A part of Sustainable Living:

NORDIC GREEN ROADMAP

for Cultural Institutions

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The Nordic Green Roadmap for Cultural Institutions is the outcome of the project: Sustainable Cultural Experiences in the Nordic Region, which is led by The Nordic House in the Faroe Islands as part of the Nordic Council of Ministers' Sustainable Living programme (2021–24). Sustainable Living aims to encourage individuals, communities, and businesses to make sustainable choices in their daily lives and to make it easier to live sustainably in the Nordic Region. The programme includes six different projects that address key issues such as climate change, resource consumption and social equity. It includes campaigns to raise awareness, educational activities, policy recommendations and collaborations with stakeholders to promote sustainable practices. The programme is a cross-sectoral Nordic collaboration between the Nordic councils of ministers for gender equality and LGBTI, environment and climate, fisheries, aquaculture, agriculture, food and forestry, education and research, culture, and Nordic co-operation, as well as NORDBUK and the expert group for sustainable development. The Nordic Green Roadmap for Cultural Institutions is developed by Inger Smærup Sørensen and Linnéa Elisabeth Vågen Svensson. We owe a big thank you to countless representatives from cultural life throughout the Nordics and to just as many experts from all sorts of different disciplines who have generously shared their knowledge and experience and understood the necessity of working cross-sectorally.

INTRODUCTION

Nordic citizens have the highest personal carbon footprint in Europe.

In the Nordic countries, more than half of our total carbon footprint is absorbed in private consumption. Our impact is significant, as indicated by numerous studies and the recent synthesis report from the UN's climate panel. The report includes some painful home truths possibly worse than anticipated. However, it also states that we are ready for change and most importantly, we need to take action now.

The Green Roadmap for Cultural Institutions in the Nordic Region aims to enable cultural institutions and artists to act now – whether they are already engaged in green transition or taking their first steps. The roadmap is part of the Sustainable Cultural Experiences in the Nordic Region project, which falls under the Nordic Council of Ministers' Sustainable Living programme to accelerate the green transition, and achieve the goals of Agenda 2030. The project has sparked conversations across the Nordic region, about the role of artists in the green transition; digital cultural dissemination; young artists' perspectives on their industry; collaboration between the cultural and travel sectors; the intersection of children, art, school, and climate; sustainable design; carbon accounting and offset schemes; change management; power structures in the cultural field; the relationship between sustainability, culture and gender; and much more. Research, knowledge sharing, doubts and frustrations have all contributed to the end result. The Roadmap presents a range of methods to reduce the environmental impact of the cultural sector. Some initiatives are straightforward, while others are more challenging, but we have learned that even the easiest changes can be difficult to initiate. This is why it is crucial to analyse your own institution and identify barriers as part of the process – not as an excuse to delay action, but to avoid giving up.

Barriers can be found in our budgets, statutes, and the laws and regulations we must comply with. These barriers are embedded in our working methods, habits, traditions, power structures, job descriptions, artistic perspectives and working hours. Obstacles will arise on all sides as we embark on the journey towards change. Overcoming them requires willingness and committed leadership, but it is ultimately rewarding, not only for the climate but also for the economy, wellbeing and the arts themselves.

The Roadmap is divided into sections with specific headings. Each section includes a list of suggested action points, and their relevance to specific personnel. There is also a proposed timeframe and guidance on creating a customised timeline with goals and milestones. It gives an example of a simple carbon accounting method and tips for making accurate calculations accurate calculations. Finally, it provides recommendations for the political system. Although we can achieve a great deal as individuals, political initiatives and collaboration are needed in the Nordic region. Therefore, our task as cultural institutions is not only to reduce our own footprint but also to influence authorities and demand changes.

The roadmap can be used in various ways. We encourage cutting and pasting materials, creating personal timelines, displaying selected pages throughout the institution, producing everything from chaotic drawings to organised Excel sheets, making advent calendars, discussing challenges, talking to experts, and collaborating with other institutions. We also suggest reviewing your existing systems to see if they can be improved and streamlined. This could include invoicing and accounting systems, booking systems and calendars – any part of the operational structure. Expect it to take time and to be demanding. But remember that it is also incredibly exciting and important, and there is no way around it. We must start now.
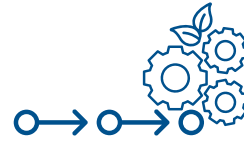
HOW TO USE THE ROADMAP

This is a dynamic document that should guide your institution's sustainability efforts over time.
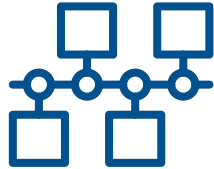
Use the document to create your own Timeline and Roadmap for your sustainability work.

We suggest that you regularly revisit and update your own roadmap as your institution makes progress and as new sustainability opportunities and challenges arise.

The Roadmap contains of 9 steps towards a greener operation as well as giving feedback and recommendations to the Nordic Governments on how to enable a greener future for Cultural Institutions in the Nordics.

The Roadmap has thematic sections that you can explore one by one or as a totality. It covers topics such as Energy & Water, Materials & Waste, Food & Beverage, Travel & Transport, Carbon Footprint and Community. Each section has an introduction, specific recommended action points and background information.
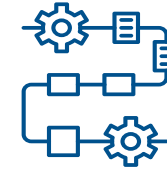
Look for actionable steps and strategies provided in the document. These are practical recommendations for achieving sustainability goals. When implementing in your own organisation, prioritise the actions that align with your institution's mission and resources.

In the last pages you will find a list of resources and a glossary.

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for Cultural Institutions

The timeline visualises the Roadmap and how cultural institutions can reach the international goals. Create your own timeline to track progress and ensure timely implementation of strategies and actions.

CO2 Emissons are reduced by

55%

Emissons are Net

ZERO

ROADMAP IS LAUNCHED

| 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | ... | 2050 |

Strategies in place

Immediate measures and action points are introduced

Strategy is reviewed

Further action points are in place

Compensation schemes are tested and implemented
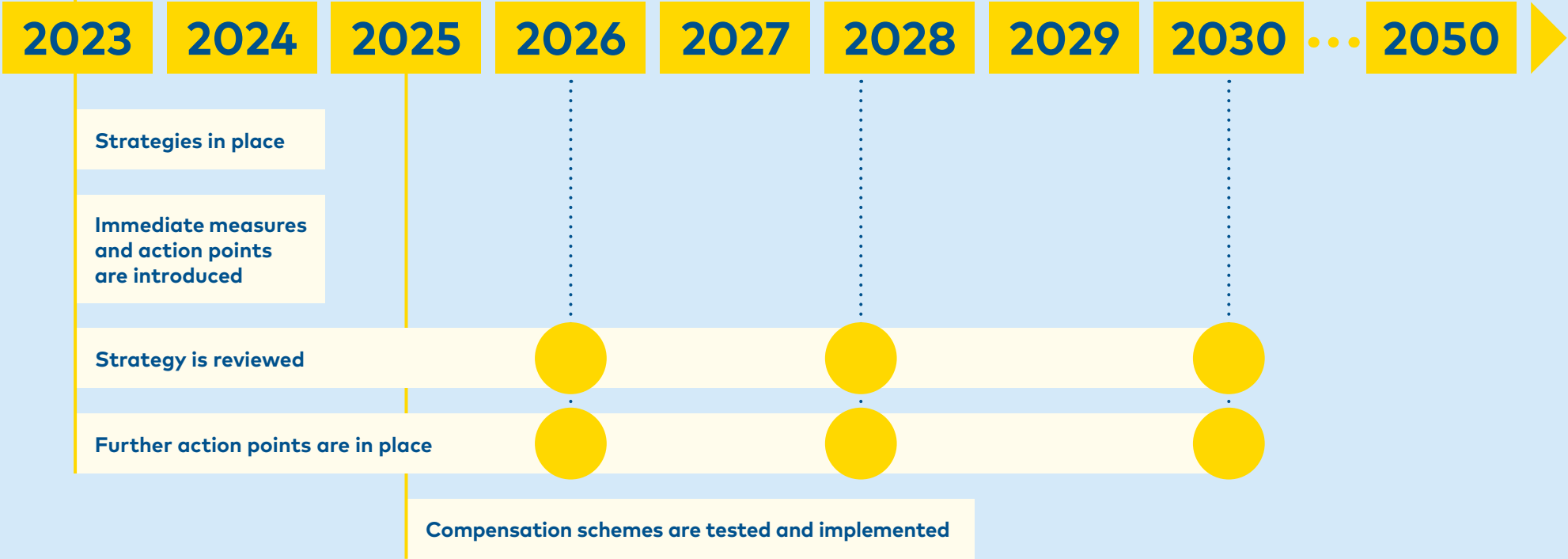
9 STEPS TOWARDS A GREEN TRANSITION

GREEN TRANSITION

9 CONTINUOUS IMPROVEMENT

8 EDUCATION AND ENGAGEMENT

7 MONITORING AND REPORTING

6 COLLABORATION AND PARTNERSHIPS

5 RESOURCE MANAGEMENT

4 ACTION PLAN

3 ASSESSMENT AND ANALYSIS

1 HUMAN RESOURCES / MANDATE

2 STRATEGY, GOALS AND OBJECTIVES

TODAY
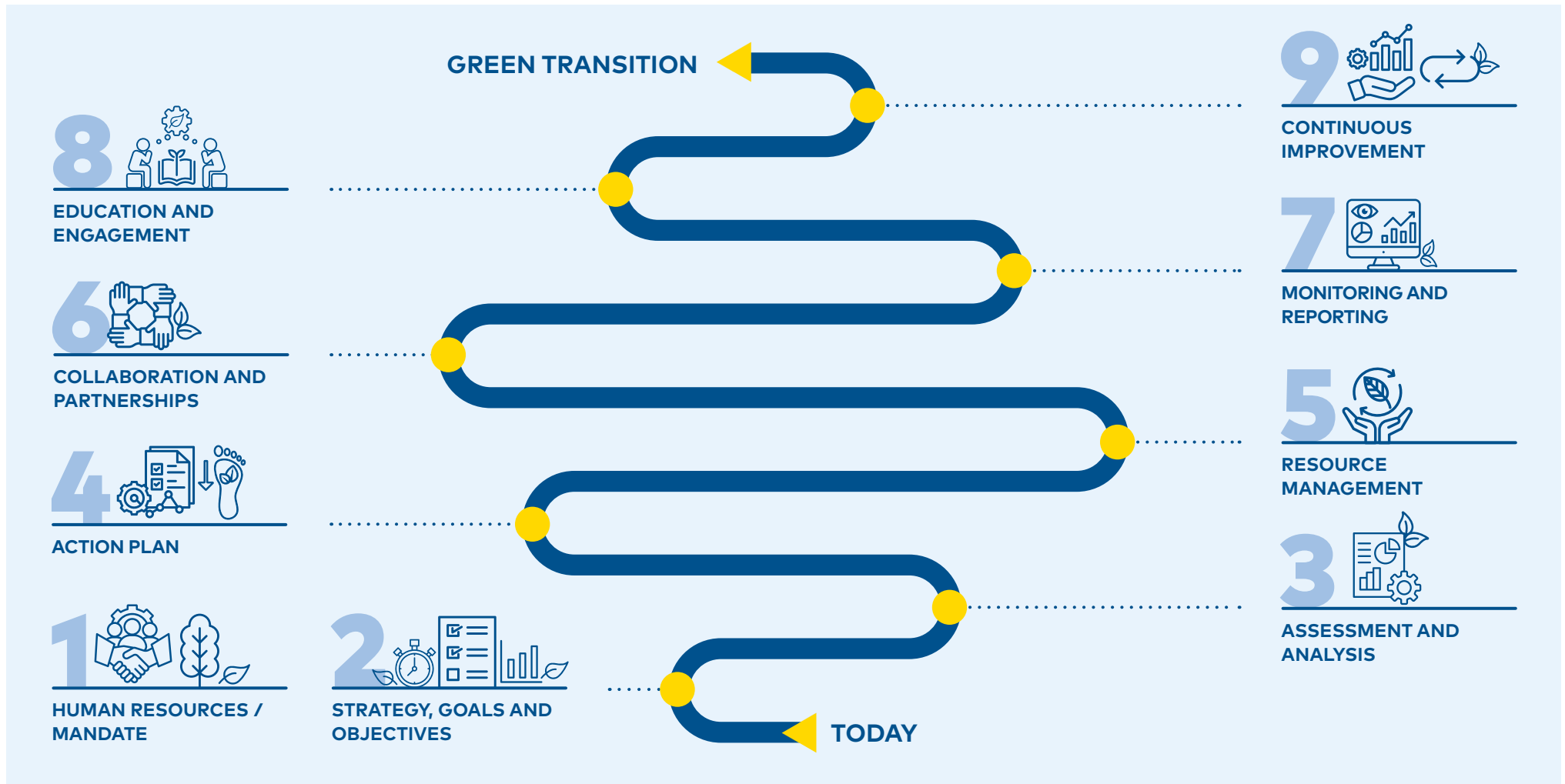
1 HUMAN RESOURCES / MANDATE

Implementing sustainable change in cultural institutions requires dedicated personnel working to a clear mandate. Appoint individuals or teams to take responsibility for driving sustainability. These people should be granted the necessary authority to make decisions, coordinate initiatives and monitor progress. Adequate staffing and clear mandates empower these personnel to effectively implement projects, ensure compliance with regulations, and foster a culture of sustainability throughout the institution.

