



Climate Action Programme 2024 25th June Understanding and measuring impacts

Julie's Bicycle EUROPE











#### Housekeeping

- Auto-captioning
- Chat and Q&A functions
- Webinar feedback
- Recording and slides available post webinar on Arts Council climate action webpage

https://www.artscouncil.ie/Arts-in-Ireland/Climate-action/Arts-Council-resources-and-supports/





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#### Training webinars

4 June 11am-12pm
Policy development I
Getting Started

11 June 11am-12pm
Policy development II
Getting People on Board

18 June 10-11am
Developing Action Plans
Public-facing buildings
+ bigger energy users

2 July 10-11am Nature & Biodiversity 25 June 10-11am Understanding & Measuring Impacts 18 June 2-3pm
Developing Action Plans
Office-based organisations
+ production companies

9 July 10-11am Buildings Energy 16 July 10-11am Materials & Procurement

October date TBC Influencing change

+ Sept-Oct
Festivals training
webinars



#### The sessions so far should have given you an understanding of:

- what an environmental policy and action plan should cover
- what to focus on in your policy and plan
- how to go about developing them
- who to involve in the process and how

Webinar 1 Webinar 2 Webinar 3 & 4

Map out your activities

Identify related impacts

Map and collaborate with key people / groups

Decide on priorities

Set aims and agree actions



### How many of the training webinars have you attended so far?

• 1

• 2

• 3

• 4

4 June 11am-12pm
Policy development I
Policy development II
Getting Started
Getting People on Board

18 June 10-11am
Developing Action Plans
Public-facing buildings
+ bigger energy users

18 June 2-3pm
Developing Action Plans
Office-based organisations
+ production companies

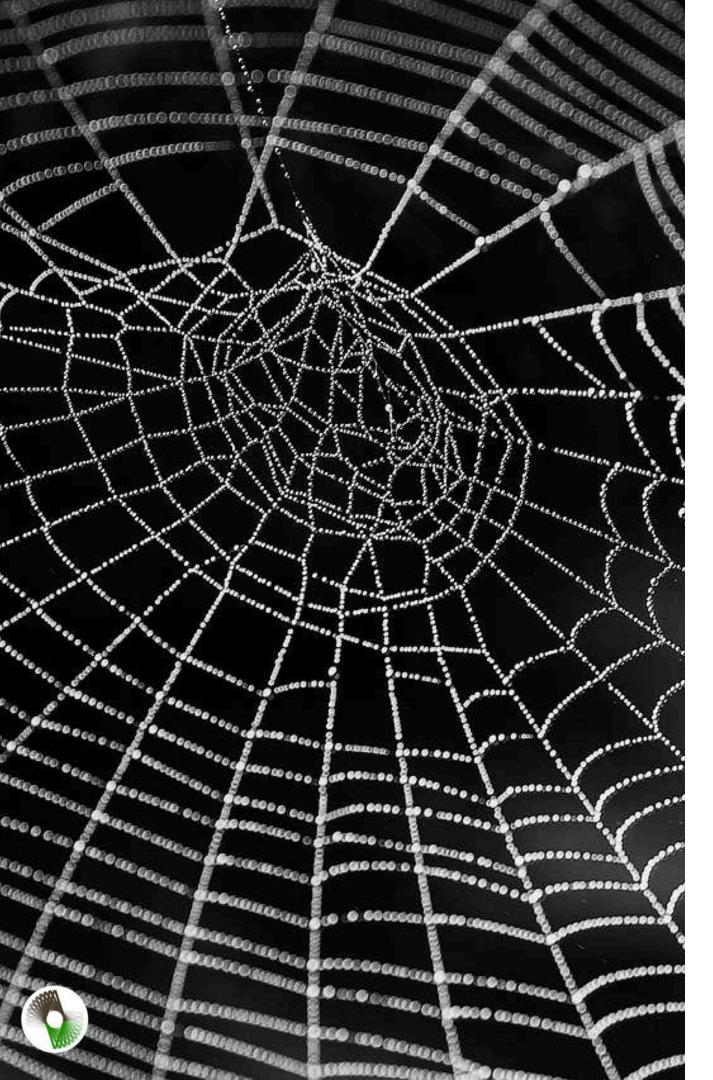


## If you didn't join the first sessions (4th, 11th and 18th June) you can access the recordings and slides at:

https://www.artscouncil.ie/Arts-in-Ireland/Climate-action/Arts-Council-resources-and-supports/







#### What will we cover?

- Benefits of understanding and measuring impacts
- Different ways to build understanding
- How to measure your impacts and footprint
- Examples, tools and resources
- Do's and Don'ts
- Q&A

### Recap on the Arts Council's ask to SFOs and Arts Centres

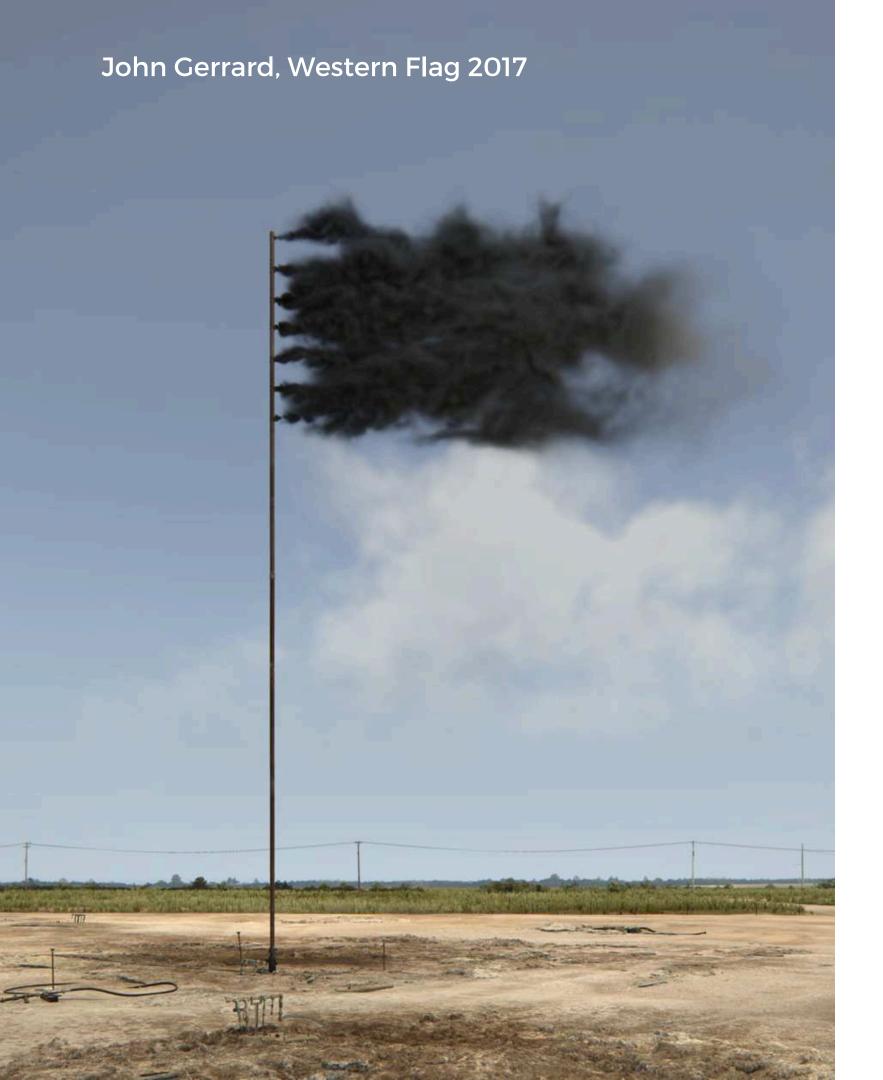
Provide a document, or set of documents, when signing funding agreements in January 2025 which cover:

- POLICY statement of topline environmental ambition, commitment, goals, values, principles...
- **PLAN** plan of action for how you will achieve your ambition, commitment, goals and/or put your values or principles into practice

#### Reminder:

- No requirement to make policy or plan public
- No plans to ask organisations to submit environmental data or carbon footprints in 2025



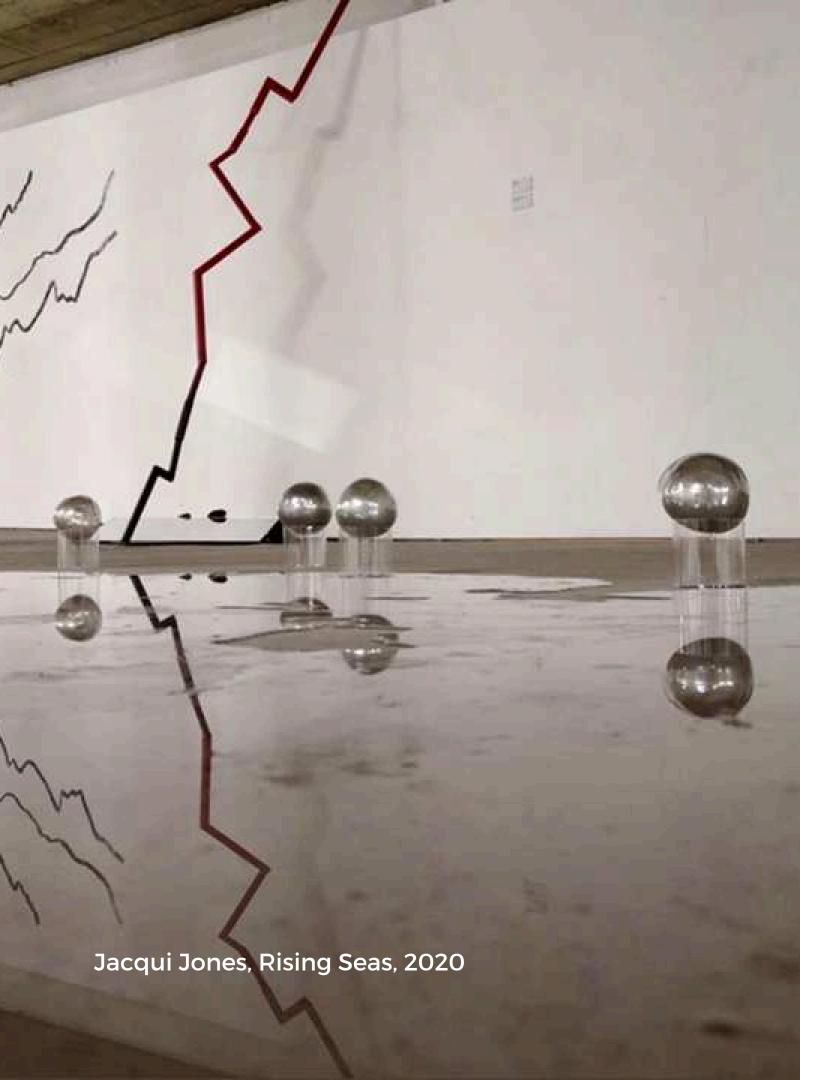


# Understanding and measuring your impacts

### Which of these statements best describes where you are on understanding and measuring your impacts

- Just starting to think about it
- Taking first steps to develop understanding and measurement of our impacts
- Understand and measure a few impacts already
- Understand and measure a few impacts already with plans to develop further
- Comprehensive understanding and measurement of all key impacts
- Other





### Benefits of understanding and measuring impacts

#### It helps with:

- identifying priorities
- setting targets
- informing action
- tracking progress
- telling your story
- demonstrating good practice to funders, audiences etc.

#### Start with...

The impacts you have identified given who you are, what you do, where and with whom

Then think about which impacts you most want to understand, starting with those over which you have most control

Identify what data and information you already have or can get e.g.

Energy, water and waste bills

Travel records

Audience travel information

Supplier or host venue environmental credentials

Think about how to build a wider picture e.g.

Find out what people think – team, audiences, members, artists, freelancers..

Find out what others are doing e.g. peers, community groups, local authorities

Use the data and information you have to e.g.

Identify priorities and set objectives and targets

Inform action

Track progress

Identify information gaps, training and support needs

Tell your story



#### Commonly measured source of impacts

- Energy
- Travel and transport
- Water
- Waste
- Goods and materials

All of this data from kilowatt hours of energy to tonnes of waste can be used to work out a carbon footprint

#### What is a carbon footprint?

The measure of the climate change impact of a business, venue, event, activity etc.

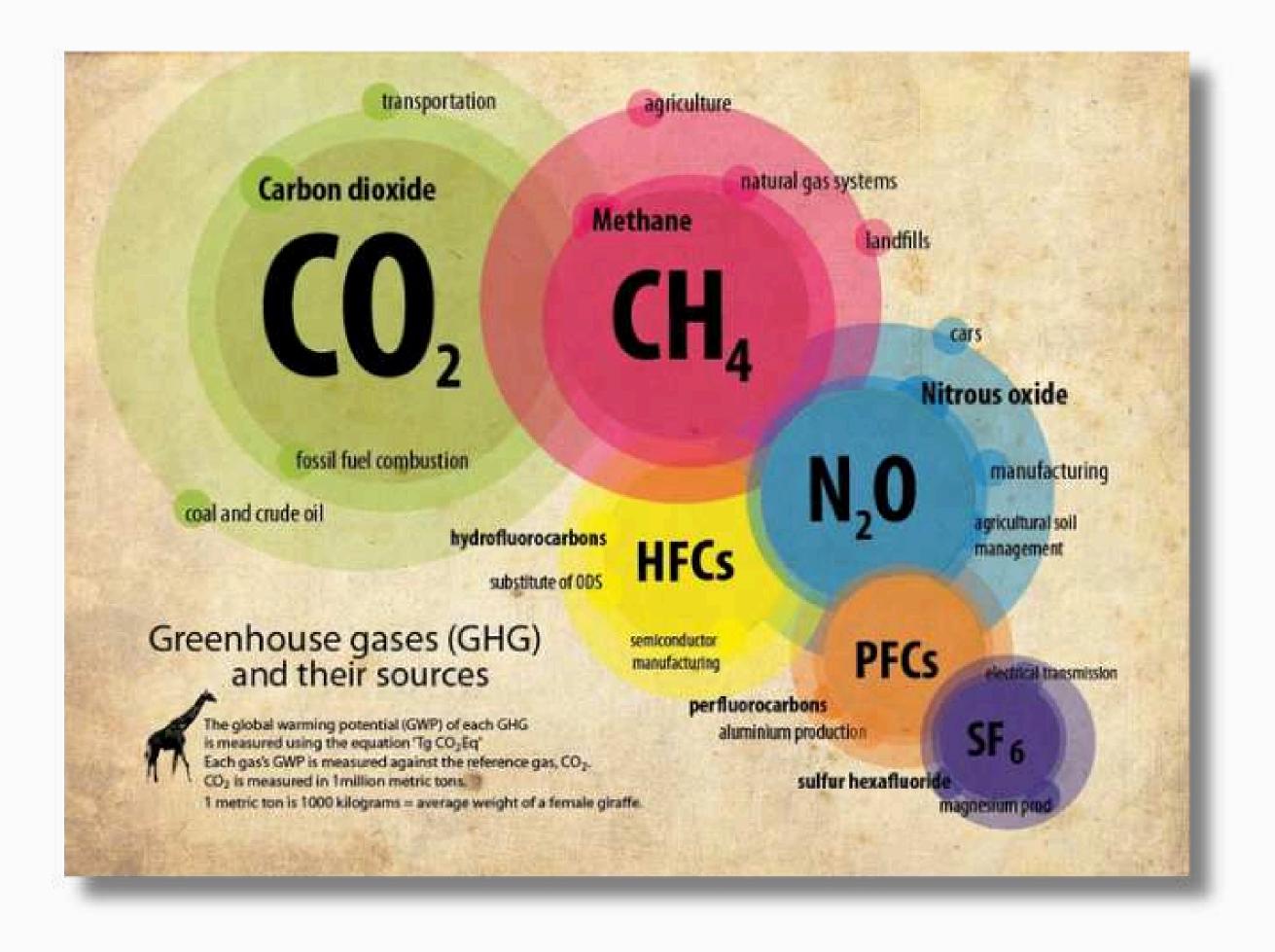
...expressed as a single number

Greenhouse gas emissions associated with the activity, business etc. in kilogrammes (kgs) or tonnes of carbon dioxide (CO2) or carbon dioxide equivalent (CO2e)



