



**Sustainable Operations :  
Detailed Guidance**

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## Foreword

The Theatre Green Book give theatre-makers and companies common standards for the sector's journey to sustainable practice. Sustainable Productions sets common standards for producing shows sustainably. Sustainable Buildings provides guidance to make theatres fit for purpose in the context of the climate emergency.

This volume, Sustainable Operations, covers everything else theatres do, from catering to rehearsals, offices to travel.

Theatre's impact on the planet is broad. Public buildings use energy. Audiences, staff and performers have to travel. The numerous operations that theatre needs, from rehearsals through to marketing, selling tickets, collecting waste, running dressing rooms and making coffee, all add to theatre's footprint.

It isn't a matter of deciding which is the worst offender and forgetting about the rest. If theatre is to become sustainable, and be seen by the public as sustainable, then it has to review every aspect of what theatre-making means, and rethink every way in which it currently harms the planet.

Building on theatre operators' own expertise, and the knowledge of theatres who have already begun this journey, Sustainable Operations provides solutions to those challenges, and offers a step-by-step approach to addressing them.

**Lisa Burger and Paddy Dillon, Renew Culture**

**sustainable operations**  
**DETAILED GUIDANCE**

# 1 Introduction

## 1 The ETC Green Book

The climate crisis is an immediate threat to our safety, equity and prosperity.

Theatre cannot solve the climate crisis, but it can play a role in addressing it, by creating new narratives, and reflecting the challenge of a world facing frightening change.

To do that, theatre itself needs to become sustainable.

The European Theatre Convention has set a target for its members to achieve net zero by the end of 2030. The ETC Theatre Green Book provides a pathway to achieve this vital transition.

## 2 The ETC Theatre Green Book

No theatre can become perfectly sustainable overnight. Reaching net zero - learning to make theatre without harming the planet - is a transition that will take place over a number of years.

The ETC Theatre Green Book provides its members with:

- A framework for planning the transition
- Standards for sustainability
- Guidance for each area
- Tools for measuring progress

## 3 The Framework

The ETC Theatre Green Book divides the challenge into three areas. Together, they give theatre clear, practical and detailed guidance towards sustainability:

- 1 Sustainable Productions
- 2 Sustainable Operations
- 3 Sustainable Buildings

## 4 The Standards

The ETC Theatre Green Book sets three standards for the transition to net zero. The standards apply to all three areas of running a theatre: Productions, Operations, and Buildings.

- Basic standard is the first step on the journey. It requires meaningful change, but it isn't too hard to achieve. Many theatres are already working at basic standard.
- Intermediate standard is the next step on the journey.
- Advanced standard is, effectively, net zero theatre.

## 5 The Guidance

The ETC Theatre Green Book (main volume) explains the basic principles of sustainable theatre in each area, productions, operations and buildings. To support each area, the ETC Theatre Green Book also gives detailed guidance. This volume is the detailed guidance for productions.

## 6 Measuring Tools

The ETC Theatre Green Book provides tools for measuring your progress in each area:

- A Production Calculator to assess productions
- An Operations Tracker to manage progress in operations
- A Building Survey Tool to help generate a Sustainability Plan for buildings.

The tools can be downloaded as Excel workbooks from the Resources area of the ETC website.

## 7 Self-Certification

To help track progress towards the target of 2030, the ETC Theatre Green Book helps theatres to self-certify the standard they've reached.

- Begin with a Preliminary certificate to demonstrate commitment, and to show that you've made preparations to begin the transition.
- Then progress through the three standards - Basic, Intermediate, Advanced - demonstrating that you've reached each standard for your productions, operations and building.

An Excel workbook for submitting your self-certification can be downloaded from the ETC website resources area. When it receives them, the ETC will issue certificates and logos to include in websites and communications.

## 8 The European Theatre Convention

Theatre has an impact on the planet. Productions use energy and materials, require travel, create waste and employ harmful chemicals; while operations require travel and create waste, and buildings consume energy. The transition to net zero is vital and urgent.

It requires shared ideas and expertise, shared learning, and mutual support. It will only happen if we make the most of our networks.

The ETC is Europe's largest and most dynamic theatre network, uniting theatres of extraordinary creative energy. It has a unique role to play in achieving the transition to net zero by 2030.

# 2 Starting Out - Preliminary Standard

## Introduction

Developing your green organisation is the first step in the transition to net zero. It forms the first action in the ETC Theatre Green Book 'Preliminary' standard and is repeated as the first action in the ETC Theatre Green Book's standard for Sustainable Operations.

### 1 Preliminary

To make progress on the transition to sustainable theatre, you need to:

- Commit to the transition
- Organise yourself to support the transition
- Make an Action Plan and timeline
- Work out what data you need to collect
- Decide how you'll communicate progress

### 2 Building a Green Team

You'll only change if you create the right conditions for change.

You need a Green Team, with someone to lead on:

- Productions
- Operations
- Buildings
- Data Gathering
- Communications

Include a member of your Senior Leadership Team.

### 3 Creating a Sustainability Culture

Make sure you have support from the senior management. In addition, establish a green staff network to educate, understand challenges and share ideas. Plan for climate literacy training across the organisation. Clearly communicate targets, milestones and achievements.

Don't forget your other partners. Freelancers, performers and artists, funders, supporters and audiences all need to understand your sustainability aspirations and share in your achievements.

You need a communications plan to share the message about sustainability, celebrate successes, and make sure everyone feels involved. Section 4 of this Guidance is about communicating.

### 4 Choosing a Target

The ETC Theatre Green Book sets three levels for your Operations:

- Basic
- Intermediate
- Advanced

Your Green Team should assess your current position, using ETC Theatre Green Book 'Basic' standard as a checklist. Create an Action List of things you haven't done yet. Then decide which level to target and set yourself a timeline to achieve it.