2 STRATEGY, GOALS AND OBJECTIVES

Clearly define the overarching sustainability goals and objectives you aim to achieve. These should be specific, measurable, achievable relevant, time-bound and evaluated (SMARTe) to provide a clear direction for the roadmap and how to put it into practice in your own department/ organisation.

3 ASSESSMENT AND ANALYSIS

Begin with a thorough measurement of the current environmental impact of your cultural institution, including what you purchase (and thus what waste is generated), energy consumption, water usage, modes of travel and carbon emissions. Analyse the findings to identify key areas for improvement and prioritise sustainability efforts.

4 ACTION PLAN

Develop a detailed action plan outlining specific steps and initiatives that your cultural institution will undertake to reduce your environmental footprint. You can use the action points in this roadmap to set the right measures and goals. These should include strategies for energy efficiency, sustainable procurement, recycling, and waste reduction, reducing fossil fuel-based transport and promoting sustainable behaviours within the institution.

5 RESOURCE MANAGEMENT

Move from strategy and planning to direct action. Set up efficient resource management, such as recycling programmes, reducing water consumption, and promoting circular economy practices. Encourage those in charge of purchasing materials and resources to consider sustainable alternatives.

6 COLLABORATION AND PARTNERSHIPS

Collaboration with stakeholders, including artists, suppliers, local communities, etc are crucial to success. We highly recommend creating partnerships and networks to share best practices, exchange knowledge and take initiatives jointly to increase the impact of your sustainability efforts.

7 MONITORING AND REPORTING

Outline a framework for monitoring and evaluating your progress. This may involve setting up key performance indicators (KPIs), conducting regular audits, and preparing sustainability reports to track the institution's performance over time. Recommended official Sustainability Certifications include ISO 14001, EMAS, Miljøfyrtårn (NO), EcoCompass (FI), The Nordic Swan Ecolabel and A Green Future.

8 EDUCATION AND ENGAGEMENT

Include strategies to educate and engage staff, artists, visitors and the wider community on sustainable practices. This can involve awareness campaigns, workshops, educational programmes and interactive exhibitions to promote and foster a culture of environmental responsibility.

9 CONTINUOUS IMPROVEMENT

It's vital to sustain continuous improvement and adaptation. Regularly review and update your institution's personalised sustainability roadmap to align with evolving best practices and emerging technologies.

RECOMMENDATIONS FOR THE NORDIC GOVERNMENTS

10 practical measures that can be taken at governmental level.

1 **FUNDING AND GRANTS** Provide dedicated funding streams and grants specifically for cultural institutions to support sustainability initiatives, including energy efficiency upgrades, waste management systems, and sustainable infrastructure development.

2 **GREEN BUILDING STANDARDS** Enforce or incentivise the adoption of green building standards for cultural institutions, encouraging the use of sustainable and recycled materials, energy-efficient designs, and renewable energy sources in new constructions or renovations.

3 **CARBON OFFSETTING AND TRADING** Establish mechanisms for cultural institutions to participate in carbon offsetting and trading programmes, allowing them to offset their carbon emissions through certified projects and promote carbon neutrality.

4 **SUSTAINABLE PROCUREMENT POLICIES** Develop guidelines and regulations placing requirements on cultural institutions to prioritise sustainable procurement practices, such as sourcing environmentally friendly materials, promoting fair trade products, and supporting local suppliers.

5 **ENVIRONMENTAL REPORTING REQUIREMENTS** Introduce mandatory environmental reporting requirements for cultural institutions. Ensure that they track and disclose their energy consumption, waste generation, water usage and carbon emissions.

6 **EDUCATION AND TRAINING PROGRAMMES** Support the development of education schemes and training initiatives that enhance sustainability knowledge and skills among cultural institution staff, artists and management. Build common standards for competence.

7 **COLLABORATION PLATFORMS** Create platforms or networks that facilitate collaboration and knowledge sharing, enabling them to exchange best practices, innovative ideas, and resources for sustainable operations. Facilitate for cross-sectoral partnership deals.

8 **POLICY INTEGRATION** Integrate sustainability considerations into cultural policies and strategies at the Nordic level as well as the national and regional levels, emphasising the importance of sustainable practices and the integration of social and environmental objectives in cultural activities.

9 **RESEARCH AND DEVELOPMENT FUNDING** Allocate funds for R&D projects focused on sustainability in the cultural sector, encouraging innovation, technological advancements, and the development of sustainable practices and solutions.

10 **PUBLIC AWARENESS CAMPAIGNS** Build on the Sustainable Living in the Nordic Region programme. Launch public awareness campaigns that highlight the importance of sustainable cultural practices and encourage individuals to support and engage with cultural institutions that prioritise environmental responsibility.

GETTING STARTED

To inspire and help cultural institutions we have compiled a range of specific action points, providing practical guidance and ideas for developing sustainable practices.

To inspire and support cultural institutions, we have assembled a set of actionable recommendations. These action points offer practical insights and ideas for introducing sustainable practices. In the following pages, you'll find the information separated into topic introductions, action points and background information on the areas: Green Change Management, Energy & Water, Materials & Waste, Food & Beverage, Travel & Transport, Carbon Footprint, and Community. Approaching these aspects holistically not only enhances sustainability but also yields numerous benefits by aligning planning and strategy across these areas.
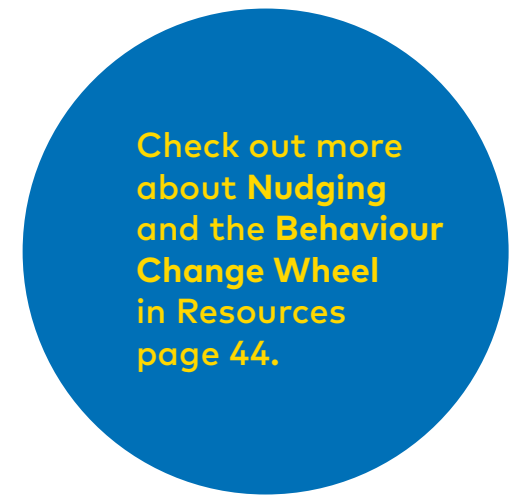
GREEN TRANSITION STRATEGIES

Change management, clear action planning and communi-
cation are important building blocks for cultural institutions
and creative organisations when embracing green transitions
and sustainable practices.

When crafting sustainable strategies for cultural insti-
tutions and creative organisations, a holistic approach is
crucial. Green change management entails facilitating the
shift towards environmentally responsible practices, en-
suring that all stakeholders understand the importance of
sustainability. Clear action planning involves the thorough
development of strategies and goals, providing a tool for
implementing green initiatives. Lastly, effective commu-
nication is the key player that disseminates the message,
engaging both internal and external stakeholders in the
mission for sustainability.

Together, these elements form a cohesive framework, fos-
tering an environment where eco-conscious choices are not
just encouraged but should be embedded in the core ethos
of your cultural institution, ultimately paving the way for a
more sustainable and environmentally responsible future.

Action points

GREEN TRANSITION STRATEGIES

CREATE A GREEN VISION A clear vision for the green transition is crucial. Articulate the commitment to reducing environmental impact, by outlining specific goals and targets.

EMPOWER LEADERSHIP Effective change management requires strong leadership that champions a green agenda. Leaders should motivate and engage stakeholders to actively participate in the transition.

ENGAGE STAKEHOLDERS Involving staff, artists, visitors, and local communities in the change process fosters a sense of collective ownership and responsibility. Listen to diverse perspectives, encouraging feedback and co-creation of sustainable initiatives.

IDENTIFY AND OVERCOME BARRIERS These may include financial constraints, lack of expertise, resistance to change or conflicting priorities. Regular assessments and open dialogue can help tackle these challenges head-on.

UTILISE BEHAVIOUR CHANGE STRATEGIES Drawing insights from behavioural change strategies, cultural institutions can develop targeted interventions to influence behaviours positively. Nudging techniques, such as making sustainable choices more accessible and appealing, can encourage greener practices.

Check out more about **Nudging and the Behaviour Change Wheel** in Resources page 44.

ADOPT A SYSTEMS THINKING APPROACH Understanding the interconnectedness of various elements within the institution's ecosystem is essential. A systems thinking approach helps identify the broader impact of sustainable initiatives and fosters long-term, transformative change.

LEARN FROM MULTIPLE MODELS Cultural institutions can draw inspiration from various diverse change management models and sustainability frameworks, and adapting them to their unique contexts.

ACTION PLAN

DEFINE THE SCOPE of your institution's sustainability strategy, i.e. set the boundaries of the strategy – what is included and what is not.

MAKE A GOOD SUSTAINABILITY STRATEGY including an overall vision, an outline of its purpose and scope, and goals for the areas where you want to make a practical change. Take account of resource and time constraints.

FIND A REASONABLE LEVEL of ambition and prioritise specific areas to tackle and actions required. Goals should set high, and sustainability strategies should be ambitious.

CREATE YOUR OWN PERSONALISED ACTION PLAN using the Roadmap as a guide.

IDENTIFY KEY PERFORMANCE INDICATORS (KPIs) to monitor and evaluate the strategy, e.g, by measuring energy consumption; waste reduction rates; recycling rates; reduction in car use and increase in public transport; water usage etc.

MEASURE THE CURRENT ENVIRONMENTAL IMPACT of the institution to set a baseline.

LEARN FROM THE MONITORING AND EVALUATION PROCESS over time and to continually improve and update the sustainability strategy by adjusting actions, setting new goals, or exploring innovative solutions to further reduce CO2 emissions and raise awareness.

Action points

COMMUNICATION

ENGAGE WITH STAKEHOLDERS In order to communicate your sustainability policy and action plans, make time and create opportunities to interact with your crew, audience, performers, suppliers, contractors, local communities and authorities before, during, and after the event. Ensure they know that you encourage their feedback.

PROMOTE SUSTAINABLE PRACTICES THROUGH POSITIVE COLLABORATION Find ways to communicate sustainable practices that foster positive cooperation rather than imposing sustainability measures.

USE VISUAL TOOLS TO EXPLAIN SUSTAINABILITY Make progress reports, dashboards, graphics and other visual aids to clearly convey the progress you are making in implementing prioritised sustainability actions and achieving your goals.

COLLABORATE WITH OTHERS BY SHARING IDEAS on your website, through social media channels, participating in conferences, and discussing your cultural institution's sustainability initiatives in media interviews.

ENGAGE WITH LOCAL GOVERNMENTS AND MINISTERS to find solutions for infrastructure gaps that could enhance the sustainability of the cultural sector and communities. Examples include improving public transport, providing power grid network connections for outdoor event/festival sites, investing in renewable energy systems in your building, installing water conservation infrastructure, and facilitating waste treatment facilities.

UNITE WITH OTHER ORGANISATIONS IN THE CULTURAL SECTOR and collaborate with political leaders to advocate for the systemic changes required to produce better and more sustainable cultural experiences. Together, we possess remarkable influence and a wider range of public platforms.

ENERGY AND WATER

Energy generation is responsible for producing 34% of global greenhouse gas emissions
Source: IPCC 6th Assessment Report

With growing concerns about climate change and the depletion of natural resources, Nordic cultural institutions can seize the chance to lead by example and drive positive change. By focusing on sustainable energy and efficient resource management, they can reduce their carbon footprint, and become advocates for environmental stewardship. Embracing renewable energy such as solar and wind power, and adopting energy-efficient technologies, can reduce energy consumption and reliance on fossil fuels. There are abundant opportunities to implement sustainable energy consumption and resource management, and cultural institutions in the Nordic region have the chance to set a positive example, find new paths and contribute to a more sustainable society.

ENERGY AND WATER

ANALYSE YOUR ENERGY USE AND SET AT PLAN
Analyse your energy use over the last three years. If this information is lacking, plan an analysis in the coming year. The analysis could either be in accordance with EN 16247-1, or be performed by an independent expert, with a focus on energy savings. Based on the analysis, the cultural institution should write down objectives and an action plan, with targets and measures to reduce energy consumption.

IMPLEMENT ROUTINES/SYSTEMS FOR ENERGY SAVINGS These can include:
– Lighting and other electrical equipment must be switched off in rooms that are not in use.
– Lighting in public areas must be switched off when not in use.
– Outdoor lighting must be time- or demand-controlled.
– Outdoor heating must be demand-driven.

ELIMINATE FOSSIL FUELS The cultural institution should avoid the use of fossil fuels to heat its premises or to produce hot water. Replace oil-fired boilers, or switch to biofuel. Avoid using gas to heat the premises (including patio heaters) or to produce hot water.

MONITOR ENERGY CONSUMPTION Energy consumption should be monitored in kWh per m2 or per guest, either monthly or connected to a specific production/ exhibition/ performance.

CONSIDER INTERNAL ENERGY PRODUCTION The cultural institution should consider generating its own energy, via solar panels or other means, ideally to account for 10% of the total energy demand. This does not apply to heat pumps.

Museums are obligated to save selected art works for posterity, and therefore have very specific demands, when it comes to climate control. There are different methods to regulate temperature and relative humidity, knowledge about passive and less energy consuming care of collections is being developed and active discussion about new standards for museums to benefit the green transition. See resources p 44.

INSTALL DEMAND-CONTROLLED HEAT PRODUCTION Heating in the cultural institution's premises should be demand-controlled. Demand-control means heating levels are adapted to the number of people in the premises, often via a sensor control. Heating timers are not adjusted to the number of people, and are therefore less efficient.

INSTALL DEMAND-CONTROLLED VENTILATION SYSTEM The cultural institution's ventilation system for its facilities should be demand-controlled. Demand-control means air supply adapted to the number of people in the premises, such as CO_2 control and sensor control. As with heating, timers do not adjust the ventilation in the best way.

