

## DECARBONISATION ACTION PLAN

**A step-by-step carbon reduction strategy for the art sector.**

GCC intends to publish revised versions of this document annually to ensure the information is up to date. Please make sure you are using the latest edition.

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# INTRODUCTION

by Danny Chivers

**The arts have always played a vital role in times of social change. Right now, change is needed more than ever.**

We are in the midst of a climate crisis.

The world is being hit by three times as many droughts, floods, heatwaves and storms every year compared to the 1980s. Millions of people are losing their lands, lives and livelihoods around the world. While the Global South has borne the brunt of this crisis, we are now at a point where no country is safe: think of the recent floods in Germany, or the wildfires in Canada. And things will get worse – far worse – without urgent action to shift the world away from its reliance on fossil fuels.

The world's governments, coming together at UN climate summits – in Paris, 2015 and recently in Glasgow – have agreed on a target to halve global emissions by

2030 to keep warming below 1.5 degrees Celsius. Reaching this target would give the world a decent chance of avoiding the worst-case scenarios of runaway climate breakdown. However, while some positive steps were taken in Glasgow, our governments have not yet put enough policies in place to effect the changes needed to reach these targets.

That means it falls to all of us – in every sector of society – to spearhead action and change.

By working together, the art world has a huge opportunity to act in line with the Paris climate agreement and (at minimum) halve its emissions by 2030. As well as fulfilling the sector's own climate responsibilities, this would have significant knock-on effects on other sections of society. By supporting clean energy, and better transport and packaging initiatives at this crucial moment, the art world can help scale up various solutions so they become more available and affordable for others to

access. By working with artists to engage with the public and help promote this work, arts businesses can showcase what is possible and thus encourage others to follow suit.

**Reducing our emissions by 50% (from 2018/19 levels) by 2030 may sound daunting, and meeting this target will certainly require a concerted effort to move away from ingrained habits and practices.**

**But this is perfectly achievable.**

One of the sector's main sources of emissions – long-distance air freight of artworks – can be replaced by ocean, electric HGV and rail freight, producing just a fraction of the climate impact. The electricity grids that power art galleries in Europe and North America are becoming

lower-carbon, as coal power stations close and new wind and solar generation comes on line – a process set to continue through the 2020s. The COVID crisis has forced us all to rethink our air travel and find alternative ways to stay globally connected while taking fewer business flights.

In fact, with enough mutual support and collaboration, we believe that not just a 50% but a 70% reduction in the art sector's greenhouse gas emissions by 2030 is possible.

**This report offers examples and pathways of how a 50% and a 70% reduction might be reached for different kinds of arts organisations.**

We realise, of course, that the opportunities and challenges faced by different arts organisations – and the resources they have available to commit to this change – will vary, and so Gallery

Climate Coalition is currently asking its members to sign up to the 50% target. But we cannot emphasise enough that a 70% reduction would be more in line with the demands of climate justice – and the fact that those of us in wealthier Northern countries (where most of GCC's members are based), who have benefited from burning carbon for hundreds of years and contributed most to the problem, have the responsibility to cut emissions first and fastest.

We will not be alone in taking action. Others are stepping up too. Over the next few years, new technologies will become available, new ways of working will become the norm, and public expectations and demands will shift. That's why the GCC is encouraging its members to set their 50% (minimum) target today, and be open to increasing that ambition as new possibilities become available between now and 2030.

Over 600 arts organisations have now signed up to the Gallery Climate Coalition. That's 600 of us who have decided to act

with hope, positivity and ambition in the face of the climate crisis. Together, we have huge potential to shift the art world onto a lower carbon path, and to help the arts – and everyone – to thrive into the future.

**Danny Chivers** is a freelance environmental researcher and climate change consultant & sustainability advisor to Gallery Climate Coalition.

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**At the heart of this document is a 10 Step Strategy to lower carbon emissions. It can be implemented by organisations large and small, non-profit or commercial, and is relevant to artists, galleries, institutions, and art-sector businesses from all corners of the globe.**

	Page:
<b>Introduction.....</b>	<b>2</b>
<b>1 Summary</b>	
i. Arts and the climate emergency.....	5
ii. The role of Gallery Climate Coalition.....	6
iii. Targets.....	7
iv. Carbon Reporting.....	8
v. Taking action.....	9
<b>2 Decarbonisation Strategy</b>	
i. Taking Action – 10 Step Strategy.....	10
Step 1: Appoint a Green Team.....	10
Step 2: Measure emissions.....	11
Step 3: Analyse data and identify necessary changes.....	12
Step 4: Set reduction targets for 2025 & 2030.....	13
Step 5: Annual CO <sub>2</sub> e allocation.....	14
Step 6: Start taking action.....	15
Step 7: Contribute to Strategic Climate Funds.....	16
Step 8: Zero waste target and Circularity.....	17
Step 9: Participate in the GCC.....	18
Step 10: Encourage change across the supply chain.....	19
ii. 50 Effective Actions.....	20
Shipping, Travel, Energy.....	20
Packaging & Materials, Waste & Recycling.....	21
Exhibitions & Gallery Spaces.....	22
iii. Building a Timeline.....	23

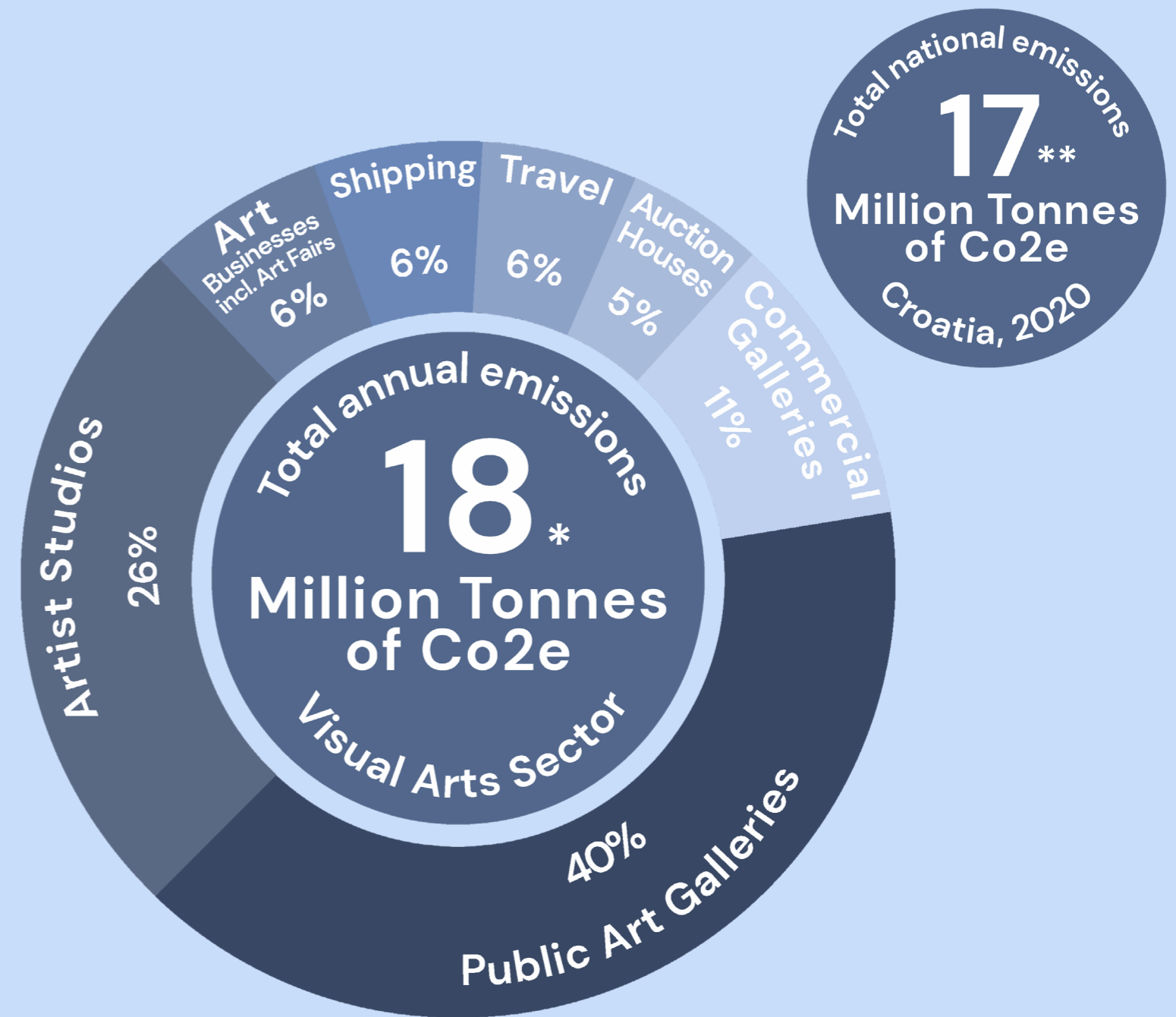
	Page:
<b>3 Implementation Projections</b>	
i. Introduction.....	24
i. Example 1.....	25
i. Example 2.....	26
i. Example 3.....	27
i. Action to 2030.....	28
<b>4 Expanded Information</b>	
i. Context: The issues we face.....	29
ii. Targets Explained.....	30
iii. Strategic Climate Funds (SCFs).....	33
iv. Carbon Budgeting.....	34
v. Creating Change Through The Supply Chain.....	36
v. Carbon Calculator.....	38
v. Glossary.....	41
<b>GCC.....</b>	<b>42</b>
About GCC.....	42
Document Credits.....	42
Credits.....	42

**In the absence of adequate governmental intervention, it is the responsibility of every sector of society to spearhead action and change.**

In order to do this, we must first understand the specific areas of our operations that cause emissions and environmental damage.

In April 2021, UK-based environmental non-profit organisation Julie's Bicycle (JB), examined the carbon footprint associated with the visual art sector. They found:

- 1** An indicative estimate of the art world's total global carbon footprint to be in the order of 70 million tonnes CO<sub>2</sub>e per annum.
- 2** An estimated 74% (~52 million t CO<sub>2</sub>e) of that figure is derived from visitor travel emissions. The remaining estimated 26% or **18 million t CO<sub>2</sub>e** is largely due to art shipment, work travel, and grid energy consumption.
- 3** Buildings and transport are significant areas in which the visual arts sector can, relatively easily, avoid and reduce emissions.
- 4** The visual arts will need to reduce emissions by at least half by 2030 to align with the global goal of limiting warming to 1.5° C.