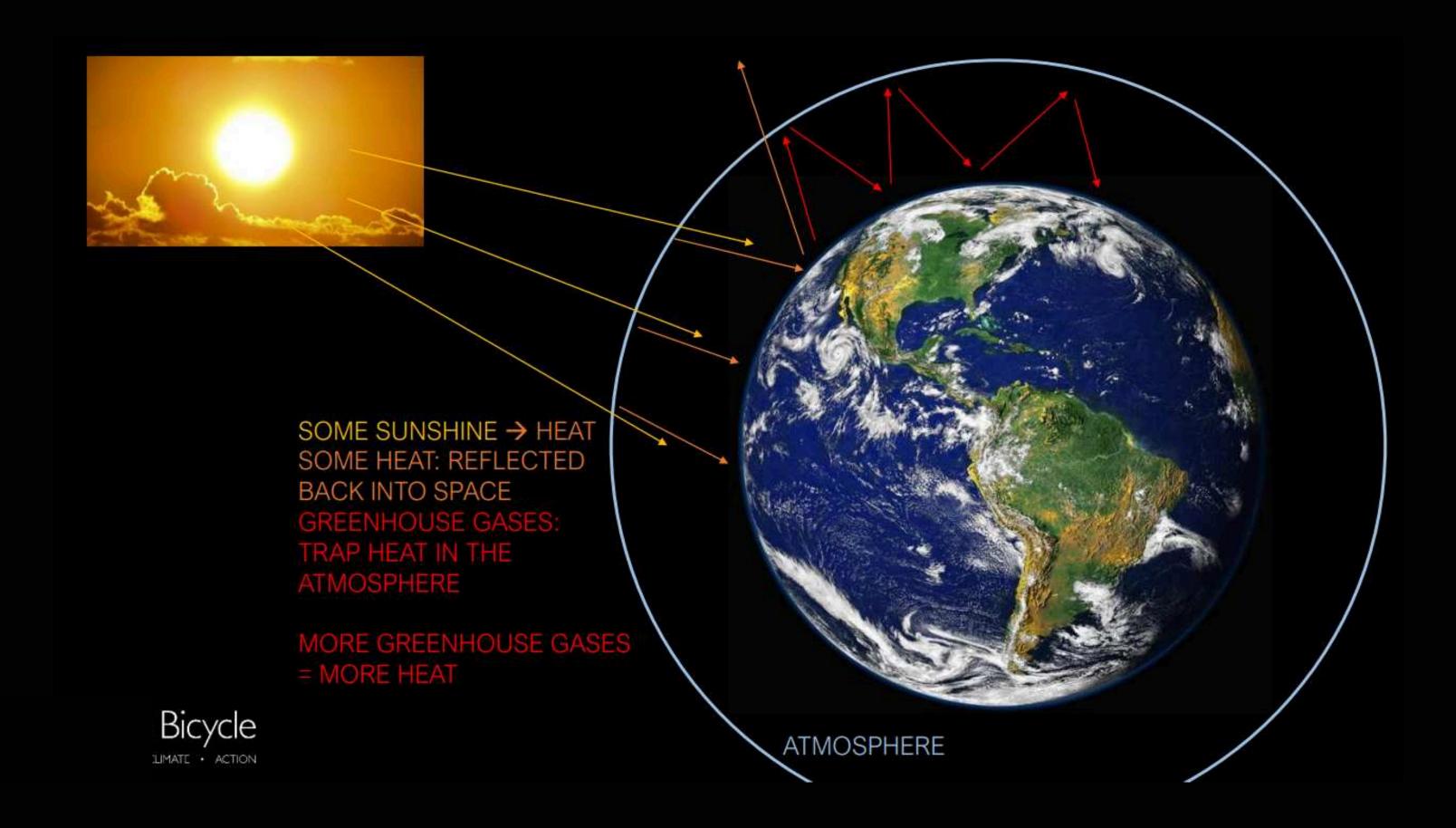


There are a number of different greenhouse gases





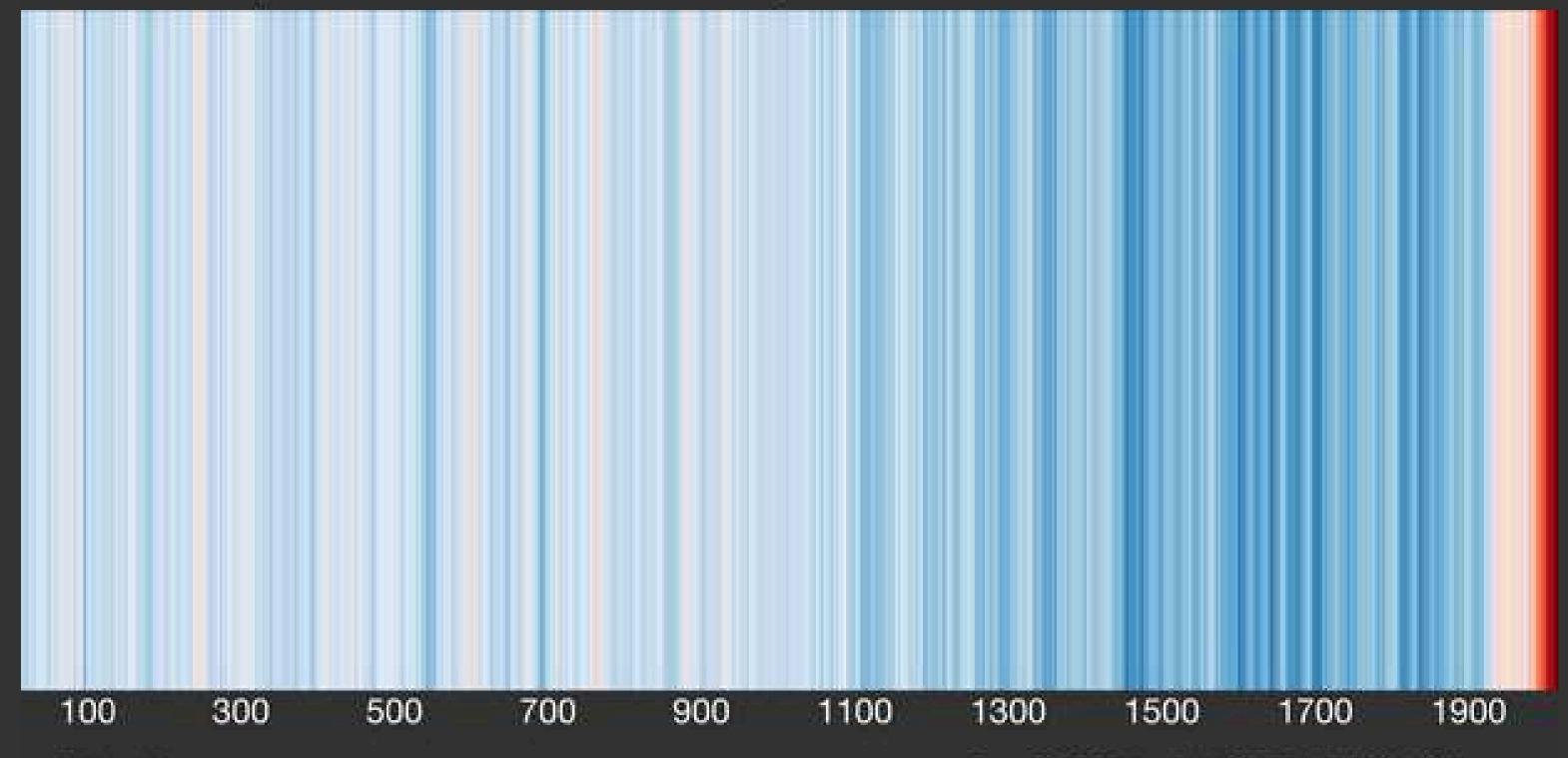
#### These gases contribute to the greenhouse effect





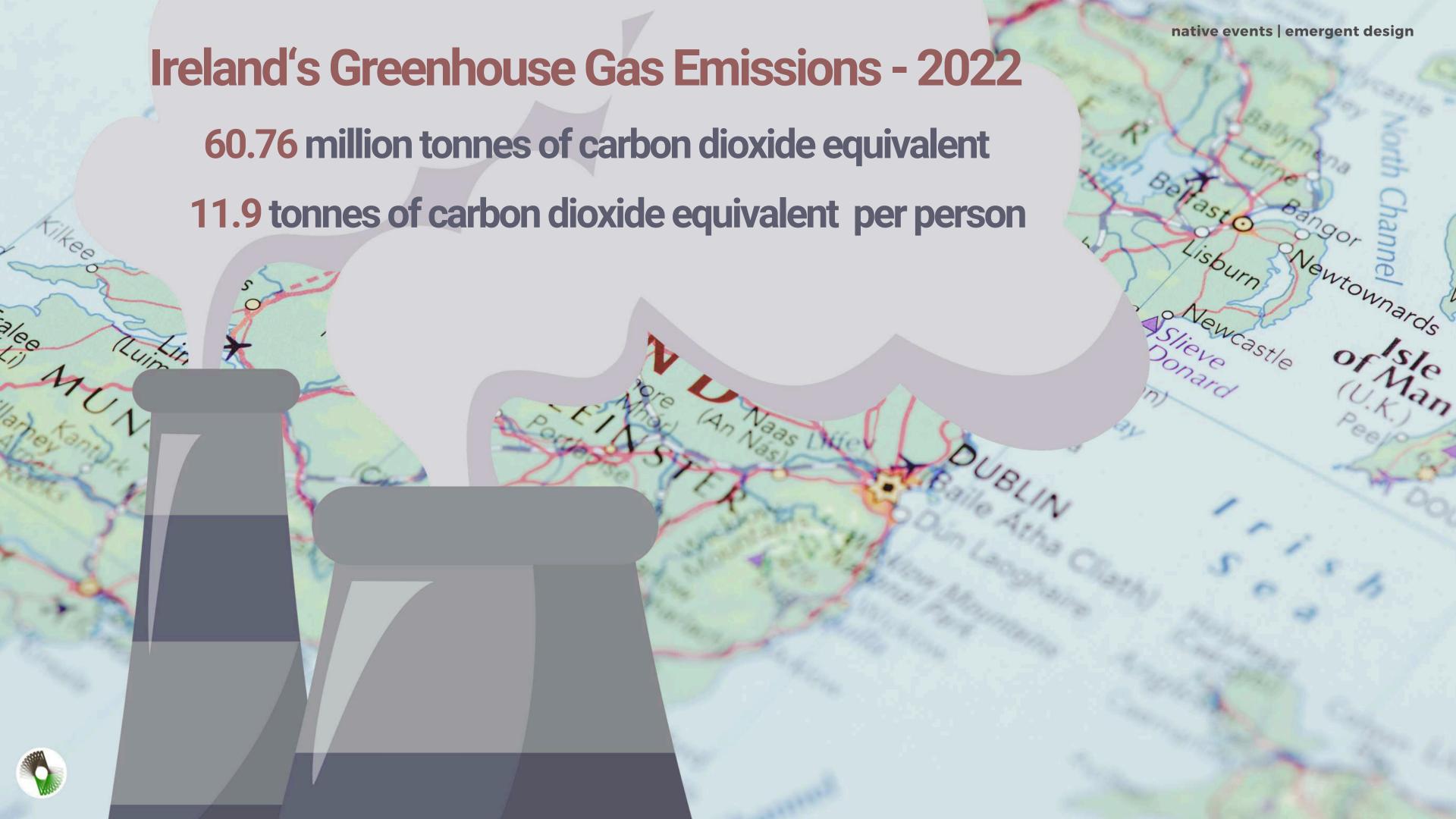
#### Resulting in a rise in global temperature

Global temperatures for the last 2023 years

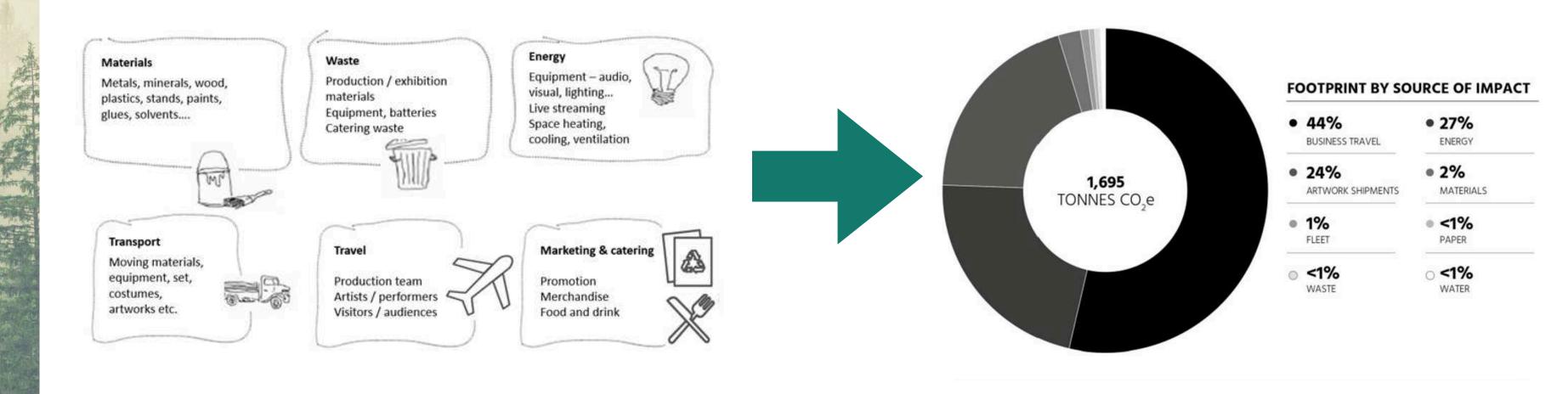




Data: PAGES2k (and HadCRUT5.0 for 2001-2023)



### A carbon footprint is like a greenhouse gas emissions inventory for a organisation, venue, event





#### How do you work it out?

Take data on different sources of impact such as energy, waste, transport and apply emissions conversion factors e.g.