CONSIDER HEAT PUMPS The cultural institution should have one or more heat pumps if at all possible.

CONSIDER HEAT EXCHANGERS The cultural institution should consider heat exchangers that recover surplus heat, from greywater or ventilation air, for example.

CONSIDER LIGHTING All rooms should have demand-controlled lighting.

USE ENERGY EFFICIENT LIGHT FITTINGS All light sources in rooms, offices and corridors should use LED or light fittings with the best possible energy rating.

USE ENERGY EFFICIENT BATHROOM/SANITARY FIXTURES All fixtures should have energy class A or B. These include mixer taps in bathrooms and toilets, showers in dressing rooms, or mixer taps in public areas. The energy classification should be in accordance with the standard SS 820000: 2010/2020 or SS 820001:2010.

INSTALL ADVANCED CONTROL OF KITCHEN EXTRACTOR FANS Kitchen extractors should be controlled by sensors or timers, turning the extractor on and off as needed.

MONITOR YOUR WATER USAGE and set your own measures to reduce your water usage.

APPLY WATER EFFICIENCY REQUIREMENTS when purchasing new plumbing equipment

ENERGY AND WATER

ENERGY SAVINGS

Cultural institutions, including museums, theatres, galleries, and more, often operate in historic or architecturally significant buildings, making energy management a challenge.

The motivation to reduce energy consumption can arise from environmental responsibility and cost savings. Optimising energy usage also provides financial stability, allowing resources to be directed towards artistic and educational endeavours.

Implementing energy-efficient technologies and practices involves the following areas:

- Conducting regular energy audits and introducing scheduling and automation techniques to further contribute to achieving sustainable and energy-efficient cultural institutions.
- Transitioning to energy-efficient LED lighting. Implementing smart controls can significantly reduce electricity consumption without compromising the quality of illumination
- Adopting intelligent climate control systems. HVAC systems must be

optimised for energy efficiency, with routine maintenance, proper insulation, and programmable thermostats all contributing to effective control.

- Ensuring the quality of the building shell, including walls, roofs, and windows, through insulation and sealing, minimises unwanted heat loss or gain.
- Energy-efficient equipment, including appliances and machinery, should replace older models to curb unnecessary energy consumption.

WATER AS A RESOURCE

Nordic Swan Ecolabel suggests the following limits on water usage in their certification of restaurants, hotels and conference facilities.

Restaurant: max 30 litres per guest
Catering: 20 litres per catering portion
Conference facility: 15 litres per guest

NEW PURCHASES

Water efficiency requirements should apply to new purchases of mixer taps, showers, toilets, urinals and dishwashers in accordance with the table below:

Water demanding equipment
Guidelines for max litres

- **Mixer taps, washbasin in backstage/ office areas**
  5 litres per minute at a pressure of 3 bar
- **Mixer taps, washbasin in public areas**
  5 litres per minute at a pressure of 3 bar, or sensor-controlled
- **Showers**
  9.5 litres per minute at a pressure of 3 bar
- **Toilets**
  Two flushing options: 3/6 litres per flush
  One flushing option: 4 litres per flush
- **Urinals**
  3.5 litres per flush at a pressure of 3 bar
- **Dishwashers**
  Hood dishwasher 3.0 litres per rack
  Conveyor dishwasher 2.0 litres per rack
  Undercounter dishwasher 2.5 litres per rack

WATER-REDUCING MEASURES

- **Own measures**
  Own measures that reduce water consumption by at least 5% per measure. For example, technical devices that reduce water consumption in water-intensive equipment.
- **Mixer taps**
  At least 90% of all mixer taps for washbasins should have a limited water flow of no more than 5 litres per minute.
- **Showers**
  At least 90% of all showers should be water-saving showers with a flow of no more than 9.5 litres per minute.
- **Toilets**
  90% of all cisterns for the cultural institution's toilets should have two flush settings, or a maximum consumption rate of 4 litres per flush.
- **Urinals**
  90% of all urinals should have a maximum consumption of 3.5 litres per flush.

MATERIALS AND WASTE

Industrial processes are responsible for 24% of global Greenhouse Gas emissions.
Source: IPCC 6th Assessment Report

In the pursuit of sustainable practices, Nordic cultural institutions are increasingly recognising the importance of purchasing materials and managing waste in an environmentally responsible manner. By embracing a circular economy approach and minimising waste, these institutions can play an important role in promoting Sustainable Living in the Nordic region.

To achieve these goals, they are guided by renowned environmental certification schemes such as the Nordic Swan Ecolabel, as well as national schemes, which all emphasise the significance of sustainable procurement.

By considering the entire life cycle of materials, from sourcing to disposal, cultural institutions can procure environmentally friendly alternatives made from recycled or renewable resources.

Moreover, they can implement robust waste management strategies that prioritise reuse, recycling and responsible waste disposal. This not only contributes to a healthier environment but also enhances their reputation and credibility.

In the Nordic region, cultural institutions can play a vital role in preserving and promoting art, history and cultural heritage. However, they also face the challenge of managing materials and waste in an environmentally responsible manner.

By leading the way in sustainable procurement and waste reduction, these institutions can continue to inspire visitors, engage stakeholders and play their part in building a more sustainable future in the Nordic region.

Action points

MATERIALS

When considering any kind of new purchase, take the following into account

ANALYSE IF THE PROCUREMENT IS NECESSARY. A procurement policy can be a good tool to get a clear idea of what you really need.

CONSIDER REUSE. Can any materials or resources be reused, repurposed, repaired or upgraded instead of buying new?

ORGANISE YOUR BELONGINGS. Make an inventory of your holdings and property.

CONSIDER RENTING OR LEASING INSTEAD OF OWNING.

THINK CIRCULAR ECONOMY when planning and executing procurement. Circular economy is about transitioning from an economy where we extract, produce, consume and dispose of resources, to an economy where we manage resources in a way that prevents waste.

STRIVE TO DEMAND SOLUTIONS designed for recycling. Use your influence by rewarding suppliers who offer recyclable products or materials – look for opportunities and potential in both the product's packaging and its lifespan.

WORK TOGETHER WITH SUPPLIERS AND FACILITATE ongoing and constructive dialogue. Dialogue provides an opportunity to explore what is available on the market, and to challenge suppliers to go further in terms of environmental considerations and innovation.

USE MARKET RESEARCH, information requests, supplier conferences, one-on-one meetings, and consultations (e.g. competition specifications) to make the procurement greener.

FACILITATE NEGOTIATIONS DURING THE PROCUREMENT PROCESS if possible – it usually expands the range of possibilities and reduces the risk of misunderstandings and failed bids.

FOLLOW UP ON THE CONTRACT AND REPORT on environmental and sustainability effects.

MONITOR THE CONTRACT and delivery with an eye on environmental and sustainability specifications and requirements.

ENFORCE THE CONTRACT'S SANCTIONS when the supplier fails to meet environmental and sustainability obligations.

MEASURE AND REPORT on environmental and sustainability effects during and/or after the procurement, so that the supplier can learn from the process.

FOLLOW-UP ON THE CONTRACT After the procurement process is complete, it's essential to actively monitor and evaluate the contract's implementation. Regular follow-ups enable the organisation to assess whether suppliers are fulfilling their sustainability commitments. This involves checking if the goods or services meet the specified environmental and social criteria outlined in the contract. Additionally, it allows for addressing any issues that may arise during the contract period promptly.

REPORTING ON ENVIRONMENTAL AND SUSTAINABILITY EFFECTS To promote transparency and accountability, create a comprehensive report on the environmental and sustainability effects of each procurement. This report could include positive impacts achieved by adopting sustainable practices, such as reduced carbon emissions, energy savings, waste reduction and improved social and economic conditions. Additionally, the report may highlight any challenges encountered during the process and outline plans for further improvement.

MATERIALS

ECOLOGICAL SUSTAINABILITY

1 **Promoting energy efficiency** Include specific requirements for energy-using equipment and solutions in procurement, favouring the most energy-efficient options and choosing the most energy-efficient appliance.

2 **Harmful substances** Encourage the reduction of harmful substances, such as chemicals and fine particles, in products. Dedicate your operations to reducing the use of such substances.

3 **Low carbon initiatives** Prioritise low-carbon options, such as electric vehicles or other renewable energy alternatives. When renting, leasing or purchasing vehicles, choose electric or other low-carbon options.

4 **Renting and leasing** Consider the possibility of rental or leasing arrangements to promote resource efficiency and reduce waste.
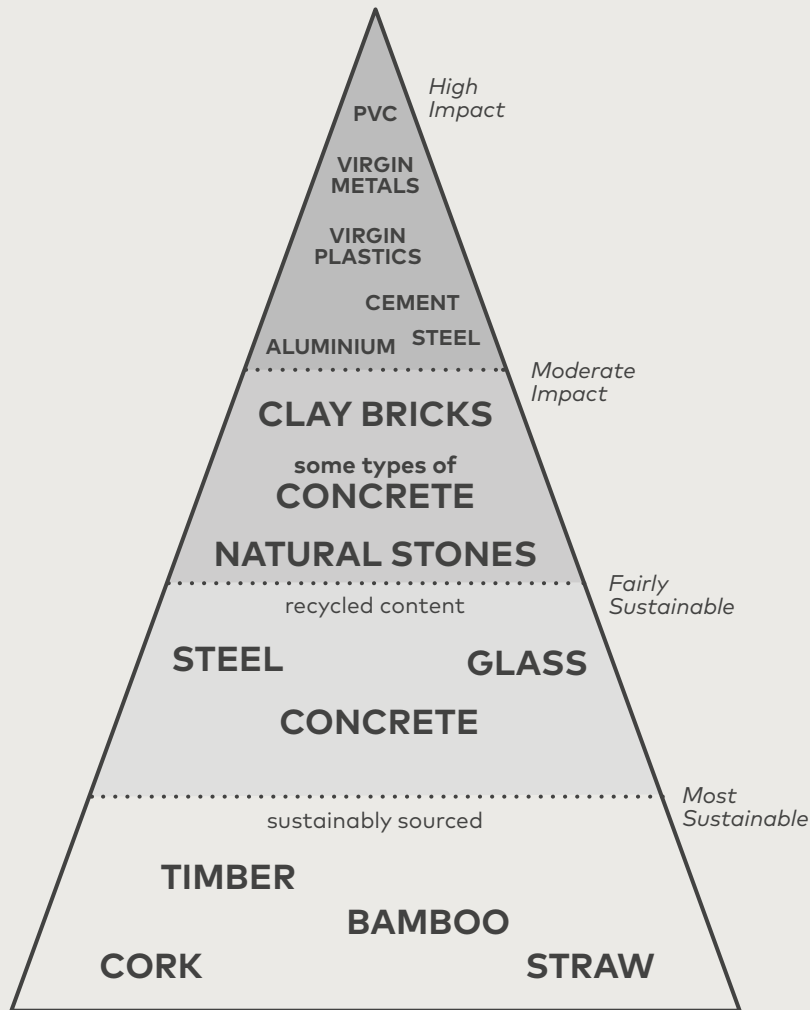
SOCIAL SUSTAINABILITY

1 **Fair working conditions** Promote respect for human rights and fair labour practices in procurement. Consider incorporating employment clauses to support job opportunities.

2 **Involving users/stakeholders** Involve users in the preparation of procurements to ensure their needs and perspectives are considered.

3 **Combating exploitation** Take measures to prevent labour exploitation, especially in domestic sourcing activities.

4 **Apprenticeship programmes** Include conditions for apprenticeships in procurement to support skill development and workforce inclusion.

ECONOMIC SUSTAINABILITY AND TECHNOLOGY

1 **SME participation** Consider the opportunities for local, small and medium-sized enterprises (SMEs) to participate in procurement processes.

2 **Life cycle cost analysis** Factor in life cycle costs when comparing bids to ensure long-run cost-effectiveness.

3 **Market surveys and dialogues** Promote the use of market surveys and dialogues to foster innovation and gain insights into emerging solutions.

4 **Automated invoice processing** Encourage the adoption of automated invoice processing to improve efficiency and reduce paper waste.

5 **New solutions and technologies** Identify and explore new solutions or technologies during the pre-procurement phase to incorporate innovative approaches.

6 **New-to-market solutions** Consider new-to-market solutions or products to foster innovation during procurement.

7 **Promote Data Security and Protection** Ensure compliance with data security and data protection requirements to safeguard sensitive information.

Source: Evaluating impact and promoting objectives Information and additional examples from the HILMA notification form www.hankintailmoitukset.fi/sv/

PURCHASING MATERIALS: THE SUSTAINABILITY PYRAMID

PVC

High Impact

VIRGIN METALS

VIRGIN PLASTICS

CEMENT

ALUMINIUM STEEL

Moderate Impact

CLAY BRICKS

some types of CONCRETE

NATURAL STONES

recycled content

Fairly Sustainable

STEEL GLASS

CONCRETE

sustainably sourced

Most Sustainable

TIMBER

BAMBOO

CORK STRAW

Source: www.materialepyramiden.dk

A simplified overview of materials used in buildings and set design. Please keep in mind that the sustainability of materials can vary based on specific criteria and regional variations:

1 HIGH IMPACT:
High-carbon footprint: Materials with a higher environmental impact due to energy-intensive production or high emissions.
Examples: aluminium, steel, cement.