JB's 'The Art of Zero' report (commissioned by AKO Foundation) is a useful insight into the impacts of our industry within the context of the broader issues and it paints a clear picture. It should be noted, however, that the numbers are provisional and increased data collection is required to improve accuracy.

\* Not including visitor travel

\*\* Land use change is not included. Source: ourworldindata.org

**GCC is an international charity and membership organisation providing environmental sustainability guidelines for the art sector. GCC aims to facilitate a reduction of the sector's carbon emissions by at least 50% by 2030.**

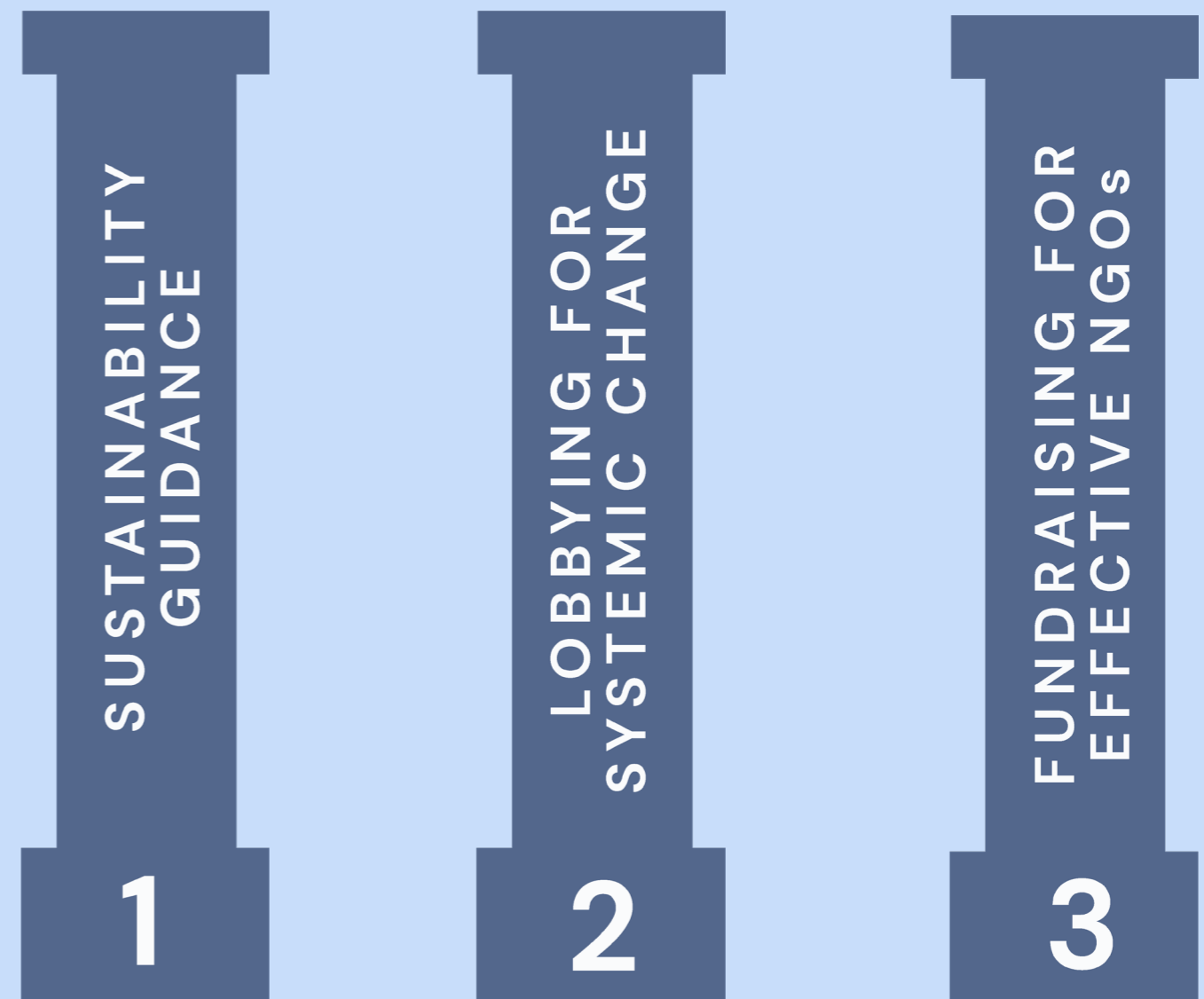
**This will be achieved by:**

- Making tools and resources freely available to all.
- Providing reliable, science-based and sector-specific guidance.
- Leveraging our power as a community (as well as individual members) to lobby for industry-wide systemic change.
- Identifying and working to remove obstacles leading to inaction in our sector.
- Establishing and supporting international volunteer groups.
- Collaborating with and promoting other organisations working towards the same goals.
- Encouraging innovation of products and services that will help members achieve targets.

In addition to sector-specific sustainability guidance, another core purpose of GCC is to raise funds from within the art market to support carefully selected initiatives working on the front line of the climate crisis by either keeping fossil fuels in the ground and greenhouse gasses out of the atmosphere or protecting natural environments, their biodiversity and their inhabitants. All the organisations that we support are effective within our 2030 timeline.

**The three pillars of GCC's operations are:**

- Sector-specific decarbonisation and sustainability guidance.
- Lobbying for greater systemic changes within the sector.
- Raising funds from within the art market to support initiatives.



### **GCC's targets are simple:**

- 1 50% CO<sub>2</sub>e emissions reduction, from 2018/2019 levels, across the sector by 2030.**
- 2 Members achieve Zero Waste operations by 2030, where facilities allow.**

These targets are based on the UN's goals/guidelines for keeping global heating below 1.5 degrees Celsius.

**Note:** We are not advising our members to set a "net zero" target, as such targets rely on purchasing conventional carbon offsets, which can be problematic for a number of reasons.

We hope that many of our members will want to reduce their carbon emissions by more than 50% by 2030, especially those with ample resources based in countries with historic responsibility for the climate crisis.

This is why we have also included information relating to a 70% reduction pathway in this resource. Although not a GCC requirement, it is useful to visualise the 70% guidelines.

However, a 50% target by 2030, is an achievable starting point for our members, as long as we all remain open to the possibility of moving further and faster, as new opportunities for decarbonisation become available over the next eight years.

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*See the full "Targets explained" and "setting targets" sections of this document for more details and advice on setting targets for your organisation.*

Calculating carbon emissions is a core coalition commitment – each and every member has pledged to do this – and is vital to understanding and taking responsibility for the emissions of the art sector. Annual Carbon Reports can be produced using GCC’s free Carbon Calculator, through Julie’s Bicycle’s website, or with a freelance auditor or consultant.

Carbon Reporting helps establish best practice, track progress, and build up a bank of data. This allows us to refine our tools and improve our research. Over time, we will be able to see how the data evolves and emissions change with new practices and conditions. These data sets will, in turn, allow us all to tackle the problems facing us more effectively.

From the data submitted by members, as part of the GCC Carbon Reporting Campaign, it’s clear that the vast majority of art sector emissions come from Travel (Airplanes), Shipping (Air Freight) and Energy (Grid Supply). This is why the focus of our advice is on these three areas.

The graphics on this page represent data collected via our Carbon Calculator over the past year. The averages are based on organisation size, and show how the variation of activities is reflected in the division of emissions. For example a smaller organisation is more likely to have a majority of emissions coming from air travel, whereas a medium size organisation is more likely to have a majority of emissions associated with freight.

**These findings are valuable for us as we refine and develop our guidelines. The more data we have, the more accurate the calculator will become and the greater our understanding of the sector-specific issues.**

More information about member categories can be found on page 24. More information about calculating emissions can be found on pages 11 & 38-40.





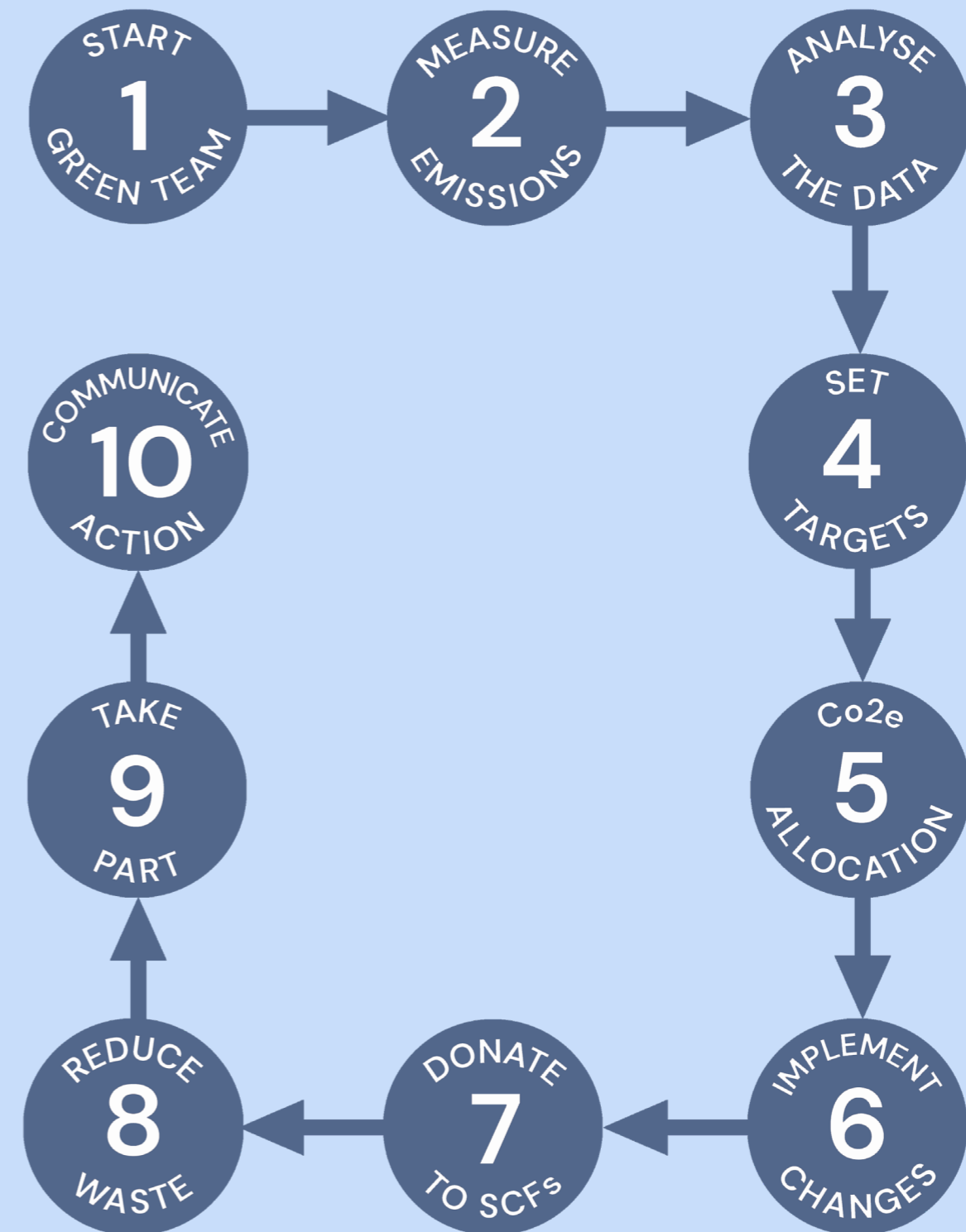
**We need to take urgent action.**

**With any new initiative, getting started is often the hardest part. But with the climate crisis unfolding around us, we don't have time to delay.**

GCC has developed a 10 step strategy to help us all take action. We've tried to strike a balance and provide advice that's specific enough to be useful, but general enough to be relevant to as many GCC members as possible. Our network includes a huge range of arts organisations, and not every solution will be possible (or relevant) for every one of our members. Some of the actions will be relatively easy to implement, others will require a long-term commitment of time and resources.

