

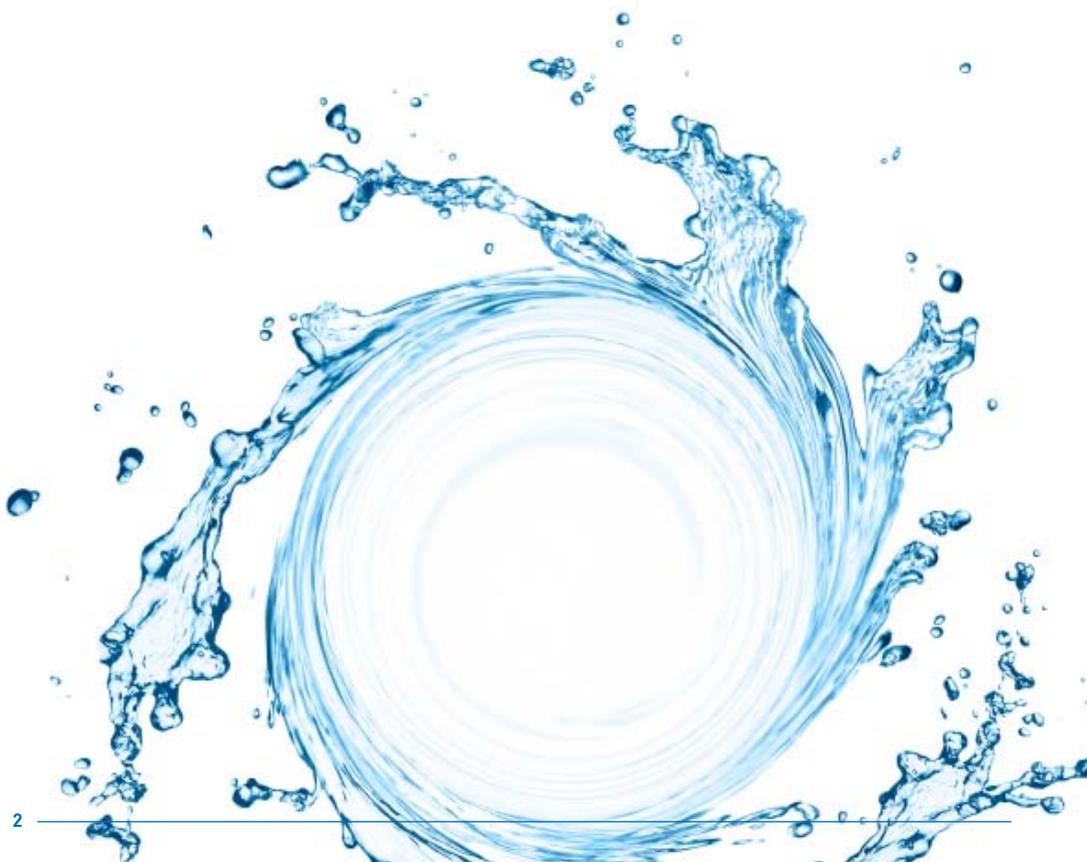
# How to manage change and improve water efficiency



**WRAP's vision is a world where resources are used sustainably.**

**We work with businesses, individuals and communities to help them reap the benefits of reducing waste, developing sustainable products and using resources in an efficient way.**

**Find out more at [www.wrap.org.uk](http://www.wrap.org.uk)**



## Summary

WRAP has produced this easy-to-use handbook to help food and drink companies establish changes that improve their water efficiency.

This handbook covers two key areas that will help facilitate behaviour changes within your business:

- understanding and challenging behavioural inertia; and
- identifying the ingredients for success:
  - **drivers for change:** senior management commitment is essential;
  - **clear and shared vision:** staff at all levels should be on board;
  - **capacity for change:** providing the resources, time and budget to deliver your desired outcome; and
  - **prioritise action:** using the 'plan-do-check-review' approach and ensuring that you keep communication routes open.

This guide will help managers to think about how they manage change within the work place. By identifying the best methods to adopt for a company, it will empower employees to take accountability and drive water efficiencies within the business.

## Introduction

The UK food and drink industry has been identified as key to driving water efficiencies, especially in water scarce areas<sup>1</sup>. These are more prevalent than might be expected. For example, in the short term this includes vulnerable catchments of East Anglia, the East Midlands and parts of South-West England. It has been forecast that in the next ten years or so this could extend to include whole regions such as South Wales, the Midlands and the South West (Table 1), so water efficiency is important for both environmental resilience and to reduce business costs.