- kWh electricity x kg CO2e per kWh = 

   electricity use CO2e
- tonnes landfill waste x kg CO2e per
   kWh = □landfill CO2e
- litres petrol x kg CO2e per litre = ⊠car travel CO2e

GRAND TOTAL			161.3 tCO2e				
	23.4	tonnes	6.1	tCO2e			
Recycling	13.5	tonnes	0.29	tCO2e			
Landfill	9.9	tonnes	5.8	tCO2e			
Waste							
	4,664	m3	2.4	tCO2e			
Waste water	2272	m3	1.6	tCO2e			
Water use	2392	m3	0.8	tCO2e			
Water							
	485,414	kWh	152.7	tCO2e			
Electricity	316,171	kWh	121.5	tCO2e			
Gas	169,243	kWh	31.2	tCO2e			
Energy							



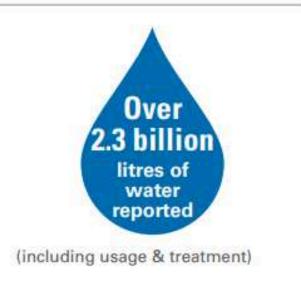
### **Example - Arts Council England National Portfolio footprint 2022-23**

In 2022-23, 656 NPOs reported on all environmental impact areas divided across venues, offices, productions, festivals/tours and indoor events (some NPOs report on more than one impact area). This snapshot for 2022-23 is based on the most commonly reported impacts: energy, water, waste, business and touring travel<sup>2</sup>.





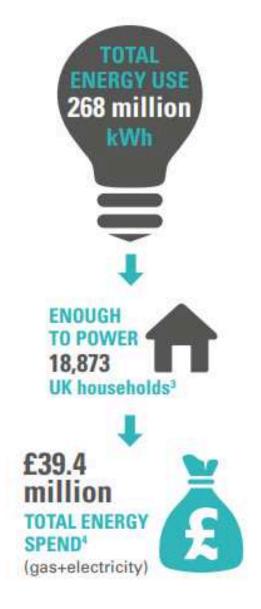


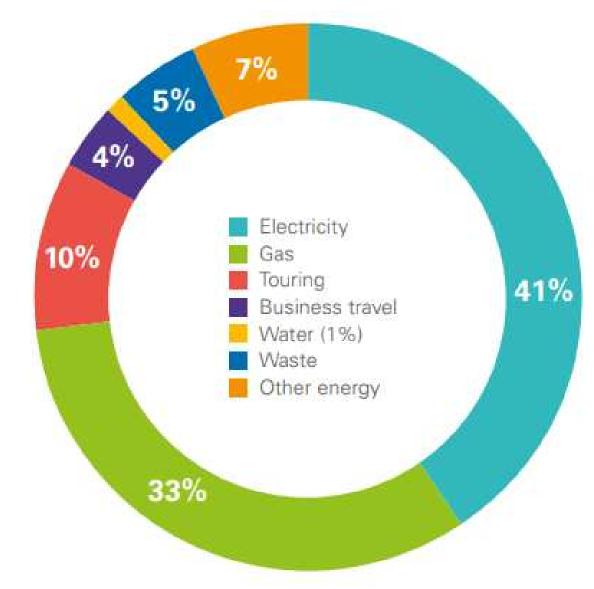






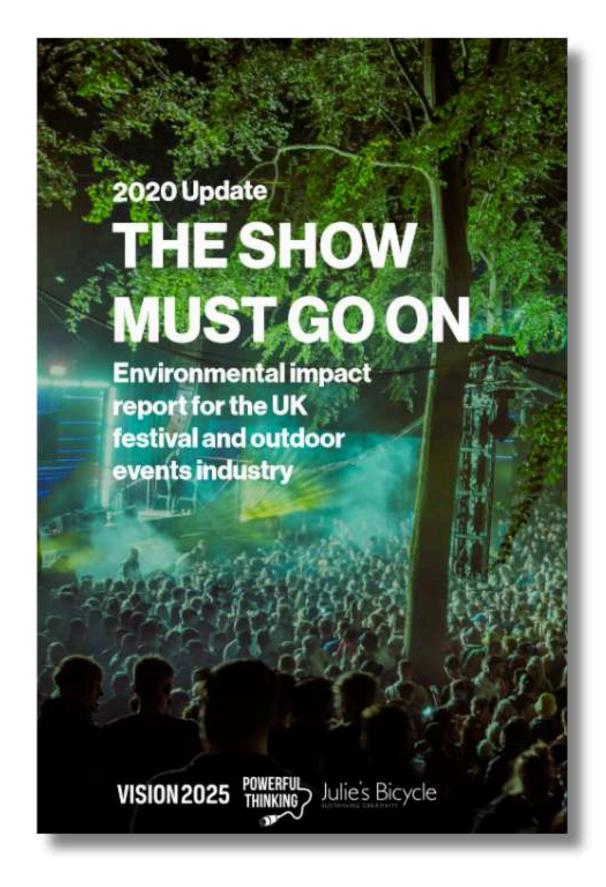


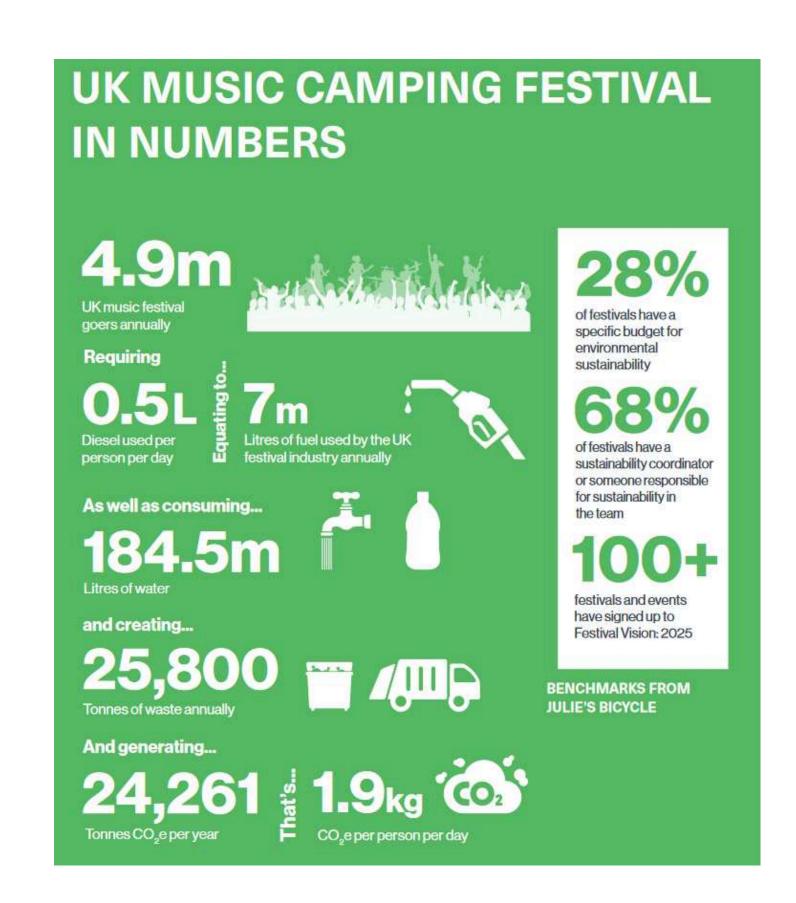




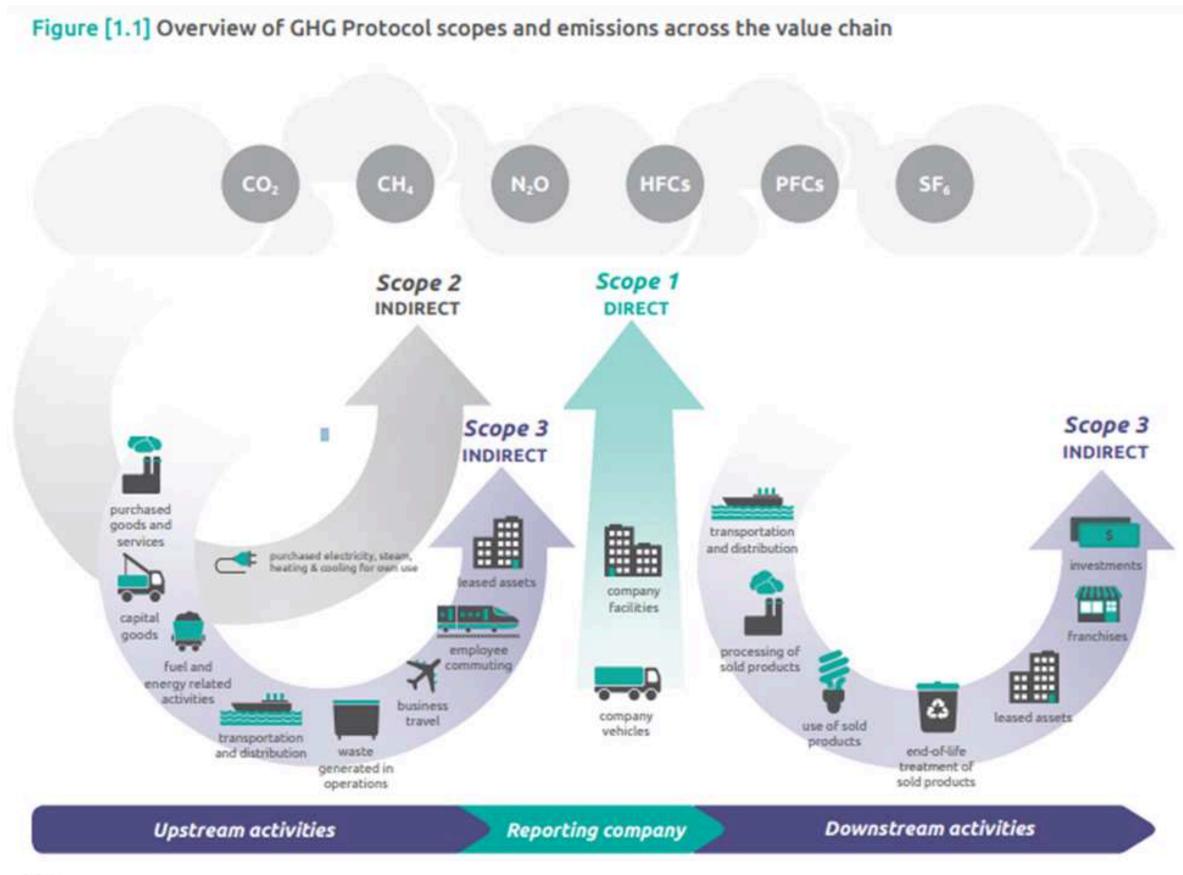


#### Example









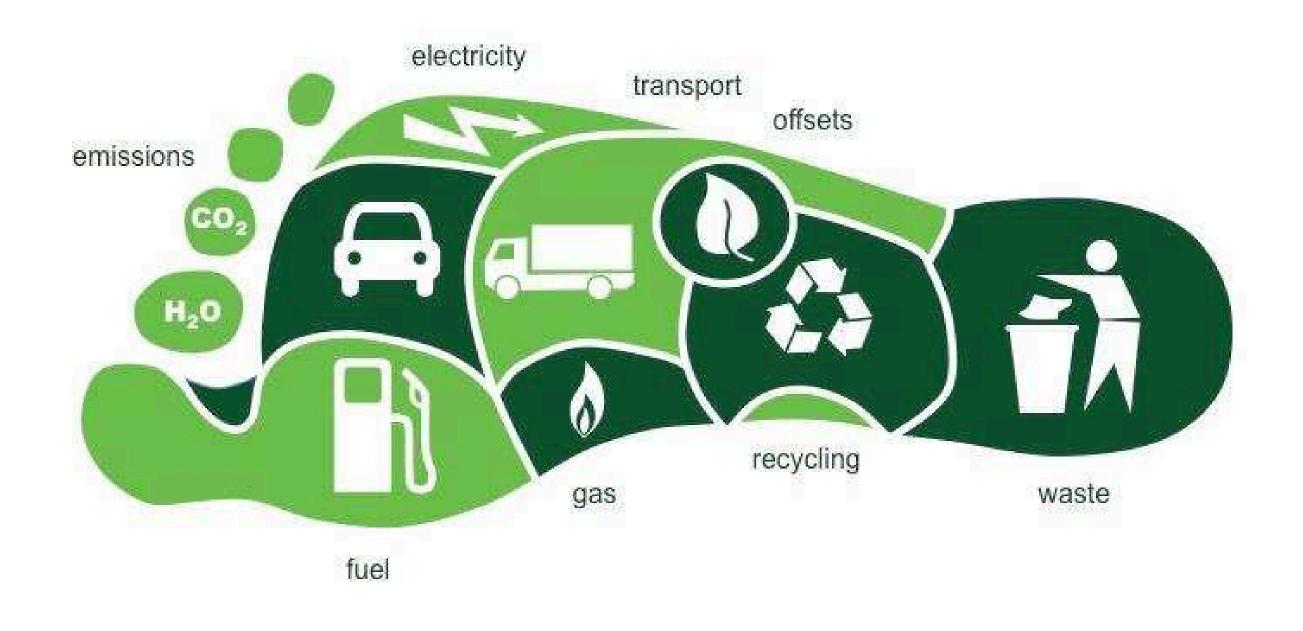
Emissions often grouped into scope 1, 2 and 3

- direct burning gas and oil for heating, fleet fuel
- indirect purchased electricity
- indirect emissions
   related to services and
   goods coming in, used or
   going out

But what really matters is what you can control and influence.....