Throughout this process, GCC will be doing its best to provide support with workshops, webinars, new reports and resources. If there's anything more we could be doing to help, please let us know.

None of us have all the answers yet. We are learning as we go. But these suggestions should help put us all on the right track.





### Appoint a Green Team

**Establishing a Green Team or appointing a Green Ambassador will increase employee engagement with environmental challenges and create a strong culture of sustainability in the workplace.**

A dedicated internal group working towards targets will make the process more efficient.

Taking individual action on climate issues can be hard, but a Green Team offers an empowering way to make a difference.

*The overlap between social and environmental progress and financial gain is called the shared value opportunity. In other words, “doing good” can have a direct impact on your company’s ability to “do well.”*

**Harvard Business School**

Start recruiting a Green Team with an open call for volunteers. It is beneficial to have team members that have proactively put themselves forward so that the team is composed of individuals with a passion for the subject and a positive attitude.

Green Teams should have input from all levels of the organisation. Depending on the type and size of an organisation this may include a: Registrar, Technician, Gallery / Studio / Facilities Manager, Financial Director, HR.

**Most importantly, a Green Team should include those who have the time and willingness to commit to bringing about real change.**

**We recommend that Green Teams:**

- Establish a regular meeting time – ideally, at least once a month.
- Work through the list of Effective Actions (pages 20–22).
- Set targets and review them regularly.
- Share successes and celebrate wins – both within the organisation and with GCC.
- Build a timeline for their organisation. An example of this can be found on page 23.

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*Visit the GCC Green Team page on the website for further information.*

[More info →](#)



### Measure emissions

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**In order to set a 2030 target, we all need a starting point. That's why we ask GCC members to calculate a baseline carbon footprint for a pre-covid year. That is your starting point.**

We're aware that many of our members do not have the resources to carry out a detailed carbon audit, which is why we developed the user-friendly GCC online carbon calculator. This online tool focuses on the areas of emissions that we know are of the greatest significance in the commercial arts sector (long-distance art transport, business flights, and building energy), and provides an easy-to-use method for measuring these emissions – and for making a quick estimate of the smaller parts of your carbon footprint too.

We recommend that larger organisations, those with more complex operations or that have the means to do so should either use Julie's Bicycle's calculator or consult with external carbon auditors. JB's tool is more detailed than the GCC one and includes functions to measure water consumption, waste generation and recycling, and production materials.

**Measuring the carbon emissions of your operations is one of the most important steps you can take as an individual or organisation. Start by retrospectively measuring a pre-covid year as a baseline.**

Reduction goals cannot be set without first calculating baseline emissions.

GCC members should make carbon reporting an annual task, similar to tax returns or general financial record keeping. By submitting yearly data, you will be able to effectively track the impact of implementing the Effective Actions (pages 20–22) as your emissions reduce, and you move towards your reductions target.

All data gathered via the calculator helps us develop more effective tools and strategies to tackle our emissions.

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*For support in using the calculator, please see GCC's Carbon Calculator User Guide, Data Collection Template and Video Tutorial.*

[More info →](#)



### Analyse data and identify necessary changes

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Once you have calculated your carbon footprint, there are a series of questions for you or your Green Team to consider:

#### What are the largest parts of your carbon footprint?

Understanding which activities create the largest climate impact allows you to prioritise the actions that will make the biggest difference.

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*“Knowledge and information are vital in the fight against climate change. If you can’t measure, you can’t reduce. You need to know where your emissions are coming from to be in a position to solve them.”*

**Victoria Siddall, GCC Founding Member, speaking in Gagosian Quarterly**

#### Where are the main opportunities for change?

As soon as you dig deeper into your data, you will quickly spot which specific actions, events and time periods make the biggest contribution to your emissions. Perhaps there were three large exhibitions that together accounted for half of your shipping footprint? Maybe a quarter of your air travel footprint came from a few long-distance journeys to a specific destination? Which months of the year was your energy use highest? (This is useful because it will indicate whether heating or cooling creates the most energy demand in your building or buildings).

If you have multiple locations, you should compare their energy use per square metre, to see which is more efficient. Similar comparisons should be made for flights, packaging or other parts of the footprint.

#### What impact has the pandemic had on your operations? What lessons can be learned from it and how might it have affected your targets?

Even if you haven’t calculated a full carbon footprint for 2020/21, you should still have a good sense of the impact the pandemic has had on your activities, particularly travel. Rather than slip automatically back into pre-pandemic practices, think about your footprint and ask: what did we change in response to the COVID crisis that would be an appropriate response to the climate crisis, especially with regard to international travel?

#### How do your results compare with others in the GCC network?

We are asking all GCC members to share their results with the rest of the network, as this allows us to learn from each other and encourages others to measure their footprint too.

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*For more information about data analysis, look out for GCC’s regular digital Carbon Calculator workshop events.*

## i. Taking Action – 10 Step Strategy



### Set targets for 2025 & 2030

It can be hard to plan for a target that is eight years away. This is why we recommend setting an interim 2025 target.

**While it may be possible to sketch out paths to a 2025 and 2030 target, a certain leap of faith is also required because we can't know exactly what will happen over the next few years; what new challenges may arise, or what new opportunities might appear.**

However, we can't allow uncertainty to prevent us from setting targets and beginning to take action.

	50% Pathway	70% Pathway
2025	25–30% reduction from your baseline.	30–40% reduction from your baseline.
2030	50% of your baseline emissions.	70% of your baseline emissions.

Example:		
	50% Pathway	70% Pathway
2019	250 tCO <sub>2</sub> e	250 tCO <sub>2</sub> e
2025	190 tCO <sub>2</sub> e	175 tCO <sub>2</sub> e
2030	125 tCO <sub>2</sub> e	75 tCO <sub>2</sub> e

If in doubt, a 30% target by 2025 is a good starting point to aim for, as it will either put you ahead of the game for a 50% target, or act as a launchpad from which you can accelerate your efforts to a 70% reduction by 2030.



### Annual CO<sub>2</sub>e Allocation

Once you have targets for 2025 and 2030, it will be useful to set specific year-on-year milestones as you work towards these goals. You could do this by looking at the total tonnes of carbon emitted and then work out what level of reduction will be needed on average per year to reach that total goal. This is your ‘annual CO<sub>2</sub>e allocation’.

For example, to reach a 30% reduction by 2025 you would need to see, on average, a 5% reduction every year between 2019 and 2025. This means that in 2022, your total emissions would need to be 15% lower than in 2019. In 2023, they would need to be 20% lower than 2019, and so on.

You can then look at your flights, shipping, energy use etc and think about the actions you need to take in each of these areas to reach the 5% annual reduction you need.

The process is comparable to financial budgeting. Set yourself an annual total that should not be exceeded, and plan your activities accordingly.

This level of detail might not be necessary for all organisations – particularly smaller ones – but it can be a helpful way to make the sometimes abstract notion of emissions more tangible.

Larger organisations might want to break their carbon budget down between departments, locations, projects and operational categories. See the Expanded Information section for more advice on setting annual carbon targets or budgets for different-sized organisations.

Of course, our progress towards 2025 and 2030 targets is unlikely to be linear in real life (especially considering the impacts of COVID). Some parts of the footprint might turn out to be easier to decarbonise than expected, while others might be harder. Annual carbon allocations or carbon budgets won’t perfectly capture this – but they are a useful tool for driving change through an organisation.

Example of Annual CO <sub>2</sub> e Allocation working towards a 2030 target										
Reduction Pathway	2019	2022	2023	2024	2025	2026	2027	2028	2029	2030
50%	50CO <sub>2</sub> e	47	44	41	38	36	33	30	27	25
70%	50CO <sub>2</sub> e	46	42	38	34	30	25	22	19	15



### Start taking action

Once you have calculated your emissions and set your targets, it's time to start taking action. Sit down with your Green Team, work from your list of priorities and potential actions, and start allocating time and resources to creating change. This might involve bringing carbon reduction into your existing processes (e.g. ensuring that planning discussions about future exhibitions and events include conversations about flights and air freight from the very start), or starting new projects (e.g. arranging energy audits for your buildings).

**The most important thing is not to be overwhelmed by the task at hand, as this can lead to inaction.**

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*Refer to the "50 Effective Actions" section for further information or visit the website for the full GCC Effective Actions handbook.*

### Top tips for preparing for action:

- 1** Circulate GCC's 50 Effective Actions amongst your colleagues.
- 2** Choose somewhere to make a start, and get going. Aim for a mix of actions that will create short-term reductions, and those that lay the foundations for longer-term change.
- 3** **Make sure you're not neglecting the largest parts of your footprint, and be careful not to get bogged down in discussions about minor sources of emissions.** *While it would definitely be good to avoid plastic bottles of water at your next event, make sure you're not spending twice as much time debating that as you are working out how to cut your air freight.*
- 4** Introduce yourself to the GCC team. We would be very happy to meet and discuss the specific needs of your organisation .