Non-renewable / resource-intensive: Materials sourced from non-renewable resources or have high extraction impacts.
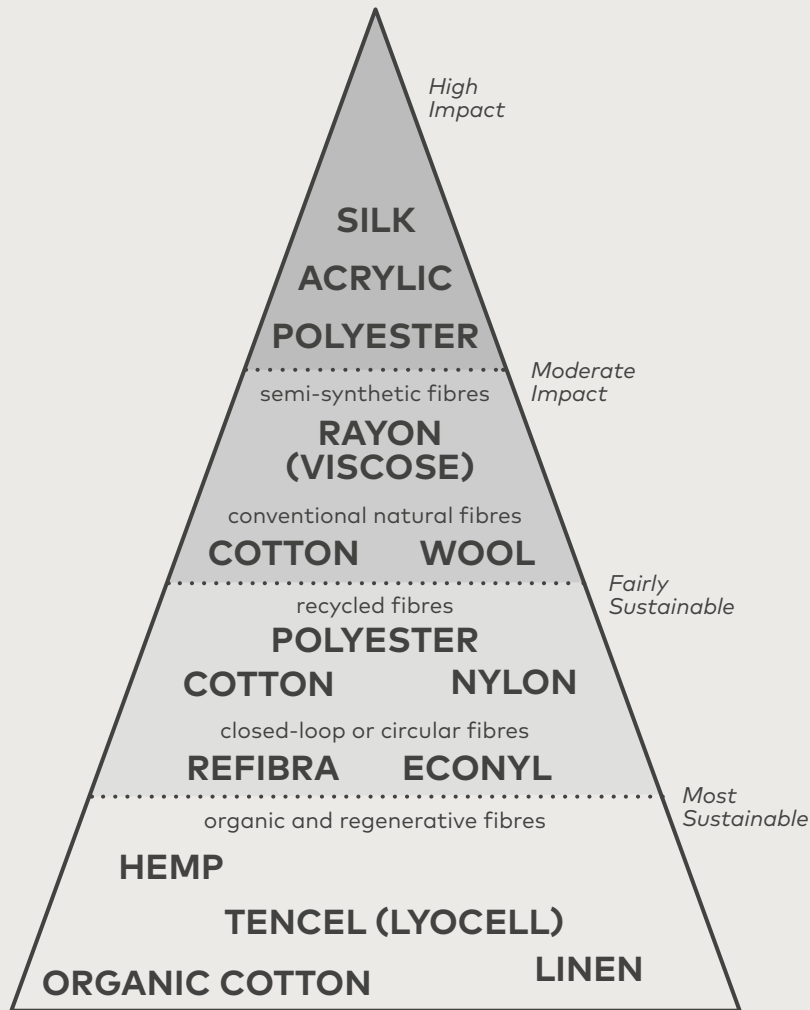*Examples:* virgin plastics, virgin metals, some industrialised wood products.

Highly polluting and hazardous: Materials containing harmful substances or dangerous chemicals.
Examples: PVC, some insulation materials, volatile organic compound (VOC)-emitting products.

2 MODERATE IMPACT:
Low-carbon footprint: Materials with moderate environmental impact in terms of energy use and greenhouse gas emissions.
Examples: clay bricks, natural stones, some types of concrete.

3 FAIRLY SUSTAINABLE:
Recycled: Building materials made from recycled content, such as recycled steel, recycled concrete and recycled glass.

4 MOST SUSTAINABLE:
Renewable and biodegradable: Materials that come from renewable sources and have a low impact on the environment.
Examples include sustainably sourced timber, bamboo, cork and straw.

It's important to note that sustainable purchasing practices involve not only considering the materials used but also the entire life cycle of the building. Factors include energy efficiency, water use, construction methods, waste management and the potential for reuse and recycling.

Sustainable building methods minimise the environmental impact of buildings and promote resource efficiency, while also creating healthy and comfortable spaces for occupants.

Various green building certifications and standards, such as LEED (Leadership in Energy and Environmental Design) and BREEAM (Building Research Establishment Environmental Assessment Method) as well as The Nordic Swan Ecolabelling, are useful guides to the selection of sustainable materials and building practices.

PURCHASING TEXTILES: THE SUSTAINABILITY PYRAMID

High Impact

SILK
ACRYLIC
POLYESTER

Moderate Impact

semi-synthetic fibres

RAYON (VISCOSE)

conventional natural fibres

COTTON   WOOL

Fairly Sustainable

recycled fibres

POLYESTER
COTTON   NYLON

closed-loop or circular fibres

REFIBRA   ECONYL

Most Sustainable

organic and regenerative fibres

HEMP
TENCEL (LYOCELL)
ORGANIC COTTON   LINEN

Source:

A simplified overview of textiles
– this may vary based on specific environmental criteria and regional context:

1 HIGH IMPACT:
Synthetic fibres: Polyester, nylon, acrylic, and other petroleum-based fibres that have higher energy use, greenhouse gas emissions, and microfiber shedding concerns.

Fast-fashion textiles: Low-cost and disposable textiles that encourage overconsumption and waste.

2 MODERATE IMPACT:
Conventional natural fibres: Conventional cotton, wool, and other natural fibres that may have a moderate environmental impact due to water and chemical use.

Semi-synthetic fibres: Rayon (viscose) and modal made from wood pulp, which have a mixed environmental profile.

3 FAIRLY SUSTAINABLE:
Recycled fibres: Textiles made from post-consumer or post-industrial recycled materials, such as recycled polyester, recycled nylon, and recycled cotton.

Closed-loop or circular fibres: Fibres designed for circular economy principles, such as Econyl (regenerated nylon) or Refibra (cotton and Tencel blend).

4 MOST SUSTAINABLE:
Organic and regenerative fibres: Organic cotton, hemp, linen, Tencel (Lyocell), and other fibres derived from renewable resources with low water and pesticide use.

Various factors – production processes, water use, chemicals, labour conditions and end-of-life disposal – contribute to the overall environmental impact of textiles. Different organisations and researchers may use different criteria to evaluate the sustainability of textiles, and there may not be a one-size-fits-all approach.

For up-to-date and comprehensive guidelines on sustainable textiles, it is worth consulting reputable sources in the fashion and sustainability industries or looking for textile certification pro-grammes that focus on environmental and social criteria, such as the Global Organic Textile Standard (GOTS) or the Textile Exchange standards.

Action points

WASTE MANAGEMENT

- **SORT THE WASTE AT SOURCE.** All waste should be sorted. Trash should be sorted at source into relevant categories, and in accordance with what your waste contractor usually removes for recycling. See the table in resources for examples of waste fractions.

- **SEND ORGANIC WASTE FOR RECYCLING/ BIOLOGICAL TREATMENT**, such as biogas production or composting. If the waste contractor cannot offer recycling of biological waste, this must be documented.

- **SORT ALL DANGEROUS WASTE.** This is mandatory for everyone. This includes, for example, hazardous chemicals, electrical items, small electronics, light bulbs and batteries – types of waste that can be generated in large quantities over a year.

- **WEIGH YOUR WASTE** for a reference week each year.

- **LIMIT AND REDUCE** unsorted waste.

- **STATE THE AMOUNT OF ORGANIC WASTE** in kg per year, generated from day-to-day operations. The information can be received from the waste contractor.

- **ORGANIC WASTE** must be seen in connection with the number of guests served. Calculate organic waste per served guest.

- **REDUCE EDIBLE FOOD WASTE** The cultural institution must work actively to reduce its edible food waste

- **BAN DISPOSABLE ITEMS AND PORTION PACKAGING** The use of disposable items should not permitted.

WASTE MANAGEMENT

UNSORTED WASTE

Unsorted waste means all general waste that arises from daily operations and is sent to landfill or for incineration.

– The cultural institution should state the amount of unsorted waste generated from daily operations (in kilograms per year). The data should be provided from the waste management contractor.

– Annual follow-up: The cultural institution should document the amount of unsorted waste (kg/year), and compare with the previous year.

– Cultural institutions that are unable to obtain the amount of unsorted waste from their waste management contractor can draw up an action plan containing targets and associated measures with a constant focus on reducing the amount of unsorted waste from daily operations.

SUGGESTIONS FOR LIMIT VALUES FOR UNSORTED WASTE

This applies to all unsorted waste that arises from daily operations.

Restaurant 0.40 kg per guest served
Catering/takeaway 0.40 kg per catering portion
Cultural institution (without restaurant) 0.10 kg per guest/audience member

If the cultural institution combines several operations, unsorted waste is calculated using the following formula: Limit value for whole cultural institution together = (0.10 kg/guest x no. of guests + 0.40 kg/guest x no. of guests served) + (0.40 kg/catering portion x no. of catering portions) + (0.10 kg/guest x no. of conference guests).

Audience area/conference:
As a bare minimum, guests must be able to sort paper and other general waste. If food is served, the guests must also be able to sort food waste.

– **Restaurant:** If the guests deal with their used plates, cutlery and so on themselves, they must be able to sort both food waste and unsorted waste, as a bare minimum. Clear instructions must be posted concerning waste sorting.

FOOD WASTE

Edible food waste covers all elements of food that are produced for human consumption, but that are either discarded or removed from the food chain for purposes other than human food, from the point when animals and plants are slaughtered or harvested.

Edible food waste may arise in a restaurant due to factors such as incorrect storage, incorrect preparation, overproduction, or waste at serving or on the plate.

By edible food waste, we do not mean food that is unfit for human consumption, i.e. the parts that are inedible, such as bones, shells, peel, cores, etc.

Food waste covers both edible and non-edible food. Non-edible food waste is inedible parts, such as bones, shells, peel, kernels, etc.

EXAMPLES OF CATEGORIES THAT MAY BE RELEVANT IN THE VARIOUS NORDIC COUNTRIES EXCLUDING TERETORIES

SWEDEN	NORWAY	DENMARK	FINLAND	ICELAND
Clear glass	Mixed glass and metal packaging	Mixed glass	Mixed glass	Glass
Coloured glass				
Metal packaging	Metal waste	Metal packaging	Metal packaging	
Organic waste	Food waste (organic waste)	Organic waste	Biowaste/organic waste	Organic waste
Garden waste	Park and garden waste (organic)	Garden	Garden waste	Garden waste
Paper	Paper	Paper	Paper	Paper
Corrugated board and paperboard	Board (corrugated and paperboard)	Cardboard	Board (corrugated and paperboard)	Cardboard
Paper packaging	Paper packaging for food and drink			
Rigid plastics	Rigid plastics	Rigid and soft plastics are combined, but may also be separate fractions	Rigid plastics in mixed waste/ unsorted waste	Plastics
Soft plastics	Plastic foils (soft plastics)	Plastic foils, plastic packaging		
Ceramics	Ceramics	Ceramics, landfill	Ceramics in mixed waste	Ceramics/inert waste
Cooking fat	Cooking oil	Cooking fat/oil	Cooking fat/oil	Cooking oil
Textiles	Textiles	Textiles	Textiles	Textiles

Source: Nordic Swan Ecolabel Criteria 055

RECOMMENDED ROUTINES

– **Responsible person:** The cultural institution must have one person with chief responsibility for following up the requirement 'prevention of edible food waste'.

– **Measurement:** The cultural institution must measure the quantity of edible and non-edible food waste. The quantity should be measured by weight and related to the number of guests served. The measurement is to be carried out in two alternative ways:

  • **1:** Measurement of edible food waste at least twice a year, for a minimum of two weeks each time. Nordic Ecolabelling's electronic 'template for reporting edible food waste' can be used in the work.

  • **2:** Daily measurement of food waste.

Annual follow-up of food waste: The cultural institution should document its edible food waste (total weight) and/or food waste (weight per guest served) and compare it with the preceding year. For alternative 1: The measurement must take place in the same weeks/periods each year.

– **Analysis:** The cultural institution should analyse its food waste data and look out for trends concerning where the edible food waste occurs.

– **Information:** Inform guests about the cultural institution's efforts to prevent edible food waste and encourage them to contribute.

– **Training:** The cultural institution must train its staff with the aim of reducing food waste. The training must include, as a minimum:
  • Training in the difference between edible and inedible food waste
  • Training in measuring and reporting edible food waste
  • Training in analysing/investigating where and when food waste occurs
  • Training in preventive measures and reduction measures
  • Training in communicating with guests about how the cultural institution works on food waste

Examples of preventive measures:

– **'Nudging',** which means encouraging behaviour that leads to less food waste without guests thinking about it (e.g. serving food on smaller plates).

– **Plate waste** can be reduced by serving smaller portions of the main dish, smaller portions of optional side dishes, allowing guests to choose whether or not they want bread with their meal, using smaller plates, offering a doggy-bag, communicating with the guests, etc.

– **Buffet waste** can be cut by reducing the selection on the tables, reducing the size of serving dishes, optimising procedures for refilling, pricing by weight or size, having a good idea of the number of visitors, maintaining food at the correct temperature, etc. Other options include selling surplus food at a reduced price, or through alternative sales channels, or donating the food to a charity.

– **Preparation-related waste** can be reduced through smart menu planning, and good use of ingredients. Being inventive about the reuse of food is also a key factor. In this case, it is crucial to observe food safety rules.8

– **Stock-related waste** can be prevented by implementing good purchasing procedures, and having a solid overview of what goods are already in stock. Optimal storage is also important, to prevent packaging being damaged, and fruit and vegetables from being crushed.

Examples of reducing measures:

– **Use surplus ingredients:** The restaurant can use surplus food and ingredients from manufacturers or grocery stores, either regularly or by appointment.

– **Sale of surplus food:** The restaurant can sell surplus food, from its usual company, at a lower price, or through alternative sales channels.