### A carbon footprint is really useful to understand impacts, track progress and inform action



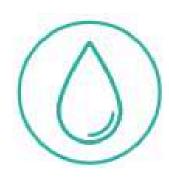


### Understanding your footprint

Footprints reveal **what** your impact is, but not exactly **why**. Analyse what lies behind it to understand the full story...



160 tonnes CO2 from energy use 5% increase from last year because of change in opening hours



3.5 million litres used Decrease on last year but we don't know why.....



40 tonnes Decrease on last year but still only recycling 30%



Only know expenditure but it's a big % of our total budget, so we need to find out more



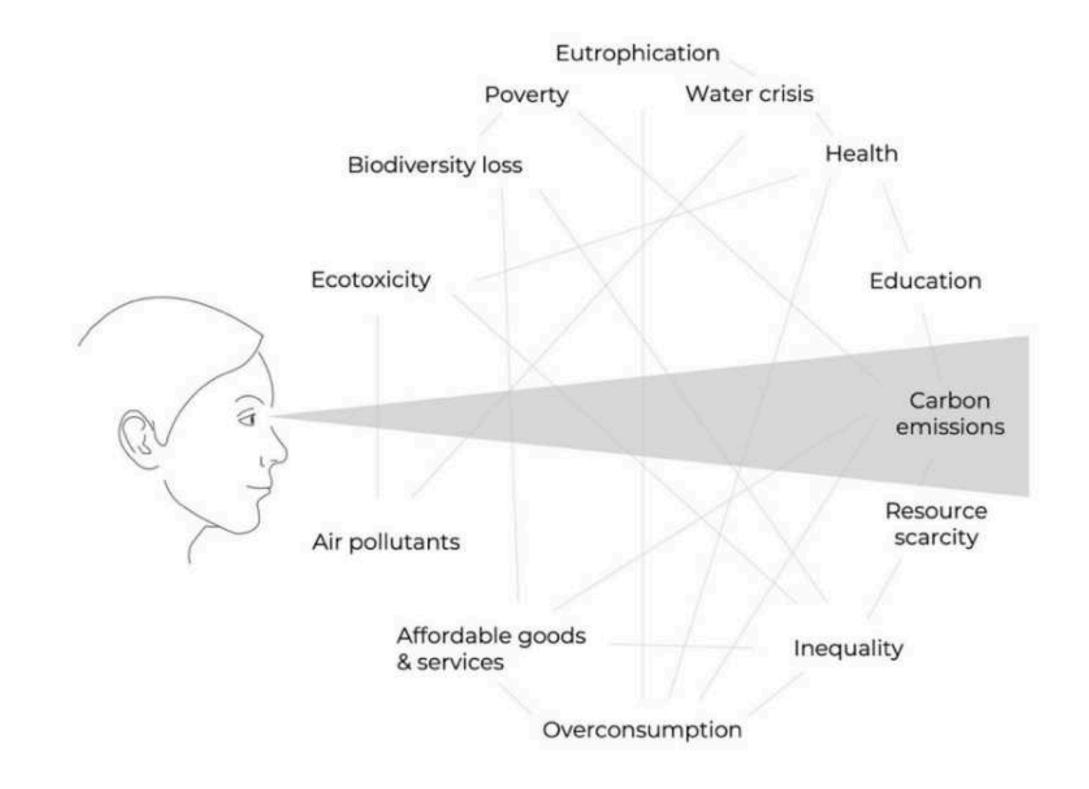
### There are some things a carbon footprint doesn't tell you

- It doesn't give the measure of other impacts such as air pollution, chemical pollution, resource depletion....
- It does not tell the story of other kinds of change e.g. green procurement, ethical sponsorship, engagement
- And sometimes you can reduce your footprint unintentionally e.g. electricity emissions decrease not because you are using less but because the % of renewables in the grid supply is increasing



## Think about data and information 'beyond carbon' e.g.

- waste volumes, recycling levels
- food sourcing and offer
- sustainability credentials of suppliers, host venues...
- engagement







### Challenges of carbon footprinting for the arts and culture

- time and understanding to do it
- accessing data where reliant on others e.g. landlord, logistics companies, visitors/audiences
- continuity year-on-year comparison, especially when things change e.g. location, visitor/audience numbers
- accounting for audience travel, supply-chain and production impacts e.g. materials

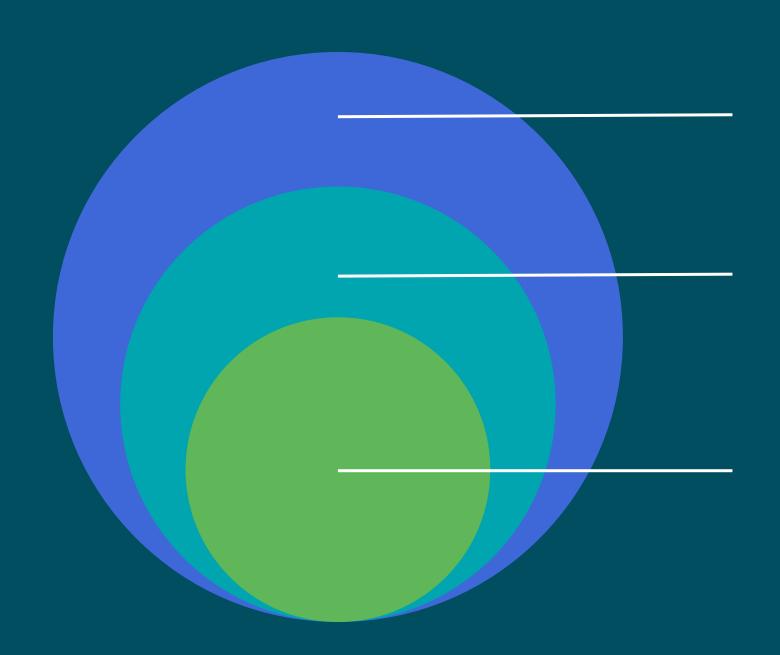
Measuring impacts: where to start

#### What can we measure?

- Energy use electricity, heat, fuel
- Business travel modes, fuel use, distances
- Staff commuting modes, distances
- Audience travel modes, distances
- Transport modes, fuel use, distances
- Water and wastewater volumes
- Waste volumes and types
- Resources and materials volumes, type, source or credentials
- Food type, source or credentials...



#### **Control and influence...**



Audience travel, waste disposal

Procurement (goods and services), transport providers info, food and catering

Electricity and water meters and bills, fuel bills, business travel, staff travel surveys, waste



#### What information can you get where?

		Venu	e Festival	Tour	Production	Office	Main data sources	And
Energy use	grid energy use - kWh electricity & gas temporary power use - litres fuel, kWh on-site generation - type and kWh generated energy source - e.g. green tariff, biodiesel production lighting type, wattage and kWh	<b>√</b>	<b>√</b>	✓	<b>✓</b>	<b>√</b>	Supplier invoices and tracking tools Building management system Manual meters, smart meters Software tools Energy audits	Building size - m2 Tickets/visitors/
Water use & wastewater	water use litres/m3 wastewater volumes litres/m3 other e.g. rainwater harvesting, greywater	<b>√</b>	✓			<b>√</b>	Supplier invoices  Manual meters, smart meters  Software tools	attendances Number of event days
Waste	how much waste and where does it go - landfill, recycling, reuse, compost, anaerobic digestion, incineration/energy from waste, donation	<b>√</b>	✓	✓	<b>√</b>	✓	Service provider invoices and reports Cleaning contractors estimates Waste audits	Touring locations Number of
Audience travel	mode – van, car, train, plane, bus, taxi etc. distances travelled - miles, km fuel consumption and type – litres hotel nights number of people travelling	<b>√</b>		<b>√</b>	<b>√</b>	Travel expenses  Travel agent reports  Audience travel surveys	employees Opening days &	
Business travel		$\checkmark$		$\checkmark$	✓		Audience travel surveys	hours
Fleet transport		<b>\</b>		<b>\</b>	<b>\</b>			Number & capacity of
Production materials	volumes and types of materials e.g. wood, steel and where does it goe e.g. landfill, reuse virgin/recycled content, FSC, bought/hired			1	<b>✓</b>		Suppliers invoices Waste service providers invoices	performance or event spaces Number of
Printing - office, publications	reams, sheets, pages, weight paper and printer credentials	<b>√</b>		<b>√</b>		<b>√</b>	Suppliers invoices Paper/printer certifications, product labels	artists, volunteers etc.
Food & drink	spend, sourcing, criteria met e.g. FairTrade, organic, seasonal etc.	<b>√</b>	✓				Supplier surveys, checklists Supplier certifications, product labels	



# **Energy**

#### What to measure?

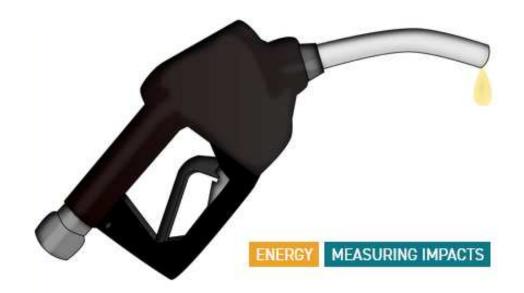
- Total energy used in your offices, buildings or for your events, tours etc.
- Electricity, natural gas or oil for heating, diesel for generators...
- Power generation: renewable energy (e.g. onsite solar panels)

#### How to measure?

- Good = Check your invoices
- Better = Read your meters
- Best = Use a Building Management System / smart meters
- Ask your generator supplier to provide fuel use, capacity and demand data
- If you rent your building, try your landlord
- If you are touring to or using other venues, try asking them



# VISION2025 Outdoor Events · Climate · Action



FESTIVAL FUEL TOOL, POWERFUL THINKING

THE SUSTAINABLE MATERIALS & WASTE TOOLKIT FOR FESTIVALS

# Let's Shine A Light!

Understanding and reducing electricity usage

Thursday 1st of September @ 11am

An informal session looking at how building-based arts organisations can get to grips with their electricity usage.

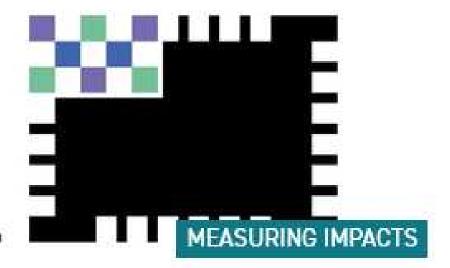




- Audience travel survey template
- Audience travel survey table
- Audience travel survey spreadsheet (with added formula)







Environmental Impacts of Digital Cultural Production

# THE NETWORKED CONDITION: MEASURE THE IMPACT OF DIGITAL EVENTS AND PRODUCTIONS

**HOW TO REDUCE YOUR** 

# DIGITAL FOOTPRINT

ARTS COUNCIL CLIMATE ACTION TRAINING

**APRIL 2024** 



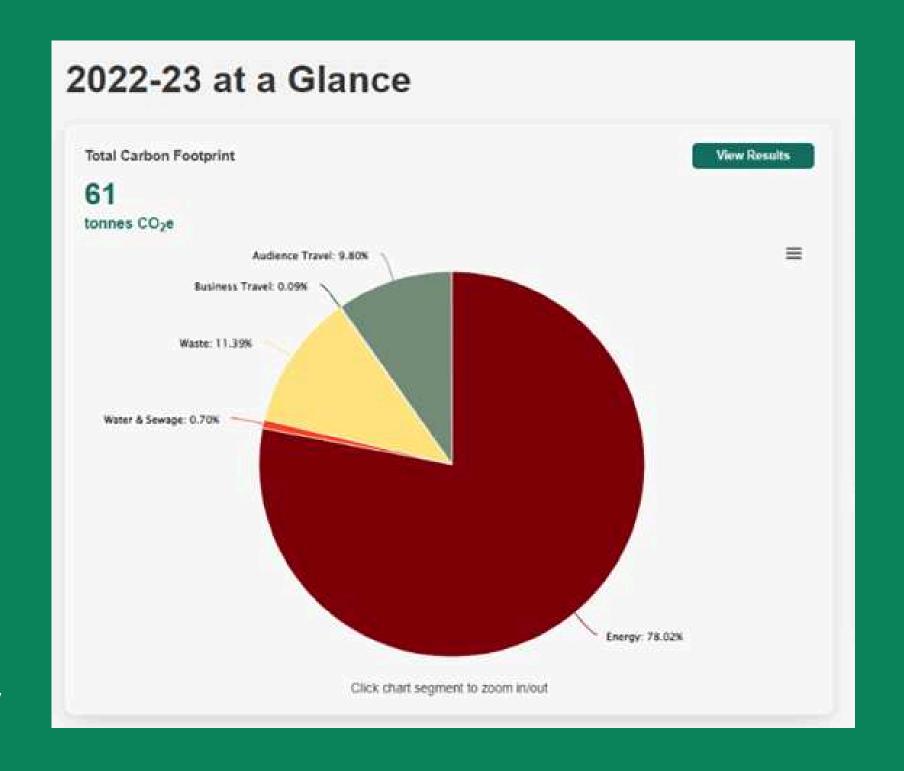






- A free carbon calculator designed to help track and understand the impacts of cultural venues, offices, tours, events and festivals
- Allow users to track a range of different impact areas including energy, water, waste, travel and materials.
- Can help to prioritise and inform action and track progress over time

