
ORGANISING A CARBON- WISE EVENT

**HANDBOOK FOR
SUSTAINABLE EVENTS**





Posintra



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Foreword

Events and the events industry are increasingly important in Finland – having a great impact both regionally and nationally. There are about 3,200 companies operating in the field, employing almost 200,000 people across the country. According to a study (by the events industry organisation Tapahtumateollisuus ry), this generated 2.35 billion euros in 2019, if we include the indirect economic impact on accommodation, catering, transport, and retail sectors. But the carbon dioxide emissions from these events also have significant repercussions for the environment and those living in it.

Besides their national economic importance, sporting and cultural events have an emotional significance that encourages a sense of community by increasing Finns' sense of togetherness and well-being. As such, they can also be an effective way of promoting a sense of responsibility towards a sustainable environment.

This handbook is a guide to organising events of all sizes. It can serve as a basis to plan sustainable activities as you strive to reduce the carbon footprint of your event and use natural resources more wisely. You can use the tips and templates to create a carbonwise sustainability plan tailored to

your event's needs. You'll also find guidance on mapping your event's emissions and calculating your carbon footprint.

The handbook also provides a wealth of practical carbonwise environmental information for event partners: companies, subcontractors, municipalities, city operators, communication partners, volunteer team leaders, cultural and sports clubs, and anyone else who might be involved in organising the event. There is power in collaboration, and it brings many benefits – some of them surprising. Responsibly organised events not only create opportunities for growth, but also contribute to sustainability of the local environment.

The approach in this handbook is based on research, practical knowledge, and solid experience of best practices gained previously from managing responsible events (e.g., the Jukola Relay and the Carbonwise Jukola project). In addition to basic information, it provides easy-to-implement practical tips, examples of possible challenges, how to overcome them, and guidance on how to manage and communicate your sustainability actions.



Photo: Timo Erkkilä

About the Carbonwise Jukola Project

The Jukola Relay is an orienteering race that has been held annually in Finland since 1949. It's not only the largest adult sports event in Finland but also the largest orienteering relay in the world, so it has international significance. The Jukola Relay is organised in different host cities and locations throughout Finland. In 2023, the relay in Porvoo attracted a total of more than 40,000 participants. This number includes the 18,000 orienteers from 18 different countries, the spectators, the support teams, and 1,500 volunteers. The event has very high visibility. For example, in 2023, with between 13–15 hours of TV coverage throughout the weekend, and a total of 2 million visits to the website. The core values for the 2023 event were responsibility, the enjoyment of sport, and well-being.

The Carbonwise Jukola project involved working with the companies and partners organising the event to develop and test an operational learning model for a mass event to find the lowest possible carbon footprint. The model was then implemented and tests

carried out on the Jukola Relay that took place in Porvoo on 17–18 June 2023. The project reduced CO₂ emissions by prioritising and selecting the event's key components and by then identifying measures that could be developed to achieve those targets more effectively. The project was carried out by Aalto University, the regional development agency Posintra Oy, and the orienteering club OK Trian.

Ten of the SMEs participating in producing the event were selected as target companies for the project. It involved them identifying and developing their environmental and carbonwise activities as forms of competitive advantage, promoting concrete action plans, and describing how they would specifically implement those plans to reduce their carbon footprint. Along with the City of Porvoo, many other partner companies and organisations were involved with organising the event.

Organising Carbonwise Jukola:

Orienteering club OK Trian

Posintra Oy

Aalto University

Volunteers

ABB

Agrica/Porvoon Peruna

Aktia Foundation Porvoo

Alkemax

Bistro Sinne/Nordic Ravintolat

Borealis

Careeria vocational education institution

Casseli

City of Porvoo

Ensto

Fiber Highway Finland

Finnfoam

Finnish Defence Forces, The

Finnish Orienteering Federation, The

Grano

GRK

Hakevuori

Halti

Helsinki-Santahamina Military Service Club Association

Helsinki-Uusimaa Regional Council

Hokola

Hotel Haikko Manor & Spa

Insta

Intersport Easton

Itoji

Järvileasing

Kaukametsäläiset Association, founder of the Jukola Relay

Koneliike Olenius

K-Rauta Porvoo

Kruuva

Loval

Lumonite

LVIS K-A Stendahl

LocalTapiola

Marrent

Meltex

Muovi-Simola

Mölnlycke

National Defence Training Association of Finland, The

Nibe

Nobina

Noname

Nordic Gourmet

OP Uusimaa

Parents' Association of Espoo School

Parkman

PL-Rakennus

Pohjola Insurance

Porvoon Energia

Porvoon Uusi Apteekki

Porvoon Vesi

Practicum

Proxion

Racing Rescue Finland

Ramirent

Revanssi

Rosk ´n Roll

Rudus

Sata IT

Simolin

Sitowise

Smaku Events

Soldiers' Home Association

Stora Enso

Suunnistajan Kauppa

Säästöpankkisäätiö Sipoo Foundation

Söderberg&Partners

Södra skogsreviret

T:mi Seppo Keltamäki

Toimistotukku Talka

Tornator

Urlus-Säätiö Foundation

Uusimaa newspaper

Valio

Varuboden-Osla

YIT

Photo: Sanna Reponen



Getting the Most Out of this Handbook

The first section of this handbook briefly explains what sustainability and carbonwise events mean in general, then explores the environmental impacts of all events, both large and small. Making an event carbonwise brings many benefits, especially at the local level; but of course, sustainability will also present certain challenges too. It's therefore important to anticipate and prepare for any possible pitfalls that might arise.


So how do you build a responsible carbonwise event and manage the whole process? Building and managing sustainability requires careful planning, organisation, and a commitment to environmental and social responsibility. The second section addresses the basics of planning by breaking them down into three stages: actions to be taken before, during, and after the event.

However, since no event can ever be completely emission-free, the third chapter goes into greater detail about the different sources of emission at an event, and gives tips on how to reduce them, as well as giving guidelines on how to calculate your carbon footprint.

Many different partners can benefit from a carbonwise event and be actively involved in making it more sustainable, but nothing will happen unless they can collaborate properly. How to communicate clearly about sustainability and work together effectively is therefore addressed in the last section.

A common thread running through the whole handbook is learning as an ongoing process. This involves continually setting appropriate targets and indicators, as well as measuring and keeping track of the results. Only then can you learn from what you do and build a strong foundation for the future, either for the same event next year or as a benchmark for other events.

Tips for acting and communicating can be found throughout the handbook, as well as checklists to help with mapping and calculating emissions, and carrying out practical tasks.



Nowadays, sustainability is increasingly one of the core values of any event. It is also expected and required.



Sustainability – Not Just a Trend, But a Key Part of Any Business

The Three Pillars of Sustainability

Sustainability is here to stay. It is an important part of how businesses, communities, cities, and municipalities operate. Acting responsibly includes not only **environmental and climate issues**, but also **economic and social responsibility**. And all three are inextricably linked. Acting in a climate-conscious and environmentally re-

sponsible way is also acting in an economic and socially responsible way. Many environmental actions save both natural resources and money, and by choosing local actors and businesses, for example, you can make a difference not only to the environment but also to the community.

Sustainable events get seen and heard

Although sporting and cultural events are in themselves short-term, they have a significant and lasting effect on the local environment, community and economy. The events sector is a large and visible player with the potential to not only reduce its own carbon footprint, but also make others take a more proactive approach to fighting climate change. Sustainability is already part of the core business for many stakeholders in the events industry and they are contributing to the sustainability revolution by setting a visible trend. An event's sustainability actions and visibility can also be a competitive advantage for event partners and the host city.

Sustainability is a widely discussed topic, not just in the media and business community but also among neighbours and friends. Green event management and effective communication go hand-in-hand. By clearly communicating your event's sustainability activities and objectives, you can demonstrate to participants, partners, stakeholders, and the media that you are working towards environmentally sustainable goals. At the same time, you can promote environmental awareness, highlight conservation values, and advance the sustainability agenda - no small feat!

A Big Impact Means Big Benefits

All events produce carbon emissions and so they will affect the environment. Most of the emissions come from transport, travelling, and logistics. These are usually thought to account for between 60 and 85 per cent of the event's total carbon footprint – making them the emissions most worth targeting. However, all sources of CO₂, including energy and water consumption, waste management, procurement, and catering, need to be addressed and can make a difference.

Calculating the carbon footprint of an event provides a good basis for reducing overall emissions. Taking practical measures to tackle the carbon footprint not only reduces the environmental impact, but is also in everyone's interest – both locally and further afield. A carbonwise event engages and mobilises partners to develop a shared sense of responsibility among all participants, especially in understanding the environmental impact of the event and actions that can be taken to reduce that impact. After all the practical measures have been taken, the event organiser can then voluntarily take emissions offsetting action.

Linking the Economic Impact of Events with Emissions

Events affect the economy and employment in many ways. Not only do the events themselves generate business, but the businesses around the events also benefit (e.g., hotels, restaurants, and transport services). Event tourism and the general spending habits of event visitors in the region also contribute to the economy. According to the Finnish government's strategy regarding major events, they are seen as important drivers of economic growth in many regional centres and

A sustainable event is also one with a positive impact. The main objective of event sustainability measures should be to increase and reinforce the positive impacts of the event and to mitigate any negative impact. A carbonwise event therefore conserves natural resources, promotes the circular economy, highlights responsible actions, and encourages the adoption of green community-oriented values. As events are always limited to a time and place, the local area will also feel most of these effects and benefits.

A sustainable and responsible event creates benefits and opportunities for many different stakeholders, not just the event itself. These include the partner companies, the host city and region, and the volunteers working at the event. There is power in collaboration too: by working together, different stakeholders can develop new solutions to environmental challenges that, in the best-case scenario, continue to be used long after the event. Positive effects are multiplied if we work together to share our experiences of lessons learned about what is possible, or how we can do things more efficiently or with lower emissions.

large cities. On average, events can generate 3-6 or even 10 times the amount spent on organising them.

Analysing the regional economic impact of an event and its carbon footprint are mutually complementary tasks. A common challenge for event organisers and their partners is to increase the local cash flow and provide employment in such a way that there is a less of an impact on the environment than on

the economy. Reducing an event's emissions while simultaneously increasing its economic benefits starts with individual decisions and actions. Both can be influenced by favouring local actors, products, and solutions. So, the best advice is to go local!