### 5 Priorities

It's easy to get confused by the many conflicting challenges around sustainability: buying new equipment, marketing shows, audience travel, printing and publishing, communication and marketing, legal and business services, computer services, catering, and so on. Some are easy to change. Others are beyond your control. Concentrate your energy where it has most impact. To help you, the ETC Theatre Green Book divides Operations into six areas: Paper and Digital; Food, Drink and Retail; Managing the Building; Reuse and Recycling; Travel; and Contracts / Procurement.

#### 1 Focus on what you can control. Don't worry about what you can't.

For example, audience travel is likely to be a major part of a theatre's impact. You can inform audiences about green travel options and incentivise them. You can't force people to travel differently. Do what you can, then move to the next task.

#### 2 Identify what has most impact.

#### 3 Plan your actions by balancing high impact with what's easiest to achieve.

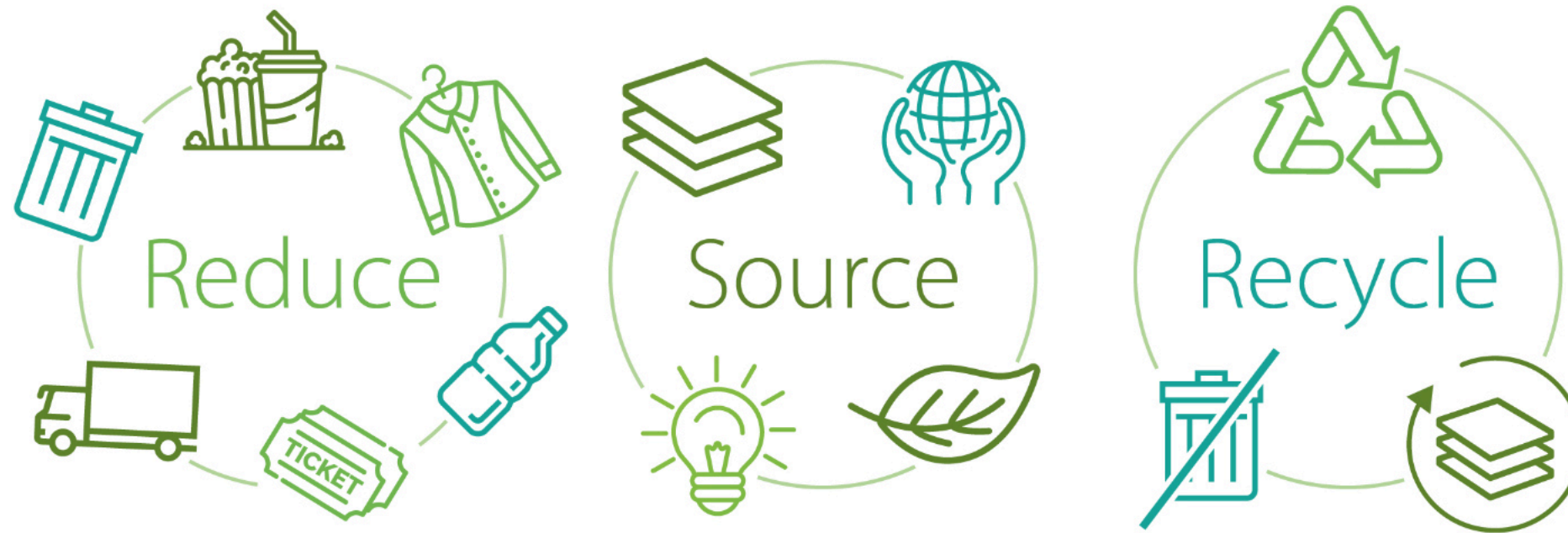
#### 4 Set a timetable for each action.

The Operations Tracker will help you.

### Sustainable Operations

There are some overlaps between Sustainable Operations and Sustainable Buildings. Sustainable Operations covers the challenge of managing buildings sustainably, whereas Sustainable Buildings shows how to upgrade them to be more sustainable. Whatever your role, it's worth looking at both volumes.

# 3 Key Principles



## Introduction

Sustainable Operations covers a wide range of different activities. But the principles are simple:

**REDUCE** how much you use.

**SOURCE** what you use as sustainably as possible.

**Reuse or RECYCLE** everything you can.

Everything is easier if you collaborate, form networks and communicate.

## 1 Reduce

First, reduce how much energy or resource you use. Whether it's the electricity you draw, the waste you generate, the paper you buy, or the size of your website, powering and sourcing things sustainably is easier if you first reduce your consumption.

## 2 Source

Next, source everything as sustainably as possible. For example, buy your electricity from renewable sources; find the most sustainable type of recyclable cup for your cafe; or buy locally to reduce travel.

To source goods and services as sustainably as you can:

- Specify sustainable materials
- Shorten supply chains by purchasing direct
- Question suppliers about their products and the transport they use

## 3 Reuse or Recycle

Finally, dispose of your waste as sustainably as possible. There's guidance in section 7. Reuse or recycle everything you can: for example, send used cooking fat for biofuel; give waste timber to local schools; or sell unwanted furniture second-hand.

### Buildings

Theatre buildings are among theatre's most significant carbon impacts.

Section 7 (Managing Buildings) will help your sustainable transition. The ETC Theatre Green Book Operations Tracker suggests practical measures that will reduce carbon impact. The ETC Theatre Green Book Building Survey Tool will help you plan the physical changes needed to upgrade your building.

# 4 Communicating

## 1 Key principles

Theatre can influence society in response to the climate emergency. But only if we communicate our own climate action with our partners and audiences.

We will only change how we work if we communicate with each other.

Theatres need to:

- Share with the public what they're doing to make the transition and work in ways that sustain the planet.
- Share with staff and partners how they're doing it.

