite been met. This is where you need to evaluate your results and ask:

* Why was the target not met?
* Was the target unrealistic?
* Was the target date unrealistic?
* Was the target properly communicated to staff?
* Were the actions properly implemented in order to reach the target?

A monitoring program will be more successfully implemented if the monitoring is made part of everyday tasks, and the process is made as easy as possible, for example, through the use of automatic email reminders to check something or a ‘tick the box’ checklist.

It is extremely important to properly cost your achievements. For example, if a practice was implemented that aimed to save the company $1,000, and it saved $5,000, this should be noted and used as a key message to promote the program. If you find that an item is costing more than expected, this needs to be assessed and perhaps an alternative method considered.

# Reporting on efficiency target outcomes

Communicating program outcomes is very important. It assists in monitoring and promoting the program and continuous improvement. You should communicate outcomes internally, and many companies now report publicly on their sustainability initiatives. Reporting can be in the form of informal, regular communications (e.g. posters, memos) or more formal reports to management and stakeholders. Any communication should link new initiatives to the original aims and objectives, as well as the company’s existing policies and procedures.

## Best practice ways to report outcomes

It is important to present sustainability outcomes clearly and succinctly. Instead of presenting tables full of numbers, consider using coloured graphs, interspersed with facts about usage and reduction. Your sustainability report often forms part of your company’s corporate image and you could consider posting your results on your website or including them in your annual report.

### Let us look at an example

Environmentally sustainable work practice is to reduce the amount of paper used, so the reporting on the program should follow this principle. Consider reporting using the Internet or company Intranet, which has the following benefits:

* You save on paper usage and staff time in printing, binding and distribution.
* You can include hyperlinks to detailed data and resources and even suppliers websites.
* You could provide information in several languages if you were part of a multi-national company.
* You could provide a linked forum or bulletin board for updates and feedback.
* The report can be quickly forwarded to a large number of stakeholders, managers, clients and suppliers.
* You could include a video podcast of leaders promoting the program, or a description of how a task has been implemented.

## How often to report outcomes

The contents of what you report and how regularly you do so will depend on what your initial action plan laid out for monitoring and reporting procedures. In your own workplace, there could be an Environmental Management System (EMS) already in place which clearly outlines what is to be monitored, when and how and when it is to be reported.

 Resources

Read the current [NSW Government Resource Efficiency Policy](http://www.environment.nsw.gov.au/resources/government/140567NSWGREP.pdf) outlining what needs to be done and how it will be reported.

This policy sets targets, minimum standards for energy, water, waste and clean air, provides direction for how each target is to be implemented followed by monitoring and reporting requirements.

## Reporting requirements

If you receive financial assistance or undertake an industry resource efficiency program you will often be provided with reporting requirements. The following is an example of some reporting requirements you may see:

Devise reports in terms of the products you sell. For example litres of water per tonne of product or by the waste per tonne of the product.

Track the usage rates of raw materials.

A system to record your measurements and determine full cost attribution for each waste product (how much each waste really costs).

Consistency when taking and recording measurements.

Establish regular reports for major resource consumables including water and energy.

Report all consumption by a per unit basis and not by time.

Ideally, you will be aware of your reporting requirements at the start of the project. If not, consult your supervisor for advice but remember, keep it visual and as short as possible without compromising any of the data. It would be better for your audience to be inspired by a short and sharp presentation leaving them asking for more than bore them senseless with a 200-page report.

# Evaluating your improvement plans

So you have:

* implemented your environmental action plan
* monitored your targets
* reported on your results.

It is now time to evaluate your action and/or improvement plans and see how your workplace systems and procedures can be improved. You may also take the opportunity to set new efficiency targets to even further improve your resource efficiency and environmental performance.

Improving systems are examples of how a workplace may have evaluated their action plans and listed the improvements to both information and workplace systems to ensure compliance and increase efficiency.

By developing and documenting sound work systems and procedures (such as an environmental management system), you can ensure that you are in control of your business and are less likely to experience failures, unexpected wastage or non-compliances.

Improvements can be made to:

* Systems management:
  + Identify and assess the environmental impacts of your business activities. A good way to start is to conduct a waste assessment.
  + Review the effectiveness of all existing controls and work instructions.
  + Identify what issues need to be addressed and what practices need to be changed, and record this information.
  + Develop an effective waste management plan as a minimum.
  + Devise procedures and plans to reduce environmental impacts.
  + Establish an environmental policy (that is achievable in your business) and communicate it to staff and external stakeholders such as suppliers and customers.
  + Consider integrating environmental management activities into existing systems such as quality and/or safety.
  + Plan for emergencies, develop contingency plans for potential incident scenarios.
  + Measure and monitor your environmental performance on a regular basis.
  + Involve staff, suppliers, customers, local community and other stakeholders in developing a long-term environmental improvement plan for your business.
  + Consider establishing an environmental management system to ISO 14001 standard.