However, the most significant source of emissions – visitors travelling to the event – is not included in regional economic calculations because people usually travel further

to attend the event. Only local travel and, for example, people refuelling at local service stations have a regional economic impact. The challenge and constraint for the event organiser is therefore how much travel can ultimately be influenced by the planning and execution of the event. However, there are ways to do this; these are described in the section on [Emission Sources and Calculating Your Carbon Footprint](#).

Results from calculating the carbon footprint of the Jukola Relay and its impact on the regional economy have shown that the choices made by all actors in the event are significant. What the organisers purchase and what the visitors consume are key factors when considering the impact of emissions, cash flow, and employment.

Photo: Janne Penttinen



THE THREE STAGES OF A CARBONWISE EVENT

So where do you start? What are the overall considerations for an environmentally responsible event? Carbonwise thinking comes into play in all three stages of event organisation: before, during, and after. The focus is usually on the pre-event phase, as most sustainability work is done before the event, but for events of all sizes, and especially those that recur, it's important that sustainability is considered across all the activities and stages.





≡ Before the Event

Here's what you do

- Allow sufficient time before the event to reflect, plan, and take action.
- Focus on the essentials: choose a sustainability theme or key points.
- Define your actions and be smart: you can't and shouldn't try to do everything!
- Make sure you anticipate any risks or challenges and learn from other events.
- Plan your activities on a timeline of before, during, and after the event.
- Set appropriate objectives and indicators early on so that you can fine-tune them if necessary.
- Do the homework: be prepared to map your event's emissions and possibly calculate your carbon footprint, report on what works and what remains a challenge, and learn from what you've done.
- You should also have a plan for how you will manage your activities, both in terms of people and things.
- Benefit from working together.
- Remember the specific role of communication!

Preparation is the Key to Success

The most important tool in a carbonwise event is a plan that will seamlessly integrate carbonwise actions throughout the event. So plan them to integrate in a smart and feasible way into the overall event design – this will ensure the event is run in a sustainable and responsible way.

The plan sets out the event's sustainability objectives and the measures that will be taken to achieve them. Your plan should cover all three key areas: environmental responsibility, social responsibility, and economic responsibility. For each of these areas,

set targets and actions to achieve them. Be sure to also include monitoring and evaluation.

In the environmental responsibility section, identify all the sources of emission from your event, your targets, and the measures you will take to achieve them. Include any carbon footprint calculations and climate change mitigation measures in your environmental actions. In the social responsibility section, include issues such as safety and well-being, diversity, and support for the local community. Economic sustainability includes cost-effectiveness and transparency.

Practical tips

1. Allow enough time

- Start early and make sure you have enough time for planning and preparation! The amount of time needed will usually depend on the size and frequency of your event.
- For many events it's a good idea to start planning sustainability measures as early as possible, for larger events this means 18 months–2 years before the event. Many things need to be fixed in the year running up to the event and can't be changed later.
- Even if you're already an expert, take time to review the process. Don't think that just because you've done it before you can do the same. New sustainability solutions are constantly emerging.



Photo: Antti Nousiainen

HIGHLIGHTS FROM THE JUKOLA RELAY:

- **”There is always something to learn the first time a new theme is introduced. Though there are many things that could’ve been done better, making the event carbonwise was a success”.**
- **”The main challenge was the time we had to do it. We didn’t include the theme early enough in the planning to integrate it properly. We should’ve given ourselves a year and a half instead of six months”.**

2. Focus on the key issues and set clear targets

- Map your operations, **check through all possible sources of emission** and any activities that might cause them or damage the environment.
- Think about what is **essential** for a successful event, what is necessary, what will add value, which carbonwise actions are most effective, and what is easy to implement.
- Choose **a sustainability theme and key actions for your event**. Keep each action to a reasonable scale: you can't and shouldn't try to do everything!
- Set appropriate **targets and indicators** for your event's sustainability actions. How many litres will we save? How many kilos less? Did our message reach the public as well as participants?
- Make **a checklist of the measures taken**. You can use this after the event to check how well you've done.
- Use **common sense** and make smart choices. You'll save money, reduce consumption, and increase profits.
- Don't put yourself under too much pressure: a clear plan matching the size and impact of the event should do the trick!

HIGHLIGHTS FROM THE JUKOLA RELAY:

- ”Carbon wisdom is a good theme for all events, but especially for Jukola and other similarly large ones, which have a significant one-off impact on the event's location.”
- ”Carbon wisdom is a theme that should be included in future events if we want to attract young people to orienteering and Jukola in particular.”

Photo: Antti Nousiainen





3. Be collaborative and open

- **Involve the whole team that's organising the event**, e.g. the people in charge of volunteers and those responsible for logistics, site construction, and services.
- Get everyone together. Sit down and have a chat. **Time spent in meetings is not time wasted**: a lot of things are going to be done and implemented whatever happens anyway, so best to plan and agree on those actions together.
- Maintain an **open** atmosphere for discussion. Listen to suggestions but remind people of the common goal if necessary.
- Think about the overall carbon footprint of the event and **how your everyday actions can make a difference**.
- Make your own actions **concrete** and think outside the box: don't take it for granted you are going to do it a certain way because that's the way you've always done things.

HIGHLIGHTS FROM JUKOLA RELAY:

”Although the topic seemed a bit abstract to some at first, it didn't cause any extra work or effort. In fact, it made us think and look at things in a new way.”

”Normally there are objections when a new theme is introduced, but this time there were hardly any. If anything, people embraced it.”

4. Map risks, anticipate challenges

- Anticipate risks or challenges. Learn from your own experience and that of others.
- Ask for and share your knowledge and expertise – **reinventing the wheel** is a waste of time and resources.
- Ensure that every level of the organisation has the necessary knowledge and understanding of sustainability activities – from management to volunteers. If one link in the chain is weaker, those either side can remind them of the right way to act. However, good intentions and goals may not be achieved if **more than one party or person is unfamiliar with your common goals or doesn't know how to do things the right way**.
- Think about what's essential for organising the event and focus on that – **cut out any unnecessary clutter**.
- Keep in mind there will be **changes and surprises along the way**. Sometimes you just need to be flexible and come up with new solutions for reasons beyond your control as circumstances change. Last minute changes will result in extra work and stretch your budget though – a lot of them can be planned for in advance.
- **Outdated attitudes** and fear of making mistakes may hold you back. If people are overly cautious about trying new things, encourage them to take small but effective steps.
- Engage everyone in the event's sustainability goal, leading it at every turn and creating an atmosphere in which everyone is guided by it. Encourage people to explore and experiment **without fear of failure**.
- **You are understaffed**. Events usually require a large number of volunteers, and there are never too many of them. Most volunteers are unpaid and working in their spare time, so planning that time efficiently to avoid them ever being left with nothing to do is therefore essential.
- **Changes in personnel**, especially those in charge, can complicate your plans and make it more difficult to run the event. You need skilled people to lead the activities and volunteer teams. People may drop out for a variety of reasons. So be prepared and appoint a deputy for each person in charge so they can step in if necessary, even in the middle of the event. This will make sharing responsibility easier for everyone too.

HIGHLIGHTS FROM THE JUKOLA RELAY:

- ”Remember that last-minute changes, especially to the construction of the venue, will result in significant additional work and costs. You should therefore plan and communicate carefully in advance.”



5. Pay Special Attention to the Choice and Construction of Venue

If you haven't yet decided on a certain venue or location for your event, take a moment to think. One of the most important decisions in terms of its carbon footprint is the location. It is easier to travel by public transport to an event in a central or easily accessible location. Walking, cycling and other low-emission modes of transport are also easy options. These should be actively promoted to participants, volunteers, and the general public.

Design a compact event area where people can move easily between locations and there is no need for separate transport within the event. A well-designed event area is also more flexible to manage, and it makes it easier to encourage those attending to act in a carbon-smart way. Big is not always beautiful, and certainly not efficient or sensible. The same applies to indoor events; think about the use of space so that you can manage the venue flexibly and wisely.



HIGHLIGHTS FROM THE JUKOLA RELAY:

”The key to a successful customer experience is a sufficiently compact event area with moderate distances between each location. In addition, proper attention should be paid to the movements of those attending and the overall layout of available services, for example accessibility to screens, waste bins, and water.”

Venues for major events are often built and prepared for several years in advance. Even smaller events are prepared for too – sometimes preparations start a year before the gates open, sometimes it's just a few months. Typically, the most hectic construction and preparation phase takes place in the last one to four weeks before the event, during which time a wide range of activities generate emissions. For outdoor events, activities such as earthworks, logistics, transporting goods and erecting temporary structures require carbonwise actions and choices to reduce carbon emissions. Many such measures

taken during construction of the venue are not directly visible to people at the event, but by investing in them you can make a big difference in reducing your carbon footprint. In most cases, when constructing a venue, outdoor-event organisers should rarely need to make changes to the environment. If they do, however, they should take measures to return it to its former natural state afterwards, where possible.



Leading with Communication and Making the Most of Collaboration

(Carbon) Smart Leadership

Managing the environmental impact of your event and how you are going to address it is an essential part of successful sustainability. Run a tight ship, motivate, inspire, and engage. Remember that organising an event consumes more than just natural resources: time, money, work-hours, and energy. Strong but flexible management can conserve all these resources. When you're losing hope,

remember the goal and inspiration you set at the start; you are doing the right thing for a good cause that will have a ripple effect on those around you.

”Plan carefully and be prepared to change your initial ideas – then make the decisions.”

It may be useful to appoint an event sustainability manager. Their role is to ensure that your plan is implemented, and that sustainability is considered in all aspects of the event. You don't necessarily need this to be full-time or permanent position, but don't think that sustainability issues can be dealt with 'on the side' or that you can outsource them entirely to this person. Sustainability activities can – and should be – a part of the event's DNA and therefore everyone's responsibility.

Communication as the backbone of action

Without communication, you are nothing. Communication provides the backbone for implementing and managing sustainability! Ensure that your sustainability actions and objectives are clearly communicated by integrating the key thematic message in all activities and communications – both internal and external. Integrate sustainability into your event's marketing: communicating externally with participants, media, and partners before the event will not only strengthen your event brand but also help the measures be implemented. Internal communication with partners, volunteers and within your own organisation creates coherence and makes everyone work more clearly towards the common goals. Involve your partners by planning and coordinating with them what you will communicate.