https://juliesbicycleeurope.org/creative-tools/

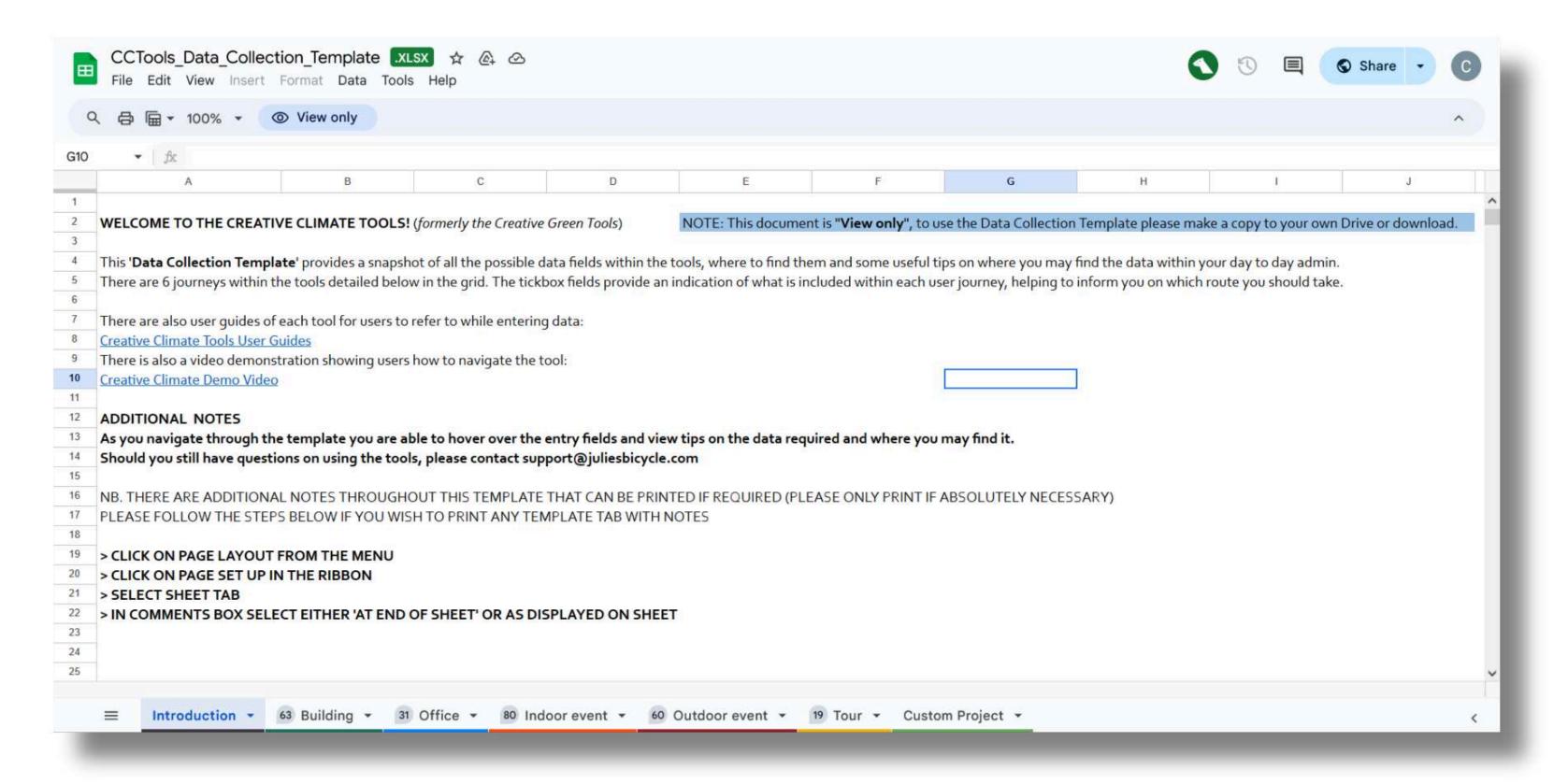














Provider	Period covered by bill	Days	kWh - Day	kWh - Night	KWh Total	Reading	Day Rate	Total Day	Night Rate	Total Night	Electricity (Net cost) A	dd'tl Charges	VAT
	January		7,800	3,200	11,000						€0.00	€0.00	€0.0
			-									€0.00	
												€0.00	
				_								€0.00	
			L									€0.00	
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								-				€0.00	
TOTALS			7,800	3,200	11,000								
Electricity	Bills and Usage Anal	ysis 20	)23				Optional -	Hide these	columns if no	ot needed 		•	
Provider	Period covered by bill	Days	kWh - Day	kWh - Night	KWh Total	Reading	Day Rate	Total Day	Night Rate	Total Night	Electricity (Net cost) A	dd'tl Charges	727.75
			0	0	0						€0.00	€0.00	€0.0
					0								
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					0								



https://www.artscouncil.ie/Arts-in-Ireland/Climate-action/Arts-Council-resources-and-supports/

## **EPA Tool for Resource Efficiency**

Carry out a quick overview of the level of Resource Efficiency in your company.

Intro

Energy

Water

Waste

Management System

#### **EPA Tool for Resource Efficiency**

The aim of this tool is to carry out a quick overview of the level of resource efficiency in your company. This overview will provide you with quick and useful feedback on what you can do to make your business more efficient and reduce costs. By registering for this survey you agree to the data being held on a database. Your data will not be shared with third parties. Any findings from the survey will be anonymised and non-identifiable.

The EPA Tool for Resource Efficiency was developed under the Green Business Programme 2008-2018, an initiative of Ireland's National Waste Prevention Programme. The National Waste Prevention Programme is a Government of Ireland initiative, led by the Environmental Protection Agency.

**REGISTER NOW** 

SIGN IN

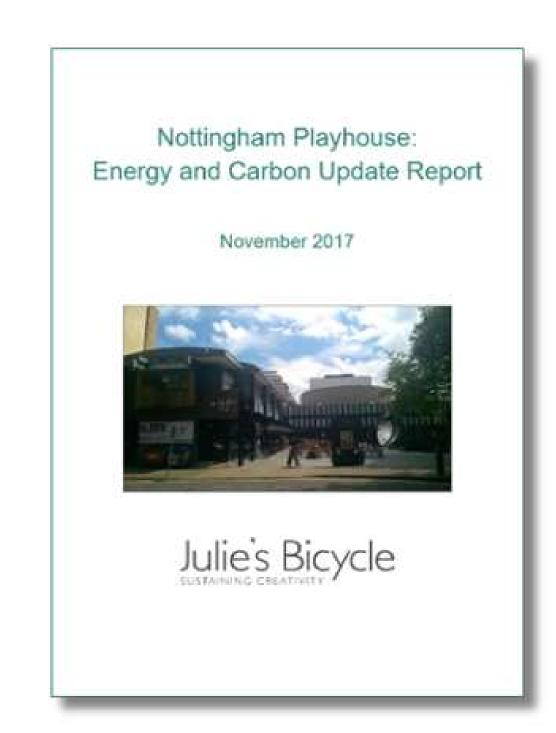


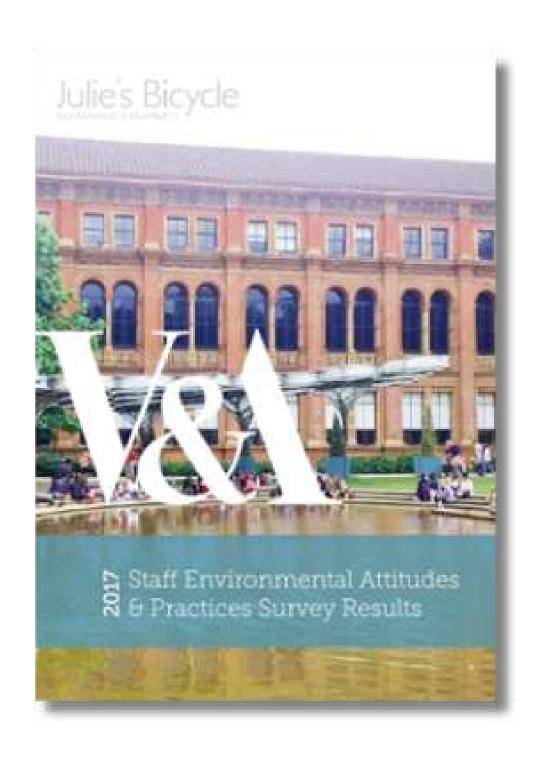




# Other ways to build understanding

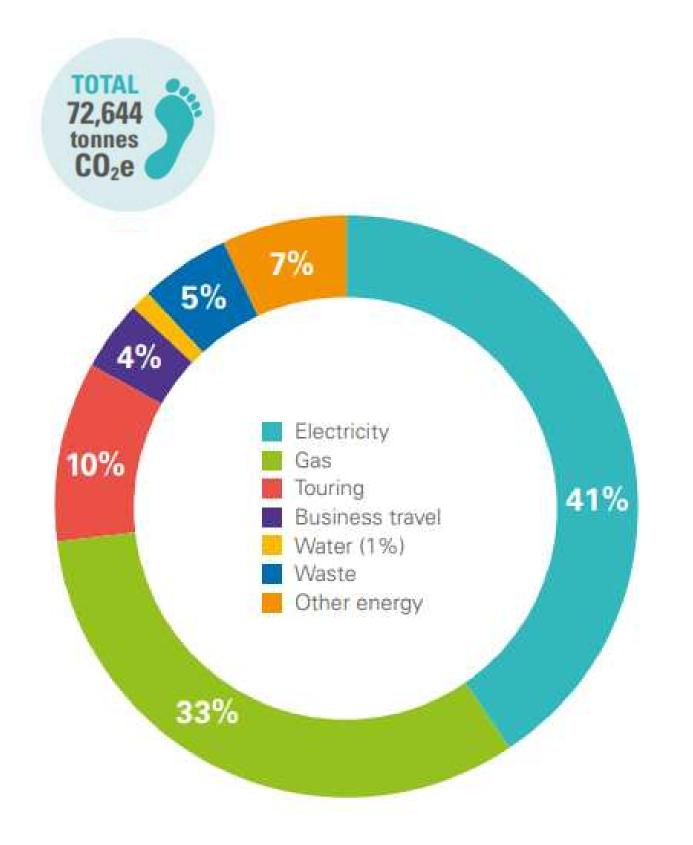
- Audits e.g. energy, waste, website
- Surveys to find out what people think e.g. team, members, audiences
- Surveys to find out what others are doing e.g. suppliers, host venues





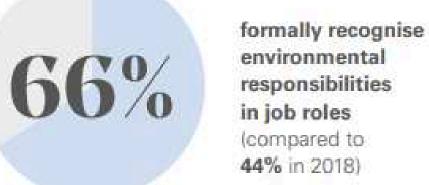


# Other stories you can tell 'beyond carbon'



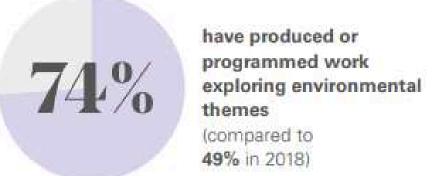
#### GOOD GOVERNANCE







#### ENGAGEMENT + COLLABORATION









we include environmental sustainability in artistic/ production briefs and open calls etc. (compared to 23% in 2018)









# Venues pilot project



#### **Impact measurement:**

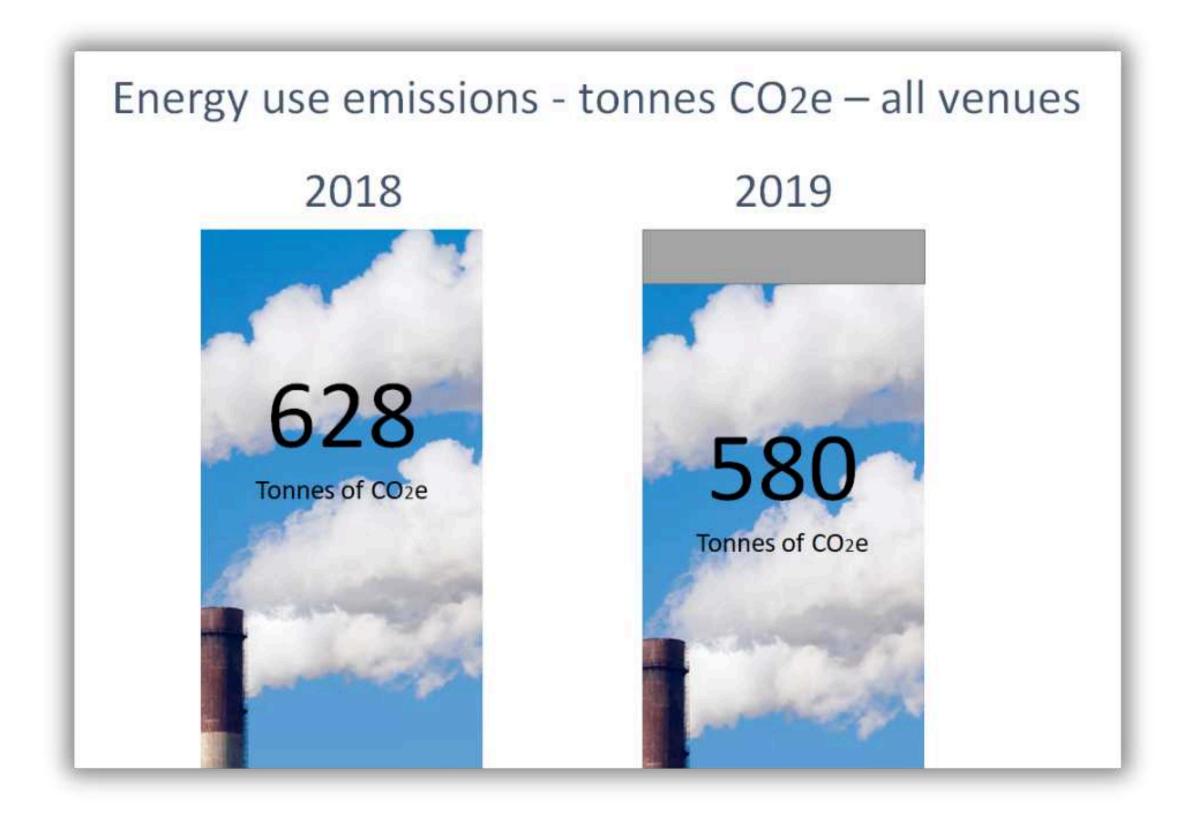
- Energy Heating & Cooling
- Energy Electricity
- Energy Efficiencies / Awareness
- Waste and Waste Management
- Water Usage
- Carbon Footprint Energy and Waste

#### Other information gathered:

- Suppliers & Procurement
- Biodiversity
- Travel & Transport: Business Travel/ Touring
- Travel staff commuting and audiences