## 2 The Message

Good communication needs clear messages:

- Theatres' values and mission, the priority they put on the climate crisis, and their desire to include audiences in the journey.
- How they plan to make their own work sustainable. For example - 'We are on target to achieve ETC Theatre Green Book Basic by December this year'.
- Stories of achievements and successes - for example, how a recent production achieved ETC Theatre Green Book 'Intermediate' standard; or how a member of the technical team found a way to avoid wasting batteries.

## 3 Getting the Message Across to Audiences

Audiences play an important role in theatre's transition to sustainability. Share what you've achieved, what you're doing - and why. Good communication enhances your brand, and involves audiences in a shared initiative.

- Create clear, consistent communications.
- Share your sustainability plan with your audiences. If you're targeting ETC Theatre Green Book standards for productions, publicise it on ticketing and marketing material. Once you have reached a standard, use the self-certification tool to get an ETC Theatre Green Book logo and use it. If you have a Sustainability Plan for your building, advertise it. Tell audiences about your Operations standard, and explain how catering or marketing operations help achieve it.
- Share good news stories, goals, data, and accomplishments. Include a regular sustainability slot in your newsletters or social media. Invite audience representatives to environmental days.
- Theatres can communicate sustainability to young people. Include it in your education work with schools.
- Help audiences, example with sustainable travel options (see Section 9). You need to involve them if, for example, you want more plant-based choices in the restaurant, or to reduce sales of bottled water at the bar.
- Social media, websites, programmes, tickets, newsletters and emails all offer opportunities to share your sustainability message.

## 4 Getting the Message Across Within the Organisation

A sustainable organisation involves everyone including trustees and senior management, staff and free-lancers (see Section 2 above).

- Set clear goals and targets
  - Make sure information is available to everyone
  - Share what you have learned, honestly and openly
- Everyone has a role to play in making theatre sustainable. To include their energy and expertise, keep them fully involved.
- Update on sustainability in company meetings and communications
  - Share the sustainability standards of the production everyone is working on
  - Share targets and successes in your operations, and in upgrading your building
  - Make sure you credit the work, commitment and skill that goes into each action.
  - Celebrate success

## 5 Getting the Message Across to Everyone Else

No one can make theatre without freelance artists, practitioners and actors. To help them work differently, keep them fully informed, and provide them with the support they need.

As everyone joins the team for a production, make sure you've told them what you expect, and provided all the information they need.

# 5 Paper and Digital

## 1 Introduction

Theatres use paper and printing for marketing, ticketing and programmes, planning schedules, rehearsal scripts, reports, and records. They print on in-house machines, as well as commercially printing large-scale posters and multiple copies of programmes. Sustainable theatres reduce paper and printing to a minimum.

'Digital' is often the solution to reducing paper - for example, with digital ticketing. But digital also has a large carbon footprint. Websites, video clips, emails - all require energy-intensive storage. 'The cloud' isn't really a cloud - it means server farms with heavy cooling needs.

The ETC Operations Tracker contains checklists of ideas to help you plan strategies for paper and printing, and for digital management.

## 2 Paper and Printing Front of House

### Paper

In the past, marketing and box office produced posters, flyers, mailshots, cast lists, programmes and tickets. The switch to digital tickets and websites has cut paper use a lot. Review your continuing paper requirements to find paperless alternatives.

You don't need to cut all paper immediately. Sustainability is a transition. Digital and paper operations can run together - for example, programmes can be available online, even if you also sell paper copies to some of your audience.

The important thing is to print only necessary quantities. If you have many wasted cast lists or programmes, you're printing too much.

If using paper, make sure it comes from a recycled source and will be recycled again later.

### Printing

Marketing posters are part of the environmental impact of your marketing operation.

Choose a local printer who uses recycled papers. Try to find one who

offers sustainable printing methods, using non-toxic inks. Make sure your environmental requirements are part of any procurement process for printing (see Section 10).

## 3 Paper and Printing Back of House

Review how much you print and ask where it can be reduced. Even where printing can't be eliminated, you can still reduce it. For example, rehearsals may still need some paper scripts - but question whether every cast member needs a new script with every change. Schedules are often printed when they could be shared digitally. Meetings don't need agendas and minutes for everyone.

Require double-sided printing, and ensure staff minimise how much they print. Central printers (requiring staff to go elsewhere to collect prints) reduce printing; so have systems that identify who orders each print.

Make sure printing and paper supplies are sustainably sourced.

## 4 Digital

Unfortunately, digital is not a zero-carbon alternative. The internet, email and cloud-based services cause heavy carbon emissions in manufacturing, powering and cooling computers and data centres.

Your website isn't a store room with infinite capacity. It needs to be actively managed.

### Websites

Without your knowing it, your website may have a large carbon footprint. Online carbon calculators can help you understand it (see sidebar). You can manage it in two ways:

- Choose an internet provider who offers a sustainable operation.
- Minimise internet page numbers and data size.

The Operations Tracker contains suggestions for how to reduce data size. Movies consume storage capacity. Images are often stored at higher res than the internet needs. Don't keep obsolete pages and information longer than you need.

## Digital Communications

Digital communication carries its own carbon footprint. Most emails don't need to be stored, so establish guidelines for deletion.

The Operations Tracker contains suggestions for managing digital communication. Once you've made a policy, make sure it's fully communicated with staff, that everyone understands it, and complies with it.

## Storage

Digital storage grows every year. We imagine 'digital' means keeping everything forever. That a nightmare for sustainability.

Keeping multiple copies of large documents increases digital storage exponentially. While editing a promotional film, for example, we often save copies of each edit. Saved copies often stay on the server, or in the cloud, for years. The same applies to high-res photographic images, audio files, schedules, reports, minutes and programmes.

Begin a project to review current storage and discard unneeded files. Establish clear guidance for everyone in reducing digital storage to a minimum.