More info →

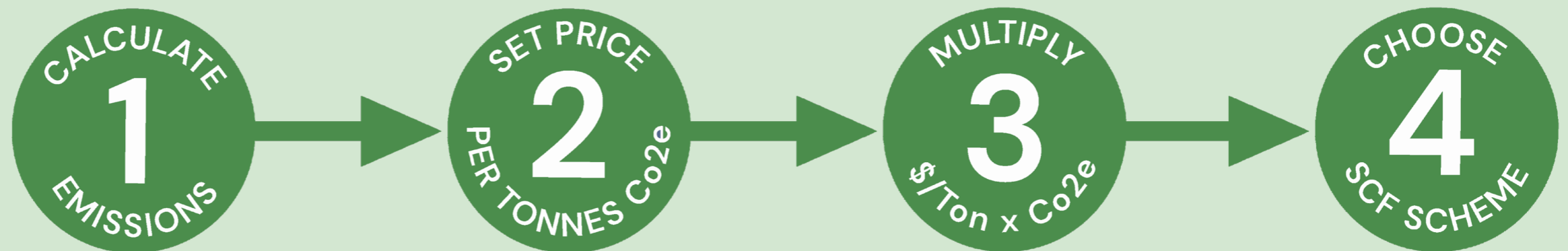
**Contribute to Strategic Climate Funds (SCFs)**



As we work to reduce our own emissions, we also need to do our part in supporting the urgent changes needed across wider society to tackle the climate crisis. Rather than putting money into conventional offsetting schemes (which at best create their carbon savings over decades, too late to help the world reach the 2030 target), we have identified a number of alternative projects that are creating active change right now, helping to keep fossil fuels in the ground, defending imminently threatened forests and developing zero carbon alternatives within the arts sector. We advise our members to set aside a certain amount of money each year, to fund whatever mix of these projects (and others) seem most strategic to them. We call this ‘Strategic Climate Funds’.

**Removing as much CO<sub>2</sub>e from your operations as possible should be your primary focus. For emissions you are unable to avoid: multiply your CO<sub>2</sub>e total by the price per tonne to calculate a guideline figure, which can be donated to a Strategic Climate Fund of your choice.**

The schemes GCC recommends will have positive impacts on fighting the climate crisis within our 2030 timeline.



*Refer to the “Strategic Climate Funds” section for further information or visit the website for the full SCF resource.*

**More info →**





### Zero Waste and Circularity

**Put simply: we must waste less and reuse, repair and recycle more – this is the essential concept behind a circular economy.**

We aim to help members achieve Zero Waste operations by 2030 and will do this by providing guidance on appropriate waste management systems, facilitating the innovation of new materials and establishing new standards of art packing based on minimal waste.

**We must change the products we use, revise ordering habits, use materials more effectively, and generally reduce the volume of materials in circulation, as well as correctly process end-of-life materials, so that nothing ends up in landfill or the natural environment.**

GCC acknowledges that we have a long way to go in this area, especially as not all regions have equal access to recycling, composting or reuse facilities. However, we do expect all members to drastically reduce their consumption of virgin materials, particularly single use plastics. We recommend setting an interim 2025 waste reduction target of 50% as that will ensure we are all well on the way to Zero Waste.

Activities such as commercial waste disposal, use of certain packing materials, and last-mile transit make up a small part of most arts organisations' carbon footprints, but have a much bigger impact on other crucial environmental issues such as plastic pollution, destruction of marine environments, air quality and damaging resource extraction.

We recommend our members set Zero Waste targets and plan how they can contribute to a shift to a 'circular' economy of reuse, repair and renewal, as opposed to take, make, dispose.

**Zero Waste definition:**  
*The conservation of all resources by means of responsible production, consumption, reuse and recovery of all products, packaging, and materials, without burning them, and without discharges to land, water or air that threaten the environment or human health.*

Wikipedia

Further dedicated research is required to make this actionable for organisations of all sizes in all territories. A new GCC resource will be available in 2022. In the meantime, we recommend referring to Ki Culture's [Waste & Materials Ki Book](#) for information on Waste Auditing.

*Refer to GCC Waste & Recycling, Packing & Materials and Circularity resources for more information.*

[More info →](#)



### Participate in the GCC

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The coalition relies on generous volunteers who contribute their time and experience on various projects.

**Taking action in a way that relates to your profession can be an empowering way to fight the climate crisis.**

If you would like to participate there are many ways to get involved:

**1 Campaigning** is going to be an important part of GCC activities going forward. We need the support of members to make our campaigns effective.

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*“As citizens of the Earth, we have a responsibility to participate. As citizens massed together, we have the power to affect change, and it is only on that scale that enough change can happen.”*

– Rebecca Solnit

**2 International Volunteer Groups** are semi-autonomous teams that represent GCC locally and internationally, for example in Berlin, London and Los Angeles. These groups develop region-specific content and resources in line with the general guidelines of GCC.

**3 Research Committees** are responsible for researching resources and best practice e.g. Shipping, Packaging and Travel.

**4 Action Teams** made up of volunteer members who are responsible for managing specific aspects and activities of the organisation such as Fundraising, Events and Editorial.

**5 Contribute** to our blog. We welcome submissions from members for our News page. This can be anything from articles, success stories, illustrations, case studies, product reviews etc.

[More info →](#)



### Encourage change across the supply chain

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A significant part of the art sector's potential for positive change lies in who we choose to work with – from the artists we collaborate with to the goods and services we procure.

**Choosing low-carbon suppliers – or pushing existing suppliers to offer low-carbon options and to rapidly reduce their own emissions – is another vital route to creating change.**

For example, we have already seen art shipping companies taking the need for emissions reductions more seriously, in response to requests from growing numbers of GCC members.

**Encouraging change throughout the supply chain will ensure that artists, institutions, shippers, framers, collectors, fabricators, commercial galleries etc. are all speaking the same sustainability language and together working towards the same goals.**

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Starting carbon conversations with your suppliers, contractors, customers, clients, artists, collectors, collaborators and supporters is a vital part of this work.

**Let your suppliers know about the carbon targets you have set and the actions you've put in place, and ask them for their help in achieving them.**

You may also want to ask them what they themselves are doing to tackle the climate crisis.

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*See the "Creating change through your partners, clients and suppliers" section of this report for some suggested starting points.*

*"Any organisation that wants to continue to exist and fulfill its function in 10 years time has to take this seriously."*

*Danny Chivers, GCC*

*Environmental Advisor speaking to artnet.*

### Shipping

1. Prioritise consolidated road and sea freight, over air, for local and international shipments.
2. Decisions relating to freight should be predicated on environmental considerations rather than speed.
3. Request hybrid or electric transport wherever possible.
4. Plan shipping schedules as far in advance as possible and involve artists and clients in the process so they are aware of the deadlines and shipping times.
5. Start a conversation with your insurance company about covering sea freight.
6. Communicate your sustainability targets to shippers and ask them to utilise low emissions and low waste options at every opportunity.
7. Collaborate to coordinate and consolidate shipping wherever possible.
8. Use Zero Emissions vehicles, or bikes, for

local courier and short transport journeys.

9. Keep a clear record of all shipments sent and received and ask shipping companies to keep their own thorough records, in line with the carbon calculator requirements; this will save time in future calculations.

### Travel

10. Reconsider what 'essential travel' means and wherever possible, do not fly.
11. Prioritise train or even road travel over airplanes.
12. If you do have to fly, choose to go direct and in economy class.
13. Plan travel schedules as far in advance as possible and set a quota for the maximum number of flights you take in a given year. Adhere to it!
14. If possible, plan for international exhibitions to be installed remotely with local teams.
15. Organise meetings back-to-back to

make business trips more efficient.

16. When travelling, use green accommodation. Certified Green Key establishments have been awarded the Green Key. This eco-label represents a commitment that their premises adhere to the strict criteria set by the Foundation for Environmental Education.

### Energy

17. Conduct an annual indicative energy audit for your premises in order to identify waste and areas of concern and track reductions as best practice is implemented. Set a reduction target for the following year.
18. If you haven't already, switch to reputable green energy suppliers. First read the [GCC report on Green Tariffs](#).
19. Update as much as possible the building's insulation to minimise energy out losses.
20. Switch to LED lighting for every available application.

**21.** Keep internal temperatures as consistent as possible, avoiding spikes of air conditioning or heating throughout the year.

**22.** Keep heating, ventilation, and air conditioning (HVAC) to a minimum and avoid unnecessary waste ie. heating on with the windows open.

**23.** If you own your own property, or if your property owner gives you permission, consider investing in onsite power generation such as solar or wind.

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### **Packaging & Materials**

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**24.** Study [GCC](#) and [Ki Culture](#) research into Packaging & Materials.

**25.** Reduce material consumption as much as possible.

**26.** Ask suppliers, framers, shippers etc. to review how much, and what type of, packaging they use per artwork.

**27.** Reconsider material ordering and commit to reusing materials whenever possible.

**28.** Only dispose of materials if absolutely necessary and when doing so, always recycle responsibly.

**29.** Avoid single-use plastics. Choose durable and long-lasting organic-based packaging made from recycled materials.

**30.** Look out for and invest in new developments and innovative solutions – for example Mycelium Composite, which is made from a network of fine fungal roots.

**31.** Consider how a material will be responsibly disposed of before using. Conduct a Life Cycle Analysis (LCA) for all materials prior to purchase.

**32.** If in any doubt about the suitability of a packing material for an artwork, contact a conservator or experienced art handler.

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*We must transform every element of our take-make-waste system: how we manage resources, how we make and use products, and what we do with the materials afterwards.*

**– Ellen MacArthur Foundation**

### **Waste & Recycling**

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**33.** Conduct an annual indicative waste audit.

**34.** Set targets based on the 5 R's of the waste hierarchy. Recycling should always be the last option.

**35.** Analyse your current waste management practices, make necessary changes and communicate system changes to colleagues including increased and clearer signage on waste streams.

**36.** Research commercial recycling service providers in your area. Choose those who can recycle the widest range of materials. Be aware that not all recycling companies provide the same level of service. Contact them if you can't easily find the answers you need, and request a visit to your premises for advice on waste management.

**37.** Reuse materials to the point of failure before replacing.

**38.** Check with your building's maintenance staff to make sure they are properly disposing of waste.

**39.** When purchasing new materials, first check the recycling capabilities in your local area before buying.

**40.** Avoid single-use items, especially materials made of fossil-fuel derived artificial polymers such as bottled water, packaging foam, or disposable plastic packaging. Reuse it or lose it.

**41.** Vote with your wallet by boycotting services and companies that continue to use single-use items in their operations.

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### Exhibitions & Gallery Spaces

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**42.** Work with artists / curators / gallery staff to plan exhibitions and projects with plenty of time. This will allow for low emission freight options which might take longer, the opportunity to produce impact reports helping all involved to consider the environmental consequences of the decision making process.

**43.** Stop single use culture wherever you can. Plinths, benches, tables, vitrines, shelves, crates must be reused, repaired and shared.