Behavioural change and continued staff engagement is important in driving water efficiency for the following reasons:

- water use is often influenced by the behaviour of individuals;
- managing change often requires changes in behaviour and attitude;
- informed staff encourages a culture of ownership and accountability; and
- it provides a mechanism for continuous improvement.

<sup>1</sup>Freshwater availability and use report in the UK (WRAP, 2011)  
[www.wrap.org.uk/content/freshwater-availability-and-use-uk-0](http://www.wrap.org.uk/content/freshwater-availability-and-use-uk-0)

**Table 1:** Regional freshwater availability

Freshwater	Vulnerable	Specific catchment
Short Term (Next four years)	Eastern England	<ul style="list-style-type: none"> <li>● Cam &amp; Ely Ouse (Cambridgeshire)</li> <li>● Broadland Rivers (Norfolk)</li> <li>● Combine Essex (Essex)</li> <li>● East Suffolk (Suffolk)</li> <li>● Upper Lee (Bedfordshire, Hertfordshire, Essex)</li> <li>● Colne (Hertfordshire)</li> </ul>
	Midlands	<ul style="list-style-type: none"> <li>● Grimsby, Ancholme &amp; Louth (Lincolnshire)</li> <li>● Dove (Derbyshire)</li> <li>● Idle &amp; Tome (Nottinghamshire)</li> <li>● Lower Trent &amp; Erewash (Nottinghamshire)</li> <li>● Welland (Leicestershire, Rutland)</li> </ul>
	South West England	<ul style="list-style-type: none"> <li>● Hampshire &amp; Avon (West Hampshire, South Wiltshire)</li> <li>● Kennet &amp; Pang (North Wiltshire)</li> <li>● Upper Thames (South Gloucestershire, West Oxfordshire)</li> </ul>
Medium Term (Four to Ten Years from now)	Midlands	<ul style="list-style-type: none"> <li>● Hampshire &amp; Avon (West Hampshire, South Wiltshire)</li> <li>● Kennet &amp; Pang (North Wiltshire)</li> <li>● Upper Thames (South Gloucestershire, West Oxfordshire)</li> </ul>
Long Term (More than ten years from now)	South wales	<ul style="list-style-type: none"> <li>● Whole region</li> </ul>
	Midlands	<ul style="list-style-type: none"> <li>● Whole region</li> </ul>
	South west england	<ul style="list-style-type: none"> <li>● Whole region</li> </ul>

## Did you know?

Below are a few facts regarding water scarcity, water use within the food and drink industry and water use at home.

Consider incorporating these facts into posters, newsletters and staff training material. Instilling a cultural change to the way people use water in the home can have a positive effect in the workplace.



The average amount of water used in the home, per person per day is **150 litres**. Annually this equates to over **54,000 litres**, which is equivalent to the volume of a **petrol tanker on a lorry**.

A tap dripping at one drop per second wastes **4,750 litres a year**.  
That is the equivalent of taking **one extra bath a week**.

A typical garden hose uses **1,000 litres (1m<sup>3</sup>) per hour**.  
That is the equivalent of taking **12 baths every hour**.

**690 million litres of water per day** is used in **manufacturing**.  
This is the equivalent of **276 Olympic size swimming pools**, and worth over **£1 million** in water **supply costs** alone<sup>2</sup>

The average **cost** of supplying **1 m<sup>3</sup> of water** in **England and Wales** is **£1.49**

**Freshwater** accounts for only **2.5% of total water on earth**.  
The remaining **97.5%** can be attributed to the **oceans, ice and contaminated water**.

<sup>2</sup>Assuming that all water savings are from the public water supply, and an average cost of £1.49/m<sup>3</sup> applies, based on the average standard user tariff for 2013 from main water companies in England and Wales.

## Key questions

Before you try to influence behaviour within your company, you need to consider the following:

### Whose **behaviour** needs to be **changed**?

Is it senior management's **behaviour** that needs to be **changed**, or is it the entire **workforce**?



### What will **change** achieve?

**Improved** environmental **consciousness** of employees, and improved process and water efficiency.

### How do we measure success?

**Establish** a realistic water reduction target (e.g. 5% reduction over [x] years)?

Develop recording and monitoring measures to track progress.