### Digital

According to the International Energy Agency, data centres consume nearly 1% of global electricity demand. Greening the internet is a new shared responsibility:

- Investigate your website emissions with carbon calculators like this one: <https://www.websitecarbon.com/>. An average web page produces 1.76 grams CO2 per page view. For a website with 10,000 monthly page views, that's 211 kg CO2 per year (the equivalent to the CO2 absorbed by about 10 trees each year).
- Fewer webpages have a smaller impact. Minimise data size (in MB), particularly through video and image content.



# 6 Food and Drink, Retail

## 1 Key principles

Around a quarter of global greenhouse gas emissions come from food, and more than half of this comes from animal products. Theatres can help tackle this challenge through:

- Their public catering offer
- Staff canteens

Addressing your catering offer is one of the single biggest impacts you can have on your theatre's overall carbon footprint.

A more sustainable catering approach means:

- Sourcing food and drink locally and sustainably; and reducing or eliminating food products with a high carbon impact.
- Reducing food waste.
- Choosing and managing kitchen and bar equipment sustainably.
- Sustainable catering service and packaging (e.g. avoiding disposables).

The Operations Tracker includes suggestions to help your transition to more sustainable catering.

Retail operations have less of an impact, but still require thoughtful management as part of the transition to net zero.

## 2 Sourcing Ingredients

The ingredients you serve and suppliers you work with are the foundation of sustainable catering. Make your menu seasonal, and champion local producers. Ingredients sourced from further away should be sourced directly from producers or through certified sourcing programmes.

Support plant-based ingredients by offering a range of plant-based starters, mains and desserts. Gradually shift away from meat and fish through plant-only starters and by highlighting plant-based 'house' dishes. For meat or fish, use only high-welfare meat and dairy, and responsibly sourced fish.

Re-think bar snacks. Offer plant-based options, seek out dairy that's high welfare, and favour locally-sourced products to reduce food miles.

## 3 Reducing Food Waste

Waste from foyers and catering departments is hard to organise. Audit waste to identify where food is being wasted and implement a reduction strategy (for example, by reducing some portion sizes).

Ensure any unavoidable food waste is sent for anaerobic digestion or composting. Label bins clearly. Use pedal bins with visual signs on the lids, and instructions in language that suit your staff and audiences.

See Section 8, Reuse and Recycling.

## 4 Kitchen and Bar Equipment

The energy and water used in kitchen and bar equipment has a significant impact. Some beer delivery systems use less power, and less water for cleaning. Consult suppliers for advice on low energy options, and include sustainability as a criterion when selecting equipment.

Good maintenance and training ensures efficient operation. Review all equipment and operations to identify sustainability wins.

## 5 Catering Service and Packaging

Promote recycling wherever possible.

Avoid single-use cups and glasses. If you don't allow glass in the auditorium, source reusable cups and glasses made from aluminium

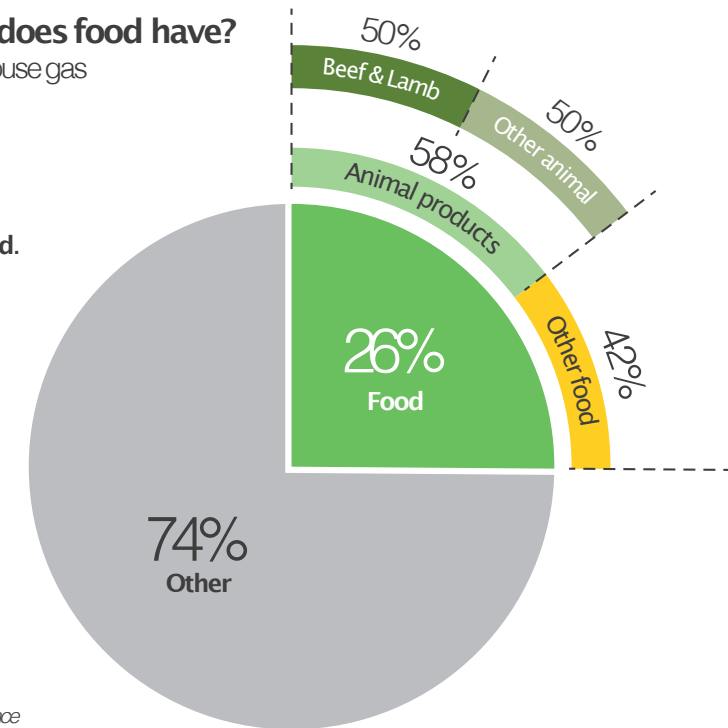
### How much impact does food have?

Proportion of total greenhouse gas emissions from food

A quarter of global emissions come from **food**.

More than half of food emissions come from **animal products**.

Half of all farmed animal emissions come from **beef and lamb**.



Source: Poore & Nemecek (2018), Science

or recycled plastic. Communicate clearly how they should be returned, and train your team to help. Be ready to serve coffee and water in customers' own reusable cups.

Source bar snacks in compostable packaging, if possible. For example, ice creams can be scooped in cones, or served in reusable cups with edible spoons. Buy savoury snacks from large catering packs, store them in glass vessels and serve into reusable containers or paper bags.

If your staff wear uniforms such as T-shirts, make sure they're locally sourced from natural fibres, and laundered sustainably with low-impact products.

## 6 Retail

If you have a retail operation:

- Sell non-perishable products that are designed to last.
- Work with your suppliers to avoid single use plastics and excessive non-recyclable packaging.
- Minimise deliveries.
- Avoid plastic carrier bags. Use recycled, reusable and biodegradable packaging.
- Promote and partner with sustainable products and brands.
- Encourage suppliers to share their sustainable policy.
- Sell re-usable coffee cups and water bottles.