Wherever possible, do not produce new products if they will only be used once.

**44.** Check your area for exhibition material circularity schemes such as Barder and CAN. If no such scheme operates in your area, establish a Circular Network by reaching out to other GCC members and other art organisations in your area to build a shared inventory of exhibition furniture and crates.

**45.** Inform fabricators and fit-out builders that you want to reduce waste and reuse materials as much as possible. Ask for details on the impacts of their processes and request Material Data Sheets outlining how materials can be recycled correctly.

**46.** Establish partnerships with galleries, studios, universities, schools and community centers, and offer them still usable materials. Nothing should end up in landfill.

**47.** Paint is by definition not reusable and care should be taken to minimise its use. When purchasing, be sure to avoid any paints which have added VOCs and/or heavy metals such as lead. There are organisations that collect leftover paint

pots to reuse in community projects. Check if this is available in your area.

**48.** Avoid using medium-density fibreboards where practicable as these materials have been shown to release harmful amounts of volatile organic chemicals (VOCs) and are environmentally unfriendly.

**49.** Use alternatives to mass print-outs such as a protected press release that can be reused many times, or QR codes that link to a website with information.

**50.** Ensure all lighting and electronic devices are switched off / unplugged appropriately at night and on the weekends and minimise heating and cooling systems where possible.

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*Refer to GCC's annually revised Effective Actions Handbook for further suggestions.*

More info →

### iii. Building a Decarbonisation Timeline

## Decarbonisation Strategy

All GCC members are different and we can only provide broadly applicable guidance. As such, each Green Team should build their own decarbonisation timeline, tailored to their organisation.

At the start of this process, we'd advise sitting down with your Green Team and mapping out how this work might fit into the next 6 – 12 months of your schedule. This will vary for everyone, but here's an example of how an initial timeline might look:

January	February	March	April	May	June
<ul style="list-style-type: none"> <li>Form Green Team.</li> <li>Decide whether to commission an external carbon audit or use the free GCC calculator.</li> <li>Start collecting data for carbon audit/GCC calculator.</li> <li>Use data collection process to start conversations with shippers/travel providers/ your own finance team about the importance of this work and your intention to set a target.</li> </ul>	<ul style="list-style-type: none"> <li>Finish collecting carbon footprint data and begin calculating footprint.</li> <li>Make decisions about any estimates/assumptions needed to fill data gaps.</li> <li>Look at internal decision-making processes and start thinking about where and how carbon-saving decisions will need to be made.</li> </ul>	<ul style="list-style-type: none"> <li>Finalise carbon footprint and communicate to staff and stakeholders.</li> <li>Share carbon results with GCC.</li> <li>Set reduction targets for 2025 and 2030.</li> <li>Analyse carbon footprint results and start drawing up lists of possible actions.</li> <li>Begin conversations with key suppliers (eg shippers, travel agents, printers, packaging suppliers) about lower-carbon options and/or improved data collection.</li> </ul>	<ul style="list-style-type: none"> <li>Consult with relevant staff and teams and start drawing up action plans for short-term, medium-term and long-term actions.</li> <li>Consider setting annual carbon budgets – would this work for your organisation?</li> <li>Decide your level of contribution to Strategic Climate Funds, and choose which funds you will support this year.</li> </ul>	<ul style="list-style-type: none"> <li>Finalise action plans and/or carbon budgets and integrate them into your ongoing decision-making processes.</li> <li>Get started on new initiatives, research and/or investments to create change.</li> <li>Assess staff capacity for this work – is more resource needed?</li> </ul>	<ul style="list-style-type: none"> <li>Communicate your sustainability targets to shippers and ask them to utilise low emissions and low waste options at every opportunity.</li> <li>Create a sea shipment calendar that includes deadlines for consolidated shipments to art fairs.</li> <li>Research locally available low carbon/zero emission/ bicycle couriers and share your findings with your team.</li> </ul>
July	August	September	October	November	December
<ul style="list-style-type: none"> <li>Conduct an energy audit to identify waste and areas of concern. Set a reduction target for the following year.</li> <li>Speak to your landlord/ senior management about switching to a reputable green energy supplier.</li> <li>Switch to LED lighting for every available application.</li> </ul>	<ul style="list-style-type: none"> <li>Review all trips that are scheduled for the coming 12 months. Where can you make carbon savings? Can any trips be consolidated/ replaced by a low carbon alternative?</li> <li>Review the number of staff travelling to overseas fairs and exhibitions. Could any exhibitions be installed remotely? Consider hiring technicians and sales reps local to the destination.</li> </ul>	<ul style="list-style-type: none"> <li>Conduct a waste audit. See the GCC Waste &amp; Recycling resource for more info on this.</li> <li>Research commercial recycling service providers in your area. and switch to the waste management provider who can recycle the widest range of materials.</li> <li>Ask suppliers, framers, shippers etc. to review how much, and what type of, packaging they use.</li> </ul>	<ul style="list-style-type: none"> <li>Based on your waste audit findings, set targets in line with the 5 R's of the waste hierarchy.</li> <li>Hold a full team meeting and discuss the waste audit findings, introduce them to any new waste management systems.</li> <li>Review waste signage. Clear and consistent messaging on waste encourages best practice.</li> </ul>	<ul style="list-style-type: none"> <li>Check your local area for circular networks such as <a href="#">Barda</a> or <a href="#">CAN</a>.</li> <li>Speak with neighbouring organisations and explore options for building a circular network in your area. This could be as simple as creating a shared inventory of plinths, crates, vitrines etc.</li> </ul>	<ul style="list-style-type: none"> <li>Review your achievements over the last 12 months and share with your team, clients, followers and suppliers.</li> <li>Speak with GCC about the lessons you've learnt, and the areas you need more support with moving forward.</li> </ul>

## Decarbonisation Implementation

The following pages show three examples of how different arts organisations might embrace this challenge and achieve reductions of both 50% and 70% by 2030.

These are fictional examples, but they are based on the data gathered through our Carbon Calculator, so they do provide helpful illustrations of how a large, medium, and small art organisation might take action to decarbonise their practice.

There is some inevitable repetition in these examples (especially between 2025 and 2030) as the actions required will be fairly similar for each type of institution.

## Member Categories Explained

We have designated four emissions categories into which our members fall. These categories help us to provide the most effective guidance as we develop tailored instructions. There is a clear correlation between the the size of an organisation, their activities, and the sources of their emissions.

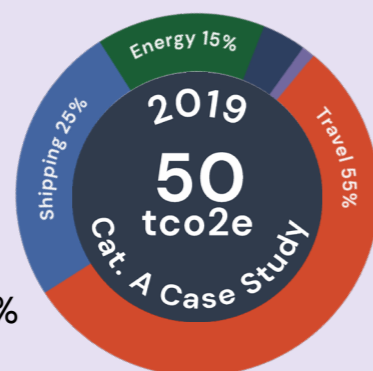
Category	Annual tCO <sub>2</sub> e emissions	Organisation Size (approx. guide)
A	1-149	Less than 8 staff in 1 location
B	150-1349	8-30 staff at 1 large or several smaller locations
C	1350-12149	30-50 staff in multiple premises, international
D	12150+	50+ staff with global operations

### a Category A Organisation Examples:

- Professional artist studio
- Small commercial gallery
- Medium art-sector business ie. art advisory firm or press & comms consultants

#### Typical Emissions Split (based on 50 tCO<sub>2</sub>e total):

- Flights 27.5 tCO<sub>2</sub>e = 55%
- Shipping 12.5 tCO<sub>2</sub>e = 25%
- Energy 7.5 tCO<sub>2</sub>e = 15%
- Travel (non-air) 2 tCO<sub>2</sub>e = 4%
- Other 0.5 tCO<sub>2</sub>e = 1%



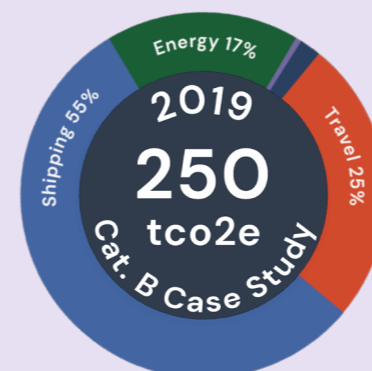
### b

### Category B Organisation Examples:

- Mid-sized commercial gallery
- Medium art-sector business ie. shipper or fabricator
- Large art advisory firm or PR consultants
- Very large professional artist studio

#### Typical Emissions Split (based on 250 tCO<sub>2</sub>e total):

- Flights 62.5 tCO<sub>2</sub>e = 25%
- Shipping 137.5 tCO<sub>2</sub>e = 55%
- Energy 42.5 tCO<sub>2</sub>e = 17%
- Travel (non-air) 0.7 tCO<sub>2</sub>e = <1%
- Other 5 tCO<sub>2</sub>e = 2%



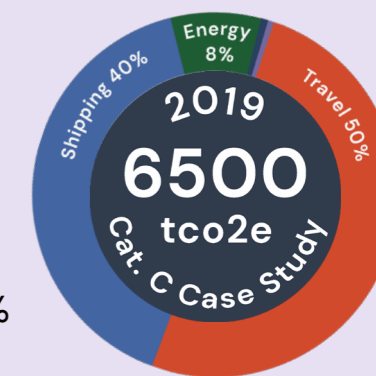
### c

### Category C Organisation Examples:

- Mid-sized public institution
- Art-sector corporation ie. Art Fair / Auction House
- Large commercial gallery

#### Typical Emissions Split (based on 6500 tCO<sub>2</sub>e total):

- Flights 3250 tCO<sub>2</sub>e = 50%
- Shipping 2600 tCO<sub>2</sub>e = 40%
- Energy 520 tCO<sub>2</sub>e = 8%
- Travel (non-air) 32 tCO<sub>2</sub>e = 0.5%
- Other 32.5 tCO<sub>2</sub>e = 0.5%





### Example 1 – Category A: Artist's studio, North America

#### Operations Overview

- A professional artist studio in Los Angeles, USA.
- 1200 sq ft. building
- The studio employs 2 full time assistants and several occasional freelance technicians.
- The artist is represented by a major gallery with several locations internationally.
- On average the artist has a solo show every other year and appears in 3 group shows annually,
- Fabricators are used regularly to produce large scale work in off-site facilities.
- The artist uses specialist materials, which are flown in from around the world

In 2019, the largest part of the footprint was work-related travel for exhibition installs, meetings, biennials, research trips etc.