Figure 14 - Improving information from Hints and tips for improving resource efficiency in your business

For information, improvements can be made to:

* Measurement:
  + Measure and track your usage rates for energy, water and ingredients.
  + Ensure that your suppliers measure, and are accountable for, the quality of their product or service, including environmental impacts.
  + Define the optimum start-up conditions for each process, and train staff to minimise start-up losses.
  + Measure what you sell or package and ensure you do not give your product away.
  + Assess your environmental performance regularly.
* Recording:
  + Keep maintenance/material safety data sheet manuals in an easily accessible place (and keep them up-to-date).
  + Keep current records up to date and manage your historical records effectively.
* Reporting:
  + Devise reports in terms of the products that you sell. For example, litres of water per tonne of product, or kilograms of waste per tonne of product.
  + Track usage rates of raw materials, for example, product yields, number of spills and waste output rates.
  + Develop a system to record your measurements, and determine full cost attribution for each waste product (that is, know how much each waste really costs).
  + Be consistent when taking and recording measurements.
  + Establish regular reports for major resource consumables including water and energy. Report all consumption by a per-unit production basis, not by time (for example, litres of water/unit of production not litres of water/minute).

By measuring the rate at which resources are consumed and wastes produced, you will be able to manage improvement in your business, particularly in increasing efficiency and reducing waste and proving it!

Spend some time looking at your own action plan or one from your workplace and identify areas that could be improved upon.

# Setting new efficiency targets

If your monitoring and reporting find that practices are being implemented 100% and that they can be improved, consider adjusting targets to aim for a higher level of sustainability. For example, if you set a target of 50% compliance with switching lights off at night and this was being met, consider increasing the target to 100%.

 Practice activity

## Activity 5.2: Reverse calculation

*Estimated duration: 20 minutes.*

Try the NABERS reverse calculators! These are where you put in what you would LIKE to achieve and then calculate backwards what needs to happen.

* [NABERS reverse calculators](https://www.nabers.gov.au/reverse-calculators)

## Monitoring program

Review your action plan from the previous period and identify areas that can be improved on.

Your efficiency targets may need to be adjusted the other way as well. If you identified that an efficiency target was not realistic and unattainable, this would be the time to reduce the target because of you:

* will have a better chance of meeting your target in the next period (thus will be able to report you have met the target next time)
* will avoid staff disillusionment for repeatedly not meeting targets
* are demonstrating flexibility and good project management by adjusting a target to be more realistic.

Part of the monitoring program should also involve researching new technologies and systems so that these can be assessed and introduced if found to be more effective than existing ones.

 Practice activity

## Activity 5.3: Checklist

*Estimated duration: 15 minutes.*

Have a look at the [Sustainability Toolkit – Office](https://businesschamber.com.au/NSWBC/media/Misc/Policy%20Documents/Sustainability-Toolkit-Offices.pdf) to learn more about new tools and technologies to measure and record resource efficiency targets.

Create a simple energy and waste audit checklist to measure and record resource efficiency in your workplace.

# Highlighting your achievements

It is important to acknowledge achievements made by the implemented work practices. Be proud of what your workplace has achieved and show other staff that this is an important achievement.

## Promoting your successful strategies

Implementing environmentally sustainable work practices may identify leadership opportunities and you may be able to share your success with other companies looking to undertake a similar program. Look to the skills of your sustainability champions to assist in promoting your company to others, and maximise your success through promotion and networking.

## Promote your achievements

Ways to promote your achievements might include:

* a media release that includes photos and graphs
* on your workplace’s social media channels
* on the company website
* as an infographic.

Try to avoid printing flyers or leaflets as this is contradicting the purpose of your resource efficiency program. Electronic is best.

## Rewarding participants for successful strategies

Consider how those who have successfully implemented practices can be rewarded, and how the company as a whole can celebrate its achievements. Don’t go overboard and undo all your good work but do make sure those staff that have worked hard to achieve efficiency targets feel recognised and even rewarded if possible.

Depending on your workplace and the nature of your business, appropriate staff rewards may include:

* a day off
* attendance at a conference representing the company
* financial bonus
* gifts, if appropriate
* movie tickets.

These are just a few ideas but it will depend on your workplace, type of business, size of achievements and the staff involved.

 Practice activity

## Activity 5.4: Review

*Estimated duration: 40 minutes.*

Answer the following questions about meeting efficiency targets and highlighting achievements.

1. List three reasons why an efficiency target may not have been met.
2. For your own workplace, what method would you choose to highlight the achievements of your recent implementation and monitoring program? Why?

Other resources

Willard, 2002 *Corporate social responsibility*: Retrieved from: [www.nabers.gov.au](http://www.northcoasttafe.edu.au/about-us/sustainability.aspx)

Dr Bob Willard *The Next Sustainability Wave: Retrieved from* <https://sustainabilityadvantage.com/leadership/next-wave/>

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| Figure 1 |  | The three objectives, or pillars, of sustainability, nested. Source: <https://commons.wikimedia.org/wiki/File:Nested_sustainability-v2.gif>  [Creative Commons](https://en.wikipedia.org/wiki/en:Creative_Commons) [Attribution-Share Alike 3.0 Unported](https://creativecommons.org/licenses/by-sa/3.0/deed.en) license. No changes made. |
| Figure 2 | 61 | The waste management hierarchy.  © Getty Images copied under licence.No changes made.  Credit tatadonets. Image [910043522](https://www.gettyimages.com.au/detail/illustration/the-waste-management-hierarchy-environment-royalty-free-illustration/910043522?adppopup=true) |
| Figure 3 | 66 | Graph example © TAFE NSW 2019 |

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