# 7 Managing Buildings

## 1 Introduction

### Managing Buildings

Theatre buildings are among theatre's biggest carbon impacts. The transition to net zero depends on reducing how much energy they use. This section is about how to manage facilities as efficiently as possible. This is an area where you can reduce carbon even if you do not own your building. 'Sustainable Buildings', the final section of the Theatre Green Book is relevant if you have control over your building. It is about how to upgrade them, to make them fit-for-purpose in the climate emergency.

### Sustainable Buildings

Sustainable Buildings provides guidance on upgrading buildings by:

- Better insulation, double-glazing and draught lobbies, so they need less energy.
- More efficient building services such as heating, cooling and hot water, so they use less energy.
- Renewables such as Photovoltaic ('PV') cells that generate on-site energy.
- Support for biodiversity and reduction of water use.

Sustainable Buildings is supported by a 'Building Survey Tool' that allows building owners or managers to enter details about their premises and generate an initial Sustainability Plan for:

- Easy Wins that you can implement straightaway.
- Maintenance projects you can plan into maintenance programmes.
- Capital Projects that need fund-raising and planning consents.

In each case, it ranks sustainability interventions in order of impact, to make sure you tackle the most important things first.

## 2 Responsibility for the Building

Many ETC members operate buildings owned by government or local authorities, who are responsible for their upkeep and operation. In that case, efficient management of the building depends on developing a good relationship with the building owner.

Collaborate with the owner to agree targets for efficient operation. Agree to share data on operation and energy use. Agree who holds responsibility for each element of the building. Both theatre and owner benefit from good maintenance and reduced energy costs.

## 3 Controls

To run buildings on as little energy as possible, you need good building controls. Zoned heating makes sure empty rooms aren't being warmed. Timers shut off fans and cooling systems. Movement detectors switch off lights in empty rooms.

If your controls don't allow careful energy management, make it a priority to upgrade them. Until then, good operational procedures ensure lights and heating are switched off.

A Building Management System provides automatic control over your use of energy. But 'BMSs' need to be set up correctly, with good training for the staff who run them.

See Sustainable Buildings for information on works to upgrade controls.

## 4 Behaviour

Good controls won't help if your staff and visitors don't understand them, and behave in ways that waste energy.

For example, don't:

- Leave doors open, so heat escapes from heated to unheated areas
- Leave lights on in empty rooms
- Switch heating systems to full because you feel cold
- Open windows while aircon is running, then leave them open when you leave the room

Those behaviours waste energy, and money

Train staff (and visitors) in sustainable behaviour. Establish a culture where everyone uses the building responsibly.

### Payback

Using less energy can generate important savings. The 'payback' on upgrading controls - the time it takes to pay back their cost through lower energy bills - is often very quick. (Improving behaviours costs nothing but also cuts bills.)

The same applies to many other sustainability measures. If you're hesitating about investing in upgrades, it's worth calculating the savings each will achieve.

## 5 Maintenance

Well-planned maintenance is important for sustainable building management. Maintenance:

- Prolongs the life of building components, plant and joinery.
- Ensures services and equipment operate as efficiently as possible.
- Prevents expensive building failures that disrupt operations.

A 'Planned Preventative Maintenance' Programme tracks the lifespan and maintenance needs of each element of your building, from roofs to boilers. This helps you plan upgrades effectively. Ideally, theatres and companies who manage buildings should maintain a detailed asset register, which provides an inventory of all maintainable assets and their relative condition. This document should include schedules of key maintenance tasks, how often they need to be carried out, and what they are likely to cost.

## 6 Housekeeping

Day-to-day upkeep of the theatre can be more energy efficient and environmentally friendly.

- Laundry: wash on cold cycles, use eco-friendly detergents, hang dry when possible or seek dry cleaners that use wet cleaning.
- Washing: Use eco-friendly chemicals.

- Bathrooms: Use organic soap. Prioritise vegan soaps to promote animal welfare. Reduce products containing palm oil. Use refillable products wherever possible. Buy in bulk to reduce deliveries and packaging.

## 7 Tracking progress

Some cities, regions or countries promote standards for sustainable buildings. ETC members in those places can use those standards to benchmark their building and compare it with others nearby.

Utilities bills give a direct measurement of how much energy you use, either through electricity, or through the fossil fuel you buy (gas, in most cases).

The ETC Theatre Green Book Operations Tracker includes a Calculator that will let you convert kilowatt hours (kwh) of energy into a measure of the carbon impact of your building energy use.

However, improvements in your carbon record will also come from improvements in the electricity supply. Tracking energy, in kwh, gives a better idea of whether you're successfully reducing energy use.

Understanding the energy use of your building as a whole is useful – but it won't tell you in detail where the energy is going. For that you need to:

- Install sub-meters to capture the energy use of each part of your operation (for example, stage lighting).
- Record energy use regularly so as to identify movements over time.

## Technology

Larger organisations manage facilities with Helpdesk platforms, Computer Aided Facilities Management (CAFM) or Building Management System (BMS).

A Helpdesk receives, logs, and responds to service requests raised by staff.

A Computer Aided Facilities Management (CAFM) system automates functions such as scheduling works. It needs good staff training, and a dedicated staff member responsible for reviewing and updating the asset database.