The long-distance freight of artworks and materials was carried out almost entirely by air, plus some local road freight. The studio's energy use was a mix of heating, lighting, hot water, humidity control and the use of power tools.

The majority of the artwork freight was covered by the artist's gallery and so did not appear in the carbon totals. However, shipments

of artworks to / from fabricators, deliveries of materials and the transport of artworks between storage facilities were recorded.

In 2020, the studio was affected by the COVID crisis like everyone else. Its footprint dropped sharply, particularly with regard to business travel and international transport. In 2021, the studio joined the Gallery Climate Coalition and set a target of reducing its emissions by at least 50% from a 2019 baseline.

#### Actions to 2025

Between 2021 and 2025, the studio shifts 25% of its air freight to ocean transport. Using the lessons learned during the pandemic, they hold more meetings and viewings remotely; flights recover to 70% of their pre-COVID levels.

By upgrading to more efficient tools and replacing old equipment, they reduce their energy use by 10%. At the same time, electricity grids in the US continue to bring more renewable generation online and close down coal plants, making the electricity supply to the studio lower-carbon. The artist also installs solar panels on the studio roof. Together, these changes in energy supply create a saving of a further 15%.

The studio prioritises more sustainable options for art materials and local transport, creating carbon savings in these areas too. The extra costs of doing this are largely covered by the savings made from fewer flights and by using ocean rather than air freight.

### Example 2 – Category B Medium-sized Commercial Gallery, UK

#### Operations Overview

- A well established gallery in central London.
- 850 sqr ft. exhibition space & 1100 sqr ft. offices and private viewing rooms. They share the building with other occupants.
- The gallery has 25 full time employees and several regular freelance technicians.
- The gallery represents 30 artists, the majority of which live outside the UK.
- On average the gallery has 6 exhibitions a year and participates in 5 art fairs internationally.
- The gallery has many international collectors and frequently ships work around the world.

In 2019, the largest part of the gallery's footprint is the long-distance freight of artworks. This was carried out almost entirely by air, plus some road freight.

Business flights also made up a significant portion of emissions. The majority of these were to art fairs, attending artists' exhibition openings, and for meetings with clients.

The gallery's building is old but moderately efficient. The largest contributor to its energy consumption is the heating and air conditioning of its office spaces.

A lot of single use packaging is consumed as part of their operations,

as well as numerous wooden crates, mostly supplied by shipping companies when artwork is being transported. Local art transport is carried out by a couple of different courier companies using petrol vans.

Occasionally the gallery produces a high quality artist monograph with a well-known printing company.

#### Actions to 2025

Between 2021 and 2025, the gallery shifts 25% of its air freight to ocean transport.

Using the lessons learned during the pandemic, they hold more meetings and viewings remotely. They also reduce the number of art fairs they participate in and introduce a policy of not flying to attend international openings, unless more than 3 business meetings can be arranged on the same trip.

By monitoring energy use, switching to LED lighting and adjusting HVAC presets, they reduce their energy use by 10%. At the same time, electricity grids across Europe continue to replace coal plants with renewable generation, making the electricity supply to the organisation lower-carbon and creating a "background" saving of a further 15%.

The gallery speaks to their shippers about crating methods and review their own packaging purchases, reducing where possible. In addition to the increased sea freight, this results in a 20% reduction in the packaging footprint.

### **Example 3 – Category C Small Public Institution, Europe**

#### **Operations Overview**

- A long-running independent art museum in Hamburg, Germany.
- 5850 sq ft. of exhibition spaces, 2000 sq ft. offices and a 3500 sq ft. storage facility.
- The museum has 60 full time employees and an additional 25 regular freelance and event-based staff.
- The institution has more than a 600,000 visitors a year.
- On average, there are 8 major exhibitions a year and a programme of public, educational and digital projects.
- The museum has a modest but growing collection.
- There is an onsite cafe and gift shop.

In 2019, the largest part of the museum's footprint is its energy use, the vast majority of that coming from heating/cooling/humidity control in the exhibition and collection storage areas.

The transport of artworks by air freight make up a significant proportion and the senior staff's travel to studios, biennials and international events result in a fair amount of the total footprint.

Packaging is a standard mix of wooden crates and plastic wrap/packing materials, mostly supplied by shipping companies when artwork is being transported. Local art transport is carried out by a couple of different courier companies using petrol vans.

For its size, the museum carries out a large amount of printing, producing books and merchandise for its shop.

#### **Actions to 2025**

Between 2021 and 2025, the museum shifts 25% of its air freight to ocean transport.

They introduce a policy of online studio visits and reduce the number of subsidised staff travel to international events.

By installing a small wind turbine and upgrading HVAC systems, they reduce their energy use by 10%. At the same time, electricity grids across Europe continue to replace coal plants with renewable generation, making the electricity supply to the galleries lower-carbon and creating a "background" saving of a further 15%.

The cafe's menu becomes seasonal, mainly locally sourced food, and the gift shop no longer stocks products made from single use plastics or transported by air freight.

They speak to their shippers about their crating methods and review their own packaging purchases, reducing where possible. The 25% shift to ocean transport also helps, as sea freight generally requires less packaging than air freight. All of this results in a 20% reduction in the packaging footprint.

**Possible Actions for all Categories:  
2025 - 2030**

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The steps after 2025 will partly depend on how much effort has been made across the arts sector – and society as a whole – to support clean energy, packaging and transport initiatives, create a cultural shift and embrace new technologies and practices.

By 2030, the story of our example organisations could continue on a 50% reduction path (option A) or opt to do more by choosing a 70% reduction path (option B):

- 1 a** Shift 50% of air freight to ocean and electrified trucks/ rail.
  - OR**
  - b** Shift 70% of air freight to ocean and electrified trucks/ rail while also working with others in the sector to support and develop greener ocean transport.
- 

- 2 a** Reduce flights to 50% of pre-COVID levels, thanks to changes in practice and better availability of high-speed electric rail.
- OR**
- b** Reduce flights to 33% of pre-COVID levels, thanks to changes in practice, better availability of high-speed electric rail and changes in the culture and expectations around travel in the art world as a whole.

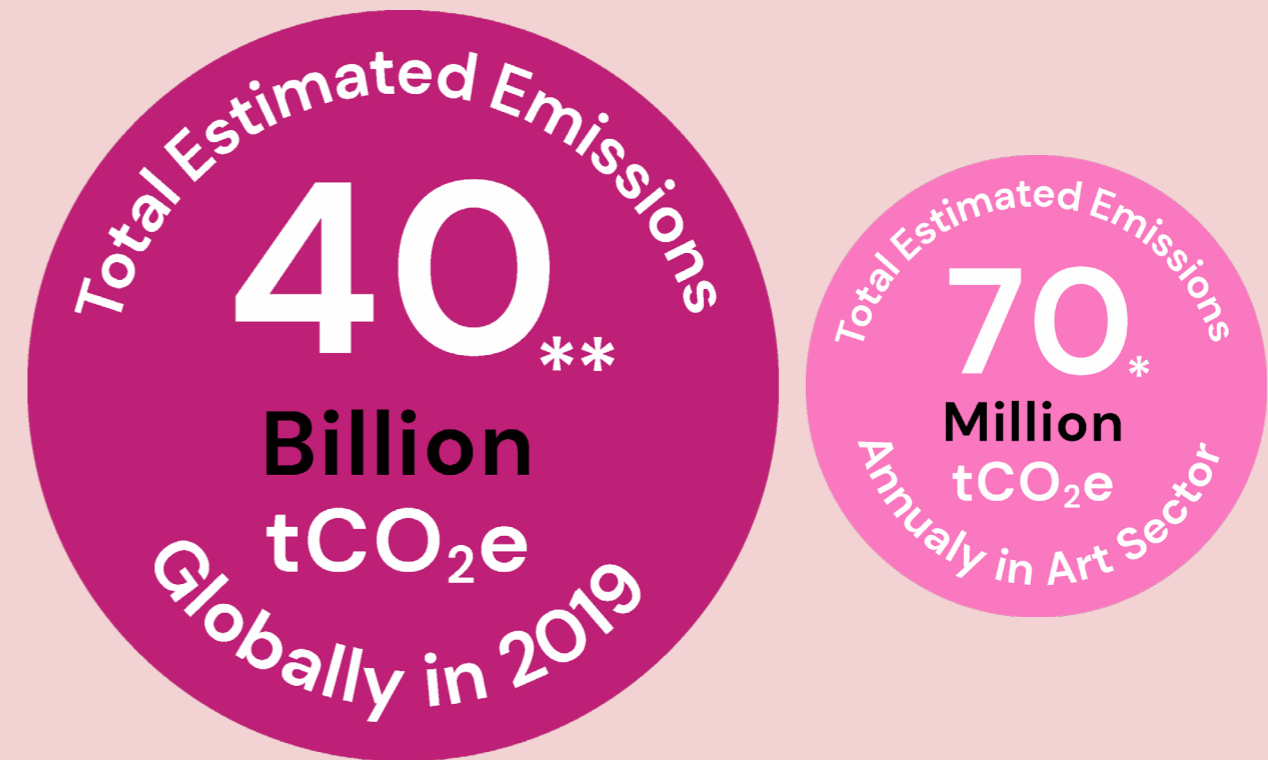
- 3 a** A further 10% saving in energy use from more efficient equipment, plus the continued greening of electricity grids, leads to an energy footprint 60% lower than in 2025.
  - OR**
  - b** A serious energy efficiency drive and the adoption of low-energy technology, plus the continued greening of electricity grids, leads to an energy footprint 75% lower than in 2025
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- 4 a** Greater use of sustainable alternatives (where available) for local transport, business ground travel, packaging and printing create a 50% total saving in these areas compared with 2019.
- OR**
- b** Active support and collaboration within the arts sector to create and boost sustainable alternatives for local transport, business ground travel, packaging and printing, leads to a two-thirds reduction in these areas compared with 2019.

In August 2021 a major report from the UN's Intergovernmental Panel on Climate Change (IPCC) was released, offering a stark warning about the future of our planet as the rates of CO<sub>2</sub>e emissions continue to rise and climate systems begin to collapse.

Some of the key findings in IPCC's report:

- 1 It has been proved beyond all doubt that human activities are responsible for warming of the atmosphere, ocean and land.
- 2 The rate at which global temperature has increased since 1850 is unprecedented. At no point in the previous 100 millennia has the planet been as warm as it is now.
- 3 This trend will continue even if we were to cease all polluting activities tomorrow. With so much CO<sub>2</sub>e already in the atmosphere temperatures will continue to rise.
- 4 If we take effective action now, it will still be possible to avert the worst case scenario predictions based on current rates of emissions.
- 5 There is already abundant evidence of global warming impacting weather systems across the world. If global warming isn't limited to 1.5C, severe impacts will be felt by billions of people on the planet in our lifetime.