Are you an event organiser? You don't handle communications alone, do you? Only for very small events should the organisation and

Not everything will always go like clockwork, so remember to be flexible: managing the measures to be taken in practice should be an organic part of the event, and the plan should be updated as challenges arise. Always keep in mind the measures you are taking to ensure sustainability in everything you do for the event.

”Plan your management too: know what you are doing and at what stage. Make use of digital communication channels and online meetings.”

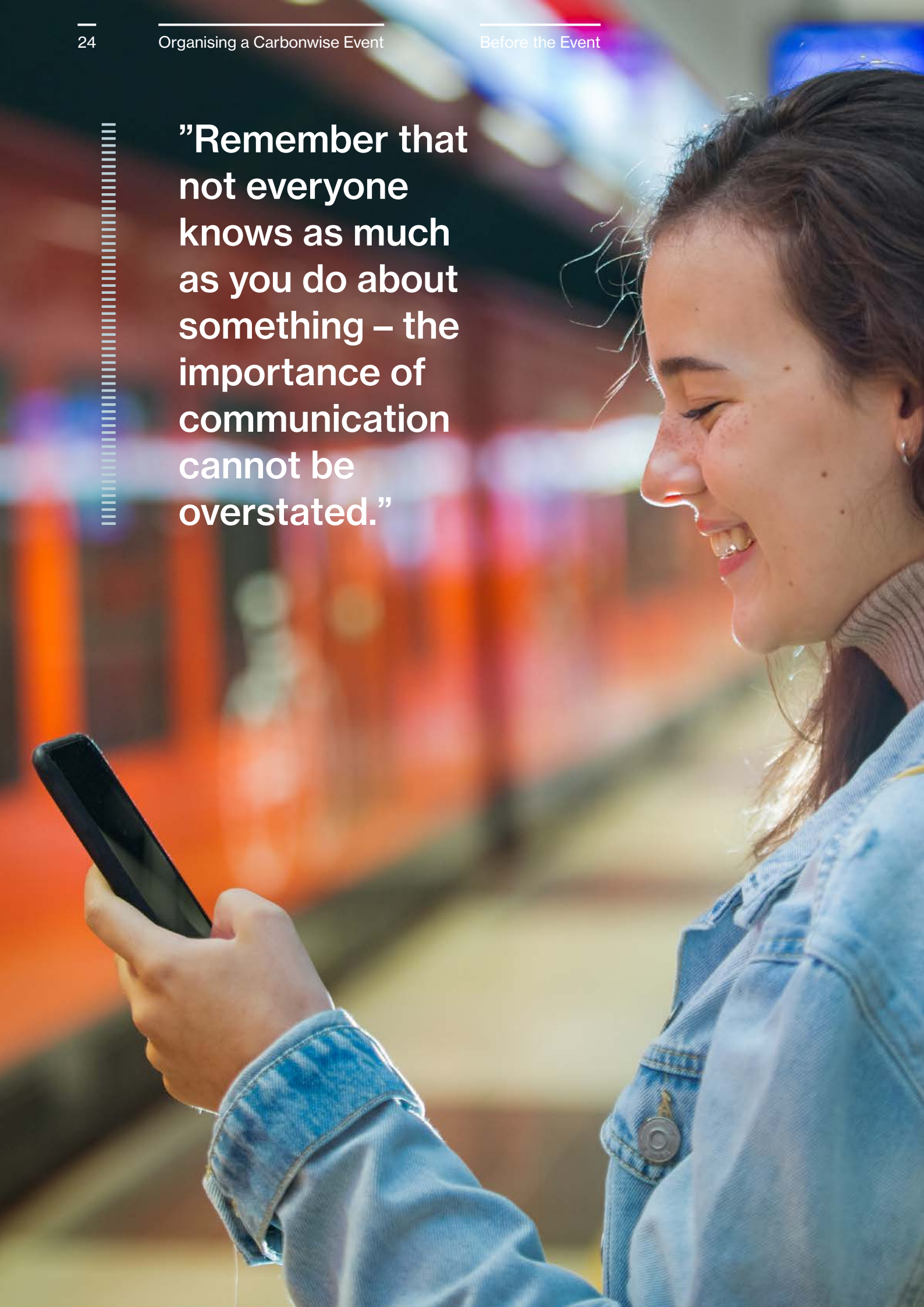
communication of an event be in the hands of only one person. Communications experts, fluent writers, and digitally savvy social media users will make sure that your sustainability theme is seen and heard in ways that will interest your target audiences the most. Remember, these communication wizards can also be found among your event volunteers and team leaders. Build a core communications team to take care of these tasks.

The core organisers of the event, i.e., the organisation itself, the volunteers, the people in charge of the different activities and the venue, also play a key role in implementing sustainability. Avoid the worst pitfalls by keeping everyone aware of what's going on at all times; include actions that have been agreed in all communications; and make others also responsible for disseminating the information so that every volunteer or casual worker at the venue knows about it.



Plan your communications before the event:

- Think in advance about who the external and internal audiences of your event are.
- In terms of sustainability, list the key messages for each target group, i.e., how you are going to get them behind a common goal.
- Plan your communication well in advance and schedule your basic activities on a weekly basis (at least).
- Think about the communication channels you use; volunteers may be best reached via WhatsApp or other short messaging systems or an email list, but corporate communication should be more carefully tailored.
- Keep your sustainability theme present and clear in all internal communications: in meetings, when talking to partners, when communicating with volunteers.
- Make sustainability one of the communication points of your event but remember to keep your feet on the ground. Too many ideals can start to come across as simply greenwashing.
- Be prepared to respond to the inevitable communication crises and storms that occasionally arise. This is especially true with active social media channels.




”Remember that not everyone knows as much as you do about something – the importance of communication cannot be overstated.”

Communication is the most direct way to reach others, such as partners, event service providers, suppliers, and volunteers. It's also important that all participants – including athletes, performers and invited guests – are aware of the environmental impact of their activities. By involving everyone in your sustainability activities and theme, they will also act as ambassadors for communicating sustainability at your event. Through active communication and interaction, you will ensure that your partners reinforce your sustainability message and objectives in their own communications and activities. You can reach out to the local community and the media, for example, through newsletters,

press releases and briefings, where you can explain what's coming up, the impact of your event and what you're trying to achieve.

Reach out to different actors in different ways. In general, it's a good idea to distinguish between different audiences: partners (e.g., partner companies, event service providers, suppliers, the council); your own event organisation (including those responsible for volunteer teams); the venue; the volunteers themselves; participants; and the general public. Think about what the target groups are interested in and how you can get them on board.

HIGHLIGHTS FROM THE JUKOLA RELAY:



”We did a good job in terms of the general atmosphere and keeping people aware, given the budget. We communicated in the right way: it was not about greenwashing, but about taking concrete actions.”



Key points to remember:

- Keep sustainability communications clear and visible.
- Communicating your sustainability efforts adds value, but don't over-promise and under-deliver.
- Integrate the core messages of your sustainability theme into everything you do. Make it part of the story of your event.
- Describe concrete environmental actions and their impact.
- Use understandable language and terms: for many of those attending and business partners, sustainability terminology can sound difficult and sometimes even hypocritical.
- Don't be afraid to communicate in a personal way, even if you are presenting facts as facts.
- Use visual communication to get your message across faster and more effectively than with words alone. Keep the same visual look across all your materials.
- Make your partners and your own organisation brand-ambassadors for sustainability, but make sure you all use the same tone of voice and key message.
- In addition to social media channels, make the most of your website - the power of a longer message can be lost in today's fast-paced social media environment.
- If your event has its own app, make sustainability a key theme there too.
- Engage with businesses, audiences and participants in a way that is relevant to the nature of your event and of interest to your target groups. For example, for a summer event you could focus on forest conservation, for a winter event on the impact of climate change on winter conditions.
- Communicate truthfully, but also be prepared for negative publicity and comments on social media. Create a crisis communication plan.

Working with Partners and the Whole Event Industry

No event is ever organised by the event organiser alone, but with partners, local businesses, suppliers, volunteers, and many others. Collaboration is also a powerful force in promoting sustainability for the benefit of all. It is essential to engage and mobilise all stakeholders in the event to act responsibly.

- Work with partners and, for example, those in charge of your event's volunteer teams to develop a sustainability plan and get them involved.
- Familiarise volunteers with what is planned and how it will be implemented.
- Take advantage of the sustainability focus when selecting partners for your event, as well as your partners' own sustainability activities and innovations.
- When engaging and involving partners and your own organisation, it is important to remember and remind them that being responsible and carbon-efficient is easier than they might think.

According to the official classification of economic activity, the event industry in Finland is not one single, homogeneous industry. However, the event industry itself is a large community consisting of a wide network of different companies and operators. Lever-

aging the event industry's networks is an essential part of successful and sustainable event management. Working with other event professionals not only benefits your own organisation, but also the whole event industry too. Sharing knowledge, networking and a commitment to sustainability are key to creating sustainable and successful events for the future. You can be at the forefront of the responsible management of events through your own actions. One way of committing to sustainability is to participate in the events industry's shared climate goals.

Individual events have an impact. But this network has the potential to make a big difference together.

- Take advantage of networks in the events sector.
- Connect with other event organisers to share and spread best practice.
- Get involved in the event sector's sustainability work and tell others about your own activities.
- Commit to the event sector's common climate targets.

Read more about partners and collaboration in the chapter on [Impactful Cooperation](#).

Identifying Emission Sources and Offsetting Emissions

Map the Environmental Impact of Your Event

The most important practical step you can take is to identify the sources of emission before your event and choose the best measures and practices to reduce them. For a smaller event, the tips in this guide will go a long way. If you have the resources, you can calculate the emissions yourself (or have a professional do it). It's a good idea to prepare in advance for calculating your carbon foot-

print. It will save you time and effort. By informing your partners about the calculation and the information they need to provide, you will ensure that they can easily provide you with the data after the event. For more tips on this, check the section on [Emission Sources and Calculating Your Carbon Footprint](#).