### Why should these behaviours change?

Reasons for water efficiency on site?

Cost savings.

## Behavioural inertia: root causes and bad practice

Understanding the attitudes of employees in your business will enable you to communicate the right messages in the right way. Some examples of employee attitudes towards change are shown below – how many relate to your business?

### “It’s not my job”

This may demonstrate a lack of initiative within the workforce.

### “What’s in it for me?”

This may indicate a lack of incentive. This could be either an internal or external incentive.

### “What difference will it make anyway?”

This may indicate a lack of environmental consciousness on site.

### “I’m keeping my head down this time”

This maybe a result of negative or insufficient feedback resulting from an idea / suggestion made previously.

### “When the MD makes his mind up, I might do something”

This almost certainly demonstrates a lack of consistent leadership (e.g. ideas changing within senior management at regular intervals).

### “Nobody told me about it’

This may demonstrate a lack of communication within your organisation.

### ‘Nobody else is bothering, why should I?’

This may indicate a problem with morale and demotivated staff.

### “If it’s such a good idea, why have we not done this before now?”

This may indicate a problem with morale and demotivated staff.

### “I haven’t got time”

This may indicate a lack of capacity (in the form of resources and budgets).

## Key steps

There are four steps to influence behaviour within your company:

1. Pressure for change, including consumer expectation: clear drivers;
2. Clear and shared vision: a shared agenda;
3. Capacity for change: making resources available; and
4. Action: "Plan – Do – Check – Review".

### 1

## Pressure for change

To manage change you need to understand what the drivers are. These can be varied, and different at each site within your business. Common drivers include:

- **Your supply chain customers:** Pressure for change may be driven by your supply chain customers. With increasing importance attached to Corporate Social Responsibility (CSR), many companies, regardless of size, are involving their supply chain within their own CSR programmes.
- **Cost:** Reducing water use can bring about cost savings. Educate your employees that water use is costly; you don't just pay for its supply, you also pay for discharging it to sewer, and emphasise that reducing reliance on water will have a positive impact on your company.
- **Regulatory compliance:** This may require improved efficiencies on site. Particularly in the case of sites which require an Environmental Permit, where a water review will need to be undertaken every four years. This is designed to demonstrate continual improvement relating to water efficiency on site.

## Think about it!

Communicate the true cost of water. You will be surprised at the number of people who might think that the cost is low, or even FREE.

- **Implementation of an environmental management system (EMS):** Water use should be a key consideration within your EMS. Your supply chain and stakeholders may also require improved efficiencies, including water reduction targets. Including these targets within your EMS is a good way to communicate commitment and continual environmental improvement to your supply chain.
- **Senior Management** Make ambitions for water efficiency official. For example, via a company policy. If senior management has not committed to this, ask them to commit to efficiency practices on site.

Communicate regulatory requirements on water efficiency on site.

Ensure employees understand the importance of identifying ways to reduce water.

## Think about it!

Senior Managers do not have a monopoly on good ideas. Providing the opportunity for all to contribute towards your EMS will make your job easier.



## 2

## Clear and shared vision

To influence behaviour on site, staff need to have a clear understanding of the company's vision and goals. It's important to communicate this with facts to support your vision and goals.



### Think About It!

Communicate what you are trying to achieve. **WHAT IS YOUR GOAL?**  
For example, reduce water use by 20% by 2020 from a 2007 baseline.

#### Is the goal to reduce costs?

Step 1 identified that if you are looking for cost savings, don't be shy to communicate this to employees.

#### Is the goal to reduce the company's impact upon the environment?

Most people will be unaware of the environmental impact associated with using and disposing of water. Communicate this to your staff.

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## Communicating your company vision

- **Induction** – Communicate your vision and goals at the start of employment. This way company visions and goals are embedded at the start of someone's employment.
- **Meetings/workshops** – Team meetings are good places to communicate your company's visions and goals. Staff should be encouraged to participate and present ideas for improvement during these meetings.
- **Notice boards** – Use noticeboards to communicate your company visions and goals and the progress made towards these. Make it easily understandable and use images.
- **Posters and stickers** – Erect posters or stickers around site to act as a gentle reminder of how employees can contribute to achieving the company visions and goals.
- **Newsletters are good tools** – for letting colleagues know that water efficiency is an important item on the company's agenda.