# Green venues pilot

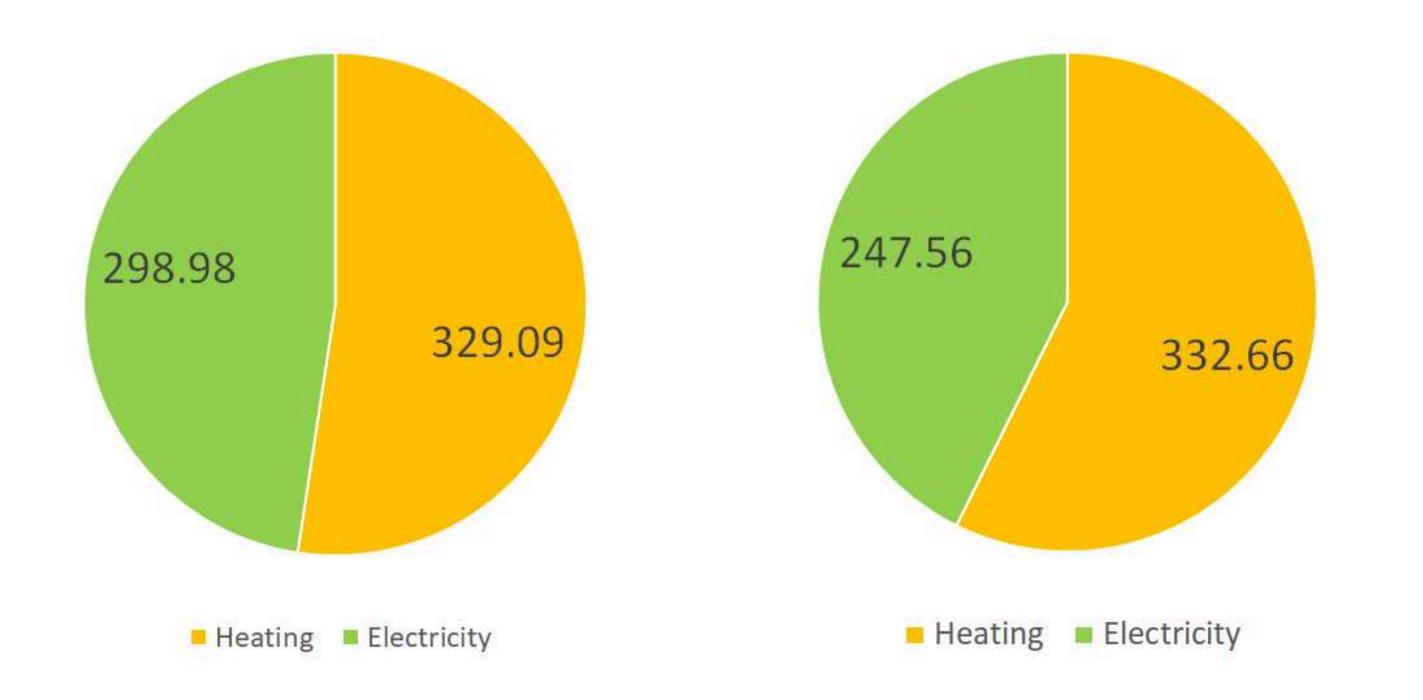




# Green venues pilot

2018 energy use emissions - tonnes CO2e

2019 energy use emissions – tonnes CO2e

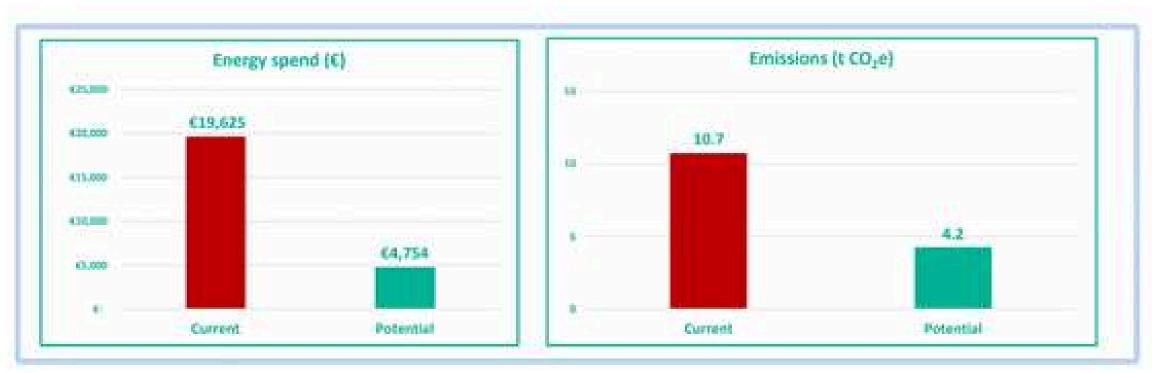


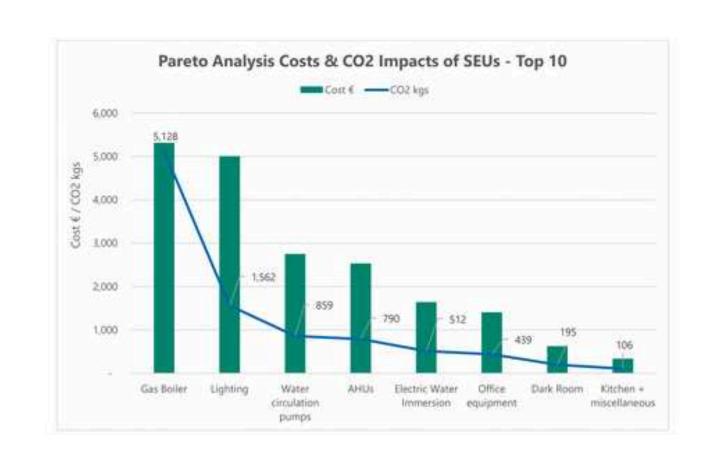


kWh of electricity decreased by 8% / associated carbon footprint decreased by 17%



- Applied for SEAI Support Scheme for Energy Audits
- Site visit and gathering of 12 months of energy bills for 2022 and 2023
- Recommended actions could help reduce emissions by 61% and annual energy spend by €14.9k approx







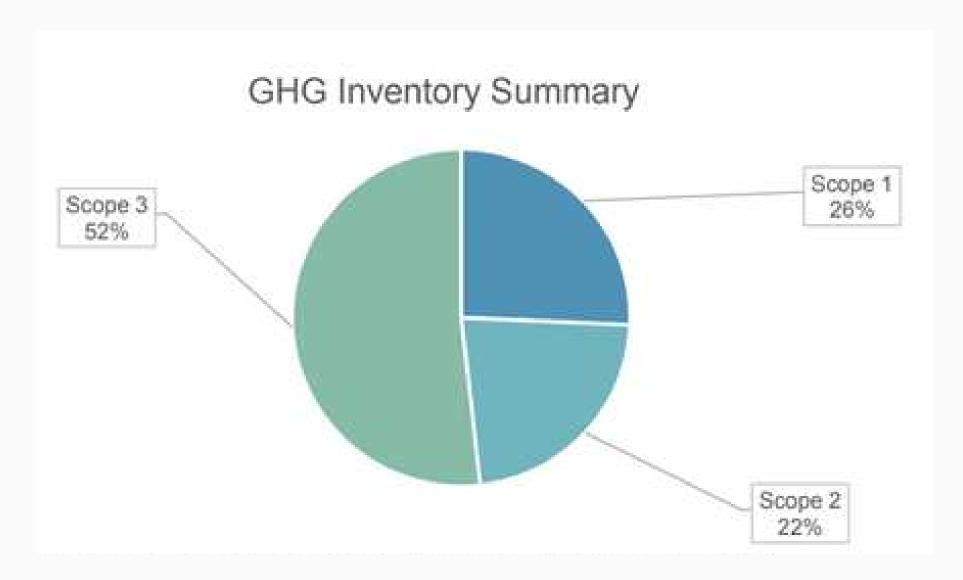


Applied for Green for Micro grant - €2,000 voucher

Site visit and gathering of 12 months of data for 2022 and 2023

- energy bills
- water usage
- business travel
- employee commuting
- waste
- purchases of goods and services
   e.g. office supplies, darkroom
   chemicals, wine for openings

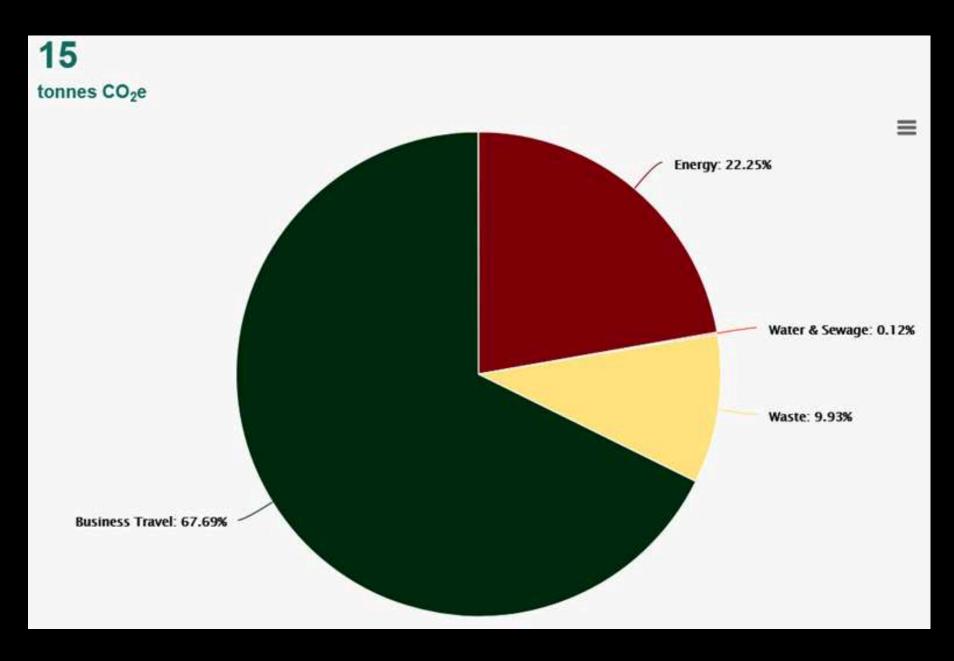
# 2023 Carbon footprint - 19.8 tonnes CO2



Top emissions: business travel, natural gas, electricity



# dtf | DUBLIN THEATRE FESTIVAL 2021 office and business travel footprint



			kg CO2e	tonnes CO2e
Energy	W			
Electricity	11180 kwh	=	3296.98	3.30
Water		ĺ		
Water use	43 m3	=:	6.41	0.01
Waste water	43 m3	=	11.70	0.01
Waste	-1V.			
Recycling	34.56 tonne	s =	735.92	0.74
Incinerated with energy recovery	34.56 tonne	s =	735.92	0.74
Business Travel	10			
Taxi	11 km	=	2.29	0.00
Bus	852.2 km	=	574.72	0.57
Train	2455 km	=	69.93	0.07
Ferry	94 km	=	10.61	0.01
Shorthaul Flights	28478 km	( <b>=</b> (	4300.75	4.30
Longhaul Flights	34298 km	=	5071.65	5.07
		74	14816.87	14.82



### SHAMBALA IN NUMBERS (like never before!)

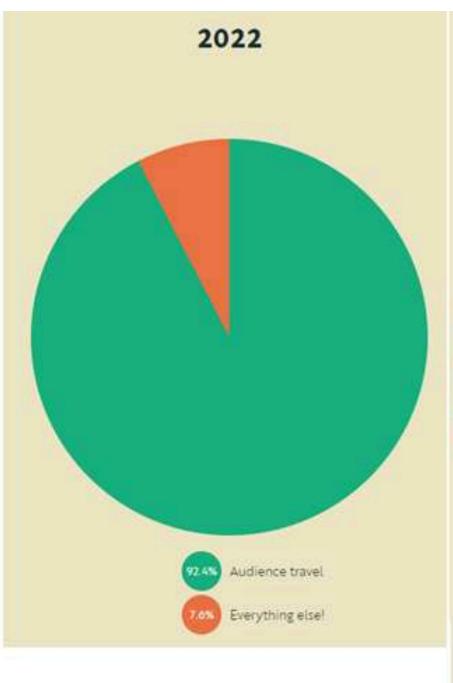
#### **Carbon Footprint:**

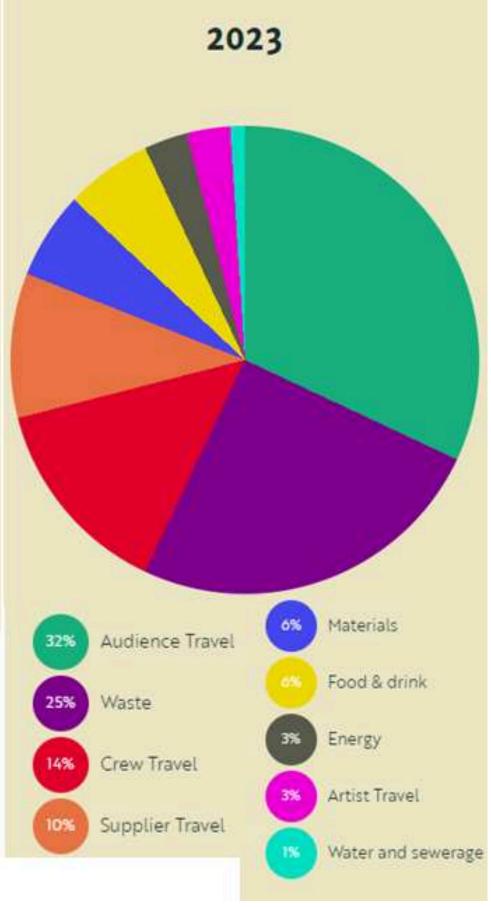
Our total carbon footprint has sky rocketed compared to last year.... but don't panic! This is because we've measured in far, far more detail than ever before.

We are getting more granular on data and wider in scope, to better understand our full impacts, at the festival and beyond.

So, as a reminder, here's how things looked in 2022, vs in 2023.