– **Donation:** The restaurant may have a permanent agreement with an organisation to donate excess food.

DISPOSABLE ITEMS

In this instance, disposable items means:

– Plates, bowls, cups, glasses and cutlery

– Drinking straws, cocktail sticks, toothpicks, chopsticks, and plastic stirrers

– Single portions and small packs (butter, jam, pâté, milk, coffee capsules, etc.)

FOOD AND BEVERAGE

Agriculture, Forestry and other land use is responsible for 22% of global greenhouse gas emissions.
Source: IPCC 6th Assessment Report

Cultural institutions in the Nordic Region have a valuable opportunity to enhance their offerings by embracing sustainable and locally sourced food and beverages for their visitors.

By recognising the potential of these practices, prioritising sustainable food and beverages choices allows cultural institutions to minimise their environmental impact and support local food systems. By sourcing ingredients locally and opting for organic and ethically produced options, you can contribute to a greener and more socially responsible society. Additionally, implementing efficient food management, such as portion control, composting, and food donation programmes, enables you to reduce food waste and demonstrate their commitment to sustainability. By seizing these opportunities, cultural institutions can provide a more enriching experience, where visitors can enjoy delicious and environmentally conscious meals while immersing themselves in the cultural offerings. By becoming advocates for sustainable food practices,

cultural institutions play a pivotal role in inspiring change and setting an example for other sectors. Embracing sustainable and local food and beverages opens doors for these institutions to make a positive impact on both the environment and the community they serve in the Nordic region.

Action points

FOOD AND BEVERAGE

PRIORITISE VEGAN/VEGETARIAN OPTIONS Offer a wide variety of delicious plant-based dishes to encourage guests to choose more sustainable and environmentally friendly alternatives to meat.

INCORPORATE SEASONAL INGREDIENTS Plan menus around locally available, seasonal produce to support regional agriculture and reduce the carbon footprint associated with long-distance transportation.

CHOOSE SUSTAINABLE SEAFOOD Source fish and seafood certified by the Marine Stewardship Council (MSC) guaranteeing they are responsibly caught or farmed. This will minimise the impact on marine ecosystems.

MINIMISE FOOD WASTE Carefully estimate quantities needed and portion sizes to avoid excess food waste. Implement proper storage and handling techniques to maximise freshness and prevent spoiling.

OPT FOR ECO-FRIENDLY WATER Serve water in reusable carafes or pitchers instead of individual bottles to reduce plastic waste and promote sustainable hydration.

SELECT ENVIRONMENTALLY-FRIENDLY PACKAGING Use recyclable or compostable materials for food packaging and take-away containers.

COMMUNICATE SUSTAINABILITY EFFORTS Inform guests about the sustainable choices on your menu, highlighting the use of local and organic ingredients, vegetarian/vegan options, and sustainable seafood. Encourage guests to make conscious food choices and take part in a more sustainable dining experience.

CHOOSE ORGANIC AND FARITRADE produce as far as possible. Choosing a few base products like coffee, milk, tea, sugar can be a good way to getting stared.

FOOD AND BEVERAGE

ORGANIC FOOD; SOME BENEFITS

– Artificial fertilizers are not permitted. Instead, the organic fertilizers provide nourishment to soil organisms such as earthworms, insects, bacteria, and fungi.

– Organic farming does not permit chemical-synthetic pesticides and artificial additives in food.

– Animal welfare is central in organic farming.

– Organic farmers work for a higher self-sufficiency from soil to table and works to innovate and build good soil health.

– With climate change we need farming that is based on resources that are available where people live and that uses them in a way that takes care of soil fertility for the future.

– A poison free agriculture has a higher amount of biodiversity in and above the soil.

LOCALLY PRODUCED FOOD AND DRINK

Examples of easy to find local produce:

– Dairy products (milk, cheese, etc.)
– Eggs
– Grains and baking ingredients
– Fruit and berries
– Vegetables, root vegetables and mushrooms
– Drinks (juice, beer, etc.)
– Poultry (chicken, turkey, etc.)
– Fish and seafood
– Meat (beef, pork, lamb, goat, wild game, etc.)
– Others (honey, oil, herbs, etc.)

VEGETARIAN DISH

The cultural institution must offer one or more vegetarian main courses on the menu, for both lunch and dinner. This also applies to catering and take-away.

SUSTAINABLE FISH

– WWF red list catch must not be served.
– MSC-labelled fish and shellfish may always be served.

TABLE SERVING OF WATER

Serving of bottled water is prohibited where the cultural institution has conference service, table service or a buffet for food and drink.

In this instance, bottled water means still water bottled off-site. The requirement does not apply to carbonated water.

By implementing these action points, cultural institutions can create menus that align with sustainable principles, minimise environmental impact and inspire guests to make mindful and sustainable food choices.

SVANEMERKET

THE NORDIC SWAN ECOLABELLING DEFINES LOCAL FOOD IN THE NORDICS IN THIS WAY

In order for food and drink to count as locally produced, all production, rearing, hunting, harvesting, picking, processing and storage must take place within 250 km of the cultural institution. For companies north of 62°N, the limit is 500 km, except for Icelandic companies, which can count all national production as locally produced.

For fish, the distance that counts is from the fishing port.

There must be full traceability along the supply chain from the restaurant back to the producer/place of production. If the product is processed/semi-processed, documenting the main ingredient is sufficient.

TRAVEL AND TRANSPORT

Transport is responsible for producing 15% of global greenhouse gas emissions
Source: IPCC 6th Assessment Report

In the Nordic region, sustainability has emerged as a critical consideration in travel and transport connected to cultural institutions. Recognising the significant environmental impact associated with transportation, cultural institutions have embarked on a transformative journey towards adopting sustainable practices and minimising their carbon footprint. They are implementing sustainable transport policies that prioritise low carbon travel options and avoid unnecessary journeys. Data is collected on different types of transport and distances travelled, enabling informed decision-making and future planning. These far-reaching efforts involve staff, crew, performers, suppliers, and visitors. Alternatives to travel can include phone or video calls, web conferencing and webinars. Additionally, they advocate for the use of public transport, walking, cycling, and carpooling, reducing emissions and promoting sustainable commuting options.

By sourcing materials locally, bulk ordering and adopting sustainable delivery methods, cultural institutions further minimise the environmental impact of transport. Visitors travel arrangements are also a key focus, with the institution providing comprehensive information on eco-friendly travel options, encouraging the use of public transport, and incentivising low carbon travel choices. By facilitating safe routes, offering bicycle parking facilities, and coordinating with local authorities, these institutions foster sustainable travel experiences for visitors.

Action points

TRAVEL AND TRANSPORT

DEVELOP A COMPREHENSIVE SUSTAINABLE TRANSPORT POLICY that prioritises low carbon travel options and minimises unnecessary journeys for cultural institutions.

CONDUCT REGULAR TRAVEL SURVEYS to gather data on transportation modes and distances travelled, using the information to inform future decision-making.

SURVEY STAFF, CREW, PERFORMERS, SUPPLIERS, AND VISITORS to establish targets for each group. For instance, reduce visitor car usage by providing public transport alternatives; decrease performer air travel by hiring local acts; and minimise supplier distance travelled by sourcing from local suppliers or ordering in bulk.

SET UP EV CHARGING STATIONS The cultural institution should offer its guests charging stations for electric vehicles.

REDUCED TRANSPORT The cultural institution should aim to reduce the amount of transport by 25% over a 12 month period.

IMPLEMENT ENVIRONMENTALLY ADAPTED DRIVING 100% of the drivers of one of the cultural institution's three largest suppliers should have routines that ensure training and follow-up of environmentally adapted/economical driving.

USE SUSTAINABLE FUEL 100% of the vehicles of one of the cultural instituiton's three largest suppliers should run on electricity, Nordic Swan Ecolabelled fuel or hydrogen.

TRANSPORT

STAFF, CREW, PERFORMER AND SUPPLIER TRANSPORT

– Promote alternatives to travel whenever possible, such as utilising phone or video calls, web conferencing and webinars. Combine face-to-face meetings with other business requirements to reduce overall travel for cultural institution personnel.

– Encourage staff and crew to walk, cycle, or use public transport, selecting meeting venue locations which will minimise travel distances.

– Encourage carpooling with three or more people per vehicle and emphasise efficient route planning when a car journey is unavoidable for cultural institution activities.

– Prioritise the use of electric or hybrid vehicles for staff and crew transportation wherever possible.

– Encourage suppliers to employ sustainable and low carbon delivery methods, such as bicycle couriers, electric vans or combined deliveries.

– Consider air travel or air freight as an absolute last resort. Explore all other options before considering this mode of transport.

PRODUCTION TRANSPORT PLANNING

– Store set design materials, costumes and hired/owned vehicles near the cultural institution's premises to reduce transportation emissions.

– Opt for purchasing and renting materials/set design from local suppliers to minimise transport emissions.

– Order items in bulk and arrange for collective collection or delivery to reduce unnecessary transportation.

– Establish internal "markets" for essential items, such as set design, costumes, hardware and eco-friendly products, to reduce or eliminate the need for extra travel for purchases.

AUDIENCE TRAVEL ARRANGEMENTS

– Provide timely and repeated communication about transport options, routes and incentives well in advance of the cultural institution's productions and events to facilitate proper planning.

– Utilise the cultural institution's website, public advertisements, and social media platforms to encourage visitors to choose eco-friendly transport options and leave their cars at home.

– Offer incentives for low carbon transport, such as discounted tickets, or extra refreshments when arriving.

– Encourage visitors to walk or cycle by coordinating groups, mapping safe routes, and working in collaboration with local authorities.

– Offer secure bike parking facilities and on-site bike repair services.

– Include a free or reduced-price local public transport option in the event ticket price, coordinating with public transport providers.

– Arrange shuttle services from nearby bus and train stations and major transport hubs, or establish park and ride facilities for cultural institution attendees.

– Implement parking fees and invest the proceeds in sustainability initiatives – or reduce/eliminate parking altogether.

– Organise hybrid events to allow people to experience elements of the institution's offerings without the need for extensive travel.

DIGITAL CARBON FOOTPRINT

Technological innovation and digitisation are essential for sustainable societal and cultural development.

However, this progress brings with it significant climate and environmental challenges, mainly in relation to energy consumption. Files and software that require a lot of storage space increase the demand for data centre services. Data centres, whether local or global, can use renewable and non-renewable energy and often have a direct impact on biodiversity and land use. Globally, data centres account for more than two per cent of the world's electricity consumption, contributing to around two to three per cent of global greenhouse gas emissions. This is due to energy consumption by electronic equipment and specially built cooling systems. Additionally, increasing amounts of discarded electronic goods further compound the environmental impact.

Cultural institutions can play many important roles, not only by reducing their own digital carbon footprint, but also by creating awareness about responsible digital behaviour among their audiences.

Action points

DIGITAL CARBON FOOTPRINT

- **OPTIMISE** data storage and cloud services.

- **STREAMLINE** digital media consumption.

- **BE EFFICIENT** in your email and digital communications.

- **ENSURE** that you have sustainable web browsing habits.

- **REVISE** your devices' life cycle management. Repair, not replace.

- **REVIEW** your procurement of data centre services.

- **SWITCH** to cloud storage. This will ensure much lower energy consumption than physical servers.

- **MINIMISE** data in the cloud. Don't produce, process or store unnecessary data. This lowers energy consumption and reduces demand for new hardware and buildings.

- **OPT FOR** data centres that run on renewable energy.

- **CHOOSE** energy efficient data centres with high Power Usage Efficiency (PUE).

- **CONSIDER** data centres that are located in cooler regions.

If your cultural institution is not responsible for choosing data centres, try to influence the authorities that make those decisions. Team up with other cultural institutions to make your wishes heard.

DIGITAL CARBON FOOTPRINT

**OPTIMISE DATA STORAGE
AND CLOUD SERVICES**

– Set goals and measures to reduce energy consumption from digital services.

– Review and organise your files and apps regularly.

– Do not store data that you know will never be used again.

– Reduce the file size of your documents, images, videos and other multimedia assets.

– Think twice before downloading or uploading files or new apps.

**STREAMLINING
DIGITAL MEDIA CONSUMPTION**

– Minimise the streaming of high-definition video to reduce energy consumption.

– Increase digital awareness by removing unnecessary photos and films.

**EFFICIENT EMAIL
AND DIGITAL COMMUNICATION**

– Always use links to online files where possible, rather than attaching documents to emails. Cloud-based and other solutions like this help reduce the size of emails.

– Regularly clean out inboxes and delete old or unnecessary emails.

– Send a 'Reply all' email only if necessary.

– Unsubscribe from unwanted or no longer needed newsletters.

**SUSTAINABLE WEB
BROWSING HABITS**

– Choose websites optimised for energy efficiency to reduce energy usage while browsing.

– Limit unnecessary online activities to decrease energy consumption associated with data processing and transmission.

– Reduce screen brightness and use dark mode (or grey mode on mobiles). This not only saves energy, but also reduces eye fatigue and dryness.

– Close apps and tabs and disable location services when you are not using them.

– Reduce notifications and animated screensavers. This saves energy.

See the chapter on Travel and Transport and create guidelines for your institution, to make it easier to choose between digital solutions and travelling.