### Think About It!

Notice boards should be placed in areas of high staff footfall, e.g. near changing rooms, the staff entrance or in staff canteen areas.



Encourage all staff to contribute to your EMS. Good ideas from staff can be integrated into your EMS action plan or management programme.

## Motivation

Give your colleagues a reason to care. Some of the most common motivators are listed below for inspiration on ways to achieve this:



**Do you know what motivates your staff?**

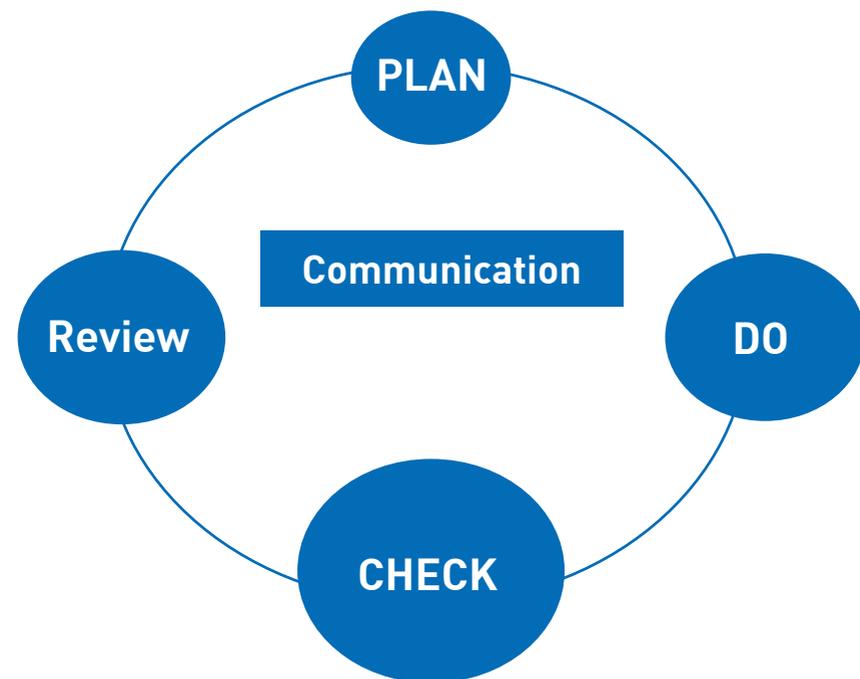
## Capacity for change

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- All companies need to put in some effort to change behaviour in the workplace. Therefore, it is important to provide the resources in order to achieve this change.
- Note: the level of effort and resourcing may change with time.
- Firstly, you will need to conclude what resources are needed to facilitate change in the workplace? Is it time, money, both?
- Involve relevant members of staff at all levels as they have valuable information, the intuition and ideas to bring about change.

When managed correctly behavioural change is a continuous cycle of improvement (much like many of the management systems you may have implemented already within your company). The key stages are:

- Plan: Establishing the objectives and processes to deliver results
- Do: Implementing the objectives and processes within your company.
- Check: Monitoring and measuring goals
- Review: Reviewing goals and progress



## PLAN

### Do background research

- Why do you want to change behaviour on site?
- What are the key drivers that are pushing for the change?
- What are you looking to achieve?

### Look at your company policies, mission statements

- If policies / mission statements are not in place, develop them to support your company visions and goals.
- Link your policies / mission statements with your company visions and goals and review regularly.
- Make sure your policies / mission statements are endorsed by senior management.

### To demonstrate a clear and shared vision, identify who needs to be on board and who can be influential

- Engage with your staff at all levels and identify whether there are any gaps.
- Do you have enthusiastic staff who are interested in what you are trying to achieve? If yes, use them to champion your cause.

Find out what drives employees, from senior management to shop floor.

- Don't forget, what drives and motivates one person may not necessarily motivate the next.



## Think About It!

You may only have one opportunity to make a good impression, so think it through

## Develop a plan

## DO

### Know what you want from senior management

Think about what you require from your senior management team and action it:

- Do you want them to just be on board?
- Do you want them to also rally their staff to the company vision and goals?
- If senior management is hard to get on board, provide them with the business case for improved staff engagement, ideally quantifying the benefits that it can bring to the business.

### Use advocates

- Ask influential communicators within the business to help promote the message to the business.

### Remember to link your message

- Implement what you have planned, but ALWAYS remember to link back to your company visions and goals.