# GREENER TOURING PROJECT – A SUMMARY

by Performing Arts Forum



Fidget Feet, Druid, Irish National Opera, Ballet Ireland, Fishamble, Catherine Young Dance

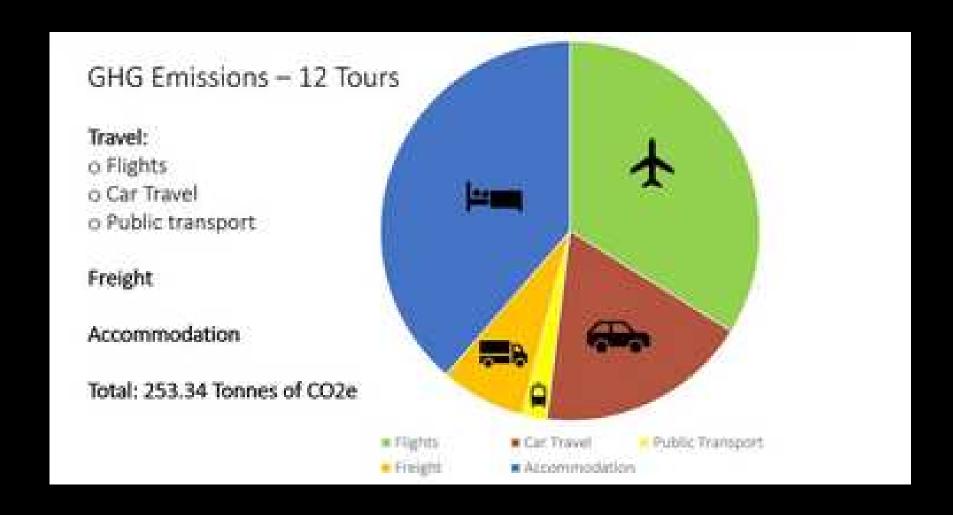
#### A mix of touring productions

- Sizeable productions with large casts and crew and smaller shows
- Large international venture and short national tours
- Some brought in performers from abroad, others relied on local cast
- One production staged 36
   performances, others
   performed as few as 5 times



# GREENER TOURING PROJECT – A SUMMARY

by Performing Arts Forum



- Covered 3 key impacts with most control
- Didnt cover electricity and heating at host venues, set and costumes, audience travel

#### Some insights

- Gathering information retrospectively is complicated
- Measuring the climate impact of accommodation is tricky
- With international touring internationally, particularly outside of Europe, flights far and away biggest part of carbon footprint



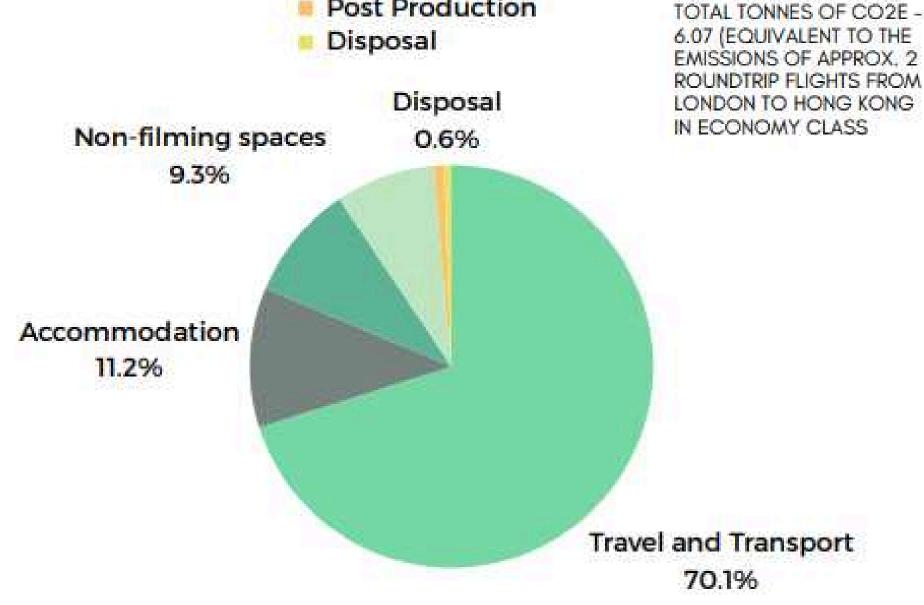
# Orchestra of the Age of Enlightenment - touring



# 'The Last Harvest' **Cracking Light Productions**

a film set Ireland 2112, where the main character wakes one morning to discover an invasive species has infected her young community's wheat crop





Travel and Transport

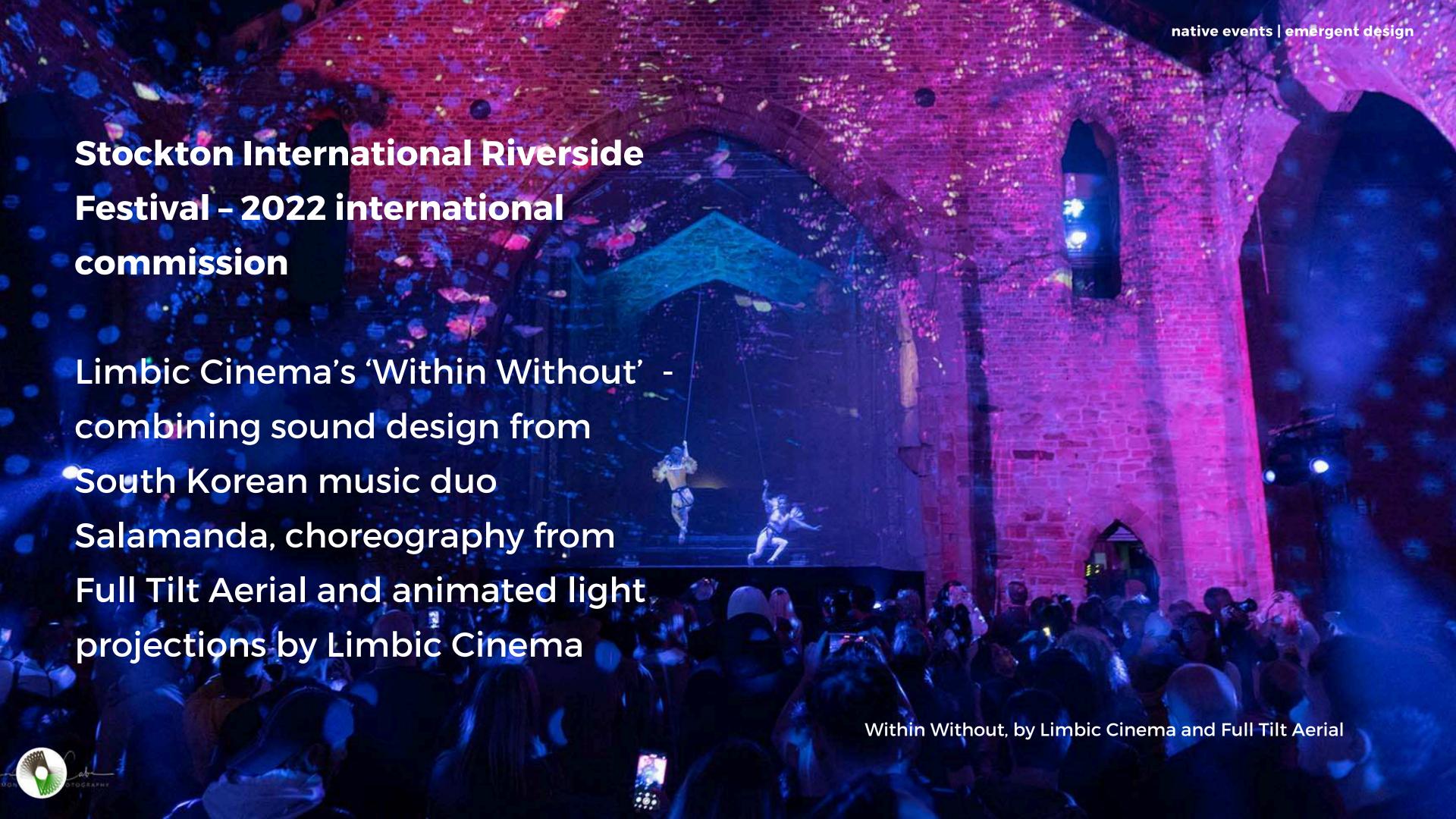
Non-filming spaces

Post Production

Accommodation

Materials



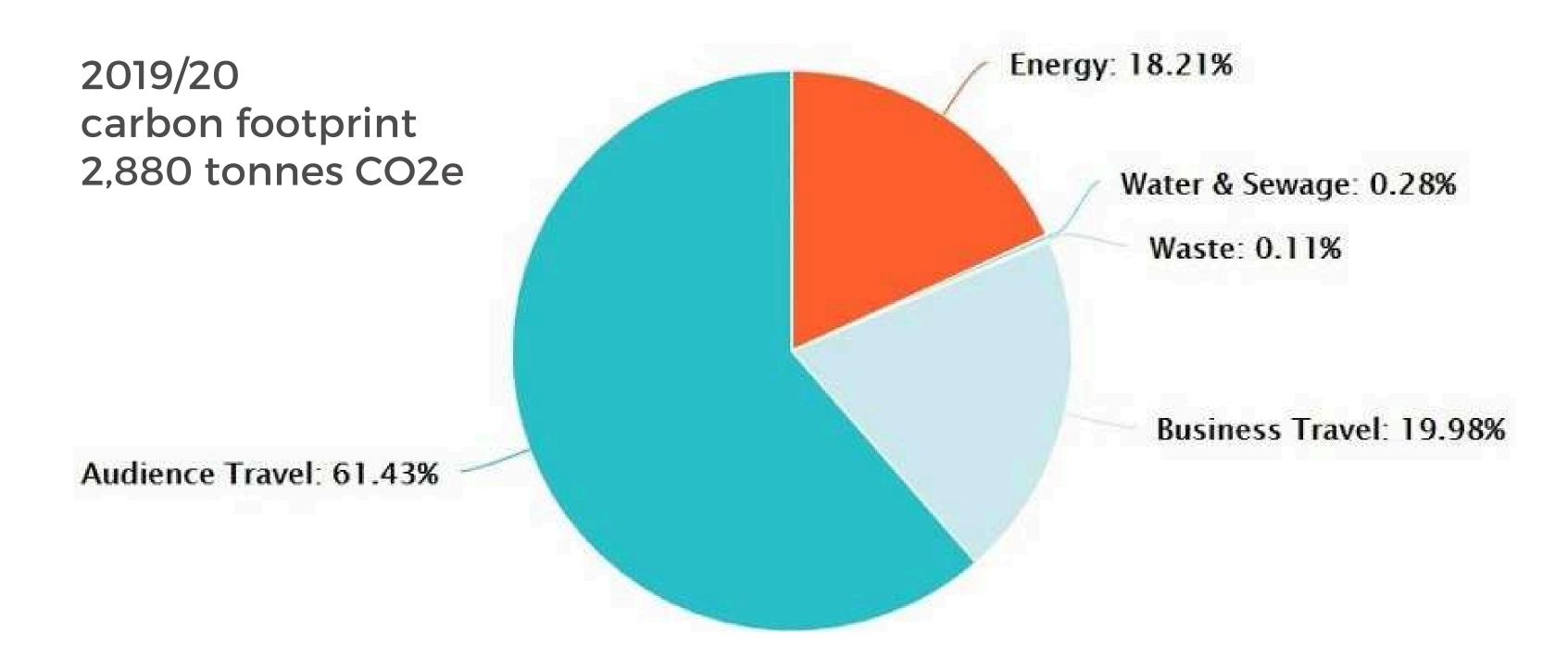


Compared with international collaboration of similar scale, Within Without emissions > 65% lower, mainly due to greatly reduced emissions from air travel typically associated with international projects

	Limbic Cinema \( (20)		International project of a similar size (2019)		
Impact area	Activity data	Tonnes CO <sub>2</sub> e	Activity data	Tonnes CO₂e	
Air travel	1,738.00 miles	0.42	21,828 miles	16.26	
Road travel	5,080.4 miles	1.55	346 miles	0.13	
Rail travel	4,358 miles	0.25	_	-	
Freight	3,588 miles	3.35	11,008.21 miles	0.15	
Production materials	-	-	517.5 kg	1.37	
Water Consumption	-	-	13.74 m3	0.002	
Accommodation	85 hotel nights	0.88	82 hotel nights	0.85	
Total		6.46		18.77	