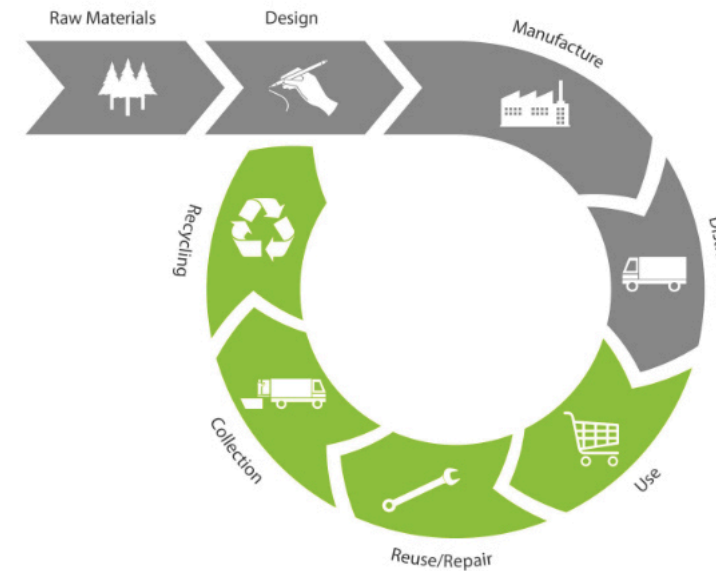
Building Management Systems (BMS) can significantly improve management and efficiency, as well as improving environment and reducing costs. Ensure the BMS is functioning appropriately and users are fully trained.

The 'lock-down year' of 2020/2021 can set a baseline for the energy the building was consuming when closed.

# 8 Reuse and Recycling



The Waste Hierarchy



The Circular Economy

## 1 The Waste Hierarchy

The Waste Hierarchy (see above) sets a framework for managing waste sustainably. Wherever possible, prevent and reduce waste. Next, re-use where you can (for example, a glass or crockery plate), then recycle (for example, recycling the material in a paper cup to make new paper products). Finally, recover energy value from discarded material (for example, by burning timber products as biomass).

Only after these options have been considered should anything be disposed of.

## 2 The Circular Economy

Incorporating these principles will encourage staff and audiences to make sustainable choices. It will help us move from a linear economy, where raw materials are turned into objects and then thrown away, to a circular economy, where resources and materials are kept in use for as long as possible.

## 3 Reduce/Reuse

The best way to reduce waste is to avoid producing it. To achieve this:

- Analyse supply chains to identify where you can avoid waste at source.
- Review activities such as catering, ticketing, and education to see where waste is generated and how you can produce less.

- Encourage behaviour in visitors and staff that results in less waste generation.

In addition:

- Choose suppliers who allow packaging, including crates and pallets, to be returned after delivery.
- Choose products that allow containers (e.g. bottles) to be returned for reuse.
- Where packaging can't be returned, reduce it as much possible. Wherever you can, replace packaging with edible or reusable alternatives.
- Eliminate single-use plastics.
- Reduce food waste through tracking food sales and consumption to avoid over-ordering.
- Cut paper waste by encouraging paperless offices and administration.

See volume one of the Theatre Green Book, Sustainable Productions, for guidance on reducing and reusing materials in productions.

## 4 Recycle

Once waste is generated and the products can no longer be reused, reduce how much waste is disposed of by increasing recycling rates. Limit contamination to make sure recyclable material is of good quality:

- Identify the most common waste materials and collect them as separate categories.
- Train staff to understand the waste management and recycling system.
- Educate visitors to dispose of waste properly and reduce contamination.
- Provide sufficient bins to allow for on-site separation of multiple waste streams (e.g. residual, dry recyclables, organic waste).
- Provide clear, concise recycling signage to guide staff and visitors.
- Ensure waste contractors follow the same waste separation strategy. Check they're committed to monitoring and inspecting where sorted waste ends up.

## 5 Recovery / Disposal

Waste which contains energy (such as timber products, or spent cooking fat) can be disposed of through contractors who recover energy as biomass.

Landfill disposal should be handled by contractors able to ensure safe best practice treatment of all waste products.

# 9 Travel and Transportation



## 1 Introduction

Travel is a 'Scope 3 emission'. In other words, it isn't the direct responsibility of the theatre like the gas burnt in a boiler (Scope 1), or the energy produced in a power station (Scope 2). The energy consumed in travel is an indirect consequence of the theatre's operations.

As with many scope 3 emissions, theatres don't fully control travel. They can't tell audiences how to arrive for a production, or re-write bus timetables to suit show times. Audiences may use their journey to shop, go to a restaurant or visit friends, as well as enjoying a show.

Nonetheless, there are concrete steps theatres can take to support sustainable travel choices for:

- Audiences
- Staff
- Visitors, including artists and freelancers

The key to cutting travel emissions is to:

- Reduce the number and length of journeys where possible.
- Identify sustainable travel options and make them easy to use.
- Promote sustainable choices, for example by educating audiences, staff and visitors about the energy consequence of car travel, informing them of alternatives, and incentivising sustainable alternatives.

A 'Green Travel Plan' can bring all these initiatives together.

## 2 Sustainable Travel Options

The most sustainable ways to reach a theatre involve walking, cycling, electric vehicles or public transport.

- Make sure signage for pedestrians is effective to direct pedestrians to the theatre. Work with Local Authorities to make sure routes are well-lit, well-maintained and safe.
- Provide adequate numbers of bicycle racks, as well as cloakroom facilities for folding bicycles. Secure storage protects staff cycles. Some audiences or visitors may be helped by charging points for electric bikes. Marketing and website information can inform audiences and visitors of the facilities you offer.
- Lobby the Council for well-signed and marked cycle routes. In some places it may be possible to partner with a local city-based bike scheme.
- If you have a car park, install electric car charging points. Your website and staff information can promote taxi companies with electric vehicles.
- It may be hard to improve public transport to your premises, but clear information about public transport and timetables can be shared on your website, with links to sales, service information and walking apps. Consider changing show times to suit local train or bus timetables.

## 3 Audiences

Encourage audiences to reduce their journeys, for example by combining theatre visits with other tasks. A single visit for shopping and theatre halves distance travelled.

Travel-share schemes reduce journeys, with audience members sharing car transport, or (electric) taxis home.

A survey of audiences gathers data about current practice, and give you a baseline to work from.

The key to progress is clear information about sustainable travel options. These can be promoted through marketing information during ticket sales, and on your website. It's easiest to get the message across if you've already engaged the audience in your sustainability journey.