## Implement the plan

## CHECK

### Failed at the first hurdle?

- You may think that your efforts have made no impact, or you may not notice much change at first. The trick is to persist with your activities to bring about change.
- Sometimes your efforts may have failed, however, use this as a positive (rather than thinking that this is a failure) and adapt your approach.

### Good Monitoring

- Ensure that you have robust monitoring and measuring methodologies in place. Without this it is difficult to track progress. Methodologies should include the need for:
  - consistent reporting – i.e. at the same time, every day, month etc.; and
  - recording data in a suitable format

### Analyse data

- Reporting absolute reduction in water use does not take into account any changes in production. Water intensity (the ratio of water use to product) provides an effective method of assessing performance and demonstrating an improvement in water efficiency.

### Feedback

- What has been done?
- What has been gained?
- What does it mean for your business?

## REVIEW

### Close the loop

After the checking stage, conduct a review to assess:

- whether, and to what extent, the company visions and objectives are being met;
- that communications are being appropriately managed; and
- to evaluate any change in circumstance. This will assist in making recommendation for further improvement.

### Utilise existing management systems

Whether this is your Quality, Health and Safety, Environmental or integrated Management systems. These will provide you with the framework to achieve your company vision and goals and provide a platform to change behaviour.

### Maintain momentum

- Incorporate new ideas to constantly refresh your campaign and maintain its momentum and success.
- Look at different methods of delivery. For example, encourage staff to be more efficient at home as well as at work.

### Reward and recognise

- Celebrate efforts that employees make, whether ideas suggested or actions they have implemented. Employees will thrive on this, and if other employees are involved in this process, they are more than likely to join in.

## Practical measures for behaviour change on site

- Forced behaviour change.
- Assisted behaviour change.
- Motivated behaviour change.

Forced behaviour change refers to measures that a company can adopt to ensure a change in behaviour e.g. the employee has no other option other than to 'do it the correct way'.

If your goal is to reduce water use, examples of forced behaviour change could include:

- fitting automatic shut off devices on all hoses;
- shortening hose length or remove hoses, to limit non-essential use. Not all areas need to be hosed; dry cleaning can be just as effective in certain areas;
- lock hoses when cleaning is not required and avoid unnecessary use of water; and
- fit automatic controls on equipment (e.g. spray bars, tray washers, cleaning in place systems, etc.), so manual practices, which can result in ineffective cleaning and often uses excessive amounts of water, can be avoided.

Encourage all staff to contribute to your EMS. Good ideas from staff can be integrated into your EMS action plan or management programme.

Assisted Behaviour Change refers to measures that a company can adopt to assist employees to adopt more efficient working practices.

Training – Consider developing short and succinct training sessions focussing on water efficiency within your business. Tailor the training sessions to suit the audience. As a starting point, you should consider developing and delivering the following training sessions:

- **general water awareness** – this training session should be delivered to shop floor staff and include guidance on water efficiency best practice, along with water facts and figures about your business. You should include the cost of water in the training; and
- **water efficiency for senior management** – this training session should provide a general overview of the costs associated with using water and disposing of wastewater. You should include information on how water efficient practices can have a positive impact on the business e.g. reducing costs, demonstrating commitment to your supply chain, stakeholders and regulators. Provide a business case for continued improvement and feedback on past achievements and performance against targets.

Procedures and guidance – Consider developing water efficiency procedures and guidance notes. These should provide the following information:

- good practice measures to be implemented on site;
- recording and monitoring methodologies to be adopted on site;
- how to interpret your site's water use data; and
- how best to report the data to employees and stakeholders.

Newsletters – consider using an internal newsletter, as a tool to communicate information on water issues specific to your business. This could mean including water issues within an existing communication forum, or creating a new document.



## Think About It!

A newsletter doesn't have to be glossy or lengthy but it must communicate the message effectively to your staff.

Posters and stickers – water efficiency posters and stickers can be displayed in key areas around your business, e.g. wash down areas, washrooms, etc.



## Think About It!

Make posters specific to your business – these often have the most impact on employees and consider renewing them regularly to maintain momentum.