Offsetting Emissions and Voluntary Climate Action

If you are planning to take voluntary climate action and/or offset the emissions from your event (i.e., the emissions that remain after all your carbonwise actions), start selecting and preparing for them early. Here are a few very important points to remember:

- National recommendations for carbon offsets and compensation may vary. Good practice suggests that all operators should first do everything they can to reduce their own emissions and carbon footprint. An organisation's own climate actions can then be complemented by supporting voluntary climate action that would otherwise not be taken by other parties. In this way the organisation is also promoting climate action nationally and globally.
- Voluntary carbon markets have become increasingly popular in recent years. The increase in demand for these services is driven both by the climate ambition targets set by companies and organisations and by consumer concerns about climate change.
- Carbon credits purchased from voluntary carbon markets can be used to make climate claims in the marketing of companies, products, and services. Climate claims can, for example, relate to the carbon neutrality of a product or service.





Photo: Markku Pulkkinen

For the 2023 Jukola Relay in Porvoo, the aim was to place as much emphasis as possible on local carbon sink actions.

Using Biochar and Restoring Peatland to Create and Maintain Carbon Sinks

Using biochar was piloted as a voluntary climate action for the event. As a form of charcoal produced by burning biowaste, it creates and maintains a permanent carbon sink sequestered in the soil. For this reason, biochar is one of the internationally recognised climate change mitigation technologies, as these carbon sinks represent a form of atmospheric carbon sequestration and long-term carbon storage. Biochar was planned to be used in the Jukola Relay by the City of Porvoo as part of the landscaping and restoration of the venue after the event.

The aim was to raise funds for voluntary climate action by using event communications to direct users to the event website where they could find out, for example, how biochar boosts carbon sinks. These funds were then kept separate from other funds, for the purpose of purchasing market-priced biochar from GRK Infra (an event partner). The transfer of biochar to Porvoo City Council for civil engineering and landscaping purposes was to be free-of-charge, provided that its use would enhance and strengthen carbon sinks in the Porvoo area.

Information boards and demonstration boxes located throughout the event area showed specific ways that biochar could potentially be used. The experiment did not seem to interest participants and spectators at the event very much – the potential uses of biochar clearly did not engage the wider public – but Porvoo City Council was very enthusiastic, and several potential uses for biochar were identified for the next growing season.

Plans were also made to start a peatland restoration project right next to the Jukola Relay event site. The idea was well received by landowners and other stakeholders, but it turned out that a longer preparation period was required, so the plan could not be implemented.



Photo: Kimmo Hirvonen

☰ During the Event

Practical tips

- Make sure **everyone knows what is planned and acts accordingly.**
- Be prepared to take **corrective action.**
- Use **communication** in a variety of ways.
- Inspire** participants and educate the public about sustainable choices.
- Stop for a moment and remember to **enjoy the event** in itself!



Let's face it, the least amount of time you have to focus on sustainability is during the event itself. From the moment you open the gates, until the point you shut them, your event is like a train rolling down the track. Your ability to influence things is limited. However, remember that you should take corrective action during your event if challenges arise. Also, make sure that everyone is working according to plan: letting things slide on small issues can lead to big problems.

"It's important to explain and motivate people to see why things are done the way they are as it may be different to what people are used to doing in their everyday life."

"During the event you can only react to sudden unexpected situations, there is not much else you can do."

- Advance planning is key: during the event, make sure that your plans are actually carried out. For example, if there are plans to accurately sort waste in the event area, make sure volunteers know how to instruct visitors to do this.
- Encourage everyone involved in the organisation to let you know as soon as they see anything that needs addressing during the event.
- Sharing information means sharing responsibility: for example, it's a good idea if volunteers tell the next person on a shift what's been planned and needs to be done.
- Also discuss with your partners what is expected of them during the event.

Offer participants, the public, and those attending a range of opportunities to have an impact on emissions through the choices they make during the event. Tell them about the options and the actual impact of choices made. Low-emission transport options, vegetarian food and waste recycling are just a few examples of practical actions that can have a big impact. For more on this, check the section on [Emission Sources and Calculating Your Carbon Footprint](#).

Effective and engaging event communications are essential to engage those attending. You often have a lot on your plate during the event, so advance planning is essential for success.

Success also depends on how participants perceive your event – and this applies equally to how they see your attempts at achieving sustainability. At its best, your event will be an inspiring, responsible, and participatory experience – adding value in its own right. Be prepared for critical comments and media

coverage. During the event, you may also discover and benefit from sudden insights that reinforce your sustainability message with concrete examples. You should also use your team members and partners for this, making sure they understand the sustainability focus and key messages of the event.

- Start communicating early.
- Communicate throughout the event about what has been done and already achieved.
- Make sure your message is to the point.
- Ensure that the core content for each media channel is planned and possibly scheduled in advance.
- Monitor your media coverage and make good use of it.

Photo: Janne Penttinen



Communicating sustainable choices to those attending is easier than you might think. Make your sustainability theme visible in the event space. Visual design, digital interfaces, stands, waste bins... engaging people will be successful if you keep your core message simple and give participants concrete tips on how to reduce their carbon footprint.

Consider the paths people use within the event. At some events, participants (i.e., performers, athletes) and spectators follow the same path; at others they don't. Communicating to both groups is the key to success. At the very least one should consider:

- The steps that participants and/or spectators take before arriving at the event, how and what is communicated to them before arriving.
- how participants and/or spectators move around the event area, how and what is communicated to them on site.

When communicating, remember cultural differences. Think about what is special about your region and your event. For example, in Finland it is useful to remind foreign visitors that Finnish tap water is perfectly clean and safe to drink, and that all plastic and glass bottles are collectable and can be returned for a deposit.



More tips on how to engage people:

- Provide visitors with a simple carbon footprint calculator, which they can use to estimate their emissions for travelling to the event if they wish.
- Offer all participants and visitors the opportunity to participate in your event's voluntary climate action.

Your partners will also be seen and heard during the event, and their actions count. During the event, showcase any carbonwise actions that you and your partners and companies have planned and agreed upon together. Are you piloting or launching something completely new? Don't forget to communicate about the carbonwise activities of the companies that built the event. Many sustainability measures, such as low-carbon earthworks, low-emission logistics or efficient waste management, will not be directly visible at the venue if you don't publicise this.

Encourage companies that are visible at your event (e.g., those in stands or tents) to reflect on their own practices. Making sustainable choices and making them known will support common goals. Read more about partners and cooperation in the section on [Impactful Cooperation](#).

Oh, and remember to enjoy! In all the hustle and bustle of the event itself, take a moment to stop and look round. Enjoy all that has been achieved, and the fact that the event is now in full swing.

HIGHLIGHTS FROM THE JUKOLA RELAY:

"Our stand design was carbonwise as we re-used the same material from previously. And we made our giveaways local dried blueberries and cranberries in a small paper bag to keep our carbon footprint smaller."

"We shared a stand with a larger company. It was smart to share space and costs, visibility was good for both, and emissions were lower than if we'd pitched our own tents."

"We did our competition survey electronically with a QR code so people could take part with their smartphone. No extra paper and less waste."



Photo: Timo Erkkilä

☰ After the Event

Practical tips

- Taking the event down, both physically and mentally, is an **important stage that can't be skipped**.
- Have a **timetable and a plan** with clear instructions, for example on how to recycle and reuse equipment and materials.
- Calculating** the carbon footprint will go more smoothly if you've prepared it well.
- Summing up and evaluating** activities should be done together and collaboratively.
- Every event leaves its mark and **legacy**: was something new created and learned, or was there just a smoking pile of rubble left behind?

Taking Down the Event

The period straight after the event is both physically and mentally draining. By planning it well in advance, everything is ready to come down as soon as the event is over. In practice, taking down is much quicker than setting up, and the people involved are in a hurry to get the job done. This underlines the importance of planning this stage in advance. If possible, plan for a team that will have had a rest beforehand to take down the event.

HIGHLIGHTS FROM THE JUKOLA RELAY:

"At this stage, people are quite tired and making plans is not an option, but carrying out plans that've already been made certainly is. Even better, would be to have a completely different and well-rested team for the post-event phase."

Other points to note:

- Taking down large structures requires a relatively large amount of equipment, machinery, and labour.
- Designate a place in advance for putting materials that can be recycled or reused. For example, timber and soil can be sold on, and fabric advertising materials can be used to make recycled products.
- Returning surplus supplies and unused products to wholesalers or other partners reduces the amount of waste.
- Sort materials out already at the venue so it only needs to be done once. Provide enough sorting bins for offices and media facilities as well.
- The best way to recycle is to make sure that materials (e.g., for advertising and partners) can be used again and again.
- Think in advance about what's going to happen to unclaimed lost property so you don't have to throw things away.
- Plan the load-out freights smartly, and you'll save on mileage. Do this together with partners.

For more tips for best practice, check the section on Emission Sources and Calculating Your Carbon Footprint.

Measure, Assess, Learn

Apart from taking down the venue, this is also the time to evaluate the measures taken to achieve sustainability, assess what worked and challenges that remain, prepare a final report, and debrief everyone. Only then can you learn from your experience and build a strong foundation for the future, either for the same event next year or as a benchmark for other events. This stage is often completely overlooked, because once the event is over, your thoughts are often already on the next day, week, or month.

But you have set clear objectives and defined concrete and measurable ways of achieving them, and these should be assessed. Evaluating the performance of your event is a big part of making it a success. Evaluation helps identify the strengths and weaknesses, and make the necessary changes for future reiterations of the event. Or perhaps you're involved in organising another event. You can

use the results of the evaluation for future sustainability planning, communication, and marketing. For example, you could write your own thank you notes to volunteers, partners, and participants after the event to let them know how well it went. In this way, you are already getting them involved in next year's event and the sustainability that will be a part of it.

So where do you get the information about what worked and didn't? It can come from many sources: measurable data such as mileage and fuel consumption, energy use, waste, the money spent, and materials purchased are all useful. Much of this information is readily available from purchase invoices or sales reports from partners. You can also get figures for each kind of waste generated by the event directly from your waste management partner and energy consumption data from your energy company.



Not all information is available in a direct and pre-measured form. In particular, data on the movement of participants and the public may not be directly available anywhere, and traffic is the biggest environmental pressure on your event. So, travel should be mapped, but how? Typically, events will have some kind of visitor survey where you can include questions on sustainability. Ask the visitors themselves how they got there and how far they travelled. It's also a good idea to ask volunteers, as they often have to travel there and back. For tips on visitor and volunteer surveys, see the annexes to this handbook.