To put this into context of the art sector, in April 2021, UK-based environmental non-profit organisation Julie's Bicycle (JB), were commissioned by AKO foundation to produce a report on the visual art sector. The purpose of the study was to model indicative greenhouse gas emissions of the global visual arts sector by activity areas, identify opportunities for reduction and share examples of climate action from the sector, with the ultimate aim of precipitating immediate action in the industry.

**An indicative estimate of the art world's total global carbon footprint is in the order of \*70 million tonnes CO<sub>2</sub>e per annum.** An estimated 26% (18 million tCO<sub>2</sub>e) is due to building, art shipment and business travel, and an estimated 74% (~52 million tCO<sub>2</sub>e) is derived from visitor travel emissions. \*\* Source: *ourworldindata.org*  
Graphics are not proportionately accurate and are only representative.

### The Paris Agreement and the 2030 goal

**In 2015, 196 governments got together in Paris and signed the Paris Agreement, a legally-binding international treaty on climate change. They pledged to limit global heating to well below 2 degrees, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.**

This is important, because – according to climate scientists – 1.5 degrees is a hugely dangerous threshold that the world cannot afford to cross.

In 2018, the climate scientists on the Intergovernmental Panel on Climate Change (IPCC) produced a landmark report on what it would take to meet this target and limit global temperature rise to 1.5 degrees. They concluded that the world needed to reduce its greenhouse gas emissions by at least 45% by 2030, compared with 2010 levels.

### What are GCC's climate targets?

**We are asking all GCC members to sign up to at least a 50% CO<sub>2</sub>e emissions reduction by 2030, based on 2018/2019 levels.**

A 45% cut from 2010 emission levels equates to roughly a 50% cut from 2018/19 emission levels, which is why the GCC has set a minimum target of 50% emissions reductions for our membership by 2030.

Ideally, we'd like to go further than this – especially as most of our members are currently based in countries that bear a higher responsibility for the climate crisis and so should arguably be reducing their emissions at a faster rate than the average. However, a 50% target by 2030 feels like an achievable starting point for our members to begin working towards, while remaining open to the possibility of moving further and faster as new opportunities for decarbonisation become available over the next eight years.

- 1 50% CO<sub>2</sub>e emissions reduction, from 2018/2019 levels, across the sector by 2030.**
- 2 Members achieve Zero Waste operations by 2030, where facilities allow.**

## What about going “net zero”?

At the Paris climate talks, governments agreed that by 2050 the world needs to reach a point where the amount of greenhouse gas emitted globally each year is equal to the amount being absorbed by forests, soils, oceans etc, so that no extra greenhouse gas is being added to the atmosphere overall. This idea has been summed up by the shorthand phrase “net zero by 2050”.

**It’s important to note two things about “Net Zero”:**

### 1

**“Net Zero” isn’t a goal in itself** – if we reach it, all it will mean is that we’re no longer adding new greenhouse gas to the atmosphere. All the warming gases we’ve already emitted will still be up there, heating the planet. The point we really need to reach is “carbon negative” emissions, where the planet’s natural systems are absorbing more greenhouse gas than we’re emitting, as this is the point where the store of warming gas in the atmosphere will start to reduce. In other words, **“net zero” is just a milestone on the path, not an end point.**

### 2

Reaching a global net zero target doesn’t require every organisation, country, company etc. to go individually “net zero” themselves. What matters is that everyone’s emission reductions – plus the carbon absorption from natural systems – add up to net zero as a global total, by 2050. While there’s been a recent trend in organisations trying to go “net zero” or “carbon neutral” by themselves, this approach is fraught with pitfalls and problems, as explained in the GCC’s online guide to offsetting.

According to the climate scientists at the IPCC, the surest way to help the world reach that global net zero milestone is for us all to reduce our emissions by at least 50% by 2030. We should also do what we can to protect, restore and expand the natural systems that help to pull carbon out of the air, but we believe we can do this more effectively without setting “carbon neutral” or “net zero” targets for our organisations.

This is where GCC’s “Strategic Climate Funds” come in – these are a way for us to support these wider changes in society without getting tangled up in problematic carbon neutral targets or offsetting schemes. See the SCF section of this document for more details.

### What if our organisation is planning to grow?

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Arts organisations that are planning to grow their operations significantly between now and 2030 – for example, by opening new galleries or selling more publications – are in a slightly more complex situation than those that plan to remain roughly the same size.

**On the one hand, the climate doesn't know or care whether our organisations are growing – the only thing that matters is how much greenhouse gas we are putting in the atmosphere.**

From this perspective, we need to make sure that we are halving our emissions in the next eight years, even if we are planning to increase in size.

**On the other hand, because GCC's goal is to reduce the carbon footprint of the art world as a whole by 50% by 2030, there is the potential for some flexibility within that.**

If the arts organisations that are growing in size are taking up space left by others who are shrinking or closing down (sadly, a common situation during COVID), then so long as the growing organisations are reducing their relative carbon footprint, then the emissions from the sector as a whole will still come down.

Any arts organisations who are planning for significant (more than 50%) growth by 2030 should speak to us at the GCC and we can discuss what this means for your target-setting and decide whether you should set a relative rather than an absolute target. We will need to make sure this is done fairly across the whole sector.

**This is an interesting topic and one we don't have all the answers to. We are keen to explore this area further in future events and resources.**

Do you work for an organisation that is planning on expanding and don't know what that means for your emissions targets? Get in touch, we would like to hear from you.



## Strategic Climate Funds (SCFs)

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A question we are often asked is: Should I offset the emissions I can't reduce?

**GCC advises against conventional offsetting schemes, as it is difficult to verify the effectiveness of the claims made by many of these schemes. For more information on the problems with offsetting, see our commissioned report.**

Instead, GCC recommends funding projects that will have the most immediate strategic impact. These projects won't make emissions disappear, but they're a way to take responsibility for the greenhouse gases that are difficult to cut, and will help accelerate wider systemic change.

We strongly encourage members to take responsibility for emissions that cannot be avoided by donating to the approved environmental charities and sustainability schemes listed on our SCF resource page.

These projects cover areas where urgent climate action is needed, including keeping fossil fuels in the ground and

defending and expanding forests and wetlands and their inhabitants.

In order to donate you must first calculate your CO<sub>2</sub>e price per tonne. There is considerable debate over exactly how to do this and guidelines vary on who you ask.

**GCC advises: £50-100 / \$70-140 / €60-115 per tonne of CO<sub>2</sub>e.**

We recommend choosing a figure within this range based on what is affordable, while also being high enough to act as a useful spur to reduce emissions.

**These strategic donations will not make your emissions impacts disappear but they are an effective way to support organisations that will have a positive impact within our 2030 timeline.**

Compensation schemes should be a last resort after reducing as much of your CO<sub>2</sub>e emissions as possible.

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For more information about Strategic Climate Funds (SCFs) vs conventional 'offsetting' as well as GCC approved schemes, visit the resources page on the website.

### Carbon budgeting

**Organisation-wide carbon budgets are a tool that may be useful to arts organisations. They involve deciding in advance what you want your maximum emissions to be in a specific year, and then working to stay within that budget – in exactly the same way as a financial budget.**

Here are a couple of ways of doing this:

# 1

Look at the total tonnes of carbon emitted and work out what level of reduction will be needed on average per year to reach that total goal. So for example, to reach a 30% reduction by 2025 you would need to see, on average, a 5% reduction every year between 2019 and 2025. That means that in 2022 you would want your total emissions to be 15% lower than in 2019, then in 2023 they'd need to be 20% lower than 2019, and so on.

You can then look at the main parts of your footprint (e.g. flights, air freight, building energy) and calculate how much lower they'd each need to be to add up to that total reduction. The GCC online calculator can be a useful tool for working this out – you can use it to plug in some speculative values for flights, shipping and energy and see what carbon total they come out with.

Once you've decided what reductions will be needed in each of these areas to achieve the 2022 reductions, you can then do the same for 2023, 2024 and so on. In this way, you can calculate your "upper limits" for km of flights, tonne-km of shipping and

KWh of electricity and gas each year. These upper limits can then become your "carbon budget" for each of those years – a total you'll aim to keep within, just like a financial budget.

# 2

Alternatively, you could start by calculating the total reductions in flights, air freight, energy footprint etc. that you need to aim for in order to reach your 2025 carbon budget. Then these figures can each be divided by six in order to get the annual reductions – and thus the annual budgets – for each of these parts of your footprint between 2019 and 2025, as above.

Once you've worked out your specific budgets for each part of your footprint, you can then build that into your existing planning process – so when you're planning upcoming exhibitions and events, as well as considering how those plans affect your financial budget you can also consider their impact on your annual carbon budgets, and modify those plans accordingly.

For a larger organisation (Category C or above) setting carbon budgets may be more complex. Typically, the overarching budget will be divided between different organizational hubs (e.g. individual galleries or specific teams), who will then each have responsibility for meeting those budgets. These kinds of formal carbon budgets require a certain amount of resource and capacity to implement, but can be an effective way to drive change through a large organisation.

### Carbon budgets work best when they are:

#### **a** Presented to staff in understandable terms, rather than as tonnes of carbon.

For example, if your goal is to reduce the carbon from business flights by 10% in a given year, then it might be easier to set budgets based on the total distance flown by each team/department rather than the tonnes of CO<sub>2</sub>e generated by those flights.

#### **b** Allocated clearly and fairly within an organisation.

For example, if you own five different galleries that each carry out international shipping, it may seem fair to ask each of them to reduce the emissions of their shipping by 5%. However, if one gallery already does half of its shipping by sea while the rest exclusively use air freight, then it might actually be fairer (and easier) to ask the latter galleries to do

#### **c** Backed up by detailed and regularly updated data.

In order to ask staff to work to carbon budgets, you will need to provide annual – or better still quarterly – figures to each team/department/gallery to allow them to track their progress, presented in a way that gives them the information that they need.

#### **d** Integrated with existing planning processes.

To be effective, carbon budgets need to be discussed at key planning meetings and taken on as an organisational responsibility, not left to individual day-to-day decisions by staff. For example, if management ask staff to fly 10% less while also committing to attending more art fairs, then staff will find it extremely challenging to meet that flights budget without management support and agreement on changes in practice that would allow fewer staff to attend each event.

#### **e** Aligned with financial budgets.

To avoid mixed messages or incorrect incentives, a planned 10% reduction in flights should be accompanied by a 10% reduction in the financial budget for flights – and an increase in the financial budget for train travel and/or videoconferencing.