Some examples of posters that your business can use are shown below. These four posters are available on [www.wrap.org.uk](http://www.wrap.org.uk) and can be easily adapted to incorporate your company's logo.

wrap

**Turn off hoses and taps!**




A running hose uses **1 m<sup>3</sup> of water** per hour...  
... that's the same capacity as **5 drums!**

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**Report leaks and faults!**




A dripping tap wastes **9,500 litres of water** per year...  
...the same capacity as a **transit van!**

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**Turn off hoses and taps!**




A running tap uses **5 litres of water** per minute...  
...that's **15 mugs** of tea!

wrap

**Dry clean instead!**




Dry cleaning can:

- save **1,000 litres of water** per hour... the same capacity as an IBC!
- reduce **product loss** to drain, and
- help **save money**

Motivated behaviour change refers to measures that a company can adopt to motivate employees to change their behaviour.



## Think About It!

It is important to remember that motivation is a key factor for successful behaviour change within the workplace. Without motivation, employees' willingness to make the change is likely to be non-existent.

Suggestion scheme – staff can often be sceptical about employee engagement and staff suggestion schemes. This may be due to failed attempts in the past. Common reasons for failure include:

- staff being unaware of the purpose for the suggestion scheme;
- poor and infrequent communication and feedback;
- lack of continued motivation and momentum; and
- no perceived improvement.

To ensure a successful suggestion scheme is implemented within your company, think about the following:

- empower employees by demonstrating that their contribution to the scheme is key and can have a significant impact upon the business;
- ensure that there is a continual and effective communication and feedback; and
- consider providing recognition of good suggestions (e.g. acknowledgment in the company newsletters or financial reward).

Introducing competition – most people have a competitive streak. Some companies have recognised this, and harnessed it to bring about change within the workplace. Your company should consider the feasibility of introducing a competition scheme between comparable lines / shifts / sites.

With the help of water sub-meters you will be able to build up an accurate picture of water use in key areas of your site. The competition scheme should then celebrate your most water efficient teams.

### Find out more

Managing Change is a guide to resource efficiency and Corporate Responsibility. This guide is accompanied by a 'Management Change Matrix', a single page document that can be used in management team discussions on resource efficiency performance. Used as a gap analysis, it can identify areas that require further attention.

[www.oursouthwest.com](http://www.oursouthwest.com)

Remember, even the smallest of suggestions can result in big benefits to a company, so try and get as many employees involved in the scheme.

Harness your employees competitive streak, you might be surprised at the results in can bring to your company.

## Further information on water efficiency

WRAP offers independent, practical and proven guidance through:

- information resources, from case studies to best practice guides; and
- an informative website ([www.wrap.org.uk/category/materials-and-products/water](http://www.wrap.org.uk/category/materials-and-products/water)).

WRAP's Business Resource Efficiency hub includes some tools and updated guidance including water use

[www.wrap.org.uk/content/business-resource-efficiency-hub](http://www.wrap.org.uk/content/business-resource-efficiency-hub)

### Water efficiency publications

- Water Minimisation in the Food and Drink Industry
- Saving Money Through Resource Efficiency: Reducing Water Use
- Reducing Your Water Consumption
- Tracking Water Use to Cut Costs

[www.wrap.org.uk/content/resource-efficiency-publications](http://www.wrap.org.uk/content/resource-efficiency-publications)

### Online resource efficiency tools

Here you will find useful tools to help you embed resource efficiency in your business.

[www.wrap.org.uk/content/online-resource-efficiency-tools](http://www.wrap.org.uk/content/online-resource-efficiency-tools)

### The Rippleffect

A water efficiency support package to help you take action to reduce water use and save money, including online modules, videos, case studies and guidance documents.

[www.wrap.org.uk/content/rippleeffect-water-efficiency-businesses](http://www.wrap.org.uk/content/rippleeffect-water-efficiency-businesses)

### Water Decision Tree Tool

Get rapid access to the water efficiency tools and information that best meet your requirements.

[wdt.wrap.org.uk](http://wdt.wrap.org.uk)

### Water Monitoring Tool

This tool can be used to easily record and track where water is being used in your organisation.

[www.wrap.org.uk/content/water-monitoring-tool-0](http://www.wrap.org.uk/content/water-monitoring-tool-0)

### Mogden Formula Tool

This tool calculates the charges water and sewerage companies apply for the conveyance and treatment of effluents discharged to the public wastewater network.

[www.wrap.org.uk/content/mogden-formula-tool-0](http://www.wrap.org.uk/content/mogden-formula-tool-0)