It's also worth asking visitors about things that cannot be measured directly. For example, how satisfied were they with the waste sorting points, public transport connections, or the vegetarian food on offer? Had they noticed the sustainability theme of your event? Did they feel these measures had worked, or did they see something at odds with the sustainability message? You can also ask about issues such as accommodation and spending, both of which are at least indirectly related to carbon wisdom. Carbonwise actions can have a positive impact on the regional economy, especially if before the event you've already followed the rule of thumb to favour local eco-friendly choices.

In addition to these measurements and surveys, you can get useful information from interviews, discussions, and joint meetings. Hold a feedback meeting with your organ-

isation a few days after the event. Go over your main experiences and observations. It's also a good idea to sit down together for a debriefing, for example a month later. It's easier to go through things more systematically when better rested and with a little distance between you and the event. At the same time, you can already look ahead to the future, if a new event is already looming somewhere in the future. What are the main insights you will be able to use there?

Prepare a summary of your sustainability measures and their success. Experiences, insights, results, and future orientations should be recorded. The final report doesn't have to be long or extensive – just enough for you and your event. Remember the follow-up communication: share the ideas summarised in the final report with partners and stakeholders, highlight the success of the sustainability theme on social media and publish a story on your website.

After the event, remember to thank your partners and ask for suggestions for future developments. Tell them you will make further improvements next time and engage them already now. Also thank your own organisation and insiders. Ask them for feedback and suggestions for improvement and encourage them to voice their critical opinions. You're only making half the progress possible if criticisms aren't also being taken into account.

Calculating Emissions

Calculating the carbon footprint of an event is a process that requires careful planning, data collection and calculation models. After the event, the carbon footprint is calculated using data collected from organisers, visitors and partners. When preparing the calculation, consider what data is likely to be easy to collect and what data may be more difficult to obtain.

Calculating the carbon footprint is not absolutely necessary. A review and mapping of emission sources can be enough to guide

the choice of responsibility measures. Acting according to your plans will make your event more environmentally friendly and sustainable. The section on Emission Sources and Calculating Your Carbon Footprint takes a closer look at emission sources and data. It also gives you a clear guide to mapping and calculating your carbon footprint, whether you decide to do it yourself or have it done by professionals.

Photo: Janne Penttinen



||| The Legacy

Your event will leave a legacy, but what kind of legacy do you want to leave? An event always has an impact on the venue or city it's held in, those that came and were involved, and on the sense of community. You may have heard the phrase, "leave a small footprint and a positive impact", but what does

this mean in practice? Ideally, responsible actions will live on long after the event. Or they are so effective that the same practices can be used at the next event. With collaboration and good communication, you can spread the message of your success far and wide.

IDEAS FROM THE JUKOLA RELAY: [LINK TO SEVERAL EVENTS](#)

||| **"Efficient use of the facilities built for the event needs to be considered and developed: the event area might take about 2 months to build, 2 days to operate and 2 weeks to dismantle."**

||| **"When it's such a big event, you could think about something else happening in the same area in future years – they would then share the same carbon footprint."**

Photo: Janne Penttinen



EMISSION SOURCES AND CALCULATING YOUR CARBON FOOTPRINT



Dealing With Emission Sources

Emission sources at events can be split into six categories: (i) transport (travel and logistics); (ii) energy and water consumption; (iii) waste and recycling; (iv) food and drink; (v) purchases and materials; and (vi) accommodation. Transport is the main source of emissions, generally accounting for around 60-85% of the total carbon footprint of an event, whether it's large, small, indoor, or outdoor.

Consider all possible sources of emission, look at them from the perspective of your particular event, and try and justify your

actions. Focus on those that best suit your event and will most effectively reduce your carbon footprint.

Remember that sometimes impressive things are invisible to the public, so you need to actively make people aware of them. Also remember that many small actions show your commitment to going green, so don't neglect them, even if their individual impact seems small.

Transport

The biggest environmental burden is caused by emissions from transport, travelling, and logistics, so it's particularly important to pay attention to these factors. The location and accessibility of your event will have the greatest impact on transport emissions,

and as event organiser, you can make a real difference by making it possible for those attending to use low-emission modes of transport and by encouraging your partners to do the same.



Tips for reducing transport emissions:

- Encourage healthy and environmentally friendly micromobility: organise bike parking in the event area. If you're organising a winter event, remember to include ski parking!
- Negotiate with your local transport company, bus and train operators, and others for extra bus and train services. Sometimes bus companies may also offer an extra stop along the normal bus route next to your event area. Don't hesitate to ask!
- Provide the public with free public transport tickets or free travel for the day of the event as part of the admission ticket.
- Locate mandatory parking in areas where it's possible to access the event site using (low-emission) park-and-ride public transport. Even a small reduction in fuel consumption brings environmental benefits.
- Provide a service point in car parks to direct visitors to the park-and-ride public transport.
- Do not offer free parking at the site to people arriving by car. Use incentives: make parking cheaper for those arriving by carpool. Use parking apps to reduce printing and workload. Explore partnership opportunities.
- Provide charging points for electric cars and electric bikes. Here's another great opportunity for partnerships.



Everyone needs to move around the site a lot at an event, not only during it, but also before and after. Finding carbonwise solutions for getting around will therefore reduce your event's carbon footprint. There will also be media and special guests you will want to take note of your climate-smart activities.

- Offer free public transport to volunteers, special guests, and media reps.
- Encourage volunteers to carpool or provide the opportunity to do so.
- Do you provide the transport for any teams, participants, performers and/or invited guests? Choose a low-emission option, e.g., biodiesel, hybrid, or electric cars, and for your own organisation's use too, as they will accumulate a lot of mileage.

Purchases and Materials

Sustainable procurement means taking the well-being of the environment, people, and society into account. No unnecessary purchases should be made. Your procurement priorities should be in this order: **get** → **borrow** → **rent** → **buy**. Use equipment and materials from elsewhere that you or your network already have wherever possible, and always take advantage of borrowing and rental opportunities before thinking of actually buying anything. This reduces the demand for manufacturing new products, saves natural resources, and strengthens the circular economy. Remember to repair and maintain your equipment to keep it in good condition and extend its service life.

Considering low-emission transport and logistics will also contribute to reducing CO₂ emissions before and after the event. Make your freight transport and logistics solutions carbonwise and encourage your partners to do the same.

- Prefer shorter journeys. You can easily reduce the carbon footprint of your event by sourcing your goods and services locally. In doing so, you are supporting and vitalising the local community and economy.
- Remind your partners to organise their deliveries energy-efficiently too.

You are going to have to buy some things though, so choose suppliers and service providers who share your sustainability values and offer environmentally friendly options. Maintain (long-term) relationships with responsible suppliers. By centralising your procurement, you can reduce your transport needs and minimise your carbon footprint, make significant savings, and improve your own efficiency. Centralising your procurement will improve coordination, making it much easier to monitor, report on, and calculate your carbon footprint. You can never dedicate too much time or resources to organising an event.

Remember:

- Order larger quantities by combining orders where possible. Avoid surpluses by ordering only what you need. This reduces waste and saves resources.
- Try to source all materials and products locally. This reduces emissions from transport and supports the local economy.
- Use recyclable building materials, advertising stands, fences, etc. Design them so you can reuse the same materials at the next event or transfer materials to future organisers or other events.
- Favour digital materials such as e-tickets and mobile apps. Avoid unnecessary printouts and paper.
- Prefer products made from 100% recycled materials.
- At indoor events especially, you can decide many small things together with your partners, e.g., you can replace hand towels with more environmentally friendly towel rolls.
- If you give out gifts, make sure they're useful and good quality so they don't just go straight in the bin. The gift could be intangible – no need to give out small carefully wrapped but useless items in large plastic bags!
- If you sell branded products at your event, make sure they're high quality and made from environmentally friendly materials. Don't make and sell junk.
- Use recyclable or biodegradable tableware, cups, and utensils; or consider even renting tableware.



Food and Drink

Catering can really affect the atmosphere and experience of participants at an event. By favouring local food and vegetarian options, you are contributing to sustainable food culture and helping mitigate climate change. Preferring local food not only supports local producers but also reduces the carbon footprint of transporting the food. Sustainable food solutions also influence how those attending regard sustainability. When the food and beverages offered at an event are environmentally friendly and responsibly produced, they can stimulate debate and raise awareness of sustainable consumption. This in turn can influence the attitudes of those attending and encourage them to make more sustainable choices elsewhere.

Minimising food waste is an important part of sustainable event management. Food should be prepared and served in appropriate quantities. Leftover food or ingredients, for example, can be donated to charities or reused the next day. Many caterers already have their own environmental programmes, forms of certification, and policies, so make use of them together.

Volunteer catering means providing food and refreshments for dozens, hundreds, sometimes thousands of volunteers; so the impact this can have is huge. Also, by making carbonwise choices, you can reduce the cost of meals.

HIGHLIGHTS FROM THE JUKOLA RELAY:

”When the competition centre was being built, we organised the meals for volunteers in conjunction with the municipality. The food was prepared centrally and brought to us at the same time as the meals for the kindergarten next door.”

For beverages, an environmentally friendly option is to give people the chance to fill their own bottles at water points, if the tap water is drinkable in your region. This avoids water bottles being used only once then thrown away and reduces plastic waste.

Using biodegradable tableware, cups, and utensils can help reduce waste. However, it's always important to check first with your

local waste management partner to see what is actually recyclable and how this will be organised. Agree from the outset with catering partners on the tableware and utensils you will use at the event. It might be that the construction crew can also use these utensils and tableware, so there will need to be collection points for them too.

More tips for sustainable catering choices:

- Use seasonal raw materials as they are often fresher, require less artificial processing so are more ecological.
- Require catering partners to offer at least one carbonwise option: domestic, local, vegetarian.
- For caterers who offer only vegetarian or vegan food, offer a reduced price for their selling point or tent.
- Use a deposit and return system for cans, bottles, and glasses.
- Prefer responsibly produced, domestic drinks.
- Go for fair trade products (e.g., coffee, tea, and chocolate).
- Provide information about the origin of the food, its preparation, and ingredients used. Open communication builds trust and empowers visitors to make more carbonwise decisions.