Responsible digital behaviour involves strict organisation. Good structures for storing and sharing knowledge are vital for reducing your carbon footprint, as well as being generally valuable to all cultural institutions

Many museums are beginning to use virtual-couriering instead of having people travel with the artwork. By including your museum in that practice you are part of a positive development.
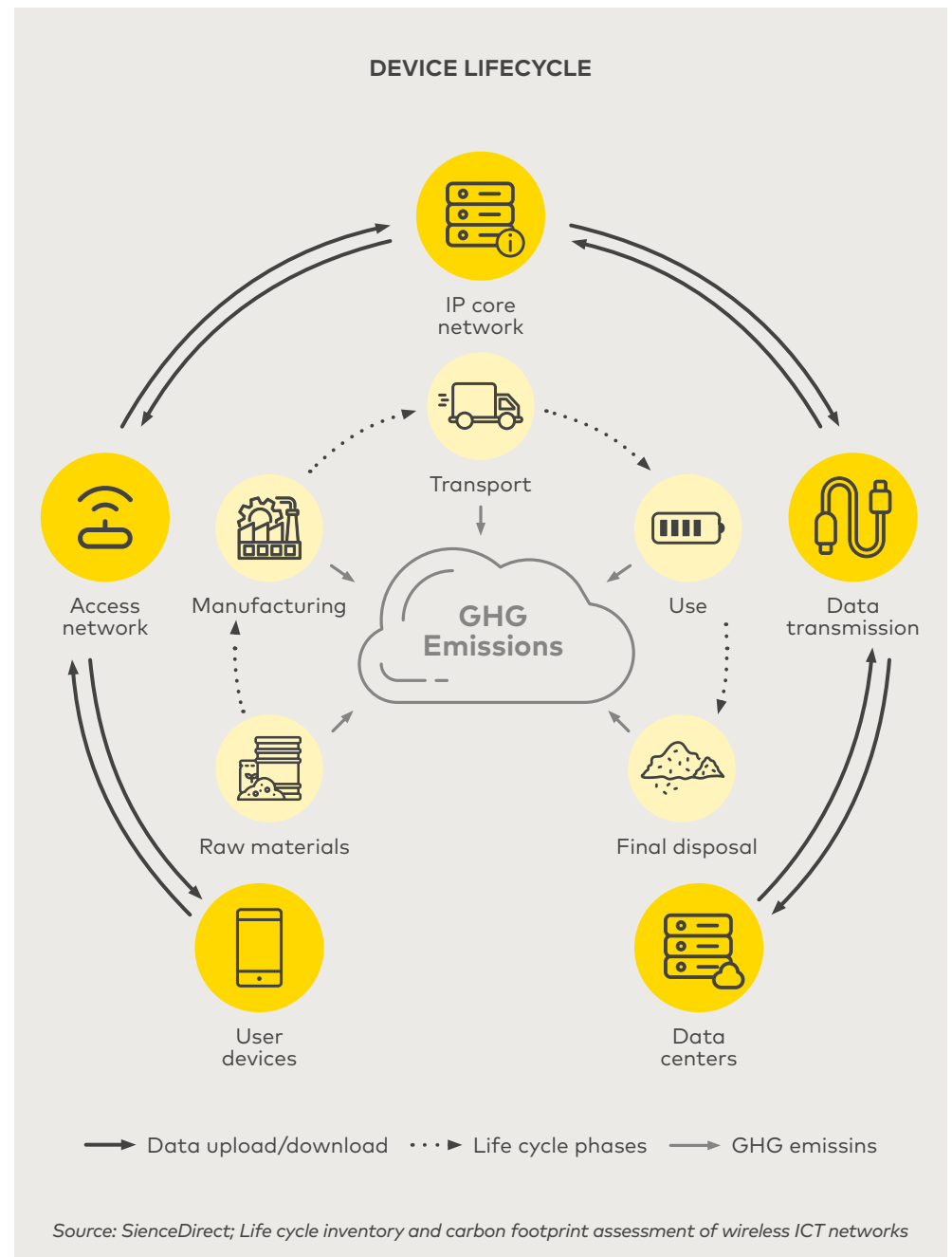
– Never leave devices plugged in when fully charged. Instead, charge for short and regular intervals – this also prolongs the battery life.

– Do not use wireless chargers – they consume 50 per cent more energy!

– Unplug chargers when not in use.

– Shut down devices when not in use, especially overnight (this also includes Wi-Fi and Bluetooth).

– Avoid using large screens or two screens unless you have a task that justifies it.

– Dispose of old electronics responsibly by recycling or upcycling them.

DEVICE LIFECYCLE MANAGEMENT

– Buy devices that are energy-efficient, repairable or refurbished.

– Extend the lifespan of devices by prioritising repairs instead of replacing them every two to three years.

– Keep battery levels of devices between 20 and 80 per cent, as this ensures a longer battery life.

PROCUREMENT OF DATA CENTRE SERVICES

– Choose data centres that prioritise energy efficiency, renewable energy sources, and reuse of surplus heat.

– Consider the environmental impact of the data centre location and energy sources when procuring services.

– Check www.cloudcarbonfootprint.org

DEVICE LIFECYCLE

Legend: Data upload/download · · ·► Life cycle phases → GHG emissins

Source: SienceDirect; Life cycle inventory and carbon footprint assessment of wireless ICT networks

OPTIMISING YOUR WEB PAGE

Creating a web page with lower emissions involves optimising various aspects. This can reduce the energy consumption associated with hosting, transmitting and rendering the web-page. Here are the key considerations:

– Focus on the entire digitisation process: from design, coding, and programming to operation and end-use.

– Use compressed images and video formats that maintain quality but reduce file size, such as WebP for images and H.265 for videos. Consider 'lazy loading' (loading only essential files and media).

– Write clean, efficient code to minimise the size of your HTML, CSS, and JavaScript files. Minify and concatenate files where possible to reduce the number of server requests.

– Use a Content Delivery Network (CDN) to distribute your content across multiple, geographically diverse servers, reducing the distance data must travel, which can cut energy use.

– Choose a web hosting provider that uses renewable energy sources or purchases carbon offsets to minimise the carbon footprint of their data centres.

– Set up caching strategies so that returning visitors can load your website faster without needing to re-download everything. This reduces energy consumption over time.

– Design your website with sustainability in mind. This might mean simplifying the website design, reducing the use of heavy animations or auto-play videos, and ensuring that your site is quick and efficient to navigate.

– Since mobile devices often have less processing power than desktop computers, optimising for mobile can reduce energy consumption. Ensure your site is responsive and tests well against mobile performance bench-marks.

– Use tools like Google's PageSpeed Insights, Lighthouse, WebPageTest, Ecograder.com or Sustainableweb-design.org to monitor your website's performance and identify areas for improvement.

– Choose third-party services wisely, as some may be more optimised than others. Look for those that have a proven record of efficiency or are designed with sustainability in mind.

Communicate your efforts to reduce your digital carbon footprint and explain why videos and photos are only available for a limited period. The added value of increased digital awareness among your audiences is priceless.

CARBON CALCULATIONS

IDENTIFYING AND REDUCING GREENHOUSE GAS EMISSIONS
In order to reach the goal of 55% reduction of climate emissions by 2030 and reach net zero by 2050, cultural institutions must cut their own emissions as much as possible. The first step is to understand where these emissions come from and how to calculate them. A Carbon Footprint is an effective method of measuring and monitoring an institution's contribution to climate change. It provides a valuable basis for designing and implementing strategies and action plans for the 2030 and 2050 goals, and a tool for monitoring progress towards these goals. These goals should be mainly achieved by reducing own emissions. However, even with best efforts, some emissions are likely to remain. Carbon credits are a means to address these remaining emissions (see the chapter about Carbon Credits for more information).

CALCULATING CARBON FOOTPRINTS
Greenhouse Gases (GHG) include carbon dioxide (CO_2) as well as methane (CH_4), sulphur dioxide (SO_2), nitrous oxide (NO_x) and fluorinated gases (F-Gases), all of which strengthen the greenhouse effect and contribute to climate change. GHGs have increased significantly as a result of human activities, and are emitted through the burning of fossil fuels for energy or transport, the use of chemicals in industry, or through animal emissions in agriculture.

Because GHGs are generated as a result of human activity and the production and consumption of materials, they can be used as measures of the climate impact of these activities or products. This is called a Carbon Footprint, with GHGs measured in outputs of 'carbon dioxide equivalent' (CO_2eq). CO_2 is used to represent all GHGs as it is the dominant one, so other gases are expressed as its equivalent.

To enable consistent reporting and calculations of these emissions, the GHG Protocol has become the most commonly used international accounting tool for authorities and businesses when seeking to quantify, understand and deal with greenhouse gas emissions. The 'Corporate Accounting and Reporting Standard' of the GHG Protocol serves as a climate accounting platform for practically all GHG reporting programmes in the world.

The GHG Protocol system divides sources of GHGs into three main emissions categories according to where the emissions occur, identified as Scope 1, Scope 2 and Scope 3 (see table below).

Scope 1 includes all direct greenhouse gas emissions by an entity, e.g. emissions from owned or rented vehicles, emissions from generators and gas used for cooking.

Scope 2 covers indirect greenhouse gas emissions from the use of purchased energy such as mains power, district heating or cooling.

Scope 3 includes other indirect sources such as all production and consumption of goods and services, e.g. stage rigging and fuel from transport-related activities not owned by the reporting entity such as goods transport and performer and audience travel. Scope 3 also addresses waste disposal, etc.

When applying the GHG Protocol to calculate emissions from a cultural institution, we first need to determine the activities within each of the three scopes, calculate the CO_2 equivalents for each activity, then add up the three scopes separately and finally add those together to arrive at the total CO_2eq emissions for the entire project.

Action points

CARBON CALCULATIONS

- **CALCULATE THE CO2 EMISSIONS** from the cultural institutions using a method based on the GHG Protocol, for example the Hotel Carbon Measurement Initiative (HCMI). Tools like Green Producers Tool, Julie's Bicycle Calculator or other calculation schemes can also be used.

- **DECIDE ON SOURCES.** The cultural institution decides for itself which emission sources to include in the calculation. The same emission sources are to be included each year in order to see how the emissions develop.

- **CREATE HONEST COMMUNICATION** if the cultural institution intends to communicate its CO2 calculations, it must be made clear which emission sources and CO2 factors have been used in the calculation.

CARBON EMISSIONS: Server centres used for webpages, email service, archives for documents, photos, videos, and more are high energy consumers with vast carbon footprints. These contribute to an often overlooked environmental footprint. The service providers should be chosen carefully.

Table 1: Analysing and classifying emission sources.(according to group and scope):

	TRANSPORT	ENERGY	CONSUMPTION OF GOODS AND SER-VICES	WASTE
SCOPE 1 direct emissions	Emissions from vehicles owned by the organisation and used for the event, and rented or leased vehicles for the pro-duction, including cars, mini-buses, machinery etc.	Emissions from fuel generators (diesel, alternative fuels, oil furnace, etc). Gas for cooking		
SCOPE 2	Electric vehicles	Mains power		
SCOPE 3	Emissions from audience transportation, performer air travel/transport, the trans-portation of goods and services of the suppliers, other relevant transport		Emissions from purchased and hired materials, technology, installations, food, accommodation, etc.	Emissions from waste disposal; waste sorting fractions, and transport. Also includes bottle deposits and sewage

To quantify the impact of an activity, conversion factors are available to convert activity data (such as fuel use, vehicle use, etc) into the equivalent GHG emissions: these are called carbon emission conversion factors:

> **Emissions (CO2eq) = activity data x emission factor**
> *For example: A gas stove used for cooking uses 20,000 kWh of gas during a year.*
> *– this is the Activity Data for the gas used for cooking.*
> *So the gas stove CO2eq = 20,000 x 0.244*
> *Therefore the gas stove emits approximately 4880 kg of CO2eq*

When applying the GHG Protocol to calculate emissions from a cultural institution, one first needs to identify the relevant activities within each of the three scopes and collect activity data, calculate the CO2 equivalents for each activity, then add up the total of each scopes to arrive at the total CO2eq emissions generated by the event.

CARBON CALCULATIONS

THE JOURNEY TOWARDS NET ZERO
Measuring the carbon footprint in your cultural institution annually allows you to track the environmental impact and make informed decisions about where to focus reduction efforts. By under-standing which activities contribute most to emissions—such as energy use, travel, or procurement— you can prioritise changes that will deliver the greatest results. For example, promoting sustainable transport options for visitors, switching to renewable energy sources, and sourcing local, low-carbon suppliers are practical ways to start reducing emissions.

By measuring emissions year-on-year, institutions can see how their actions translate into measurable progress. Emission sources can vary greatly, so it's important to continuously refine the calculations to capture changes in operations, visitor behaviour, or supply chains.

Reducing emissions will take time, and for many cultural institutions, the complete elimination of all emissions may not be possible, especially not in the short term, so it is important to set realistic targets that also align with the broader sustainability goals.

On the journey to net zero, cultural institutions are encouraged to take responsibility for their remaining emissions by supporting additional emission reductions and removals outside their boundaries.

Carbon credits are a popular way to provide such support. Certain carbon credits can also be used in the net-zero target year and beyond. All carbon credits should meet common integrity criteria, but different types of carbon credits are suitable for different uses. A deeper exploration of carbon credits and their application is covered in the Carbon Credits chapter.

NET ZERO AND CARBON NEUTRALITY At the global level, net zero and carbon neutrality are synonyms and refer to achieving a balance between global emissions and removals. The Paris Agreement aims to limit global warming to 1.5°C by reaching this balance by 2050.