### Measuring Travel

Track data to find out if you're making progress.

Gather all the information you can about how audiences reach your venues, so you can measure change over time. Communicate results with audiences.

Record staff and visitor travel. Set targets for improvement each year. The ETC Theatre Green Book Operations Tracker includes a simple travel calculator.

Sustainable travel can be incentivised by:

- A slight reduction of ticket costs for use of public transport.
- Reducing car parking provision (gradually).
- Suggesting audience members offset carbon emissions for travel. It may be possible to link to offsetting schemes, in-putting travel distance through postcode information.

Where theatres attract international audiences, websites should provide information about sustainable ways to travel from abroad.

#### 4 Staff

To reduce staff travel, consider:

- Flexible working, to reduce commuting.
- Video conference calls to reduce travel to meetings. Long-distance journeys should only be undertaken if there's a clear reason why a zoom call won't work.
- Time management to reduce the numbers of long-distance journeys. For example, a single journey can be planned to serve multiple meetings.
- Reducing single journeys in taxis.

Sustainable travel options can be promoted and incentivised by:

- Subsidising cycle purchase.

- Providing more secure bicycle storage (along with tools for repair and shared maintenance days).
- Providing shower facilities for cycle commuters.
- Subsidising local transport bus passes.
- Timing meetings to help staff avoid rush hours.

Your Green Travel Plan can gather information in one place, helping staff use less polluting forms of transport in all aspects of their work.

#### 5 Visitors

To reduce visitor travel:

- Use local contractors if possible.
- For visiting artists, provide temporary accommodation close to rehearsal spaces and venues. Create longer residencies for out-of-town artists. For journeys to theatre or rehearsals, promote sustainable travel options.
- Adopt video-conferencing where possible.
- Employ locally-based freelancers if possible. Some theatres may even choose to cast locally.

#### 6 Deliveries

You can reduce journeys by:

- Planning ahead and consolidating to avoid multiple deliveries from the same suppliers.
  - Ensuring Production and Storage facilities are in close proximity.
  - Sourcing materials locally.
- To ensure deliveries are as sustainable as possible:
- Consider replacing your own transport with an electric van.
  - Seek out suppliers who offer sustainable deliveries.

#### 7 Touring

Sustainable touring is essential if theatre is to move towards sustainability, but still reach audiences. The key is to:

- Reduce the amount of set and equipment you take on tour.
- Reduce the number and length of journeys.
- Choose sustainable transport wherever possible.

There's more advice on sustainable touring in the ETC Theatre Green Book, Sustainable Productions.

# 10 Contracts and Procurement

## 1 Introduction

Theatres and companies don't control everything. They depend on suppliers of food, plywood, paper, and cleaning products. They work with contractors for cleaning, building maintenance, and the upkeep of technical equipment.

To make your operation sustainable, you need all those 'third parties' to share your values and work to the standards you set.

That needs:

- Well-defined standards that you communicate clearly.
- Procurement rules and practices that prioritise sustainability, identify companies with shared values, and reject 'greenwash'.
- Contracts that enshrine sustainability requirements.
- Effective action in monitoring performance.

## 2 Standards

The ETC Theatre Green Book sets standards which are easy to explain. Use it as a reference with contractors.

External standards and guides can also act as references for sustainability. These are often national. ETC members will find appropriate standards within their own countries. Independent certification is essential for any product claiming to be sustainably sourced or zero carbon.

If you need to define standards for yourself, make sure they cover:

- Origin of products (i.e. where originally manufactured, and where raw materials come from).
- Delivery / transport methods and packaging.
- Certification.

## 3 Procurement

Sustainable procurement identifies third parties who will provide what you need in a sustainable way. It helps to identify partners who share your standards, and develop long-term relationships with them, encouraging them to be part of your sustainability journey.

### Procurement Criteria

Make sure sustainability is ranked alongside cost and quality when you select contractors. When tendering goods or services, make sustainability a high priority, and set scoring systems to reflect this. Include sustainability in questionnaires.

### Information

In reviewing companies' information, it can be hard to separate 'green' claims from reality, and easy to get lost in the detail of where components come from and which standards you can trust.

Ask for information on transportation methods and distances. Include questions about packaging, treatment of waste, and whether waste disposal can be included in contracts.

Be clear about your own standards and ask for verification that contractors' proposals will meet them.

### Central Procurement

For larger ETC members, central procurement manages standards across everything you do, and prevents different departments having to create their own templates with every tender. Checklists of approved suppliers saves time on hunting for appropriate partners.

Some governments offer useful guidance on sustainable procurement.

## 4 Contracts

New contracts with external suppliers or contractors should be revised to incorporate sustainable principles, commitments and specific roles. These may involve the right to reuse and recycle products where necessary.

Key Performance Indicators (KPIs) can be introduced to measure performance. They will need active management (see below).