Waste and Recycling

Waste management, recycling, and sorting are key areas of environmental responsibility. Event organisers have a major role to play in protecting the environment and promoting sustainable development, and proper waste management is one of the concrete ways to make a positive contribution. Environmentally responsible waste management not only reduces the environmental footprint but also increases the environmental awareness of participants. It can also bring positive publicity to the event and its organisers that may attract more participants and partners to future events.

Consider using a local waste management company when planning your event. There need to be enough bins for the different waste fractions (e.g., mixed waste, bio-waste, paper, plastic, glass, etc.) all over the event area. Clear signage and information will help participants to sort their waste correctly too.

- For larger events, separate waste areas or collection points can be set up for the different waste fractions, as well as for partners and service providers. Food, drink, and other services often generate waste for which particular fraction bins should be provided – e.g., packaging plastics, cardboard boxes, and used cooking oil.

Event staff and volunteers should all be aware of the principles of waste management and sorting and they can also help visitors with this. At larger events, a separate environmental or recycling team can be responsible for waste management.

By monitoring the amount of waste and how it is sorted, you can see how well waste management is working. Report on waste quantities and sorting success to participants and stakeholders after the event. Also ask visitors for feedback and suggestions for improvement and learn lessons for better waste management at future events.

HIGHLIGHTS FROM THE JUKOLA RELAY:

”As a rule of thumb, each bin or waste point should be visible from the next. In other words, wherever people go, there should be a point nearby where they can drop off their rubbish”.

”The important thing is to have plenty of waste points all over the site that are clearly indicated. It’s unlikely that anyone will take their rubbish with them, people will always want to leave it somewhere”.

Also remember the following tips:

- Ensure that waste management is in place during the construction phase. A lot of waste and debris is generated during this time.
- Improve and manage sorting and recycling, for example by improving the labelling of recycling points. Not everyone speaks Finnish or even English, so pictograms are a great help.
- Be flexible in waste management, as it may sometimes be necessary to, for example, move bins.
- Choosing larger bins means less emptying. Optimally, they need to be emptied only once during the event.
- Encourage volunteers to recycle and sort correctly - they're role models!
- The line between bio-waste and mixed waste varies between waste management companies, so check your waste management partner's policy (about biodegradability in particular). Find out which materials can be composted, and which can be used for energy or other purposes. Use this information to make your final sorting decision.
- There are clear peak times for waste at the event. These can cause bins to overflow and confuse sorting. Plan ahead so you don't get any nasty surprises.
- Make sure returnable bottles and cans are collected separately from other rubbish so they can be recycled, and the materials used again.

Energy and Water Consumption

Carbonwise energy consumption means using less of the fossil fuels which exacerbate climate change. Using energy and water responsibly takes planning and commitment, but it can bring many benefits, including financial ones. In other words, the energy efficiency of your event is not only an environmental issue, but also linked to the economic success and social responsibility of your event, and the energy costs saved will be directly reflected in your event's budget.

Choose green electricity, power generated from renewable sources such as wind, solar, hydroelectric or biomass. Your key partner is your (local) energy company, who can also help you set up the event. Also, reduce unnecessary consumption:

- Replace older light bulbs with energy-efficient LED lamps. They use less electricity and last longer.
- Use lighting only where necessary. For outdoor events, LED lighting towers allow you to direct light fairly precisely to the desired area.
- Use dark backgrounds on screens to reduce energy consumption.

- Think carefully about equipment to avoid unnecessary hours of use.
- Use motion detectors so lights automatically turn off in areas and indoor spaces that are not in constant use, such as toilets and storage rooms.
- Use intelligent heating and cooling systems that automatically adjust the temperature according to each room's use.

Use water in moderation and do what you can to rationalise consumption:

- Install water meters and monitor water consumption closely. These will detect leaks and reduce wastage.
- Use grey water (e.g., water after washing, shower water) for irrigation and other non-drinking water needs.
- Determine in advance appropriate water flow rates (toilets, showers, and saunas). You can save energy by adjusting the water temperature too.



Other sources of energy emission typical of events are temporary generators and network usage from people at the event simultaneously streaming images and videos to the web.

Generators are used at events, especially when the venue doesn't have sufficient electricity infrastructure or backup power is needed (e.g., many outdoor events). Generators allow electricity to be generated independently, but their use does have an environmental impact.

- Choose generators that match the energy needs of the event. Too large a generator will consume unnecessary fuel and cause additional emissions.
- Inverter generators produce direct current, which is more efficient and environmentally friendly.
- Use biofuels or alternative fuels such as biodiesel for the generator to reduce greenhouse gas emissions.
- Use the generator only when necessary. Always switch it off when not needed.

network usage caused by streaming at events can also be significant factors, especially for large events. Audiences and

spectators stream their videos and images from the event site over the network. At the same time, large numbers of people may be watching the event on their own mobile devices. During streaming, a large amount of data is transferred from servers to users and the energy efficiency of data transfer affects emissions. The energy efficiency of servers and the way they generate electricity also affects emissions. Large data centres, where websites and applications are hosted, require a lot of energy for cooling and maintenance. These are factors over which the event organiser has little control. Of course, to reduce the environmental impact of streaming, it is possible to use energy-efficient equipment, use renewable energy, optimise data transfer, and favour energy-efficient streaming technologies.

Traditional TV broadcasting does not increase the environmental burden as such, as channels always broadcast the same amount of content. TV production pollutes the environment in the same ways as the event itself, such as energy use and waste production. In the event's emissions calculation, these are automatically counted as part of the event's carbon footprint.





Accommodation

Emissions from accommodation at events are a major environmental challenge, especially for large events involving long distance travel. You cannot control emissions from accommodation directly, but you can influence them indirectly. They should also be taken into account when calculating total emissions.

The main sources of emission in hotels are energy consumption, especially for air conditioning and heating, water consumption, and catering. However, many hotels and hotel chains in Finland are already paying attention to more environmentally friendly practices

and many have some form of environmental certification, such as the accommodation industry's own certifications. If you are organising accommodation for participants (athletes, performers), work with a responsible party and ask them for information about their carbon footprint.

In addition to hotels, your event's emissions calculation should include those from camper vans, holiday homes, and other forms of accommodation such as tents, campsites, hostels, and private accommodation.

Calculation

Calculating the carbon footprint of an event is not just a one-way process, but part of a continuous learning exercise. The results can help you identify the biggest sources of emission and develop strategies and measures to reduce emissions at future events to help make them more environmentally friendly.

You can also estimate the emissions of your event in advance. For example, think about how much money you will spend on a product or material. You can make a preliminary calculation of the potential emissions based on the money you plan to spend.

Calculating the carbon footprint is not mandatory. Mapping your emission sources and acting on your plans will make your event more carbonwise. You can also take a step-

by-step approach: this year, identify the sources and take action; next year, calculate the carbon footprint of the entire event.

So, if you are in a position to calculate the carbon footprint of your event yourself, here's how to do it: prepare for the calculation → collect data after the event → calculate → obtain results and make an assessment. You can also have the calculation done by professionals; in which case you collect the data, but they do the calculations.





The environmental impact of an event and its contribution to global warming is reflected in its carbon footprint.

This measurement includes the global warming effects of the main greenhouse gases such as carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O). Typically measured in kilograms of carbon dioxide equivalent (kg CO₂-eq), it is recommended that widely accepted and reliable metrics and factors are used to estimate and analyse event emissions. The calculation follows the international Greenhouse Gas Protocol (GHG) guidelines and considers different levels of emissions:

Scope 1 emissions include direct emissions from the organisation, such as those from facilities used by the organiser and the fuel consumption of its own vehicles.

Scope 2 emissions include indirect emissions from energy production, such as electricity and heat purchased for the event.

Scope 3 emissions include other indirect emissions such as those from transport, travel, procurement, construction, water, and waste management. Although not directly controlled by the event organisation, these emissions can be difficult to identify and calculate. However, they are a significant part of the overall carbon footprint of the event and should be included in the calculations, particularly for those emissions identified as most significant.

Prepare for the Calculation

Preparing for the carbon footprint calculation is an important step. Overall, the calculation requires accuracy, collaboration with the stakeholders, and may need creative solutions to data collection challenges.

1. Mapping activities and emission sources:

The first step is to understand exactly what the organisation does and how it affects the environment. This means identifying all activities, processes, and purchases that cause carbon emissions.

2. Engage partners:

Working with stakeholders such as suppliers, transport companies, and other partners is essential. Collaboration with these partners for information is essential to gain the fullest picture of the environmental impacts of your operations.

3. Scope the calculation:

Define exactly what is and isn't included in your carbon footprint. This should be as comprehensive as possible to give you a realistic idea of your total emissions. On the other hand, you have to draw the line somewhere: events usually include emissions from the construction of the venue, activities during the event, and the take down. The time span is usually from about 2 weeks before the event to the last day of the venue's take down. For larger events, this period may be longer.

A large proportion of your emissions will come from the purchase of goods and services. To get a good estimate of the scope, compare your emissions calculation with your purchases. Aim to include the main financial expenditure items in the emissions calculation.

4a. Choose the appropriate calculator:

Once you know what you want to calculate and the accuracy you need, you can choose the right calculation tool. There is now a variety of online calculators and software that can help you with your calculations. Choose one that meets your needs and is accurate enough to give you reliable results.

4b. Choose a suitable partner to calculate your emissions:

If you don't want to or can't calculate emissions yourself, consider using an external expert or company. They will have the experience and knowledge to make the calculation correctly and accurately. Choose a partner who is familiar with the events industry and can provide the necessary support at every stage of the calculation.

Collect Data

The first step is to collect all the necessary information about the event, such as energy consumption, transport, accommodation, food and drink, materials, and waste management. Try to collect as accurate data as possible but be prepared to make estimates and use averages if accurate figures are not available. The most important thing is to do the calculation carefully and transparently so you get a realistic picture of the environmental impact of the event. Once you know exactly what it is you have calculated, it's easier to communicate the results to the outside world, without greenwashing or overstating your case.

Gather information from service providers, suppliers, and other stakeholders as openly as possible to ensure the most accurate

Waste

To calculate the waste fraction quantities in kilos, contact your waste management partner. They can also give you very detailed information about the frequency of collection, peak times for waste, and the purity or recyclability of the fractions collected. Commonly collected material fractions in-

information is included in the calculation.