At the level of organisations, however, carbon neutrality and net zero do not mean the same thing. Carbon neutrality has focused on offsetting current emissions with carbon credits, without requirement for reducing own emissions and without limitations on the types of carbon credits used. By contrast, net zero focuses on aligning the reductions in the organisation's own emissions with science and allows carbon credits to be used only after own emissions have been reduced in line with science, only to cover residual emissions in the net zero target year, and only with carbon credits based on permanent removals.

Carbon neutrality and net zero address different but complementary parts of the decarbonisation journey: carbon neutrality focuses on offsetting current emissions with carbon credits here and now, while net zero focuses on reducing the organisation's own emissions in line with science, with the role of carbon credits limited to "neutralising" residual emissions in and after the net zero target year.

CARBON CREDITS

Cultural institutions have many important roles to play in addressing climate change. One is building knowledge about and trust in the carbon market.

Cultural institutions can contribute to climate action by reducing their greenhouse gas emissions and supporting external climate initiatives. Institutions may buy carbon credits from carbon crediting programs to support projects that reduce emissions or remove carbon from the atmosphere. Voluntary credits are commonly used by organisations seeking to offset their emissions, while mandatory emission allowances are required in specific sectors under government-imposed schemes such as the EU Emissions Trading System (ETS), covering industries like energy, heavy industry, and aviation. These legal frameworks, however, currently do not apply to the cultural sector, though future changes are possible.

Representing a cultural institution, you should first calculate and reduce your carbon footprint, following guidance such as the Science-Based Targets initiative (SBTi). Carbon credits should complement, not replace, direct emission reductions. The voluntary use of carbon credits offers a way for institutions to support global climate efforts beyond what can be achieved through internal actions alone.

Ensuring that carbon credits genuinely contribute to climate mitigation is critical. To ensure integrity, carbon credits must contribute to emission reductions that wouldn't have happened otherwise (additional), have long-lasting impacts (permanent), and be backed by reliable data (verifiable).

Action points

CARBON CREDITS

When it comes to good practices in using carbon credits, it's important to follow a structured process rather than selecting individual actions. We suggest the following steps:

1 **CONDUCT A COMPREHENSIVE ASSESSMENT** of your organization's carbon footprint, encompassing Scope 1 (direct emissions), Scope 2 (indirect emissions from purchased energy), and Scope 3 (all other indirect emissions). This will help you understand the full extent of your impact. *(See the chapter on Carbon Calculation.)

2 **SET TARGETS TO REDUCE** your emissions as much as possible. Align your emission reduction goals with science, following international guidance such as the SBTi. These help to set targets consistently with the global goal to limit temperature rise to 1.5°C above pre-industrial levels.

3 **IMPLEMENT EMISSION REDUCTION MEASURES** within your organisation by enhancing energy efficiency, adopting renewable energy sources, promoting sustainable travel policies, reducing meat consumption in catering services, and incorporating sustainable practices into operations and supply chains.

4 **ENGAGE IN INNOVATION WITH SUPPLIERS AND PARTNERS** to reduce carbon emissions within your value chain, also known as "insetting".

5 **IDENTIFY RESIDUAL EMISSIONS** that cannot be eliminated after maximizing internal reductions.

6 **DETERMINE YOUR CARBON CREDIT INVESTMENT** by deciding how many additional emissions you wish to offset and establishing a budget for purchasing carbon credits, keeping in mind that prices vary based on the project and its certification.

7 **SELECT HIGH-QUALITY CARBON CREDITS** from reputable carbon crediting programs certified by standards such as the Gold Standard, Verra's Verified Carbon Standard (VCS), or the Climate Action Reserve. Ensure the credits meet integrity criteria by utilizing initiatives like the Integrity Council for the Voluntary Carbon Market (ICVCM) and the Carbon Credit Quality Initiative (CCQI).

8 **CONDUCT DUE DILIGENCE ON PROJECTS** to ensure that the emissions reductions are additional, permanent, and not double-counted. Evaluate co-benefits such as social and environmental impacts beyond carbon reduction and consider prioritizing local and regional projects.

9 **COMMIT TO TRANSPARENCY AND REPORTING** by disclosing your carbon offsetting activities in annual sustainability reports or other communication channels. Include details such as the volume of carbon credits purchased, year of generation, project location, activity type, methodologies used, and whether the credits have host country authorisation under Article 6 of the Paris Agreement. Share your process, including successes and challenges, to build trust and encourage industry best practices.

Publicly funded cultural institutions are often restricted from using public funds to purchase carbon credits. To meet their climate goals, some institutions have used their ticket revenue or other non-public income sources.

10 **REGULARLY REVIEW AND ADJUST YOUR STRATEGY** by evaluating your carbon offsetting approach at least once a year. Consider whether to change suppliers or support different projects based on their performance and emerging best practices.

11 **STAY INFORMED ABOUT REGULATORY CHANGES** by keeping up to date with developments in the carbon market, as voluntary actions today may become mandatory in the future.

CARBON CREDITS

The topic of carbon credits is complex, with many technical terms and concepts. This background section provides an overview of key terms and actors relevant to cultural institutions considering the purchase of carbon credits from carbon crediting programmes. We explain essential concepts, list important players, describe types of CO_2 removal projects, and offer guidance on choosing high-integrity carbon credit projects. At the end of the chapter, you'll find a table with more details on significant carbon crediting programmes, as well as suggestions for further reading.

THE ROLE OF CARBON CREDITS ON THE JOURNEY TO NET ZERO

For many cultural institutions, the journey towards net zero emissions will include the voluntary use of carbon credits. While the other chapters of this roadmap focus on how you can reduce your own emissions as much as possi-ble, this chapter describes how you can use carbon credits to take responsibility for your remaining emissions on your path to net zero. To use carbon credits responsibly, you need to understand key concepts and good practices.

NET ZERO FOCUSES ON EMISSION REDUCTIONS

Net zero targets emphasise significantly reducing an organisation's own emissions. The use of carbon credits in net zero strategies is limited, typically applied in the final target year (often 2050) to cover a small amount of residual emissions that cannot be eliminated.

VOLUNTARY USE OF CARBON CREDITS ALONG THE WAY

While purchasing carbon credits during the journey to net zero is not required to achieve net zero status, it is an extra step that institutions are encouraged to take. This voluntary action contributes further to global climate efforts, going beyond what is possible within your own value chain.

BUILDING TRUST THROUGH KNOWLEDGE

After implementing measures to reduce your emissions, the next decisive step towards net zero is the voluntary use of carbon credits. Building trust in the importance of this step requires background knowledge, which we have categorised as follows:

1. Carbon credits and emission allowances

2. Key climate targets and terms

3. Tools and initiatives

4. Carbon crediting programmes

5. Building trust

6. Overview of integrity initiatives

7. Types of CO_2 reduction and removal projects

1 CARBON CREDITS AND EMISSION ALLOWANCES

Carbon credits
Definition: Carbon credits represent the reduction or removal of one tonne of carbon dioxide (or its equivalent in other greenhouse gases) from the atmosphere. These credits can be bought and sold on voluntary or compliance markets, allowing entities to off-set their emissions by investing in environmental projects elsewhere.

Issuance: Carbon credits are issued by carbon crediting programmes (also known as baseline-and-credit schemes) for emission reductions or removals that meet the programme's criteria.

Trading: Carbon credits are bought and sold in carbon markets, either directly from the project owner or through intermediaries and exchanges.

Emission allowances and Emissions Trading Schemes (ETS)
Definition: Emission allowances, often referred to as carbon allowances, are permits that allow a country, sector, or company to emit a specific amount of greenhouse gases under an Emissions Trading Scheme (ETS), such as the European Union Emissions Trading System (EU ETS). These apply to mandatory sectors, not cultural institutions. These entities must keep their emissions within their allocated allowances or purchase additional allowances from others with surplus.

Emissions Trading Schemes (ETS): Public systems for trading emission allowances, setting a cap on total emissions and allowing trading to meet emission targets.

Note: Emission allowances are currently not relevant for cultural institutions in the Nordic region, which is why this roadmap focuses on carbon credits.

2 KEY CLIMATE TARGETS AND TERMS

Climate neutral
Definition: Achieving a balance between emitting carbon dioxide into the atmosphere and absorbing it, typically through carbon offsetting measures, resulting in a net-zero impact on the climate.

Approach: Climate neutrality can sometimes imply a more immediate offsetting approach, focusing on compensating for emissions through carbon credits.

Net zero
Definition: A state where an organisation's greenhouse gas emissions are balanced by removing an equivalent amount from the atmosphere, aiming for a zero balance by a specific target date.

Approach: Net zero emphasises substantial emissions reductions and longer-term strategies to balance any remaining emissions with removals. The use of carbon credits is limited, primarily for residual emissions that cannot be eliminated.

Zero emissions
Definition: Refers to processes, activities, or systems that release no pollutants or greenhouse gases into the environment.

Approach: Aims for a net impact of zero harmful emissions by preventing emissions at the source, without relying on offsetting measures.

3 TOOLS AND INITIATIVES SUPPORTING EMISSION REDUCTIONS

The Science Based Targets initiative (SBTi)
An example of a tool that can help cultural institutions get started with setting emission reduction targets is the Science Based Targets initiative (SBTi). This is a collaboration between the CDP (formerly the Carbon Disclosure Project), the United Nations Global Compact, the World Resources Institute (WRI), and the World Wide Fund for Nature (WWF). It aims to drive ambitious climate action in the private sector by encouraging organisations to set greenhouse gas (GHG) reduction targets in line with the latest climate science.

Framework for emission reduction:
SBTi provides a framework for organisations to contribute to global efforts to mitigate climate change by reducing their greenhouse gas emissions in line with what the latest science deems necessary to meet the goals of the Paris Agreement.

– SBTi requires organisations to set decarbonisation targets consistent with keeping global temperature increase well below 2 degrees Celsius above pre-industrial levels, with a preferred goal of limiting the increase to 1.5 degrees Celsius.

– Organisations are encouraged to set targets for all relevant scopes of their GHG emissions:
  – Scope 1: Direct emissions from owned or controlled sources.
  – Scope 2: Indirect emissions from the generation of purchased energy.
  – Scope 3: All other indirect emissions that occur in an organisation's value chain (which is often the majority of an organisation's carbon footprint).

– Organisations follow a structured process to propose targets, which are then validated by the SBTi to ensure they are science-based. This process helps ensure transparency, credibility, and consistency across different sectors and geographies.

– Participating organisations are expected to publicly report their GHG emissions and progress against their targets on an annual basis. This ongoing commitment to transparency helps stakeholders, including investors and customers, monitor progress.

– The SBTi also guides organisations in setting net-zero targets, defining a long-term goal to neutralise or significantly reduce greenhouse gas emissions by a specified year, typically 2050. This includes interim targets consistent with the pace of reductions required to meet the Paris Agreement goals.

4 CARBON CREDITING PROGRAMMES

Carbon crediting programmes are organisations that certify, and issue carbon credits based on verified emission reductions or removals. They set the standards and methodologies for calculating, verifying, and issuing carbon credits.

Carbon credits support a variety of projects that reduce or remove greenhouse gas emissions. See list below at the end of this section.

Explaining some core initiatives:

STANDARD/DESCRIPTION	CREDIT ISSUED	VERIFICATION PROCESS
Verified Carbon Standard (VCS) managed by Verra: A global standard that certifies carbon emissions reductions and removals in the voluntary carbon market, ensuring the environmental integrity and credibility of the carbon credits.	**Verified Carbon Unit (VCU):** A unit issued by the Verified Carbon Standard (VCS) representing the reduction or removal of one tonne of CO_2eq.	Third-party entities accredited by Verra conduct the verification of projects and their carbon credits.
Gold Standard: Founded by WWF and other international NGOs, certifies projects that reduce carbon emissions and deliver benefits to the local communities and biodiversity, ensuring both climate and sustainable development outcomes.	**Gold Standard Verified Emission Reduction (GS-VER):** A carbon offset representing a reduction or removal of one tonne of CO_2eq. VER can be based on various standards, not limited to a single system.	Verification under the Gold Standard is carried out by independent third-party auditors that are specifically accredited by the Gold Standard Foundation.
Plan Vivo: A standard for community-based payments for ecosystem services projects, focusing on rural smallholder and community land-use projects that deliver climate change mitigation, improved livelihoods, and ecosystem services benefits.	**Plan Vivo Certificates:** Each certificate represents the reduction or sequestration of one tonne of CO_2, achieved through community-based land use projects that also support livelihood improvements and biodiversity.	Third-party validators and verifiers accredited by the Plan Vivo Foundation are responsible for assessing projects to ensure that projects meet the Plan Vivo Standard's requirements.
Clean Development Mechanism (CDM): Defined under the Kyoto Protocol. Historically allowed emission-reduction projects in developing countries to earn Certified Emission Reduction (CER) credits, each equivalent to one tonne of CO_2, which could be traded and used by industrialised countries to meet emission reduction targets under the Kyoto Protocol. This is the standard associated with the United Nations.	**Certified Emission Reduction (CER):** A type of carbon credit issued by the Clean Development Mechanism (CDM) under the Kyoto Protocol, representing a reduction of one tonne of CO_2 or its equivalent in other greenhouse gases achieved by a project in a developing country. **Note:** The CDM is being phased out and replaced by new mechanisms under the Paris Agreement, the SDM, which provides a level playing field, emphasising high integrity, transparency, and the avoidance of double counting	The verification process for CDM projects is conducted by Designated Operational Entities (DOEs) that are accredited by the Executive Board of the CDM. These DOEs are independent auditors authorised to validate project proposals and verify that implemented projects achieve the expected emission reductions.
Puro.earth Carbon Removal Standard: Focuses on certifying the carbon removal impact of various technologies and methods, facilitating the sale of carbon removal certificates in the voluntary market to support the scaling of carbon removal solutions.	**Carbon Removal Certificate (CORC):** A CORC represents one tonne of CO_2 removed from the atmosphere and stored for a minimum of 50 years.	Verification under the Puro Standard is carried out by third-party auditors accredited by Puro.earth. These auditors assess projects according to the Puro Standard's criteria for measurable, verifiable, and long-term carbon removal.