If you think this kind of carbon budgeting may be appropriate for your gallery, please contact GCC for more information and guidance.

### Creating Change Through The Supply Chain

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As explained in the ten-step plan, this is a key area that can amplify our impact and support the shift to a lower-carbon world beyond the walls of our own organisations. Here are some suggested starting points:

- 1** Ask suppliers for good quality data for your carbon footprint calculations. These are conversations you may have already started. To measure an accurate carbon footprint, you might need data from your shippers on the weights and distances transported and the amount of packaging used; lists of flights from your travel supplier; accurate energy figures from your landlord; and so on. The more we have these conversations within the sector, the easier it should become to collect these data as they become something standard that everyone is asking for.
- 2** Talk to shippers about lower-carbon transport options such as ocean or road freight. We currently don't know of any fine art shippers offering rail freight, so this is also something to raise and encourage, as an option for future development.

- 3** Look for local enterprises trying out innovative low-carbon solutions, and giving them your support. For example, local courier services using cycle-powered or electric transport options, reusable packaging suppliers, or eco-friendly print companies. If we all invest in these solutions now, they will start to expand and prices will fall.
- 4** Work with other GCC members to support larger-scale solutions and changes in the market, such as more insurance options for ocean freight, more flexible temperature standards for art storage, or trials of more efficient and renewably-powered ships. Look out for more information from GCC about this.
- 5** If undertaking major one-off projects, such as construction, gallery refurbishment, or international events, ensure that low-carbon practices and decisions are built into the planning from the start. This includes working with external experts and contractors from the very beginning who understand the importance of this issue and are able to integrate it into the whole process.

**6** Make sure you are purchasing from an energy supplier that isn't spending your money on more fossil fuels – and ideally select a supplier that is investing in expanding clean energy instead. This is an area where care needs to be taken, as many energy suppliers make bold claims about providing renewable energy that aren't always backed up by the facts. See our special report about green energy suppliers on the GCC website for more details.

**7** Review your fundraising policy and shift away from promoting companies with a bad track record on climate. A number of arts organisations are under fire for making public climate action commitments while partnering with companies whose business activities undermine those commitments. For advice on how to do this, see [cultureunstained.org/ethicalsponsorship](http://cultureunstained.org/ethicalsponsorship)

**8** Review your banking and investment policies, and make sure that you aren't inadvertently supporting the expansion of fossil fuels, deforestation, or other high-emitting activities via your bank, staff pension or investment funds. We are currently putting together more detailed advice in this area, so watch this space for a new report from us soon.

This is not an exhaustive list, and we welcome suggestions from our members on more areas where there are opportunities to create positive change. We also welcome recommendations of suppliers who are offering low-carbon solutions and alternatives to the art world.

## Measuring Emissions

The decisions we make between now and 2030 will be critical in determining whether humanity will avert the worst effects of climate change. To make these decisions, we have to be informed about the industry's environmental impacts. Your carbon report will be the first step in understanding your carbon footprint and taking responsibility for the emissions produced. From here we can set science based targets and track our progress towards achieving the 50% reduction in carbon emissions needed by 2030.

Calculating CO<sub>2</sub>e emissions is an essential step in the journey towards sustainability. Starting with retrospectively measuring a pre-covid year as a baseline.

### **Reduction goals cannot be set without first calculating baseline emissions.**

On an organisational scale, if you want to understand your emissions and set achievable targets, you need to collect data, and continuously monitor it. This is the most common effective strategy for long-lasting change.

GCC members should make carbon reporting an annual task, similar to tax returns or general financial record keeping. By submitting yearly data.

## GCC Carbon Calculator

The GCC Carbon Calculator is a free online tool designed to help estimate the carbon footprint of your business and is based on metrics common to most art galleries in today's international art world. It aims to be easy-to-use and provide a quick breakdown of the main sources of greenhouse gas emissions.

It is the first of these carbon data tools to come from directly within the art industry, and is therefore tailored specifically for galleries and related organisations to use.

The calculator has been designed and built by Artlogic CEO Peter Chater and GCC environmental advisor, Danny Chivers.

**From the research we conducted, it is clear that there are three main areas of carbon emissions associated with most galleries, institutions, artist studios and art sector businesses – Travel (by plane), Shipping (by air freight) and building energy consumption.**

These categories vastly outweigh others such as printing, local transport and packaging.

## Data Gathering

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**Before getting started, we recommend watching the [GCC Carbon Calculator Tutorial](#) and studying the [GCC Calculator User Guide](#) with your Green Team.**

We have provided a [Data Collection Template](#) to make the process easier. This downloadable spreadsheet – which can also be found on the website – is setup with the necessary entry fields to collect information in categories that responds to the calculator.

It may seem like a big task at first to assemble all of the data, but your finance departments and registrars may already have most of it. Additionally, the bulk of your data will be recorded by the shippers and travel agents you use. It would be beneficial to let the companies you work with know you are doing your carbon report and will be requesting certain information.

For a pre-Covid baseline year, data should be collected for the latest financial year that ends before February 2020. For example, this might be April 2018 – March 2019, or October 2018 – September 2019. Alternatively, you could choose to

use the 2019 calendar year if this is easier for any reason. In most countries, financial records must be kept for 6 years, so the data required will still be available via your organisation's finance team.

## What isn't included in GCC's carbon calculations, and why

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For our carbon calculations for arts organisations, we follow the guidelines laid down by the Greenhouse Gas (GHG) Protocol, which sets the standard for carbon footprinting worldwide. This means we include all direct energy and electricity use (known as "Scope 1" and "Scope 2"). Everything else that could be included in a carbon footprint is called "Scope 3".

**For Scope 3, we focus on the parts of an arts organisation's carbon footprint that are:**

- **Measurable**
- **Significant**
- **Within the organisation's responsibility and control**

In other words, the calculator purposefully excludes areas of Scope 3 that would require an excessive amount of work to calculate, compared to their likely impact and the organisation's ability to actually do something about it.

The areas of Scope 3 that are included in the footprint are business travel, shipping, packaging, and printing. These are all areas that can be calculated without too much difficulty and where arts organisations have the ability to make a difference.

These Scope 3 areas are likely to have only a small relative impact, but would require a significant amount of work to collect the necessary data and so have been excluded:

- Materials purchased for framing, displaying and exhibiting artworks
- Use of hotels by staff
- The footprint of data services
- Waste disposal
- Water supply and disposal
- Other purchased materials (furniture, office equipment)
- The footprint of investments, pensions and banking
- Refrigerant use (in air conditioning etc)

The following areas of Scope 3 may have a significant impact in some cases, but would require a significant amount of work to collect the necessary data and are not under the full responsibility or control of the arts organisation:

- Staff commuting
- Energy used by staff when working from home
- Transport of artwork and materials to the galleries by third parties, not paid for by the gallery
- Visitor travel, especially of invited guests to events, launches, sales etc.

None of the above elements are included in the carbon calculator, and we do not expect most galleries to measure or set specific targets against them. However, we would encourage all galleries to keep these elements in mind and make the lowest-carbon choices possible in relation to them, even though these will not show up in the calculated footprint.

We encourage members which have the means to investigate these footprint elements where possible. In the medium to longer term, it would be great to get some typical/average figures for these footprint elements that we could share within the network.

There are also some "one-off" events, ie. the construction of a new gallery/studio, that could have a significant footprint but wouldn't fall into the typical annual activities of a gallery and so aren't captured in the calculator. Again, we suggest these should be investigated on a case-by-case basis so galleries can make the lowest-carbon choices possible.



### **Scope 1 emissions**

Scope 1 emissions are greenhouse gases directly emitted by an organisation, such as from gas burned to heat a building or petrol purchased to burn in a car.

### **Scope 2 emissions**

Scope 2 emissions are greenhouse gases from the production of electricity purchased directly by the organisation.

### **Scope 3 emissions**

Scope 3 emissions are greenhouse gases from the production of electricity purchased by the organisation, and other “indirect” emissions. This includes everything that the organisation spends money on, from taxis to flights to printing to shipping.

### **Zero Carbon**

Zero carbon means that no carbon emissions are being produced from a product or service (for example, a wind farm generating electricity, or a battery deploying electricity). Energy sources like wind and solar do not create carbon emissions when they are used to produce electricity – we refer to these sources as zero-carbon.

### **Carbon Neutral**

Carbon neutral means that any carbon emissions created are balanced by taking the same amount out of the atmosphere. So we’ll reach net zero when the amount of carbon emissions we add is no more than the amount taken away. There are limited ways to remove carbon from the atmosphere – for example, you can plant trees which absorb CO<sub>2</sub> and release oxygen. However, to be truly “net zero” the emissions would need to be removed from the atmosphere at the same rate that they are being emitted – something that is very difficult to achieve except on a global scale.

### **Carbon Negative**

Carbon negative is the point where global emissions become so low that more carbon is being removed from the atmosphere (through absorption by forests, soils, oceans etc.) that is being emitted by humanity. This is a goal we need to reach globally, the next step beyond “net zero”. It is theoretically possible for a product or organisation to become carbon negative, but (as with net zero) this is difficult to achieve except on a global scale. There are very few credible examples of “carbon negative” organisations or products, even though there are quite a few claims out there – again, there’s the problem with timescales, with companies claiming that carbon savings from tree-planting or soil restoration over the next few decades will more than cancel out their current emissions.

## About GCC

**Gallery Climate Coalition is an international charity and membership organisation providing environmental sustainability guidelines for the art sector, whilst promoting effective action towards decarbonisation through collaboration and innovation.**

GCC's primary goal is to facilitate a reduction of the sector's CO<sub>2</sub>e emissions by at least 50% by 2030 (in line with the Paris Agreement). It will achieve this by setting actionable targets, developing the necessary resources and making them available to all free of charge.

By aligning an international network of 600+ galleries, artists, non-profits & institutions, and art-sector businesses GCC will use its collective lobbying potential to achieve major systemic change.

GCC started in London, but is now international with volunteer chapters operating in Berlin and Los Angeles. We are

in conversation about further chapters in Brussels, Italy, Mexico City, New York, Sao Paulo and Spain.

The coalition is structured around a network of generous volunteers. These members contribute their time and professional expertise pro bono to the charity.

Often the challenge of the climate crisis feels insurmountable, but by working together – simultaneously on local and global scales – the necessary changes become possible.

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## Document Credits

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**GCC would like to thank all the volunteers who have given their time and experience to our Research Committees or International Volunteer Groups. Without such contributions our work would not be possible.**

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