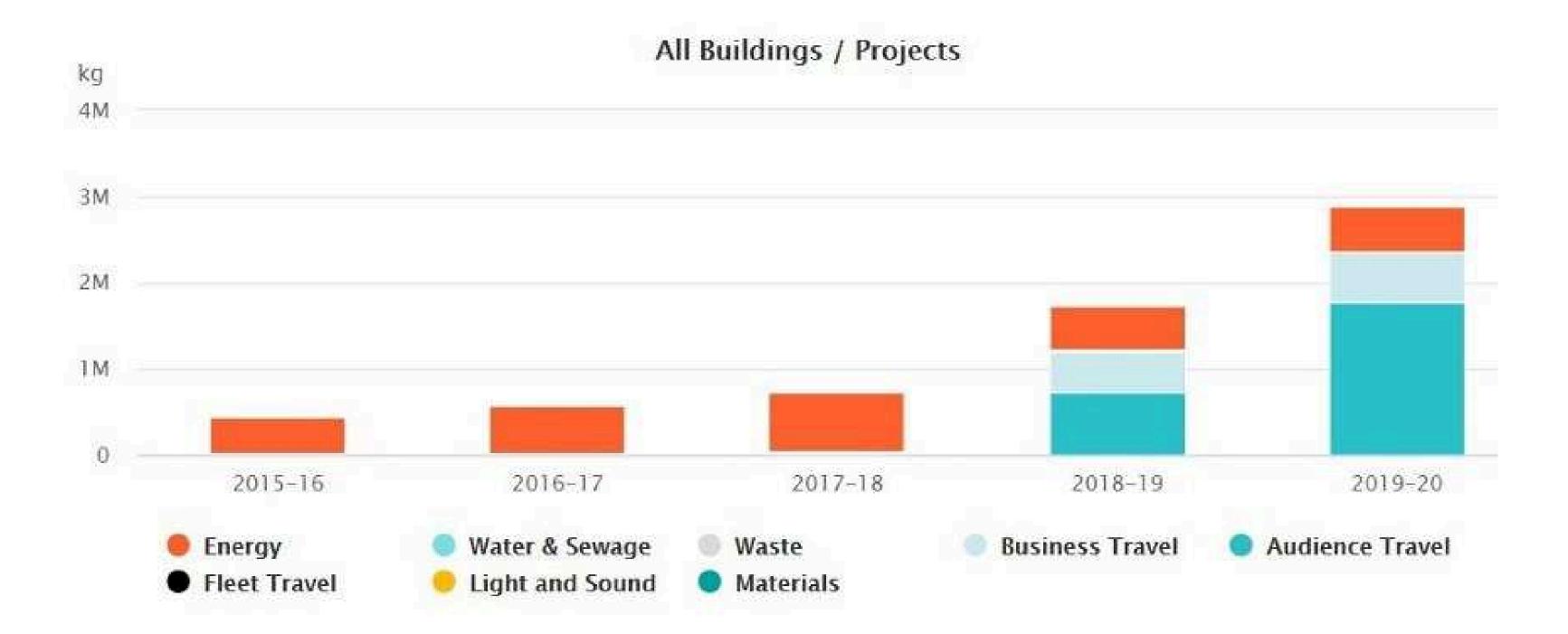


# **HOME Manchester**





# **HOME Manchester**

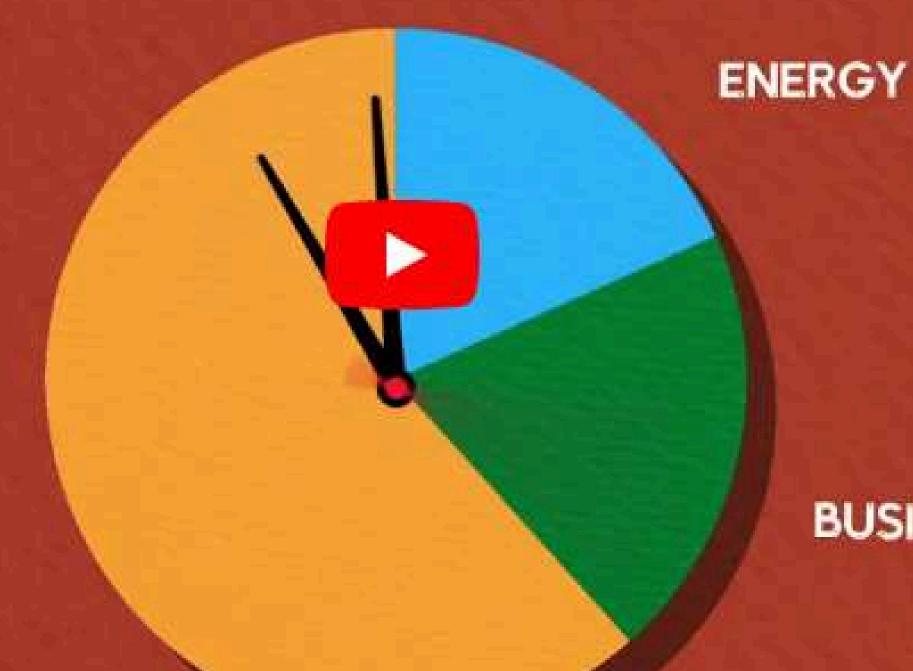








# AND THIS IS HOW WE'LL DO IT

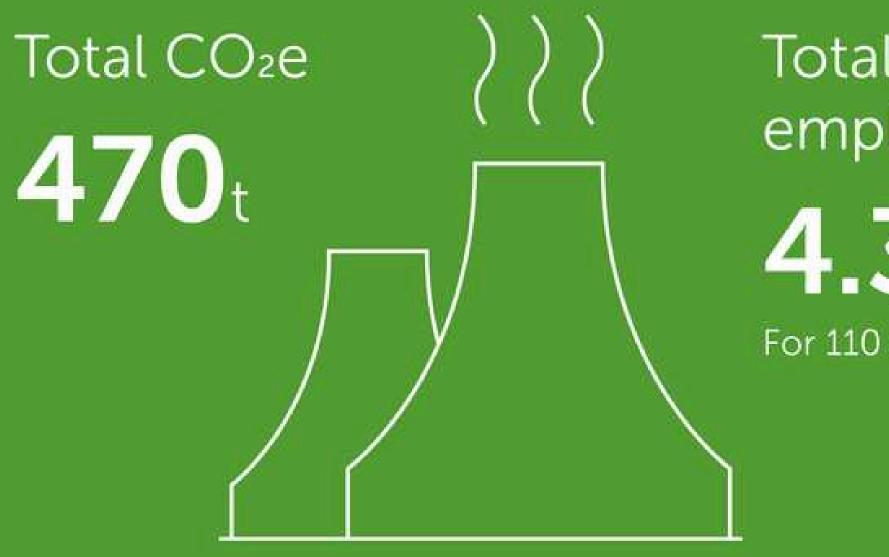


**AUDIENCE TRAVEL** 



**BUSINESS TRAVEL** 

# Watershed Emissions Overview, April 2022 - March 2023

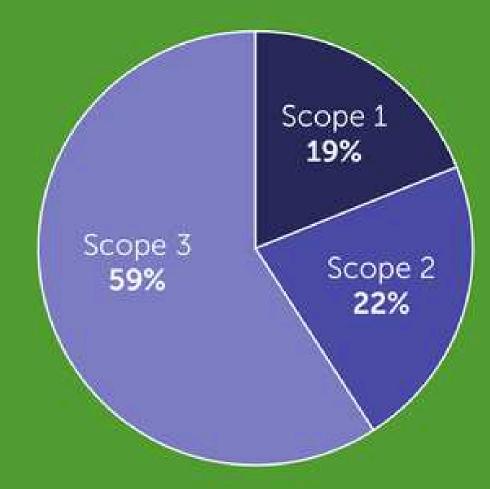


CO2e = Carbon Dioxide Equivelant

Total CO₂e per employee

4.3t

For 110 employees

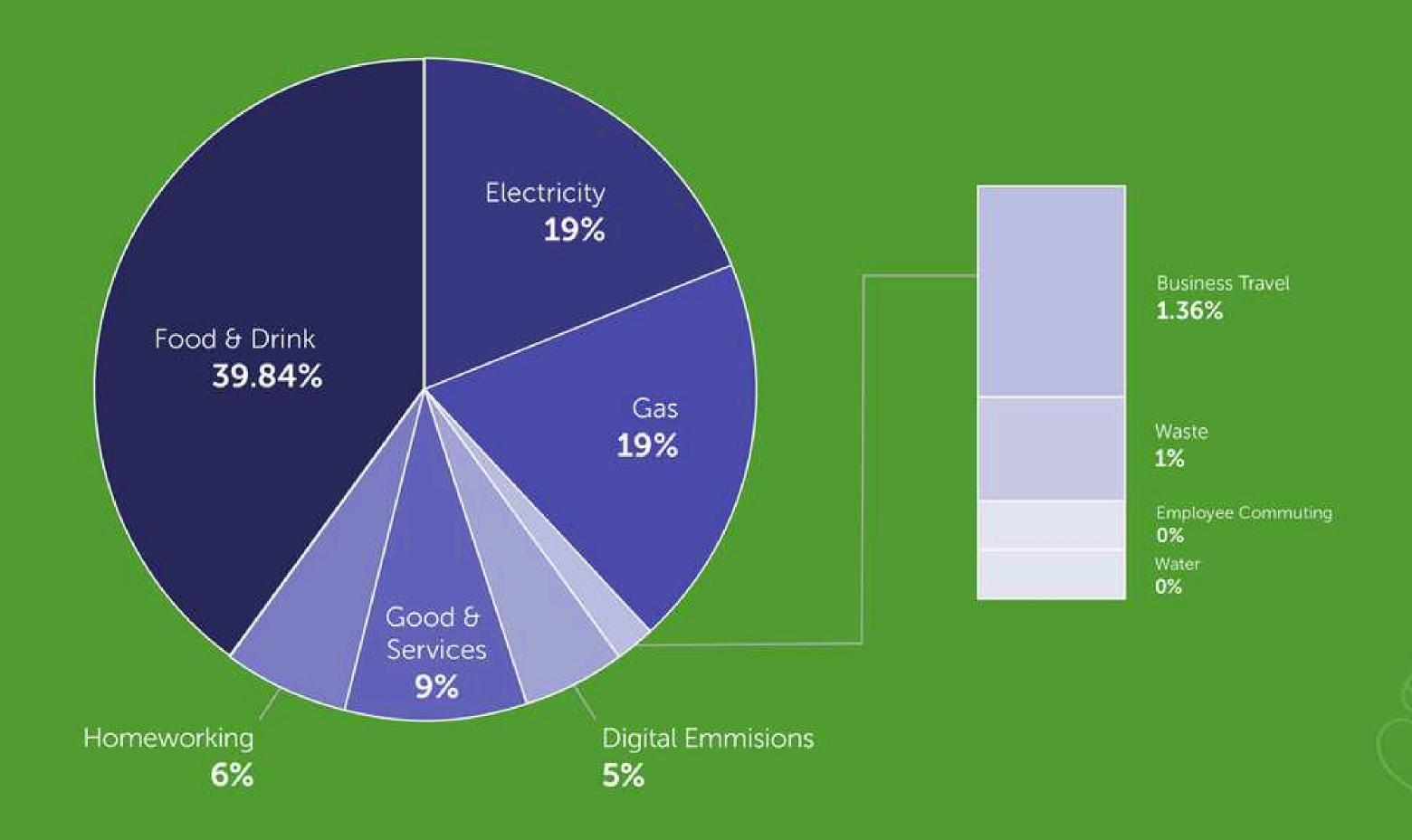


Scope 1 emissions are from gas used in Watershed's building

Scope 2 emissions are from electricity used in Watershed's building

Scope 3 emissions are mainly from goods & services including food & drink. This is fairly typical for a lot of organisations.

# Watershed Emissions by Area, April 2022 - March 2023







Watch on YouTube

we had take in our scope 3 emissions, we didn't have anything to compare it to.



# Use the information you have to tell your story....

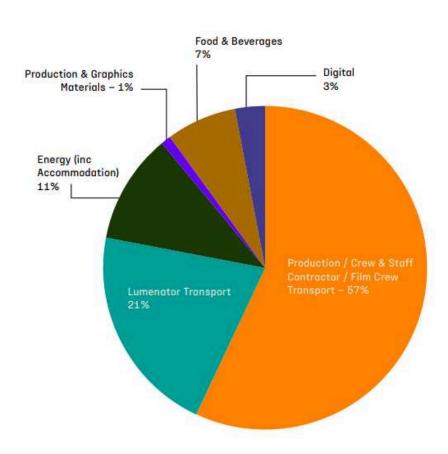


https://www.walktheplank.co.uk/sustainability/

Total carbon footprint: 378.84 tC02e

Average emissions per event: 19.94 tC02e

Average emissions per Lumenator: 60kg CO2e



#### SUCCESSES

100%
KEY SUPPLIERS MET PROCUREMENT
STANDARDS (Target 9)

81% C LUMENATORS SHARED TRANSPORT (exceeded Target 2) 50/50 SPLIT
OF VEGETARIAN AND MEAT
MEALS OVERALL

71% SUPPLIERS CAME FROM WITHIN 50 MILES (Target 3)

13/19 EVENTS

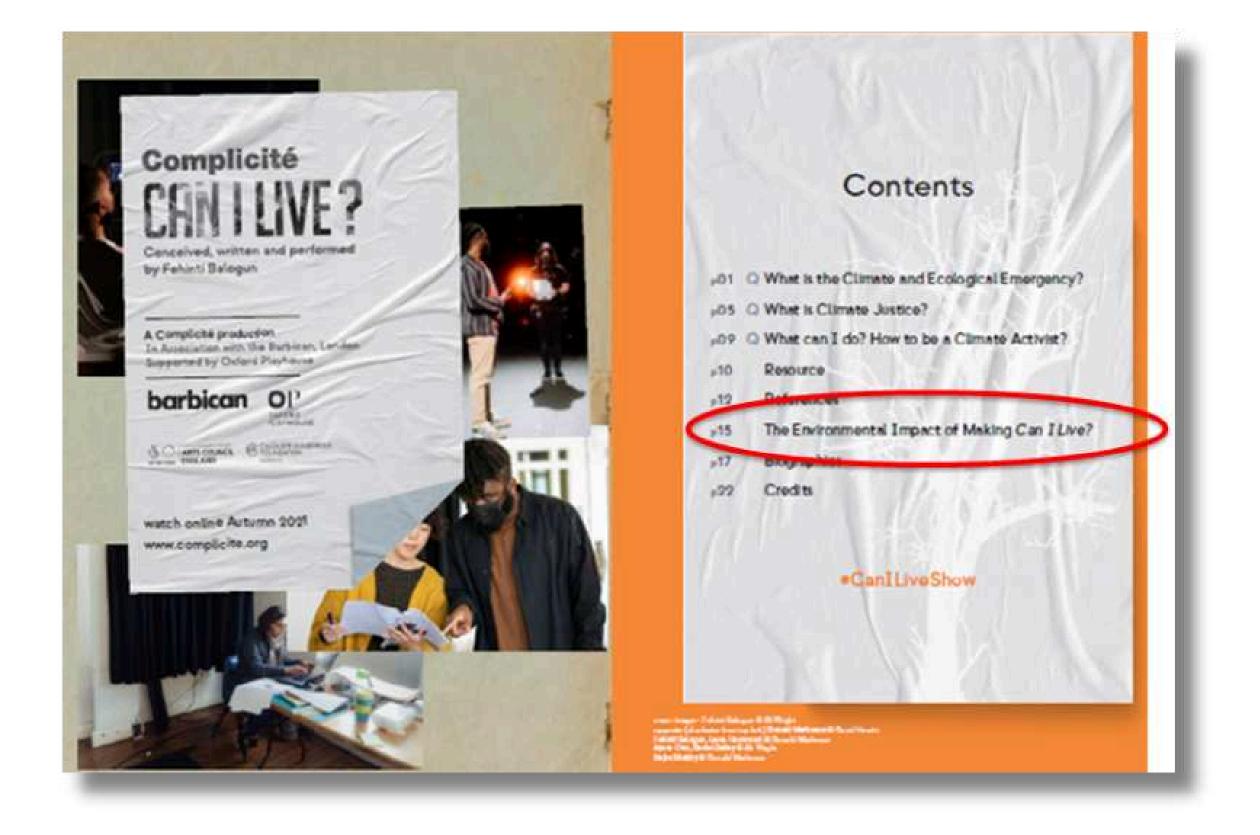
JSED OVER 80% RENEWABLE ENERGY

(Target 4)





# Use the information you have to tell your story....





Do

Involve the Be smart people focus on who have key areas the info Dig Use deeper existing e.g. tools + get audits. help surveys Compare qualitative over time and and likequantitwith-like ative Share and Use informacommunition to cate inform action information

### Don't

- Don't just get information or data because you can - if it's not an important impact and you can't do much about it anyway
- Unless you have help don't try to measure everything all at once - focus on the most important areas - you can always build this up over time
- Don't think measurement = job done - it's what you do it with that counts most
- Don't let a lack of impact data stop you from taking action





Energy audit for buildings, processes, or systems

Three-step process involving preparation, site visit and reporting

Eligible organisations - min. €10,000 energy spend p.a. (exclusive of transport energy costs)

SEAI's Support Scheme for Energy Audits (SSEA) will offer SMEs a €2,000 voucher towards the cost of a high quality energy audit





#### **Green for Business**

All enterprises with 1-50 employees Turnover > €30,000 annually. Business is trading > 6 months

#### 2 step process:

Step 1: Watch the webinar

Step 2: Apply for Green for Business: Two days of mentoring with a specialist Green Consultant – this will include recommendations on specific changes which your business can implement





#### **Energy Efficiency Grant**

The Energy Efficiency Grant supports the investment in technologies and equipment identified in a Green for Micro Report, GreenStart Report or an SEAI Energy Audit with 50% of eligible costs up to a maximum grant of €5,000.

#### **Other Supports:**

- Green Starts
- Climate Toolkit for Business
- Support Scheme for Renewable Heat
- Climate Ready Academy



# What next?

4 June 11am-12pm
Policy development I
Getting Started

11 June 11am-12pm
Policy development II
Getting People on Board

18 June 10-11am
Developing Action Plans
Public-facing buildings
+ bigger energy users

2 July: 10-11am Nature & Biodiversity 25 June 10-11am
Understand and
measuring Impacts

18 June 2-3pm
Developing Action Plans
Office-based organisations
+ production companies

9 July 10-11am Buildings Energy 16 July 10-11am Materials & Procurement October date TBC Influencing change

+Nov-Dec
Some group and 121
support on policies
and plans



Thank you for joining us today
Over to you for Q&A....