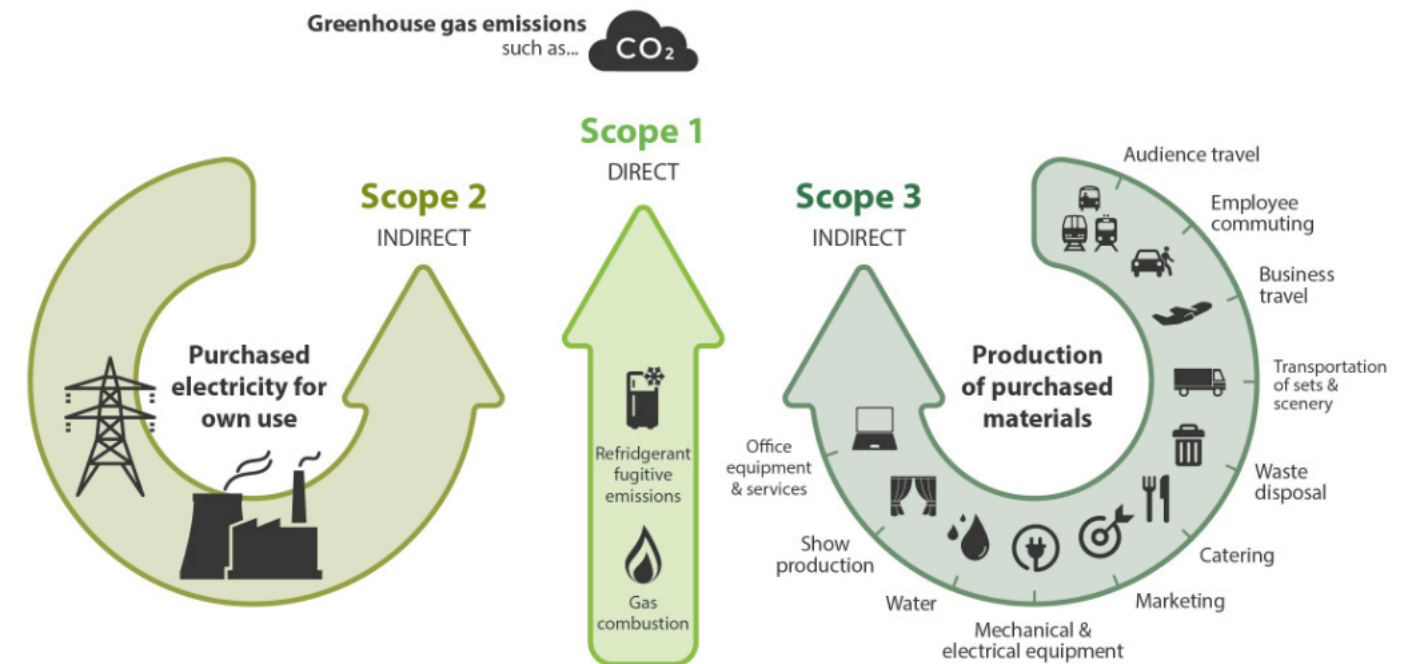
It's sometimes possible, by agreement, to amend existing contracts to incorporate sustainability. Contract riders can bring pre-existing contracts into line with sustainability targets.

## 5 Monitoring Performance

Key Performance Indicators in contracts help monitor performance and ensure sustainable outcomes. They need active management. Staff time must be set aside to monitor performance and raise questions.

If you have limited time and resource, identify the contracts which have most impact and concentrate on them.

# 11 Zero Carbon and Beyond



## 1 Introduction

The goal for every organisation in the ETC is to achieve zero carbon emissions each year: to operate without harming the planet.

For most ETC members, that will take several years to achieve. For some, it may be impossible. For example, most countries don't have a decarbonised transport network to support sustainable touring. Historic theatres can't be fully insulated, and will always need more energy to run at acceptable temperatures.

When theatres can't achieve zero carbon operation, they reach 'net zero' by 'off-setting' the amount of carbon they can't get rid of. Off-setting means calculating your carbon, then investing in a scheme (for example, tree-planting) to absorb the same amount of carbon as the theatre is emitting. In theory, the building's impact is cancelled out: it's 'net zero'.

But accurate carbon calculation is difficult, off-setting is complex, and it can be hard to find reliable schemes. Offsetting is a last resort. The first step is to reduce carbon emissions as far as practically possible.

## 2 Offsetting

If you decide to off-set carbon:

- Carbon offsets should either be procured directly or via recognised offsetting frameworks.
- Off-setting schemes should demonstrate 'additionality' (i.e. they wouldn't be happening anyway), avoid double-counting and provide a clear process for verifying actual carbon savings.

## 3 Regenerative Action

Reaching zero carbon is difficult. All the same, it is important to focus on the need to repair the damage we have already done to the planet.

ETC members should aim to take restorative action by generating electricity, supporting biodiversity, and taking whatever measures they can to address the climate emergency.

The journey need not end at carbon zero.

### Measuring Travel

**Scope 1** emissions are caused directly by the theatre, when it burns fossil fuels like oil and gas in a boiler.

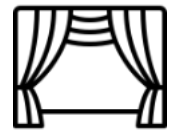
**Scope 2** emissions come from indirect energy generation - i.e. when a theatre buys electricity which the electricity company makes by burning fossil fuels in power stations.

Scope 1 and 2 are mostly within a theatre's control.

**Scope 3** emissions are indirect. They're far harder for theatres to control. They're caused by the journeys audience make to reach the theatre, the carbon emissions of supply companies, and the transport needed to deliver supplies and take away waste. It's easy to get confused trying to calculate, let alone change them.



# You'll find tools and more in the **RESOURCES** area



## Sustainable Productions

for...

- Downloadable Production Calculator
- Detailed guidance
- Case studies
- Toolkit

Go to **Productions** resources



## Sustainable Operations

for...

- Downloadable Operations Tracker
- Detailed guidance
- Case studies
- Toolkit

Go to **Operations** resources



## Sustainable Buildings

for...

- Downloadable Building Survey Tool
- Detailed guidance
- Case studies
- Toolkit

Go to **Buildings** resources

## Certification

for...

- Downloadable Self-certification forms

Go to **General** resources

*Renew Culture are co-founders and co-authors of the Theatre Green Book. We have pioneered the growth of Green Book networks across the world, and are leaders in theatre's journey to sustainability.*

*<https://www.renewculture.co.uk>*

**Renew Culture**  
The Theatre Green Book

*Buro Happold is an international, integrated consultancy of engineers, consultants and advisers. After leading the construction industry in declaring a climate emergency, we've committed to reduce our own impact by achieving challenging science-based targets. We are collectively working towards an equitable and green future by adapting our business to mitigate climate change and the biodiversity crisis and helping others achieve their sustainability goals.*

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