Tell your partners that any information they provide will be kept confidential and will only be used in an overall calculation where individual actors cannot be identified. This is important as they may share confidential commercial information with you.

For many emissions, you can easily obtain information either from your own purchase invoices and receipts or directly from partners. This information includes electricity consumption, district heating/cooling, litres of fuel used/purchased by the organisation, waste fractions per kilo, and water consumption data. More challenging to collect, is emissions data on procurement, food and beverages, accommodation, and the largest and most influential of all – transport.

clude biowaste, cardboard, paper, glass, metal, plastic, cooking oil, construction waste not suitable for other fractions, and electrical and electronic equipment. Depending on the nature of the event, the target audience and the number of visitors, hazardous waste may also be generated.

Photo: Jarmo Koskela



Energy and water consumption

Energy consumption includes emissions from electricity use, heating and cooling, and the use of generators. If energy consumption data is not available from your own utility bills or directly from the energy company, you can estimate emissions based on the facilities you use and their hours of use. It's relatively easy to collect this information – especially for indoor events. If you're using generators, you can base calculations on either fuel consumption data or hours of use.

It's often difficult to obtain comprehensive emissions data concerning the energy consumption involved in network use, but one

Procurement

When it comes to the procurement of different materials, emissions are calculated in units of currency, rather than kilos or pieces, as it makes the data easier to then process. The emissions burden is thus calculated using the monetary value of the products and materials purchased and the common emission factor for each type of product. As you receive more detailed information about purchases, you should adjust your calculations to ensure the final carbon footprint is based on the most accurate information possible. There are specific emission factors for different products and materials. Procurement involves not only newly purchased

way is to estimate the number of hours spent streaming. Almost all emissions from TV production are already automatically included in other calculations for the carbon footprint of the event (e.g., water consumption and waste). For water consumption, you can usually obtain the data directly from the water utility.

supplies and materials, but can also include other services bought in, such as cleaning and separate entertainment services.

Among other things, take into account:

- raw materials (wood, glass, plastic, metal, fabrics, paper, etc.)
- readymade products (incl. clothing for volunteers)
- technical equipment (e.g., machines, telephones, printers)
- furniture

Food and beverages

Collect accurate data on food and beverage portions sold, either in kilos and litres, or in units of currency. You can then calculate your emissions in those same terms.

Accommodation

Calculating the carbon footprint of accommodation depends on the accommodation services used and their energy efficiency. Ask them to provide information on their accommodation's emissions and carbon foot-

Transport

Extensive mapping of the transport and travel required to, from, and around the event will be needed. Data collection for this purpose often requires surveys to be made among visitors, volunteers, and partners. Use mobile apps or online forms to collect data on the means of transport used, the length of trips, and logistics. Remember that it would also be useful to identify and include emissions data on the movements of TV broadcasting trucks, units, and staff in the calculation. Encourage participants and companies to respond accurately to obtain the most reliable data possible.

Transport emissions can be calculated using either fuel consumption figures or the number of kilometres travelled using each mode of transport. Remember to avoid double counting: if you've already calculated emissions for an activity based on fuel consumption, don't then include the kilometres travelled for that activity in the calculation. The various modes of transport usually consist of:

print. Look for accommodation services that are committed to environmentally friendly practices and have obtained environmental certificates.

- passenger car (petrol, renewable diesel/diesel, electric, hybrid, LPG/biogas)
- taxi
- van, delivery van, trailer/caravan
- motorcycle
- long-distance bus, commuter bus, minibus (renewable diesel/diesel, electric)
- train
- other local means of transport (tram, metro)
- cycling
- walking
- other solutions suitable for the event (boat, car ferry, electric shuttlebus, electric bike, skis)
- flights (domestic short and long haul, international short and long haul)

The calculation does not take into account indirect emissions from the manufacture of fuels or emissions from the manufacture of the vehicles themselves.

Calculate Emissions (or have them done for you)

Once you have the necessary data, you can either carry out a carbon footprint calculation yourself or have it done by professionals.

The calculation estimates the amount of greenhouse gas emissions caused by the event in terms of the amount of CO₂ which would have the equivalent global warming potential. This is known as the carbon dioxide equivalent and is usually expressed in kilograms (or kg CO₂-eq). Make sure that you carefully document the emission factors and calculation criteria you use for this as it is important for the transparency of the final result.

You can use various calculation programs and tools to calculate your footprint. The results provided by the calculators are always based on the best data and assumptions available at the time. It's important to note that different sources may provide different emission factors, so double-check the data you use in your calculations and ensure that it's based on reliable sources.

Outcome and Conclusions

Analyse the results of the calculation and compare how each activity contributes to the total figure to identify the main sources of emission and possible areas for improvement. You can also compare the carbon footprint of an event over the years if it is held annually and data from previous years is available.

Record and report the results of the calculation and explain how emissions can be reduced at future events. Actions could include taking more energy efficiency measures, using more renewable energy, improving the recycling of materials, and managing travel arrangements better. Monitor the impact of actions taken on the carbon footprint over time. Continue to collect data and carry out regular calculations to assess how well the measures have reduced the event's emissions.

Remember that the calculation of a carbon footprint is always an estimate based on different assumptions and sources. Accuracy

and reliability depend on the data and calculation methods used. It's therefore important to work with reputable experts if a more accurate and reliable carbon footprint estimate is required.

Crucial to the carbon footprint calculation is that comparisons can be made between different years or even different events. It means that calculation methods and parameters must be the same or similar. This comparability can then serve as a basis for planning future events and reducing the impact on the environment.

However, comparability has its limits: in the case of 'travelling events', the location of the event can change radically, and even with annual iterations of the same event, changing circumstances must be taken into account when making the footprint calculations: no two events are exactly the same.



IMPACTFUL COOPERATION

It goes without saying that no event can be set up by just one organisation; events are always organised in cooperation with partners. At a sustainable event, large corporate partners, local SMEs, the local council, volunteers, and other partners play an important role. The commitment of all parties to creating a sustainable event benefits everyone; partners not only act as enablers for carbonwise actions, but also gain positive visibility for themselves while learning something new.



The carbonwise approach of SMEs and other partners at their local event will boost the transition to regional sustainability. Many partners and/or potential partners are already doing a lot to promote sustainability, either in their own sector or more widely. Many companies and local councils have developed a sustainability (or environmental/ climate) strategy and are committed to promoting sustainability in different ways. Finding common ground will not only increase the visibility of your event, but also create opportunities for a range of concrete, effective actions.

When you negotiate contracts with your partners, you should already have a clear theme of accountability and a strong basis for planning your practical activities, or at least a clear vision of what you will do. Discussions and negotiations with partners will be most beneficial if your event's sustainability plan is already firmly in place and you can give concrete examples of the actions you plan to take. A good event sustainability brand will also open doors with stakeholders that might otherwise be difficult to reach.

HIGHLIGHTS FROM THE JUKOLA RELAY:

- ”We got our key partners to commit to the theme and the approach. Naturally, this also had an impact on the budget.”**
- ”Some of our partners had ready-made environmental management systems and methods for calculating carbon footprints, which increased our knowledge and awareness.”**
- ”We were able to attract partners to Jukola because we had a clear story about the sustainability theme and values of the event that we could put**

Partner Companies

There are two types of partner company: supporter and actor. Of course, partners can be both, while local SMEs and subcontractors will usually be actors. Together, you can find a role for each partner that suits everyone's objectives.

When you're looking for event partners, use the sustainability theme of your choice and make sure you address sustainability issues from the start of your partnership discussions even if negotiations start years before the event itself. Partner communication is such an integral part of an event, that your sustainability theme might receive comparatively less attention – so explain your theme right from the start. Negotiating with companies, drafting contracts, discussing policies and agreeing schedules often takes place without a carbonwise approach.

Many potential partners may have their own climate or environmental programmes, which means they will favour responsible partner-

ships. In other words, a carbonwise event is more likely to attract partners than one where sustainability has not been addressed or is only superficially included as icing on the cake. Remember to choose partners with policies that do not contradict your sustainability goals and commitments. It will be noticed immediately and, in the worst-case scenario, harm your reputation.

It's worth taking advantage of your partner's concrete sustainability activities and innovations. Encourage them to think and tell you about the responsible actions they're taking in relation to your event (and beyond). Engaging larger companies and key partners will not only bring carbon wisdom, but also visibility and maybe even financial support. You can also encourage your partners to act more responsibly or in line with your theme. It's worth including sustainability targets in your agreements and checking how these have been implemented after the event.

A WORD FROM KEY PARTNERS IN THE JUKOLA RELAY:

”Carbon wisdom was a really good theme for us, and we were also able to highlight our own diversity and climate programme.”

”We have a pretty big emphasis on responsibility in our strategy, so carbon wisdom certainly was an advantage. We're happy to highlight that and be involved in sustainable projects.”

As producing an event involves many supply chains and subcontractors, SMEs also play an important role in achieving sustainability goals. For example, a local civil engineering company might be carrying out earthworks in the event area, while a food chain is supplying the ingredients for a restaurant run at

the event by a local restaurateur. Local SMEs are also likely to be responsible for the event area's telecommunications network, the water and sewage, and waste management. Engage and involve these businesses in ownership of the event's sustainability.

A WORD FROM SME PARTNERS IN THE JUKOLA RELAY:

”We were pleased to be part of this carbonwise event. It’s been thought-provoking and we know that in the future we’ll have to get used to taking sustainability on board in whatever we do.”

”We certainly have more knowledge now about sustainability, and about how things should be done. In business, we’re always trying to cut out what is not so relevant. This has helped us do just that.”

Photo: Janne Penttinen



Now you have a sustainability theme and, with any luck, both your supporting and acting partners are committed to it too. Remind them of the carbon wisdom of your event:

- Include carbon wisdom in all your everyday business communications with partners, including service providers and suppliers at the event. Too many reminders are never a bad thing.
- Encourage them to communicate the sustainability of your event in their own internal communications.
- Make sure your communications team and those that are engaging with various partners talk to each other: What has each partner said about their own sustainability? How will the event's environmental actions be highlighted? Partners are one of your sustainability target groups!
- Create common tags (hashtags, digital stickers, etc.), campaigns, and messages for the event so communications coherently reflect the sustainability objectives and attract participants.

≡ **"At the Jukola Relay, for example, we used the #makingcarbonwisejukola tag as text and image in three languages. It worked great!"**

≡ **"It's good to have something a bit more practical to communicate, so we can come up with ideas on how to use different responsibility themes in both our interests."**

≡ **"It was nice to have a joint Teams where the partner companies could get together a few months before the zero hour. From the partners' point of view, it's good to receive information and briefings on concrete carbonwise actions well in advance. It provides a kind of concise kit that can be used in our own communications."**

“We have thousands of people in our group of companies all over the country, which is a really big target group for carbon wisdom.”



Boost the Local Economy

You can also maximise the local economic impact of your event by working in a carbon-conscious way. First, consider the target audience and visitor profile for your event, then work with tourism operators, retailers, and other ancillary service providers. Encourage them to:

- Package services for your visitors.
- Offer transport and rental services.
- Provide transport and other services.
- Develop sustainable side events and social programmes.



Innovative Achievements of the Carbonwise Jukola Project

The companies involved in Carbonwise Jukola were working to create a sustainable major event. Local companies from different sectors looked at their own carbon foot-

print and prepared a climate roadmap to ensure that the world's largest orienteering relay event is produced in the most carbon-friendly way possible.

Muovi-Simola Ltd | Juha and Jani Simola

Based in Porvoo, Muovi-Simola manufactures long-lasting fibreglass products such as swimming pools, basketball hoops, oil spill response, and building service products. Muovi-Simola manufactured a mobile swimming pool for the competition centre. With carbon wisdom in mind, the company changed its product to something that was more sustainable and tested out a new concept: the pool is a prototype, with around 25% of the material used to manufacture it coming from 4,000 recycled plastic bottles. The material was also produced locally in Porvoo. Social responsibility was also a factor that was considered: the mobile pool was tested to see if it could be used to give children swimming lessons who otherwise did not have regular access to them.

PL-Rakennus | Pekka and Pyry Lindblad

PL-Rakennus, the local earthworks contractor at the venue, said that they need to be able to prove and develop their accountability in future. During the Carbonwise Jukola Project, they took their first steps towards making the business as emission-free as possible by upgrading working methods and equipment. For example, they tested and introduced lower-emission fuel for their machinery, which significantly reduced emissions and will be to their advantage in future tenders too.

Local Council

The local council can be both a supporter and actor in your event. The council's procurement policy or event strategy can guide your event and the companies working with it to be more sustainable. Councils can encourage events to be more environmentally responsible by offering grants that take into account the event's environmental sustainability goals and activities. The council can also support your event's sustainability efforts directly, for example, via council-owned companies (the city transport department, energy company). This can take the form of providing free public transport, for instance, or ensuring that the energy provided to the venue is green.

Councils can also benefit from responsible events taking place in the local area. A carbonwise event will generate new sustainable activities and may enhance the area's sustainability brand and environmental strategy. Some councils may also have direct strategic objectives to become more attractive as a

host city for future events. They will recognise that events have a significant positive impact, not just through tourism on the local economy, but also by providing memorable experiences and strengthening the sense of community. Responsible events not only support the council's values and strategy, but also serve as a marketing and communication tool. This in turn supports the efforts of the event organiser, while the public visibility of the event will also bring a range of image benefits to the city.

Communication with the council also starts years before the event, aiming to highlight local sustainability innovations and practices. A responsible event will also promote the council's own sustainability goals, but none of this can happen without a shared sense of purpose being effectively communicated. Who is the council's contact person for your event? Who else would be good to keep in touch with before, during, and after the event?



Volunteers

Volunteers are invaluable to the success of any event. Their time and skills don't just enable your event to take place, but they also create a positive and supportive atmosphere that fosters a sense of local community spirit and cooperation. Volunteers play a key role in promoting responsible events and their contribution can be crucial to the success of carbonwise activities. They act as role models, promoters, and ambassadors for sustainability. It is therefore im-

portant to familiarise them with your sustainability theme, so they understand what is planned and how those plans will be implemented.

Volunteers always work in teams on a specific task. All the tasks are equally important from a sustainability perspective, but you can contribute to carbon wisdom by organising a team specifically dedicated to sustainability.



Photo: Micki Kulju

Other Partnerships and External Funding

Research institutes, educational institutions and various local communities can be very useful partners when organising an event. Working with such organisations brings diversity, expertise, and resources to the table. A collaborative and multi-faceted approach strengthens the local community, creates a sense of belonging, and supports cultural communities and activities (such as local sports clubs).

As partners, research institutes can analyse the economic, social, environmental, and cultural impact of events to help the organisers better understand their impact. They can also develop new technological solutions, such as monitoring systems which will improve the analysis of sustainability measures or spectator participation in an event.

Working with an educational institution can provide the students there with invaluable hands-on experience and a chance to put their learning into practice. It's important to understand that institutional cooperation requires willingness and commitment on both sides. It works best when all parties share a common interest and goal in working together. In particular, if working together involves providing qualifications or certificates, it is important that the details are worked out and clear ground rules established first.

Local communities can provide facilities for the event and help with marketing and promotion at the local level. They can also encourage residents to participate as volunteers or spectators and provide support for the event's sustainability activities.

Organising a sustainable event can require significant investment. Various funding programmes and foundations can be important providers of additional resources. To find the most appropriate funding for your event, look carefully at all the possibilities. Many funding sources require a well-developed plan and budget, which will show how the funds will be used responsibly and effectively.

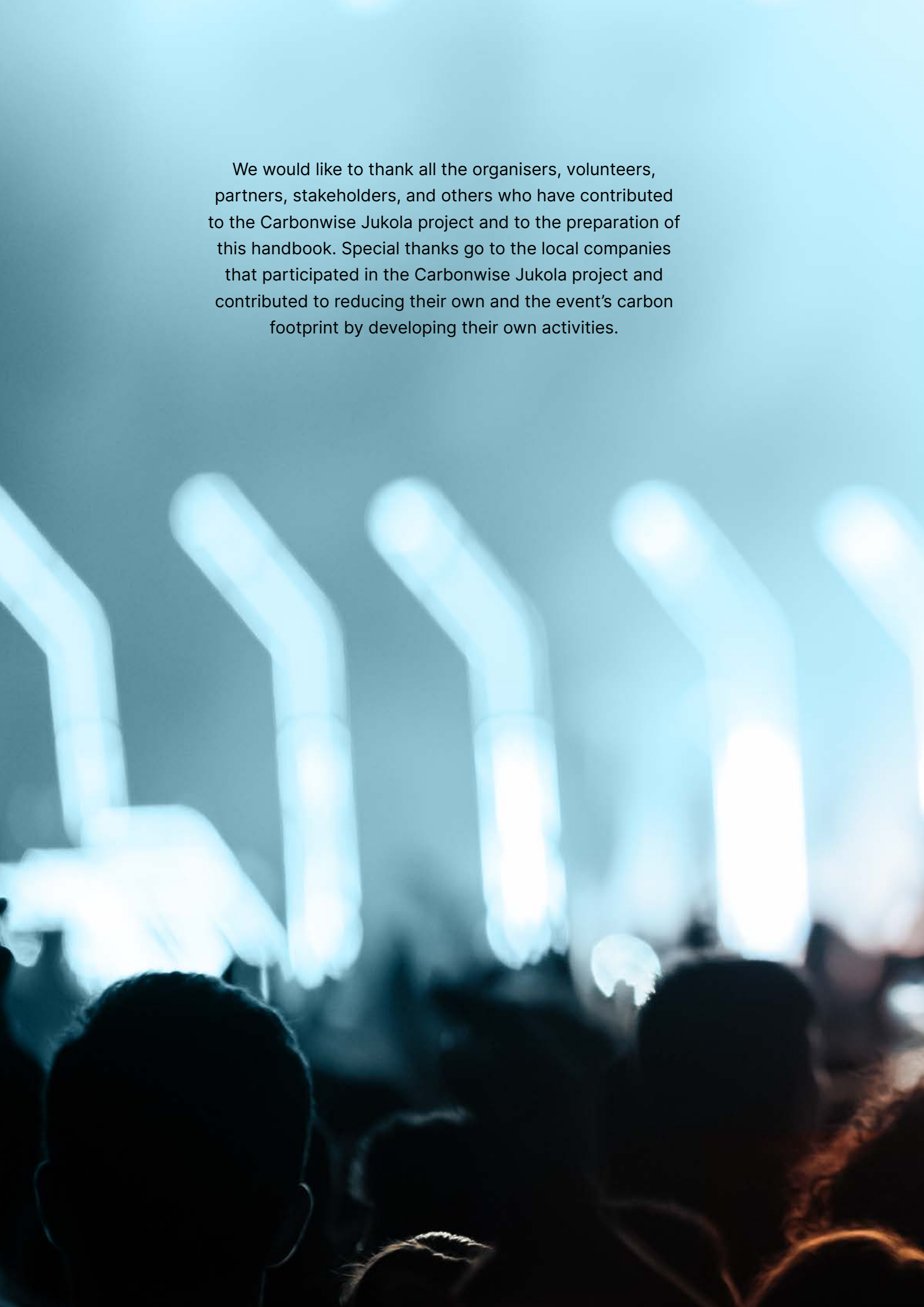
Many foundations focus on environmental protection and sustainable development. They can provide funding for the event's green practices and sustainability breakthroughs, while others will support events that promote cultural diversity and the preservation of local culture. Meanwhile, foundations that focus on social issues may provide funding for events that promote community and social justice.

You don't necessarily have to apply for funding on your own. For example, development companies and educational and research institutions can be valuable partners in organising and facilitating a responsible event. Working together can improve the sustainability and social impact of the event. Their expertise, resources and networks can help ensure that the event is delivered in the most responsible and effective way. They can also help to create innovative solutions and develop responsible practices.

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A photograph of a crowd of people at night, with their hands raised in the air. The scene is illuminated by a strong blue light, creating a vibrant, energetic atmosphere. The background is dark, and the foreground shows the silhouettes of people's heads and shoulders. The overall mood is one of excitement and participation.

We would like to thank all the organisers, volunteers, partners, stakeholders, and others who have contributed to the Carbonwise Jukola project and to the preparation of this handbook. Special thanks go to the local companies that participated in the Carbonwise Jukola project and contributed to reducing their own and the event's carbon footprint by developing their own activities.