5 BUILDING TRUST AND ENSURING INTEGRITY

To use carbon credits responsibly, it's essential to choose high-integrity projects and understand key concepts such as additionality, permanence, and avoidance of double counting.

- **Additionality:** Ensuring that the emission reductions would not have occurred without the project.

- **Permanence:** Confirming that the emission reductions are lasting and not reversible.

- **Avoidance of double counting:** Making sure that the same emission reduction is not claimed by multiple parties.

6 INTEGRITY INITIATIVES

The Integrity Council for the Voluntary Carbon Market (ICVCM) is an independent governance body that aims to ensure the integrity of the voluntary carbon market. It sets and enforces definitive global threshold standards for high-quality carbon credits and provides guidance on additional attributes such as removals and sustainable development co-benefits.

- **Ensuring integrity:** ICVCM assesses carbon crediting programmes and activity types to ensure they meet high-integrity criteria.

- **Guidance on additional attributes:** Supports the identification of credits with additional benefits, such as carbon removals, contributions to sustainable development goals, and credits authorised under Article 6.2 of the Paris Agreement.

Note on Article 6.2 of the Paris Agreement:
- **Authorised Credits:** Under Article 6.2, countries can cooperate to achieve their nationally determined contributions (NDCs), and emission reductions can be transferred between countries. Choosing credits with host country authorisation ensures alignment with national climate strategies and avoids double counting.

Guidelines for choosing high-integrity carbon credits

- **Select reputable programmes:** Choose carbon credits from programmes that adhere to rigorous standards and verification processes.

- **Use integrity initiatives:** Refer to organisations like the ICVCM and the Carbon Credit Quality Initiative (CCQI) for guidance on high-quality credits.

- **Conduct due diligence:** While programmes provide assurance, it's advisable to perform your own evaluation or work with trusted partners to select specific projects that meet your standards.

- **Consider co-benefits:** Support projects that offer additional social and environmental benefits, such as community development or biodiversity conservation.

- **Prioritise local projects:** Investing in local or regional projects can enhance traceability and support local economies.

7 TYPES OF CO₂ REDUCTION AND REMOVAL PROJECTS

Carbon credits support a variety of projects that reduce or remove greenhouse gas emissions. Understanding these can help you choose the projects that align best with your institution's values and objectives. Below is an overview of the main types of CO_2 removal and reduction projects:

1. NATURE-BASED SOLUTIONS
Afforestation and reforestation
– **Description:** Planting new forests on lands that have not been forested for a long time (afforestation) or replanting trees in deforested areas (reforestation).

– **Benefits:** Trees absorb CO_2 from the atmosphere through photosynthesis, acting as carbon sinks. These projects can also enhance biodiversity and support local ecosystems.

Forest conservation and sustainable forest management
– **Description:** Protecting existing forests from deforestation and degradation and managing forests sustainably through practices like selective logging.

– **Benefits:** Prevents the release of stored carbon, maintains biodiversity, and supports the livelihoods of local communities.

Restoring ecosystems
– **Description:** Activities such as wetland restoration, peatland conservation, and soil regeneration.

– **Benefits:** Enhances carbon sequestration, improves resilience to climate impacts, and restores natural habitats.

Soil carbon sequestration
– **Description:** Improving agricultural and land-use practices to increase the amount of carbon stored in soils. Techniques Include; No-till farming, cover cropping, and agroforestry.

– **Benefits:** Enhances soil health, increases agricultural productivity, and stores carbon in the soil.

2. TECHNOLOGICAL SOLUTIONS
Bioenergy with carbon capture and storage (BECCS)
– **Description:** Generating energy from biomass (like plants or organic waste), capturing the CO_2 emitted during the process, and storing it underground.

– **Benefits:** Produces renewable energy while removing CO_2 from the atmosphere.

Direct air capture with carbon storage (DACCS)
– **Description:** Technology that captures CO_2 directly from the ambient air and stores it underground or utilises it in products.

– **Benefits:** Can remove CO_2 regardless of emission source and has a small land footprint.

Carbon capture and storage (CCS)
– **Description:** Capturing CO_2 emissions from industrial processes and power generation before they enter the atmosphere and storing them underground.

– **Benefits:** Reduces emissions from hard-to-abate sectors like cement and steel production.

Biochar
– **Description:** Producing charcoal-like material from biomass through pyrolysis and adding it to soils.

– **Benefits:** Sequesters carbon for long periods while improving soil fertility and water retention.

Enhanced weathering and mineralisation
– **Enhanced Weathering:**
– **Description:** Spreading crushed reactive minerals (like basalt) over land to accelerate natural chemical reactions that remove CO_2 from the atmosphere.

– **Benefits:** Permanently stores CO_2 in the form of stable carbonates and can improve soil health.

– **Mineralisation:**
– **Description:** Converting CO_2 into stable mineral forms through chemical reactions, facilitating long-term storage.

– **Benefits:** Provides permanent CO_2 removal with minimal risk of re-release.

3. AVOIDED EMISSIONS PROJECTS
Preventing deforestation (REDD+ Projects)
- **Description:** Projects aimed at Reducing Emissions from Deforestation and Forest Degradation (REDD+), focusing on avoiding deforestation and forest degradation.

- **Benefits:** Prevents the release of CO_2 stored in forests, supports biodiversity, and benefits local communities.

ART/TREES Programs
- **ART (Architecture for REDD+ Transactions):**
- **Description:** Provides a standardised approach to REDD+ crediting, promoting high-integrity emission reductions from forest conservation.

- **TREES (The REDD+ Environmental Excellence Standard):**
- **Description:** A standard under ART for measuring, monitoring, reporting, and verifying emission reductions.

- **Benefits:** Ensures high-quality, transparent, and credible emission reductions from forestry projects.

4. RENEWABLE ENERGY AND ENERGY EFFICIENCY
Renewable energy projects
- **Description:** Developing wind, solar, hydroelectric, and other renewable energy sources to replace fossil fuel-based energy generation.

- **Benefits:** Reduces CO_2 emissions by displacing high-emission energy sources, promotes energy security.

Energy efficiency improvements
- **Description:** Upgrading technology, infrastructure, or processes to use less energy for the same output.

- **Benefits:** Lowers energy consumption and associated emissions, reduces operational costs.

5. WASTE MANAGEMENT AND METHANE CAPTURE
Methane capture
- **Description:** Collecting methane emissions from landfills, agriculture (like livestock manure), and wastewater treatment facilities.

- **Benefits:** Methane is a potent greenhouse gas; capturing and utilising it as energy reduces emissions and provides a renewable energy source.

6. OCEAN-BASED SOLUTIONS
Ocean Fertilisation and Artificial Upwelling
- **Ocean Fertilisation:**
- **Description:** Adding nutrients to ocean waters to stimulate the growth of phytoplankton, which absorb CO_2 through photosynthesis.

- **Artificial Upwelling:**
- **Description:** Bringing nutrient-rich deep water to the surface to enhance biological productivity.

- **Benefits:** Potential to enhance the ocean's natural capacity to absorb CO_2.

Note: Ocean-based solutions are still largely experimental and may have ecological risks; they are less common in the voluntary carbon market.

COMMUNITY

Cultural life does not exist in a closed bubble. It's part of a complex ecosystem involving people, social structures, relationships, concepts, phenomena, rules, habits, history and much more.

The green transition requires that we know ourselves well, but also that we openly involve our surroundings, near and far, and relate to the entire ecosystem. Everything is connected. Sustainability, for cultural institutions, is about more than just green measures; it also involves sound economic management and social responsibility. As stewards of culture, these cultural institutions have a duty to engage and support their communities, extending their impact beyond artistic endeavours. Key areas for consideration include community engagement, accessibility, educational outreach, fostering local partnerships and promoting diversity. Embracing social sustainability transforms cultural institutions into inclusive community hubs that contribute to the well-being of their surroundings. Recognising their place within a vast ecosystem, institutions should openly involve their surroundings, taking into account the interconnectedness of all elements.

This roadmap can only touch on the subject very superficially, but below we have mentioned some of the things that you should think about and discuss in your green transition process. It may seem unmanageable, but there are many 'hidden' resources to be found. Considering as many aspects as possible is an important part of successful green transition.

Action points

COMMUNITY

CLIMATE LITERACY

- Set time aside for everyone in your institution to learn about climate and climate change.
- Invite experts and scientists for support and help with assessing the validity of information.
- Use all your platforms to communicate your knowledge to help fight climate illiteracy globally.

CLIMATE COLONIALISM AND CLIMATE JUSTICE

- Learn about the complex mechanisms of climate injustice.
- Take social responsibility, e.g. through carbon offset projects.
- Offer your power and platforms to minority communities.

EQUITY, DIVERSITY, INCLUSION (EDI)

- Involve everyone in the EDI work. Employees, audience, board members, suppliers, and other stakeholders.
- Begin by counting. Assess how well minorities are represented in your programme, artists, staff etc.
- Seek peer support and put work into strong networks to strengthen EDI in the culture sector.

BEHAVIOURAL CHANGE AND INTERVENTIONS

- Identify the level of capability, motivation, and opportunity in your institution.
- Understand the historical background behind current behaviour.
- Get help to find the most efficient types of intervention for your spesific case needs.

GREENWASHING AND GREEN HUSHING

- Insist on honest communication.
- Be transparent. Don't be afraid to admit when chage is difficult, and results are uncertain.
- Show that you believe green change is important and that you are working hard to reach the goal.

POLARISATION

- Focus on common ground and the things you can agree on.
- Find reliable information with different perspectives and a more nuanced understanding of the issue.
- Avoid using techniques of shaming and embarrassment.

LOCAL COMMUNITY AND CO-CREATION

- Initiate workshops identifying challenges, conflicts, and interests within the group.
- Draw up a comprehensive plan with common goals.
- Use small transition projects to practise co-creating.

INFLUENCE AND SCOPE X

- Reduce your footprint (negative impact) and increase your handprint (positive impact).
- Remember the importance of culture.
- Share best practices, knowledge, and experiences generously.

CLIMATE ANXIETY AND CLIMATE SHAME

- Have individual talks with everyone before embarking an institution-wide on the green transition.
- Get help from mental health professionals if necessary.
- Create an open and safe environment in which it is possible to express any emotion.

FREE ART AND ARM'S LENGTH

- Don't be afraid to discuss the current state of the creative sector.
- Challenge the view the culture and art sector has of itself and its role in the green transition.
- Demand support and information from the political system.

CROSS-SECTORAL TOOLS AND BROAD COOPERATION

- Know your own sector. Know your own mindset, habits, and values in order to be easier to be easier to work with.
- Be aware that cross sectoral work is difficult, and activates a variety of power mechanisms.
- Consider if you would be comfortable taking the role of an activist as an institution and trying to affect other sectors and the political system.

CIRCULAR ECONOMY

- Rent or borrow before you buy.
- Organize and register your belongings and recycle.
- Create networks and join apps to share information about what you and other institution own

COMMUNITY

CLIMATE COLONIALISM AND CLIMATE JUSTICE

The term Global South is not used as a specifically geographical term, but refers to peoples who are being negatively impacted by modern-day capitalist globalisation. These include various minorities and indigenous people, such as Sami and Inuit populations in the Nordic region. The climate crisis has larger and more destructive effects on communities in the Global South, while the Global North is responsible for an estimated 92 per cent of the emissions that contribute to climate change. The exploitation of resources and power by the Global North is referred to as climate colonialism. When dealing with green change, it is important to keep global interests in mind and to insist on a just transition.

CLIMATE LITERACY

Climate literacy refers to knowledge of the Earth's climate, the impacts of climate change and solutions to the climate emergency. It refers to individuals or communities with an understanding of their own influence on climate and the relationship between climate and society. People with an ability to find and communicate trustworthy information and make responsible decisions. Climate change brings many challenges and certain opportunities; climate literate people and their institutions will be better prepared for both, and will therefore enjoy significant advantages.

GREENWASHING AND GREEN HUSHING

Uncertainty about numbers and concepts, as well as the fear of being seen as 'greenwashing', means that communicating the institution's green transition can be difficult. Greenwashing is serious and must of course be avoided, but it is also important to avoid 'green hushing'. Green hushing is when you completely fail to communicate your green efforts, and you therefore are not sharing your knowledge and best practice,helping to motivate others or developing methods and systems.

POLARISATION

The climate crisis is considered one of the most polarising subjects today. The population is split between those who want to prompt others to adopt climate-friendly behaviour, sometimes by using shame and embarrassment, and those that either feel overly controlled or believe that the climate crisis is a hoax. It is important to be aware of polarisation because a polarised environment has the potential to drive antagonism and does not leave the possibility for positive change. This polarisation often leads to a breakdown in constructive dialogue, hinders effective policymaking, and slows down collective action to mitigate and adapt to climate change. In almost all institutions both sides will be represented, and it is important to deal with that in a respectful way to find common ground for collaborative solutions.

CLIMATE ANXIETY AND CLIMATE SHAME

Climate anxiety and climate shame are emotional responses to climate change. They can be triggered by changes in everyday life and by information about the state of the world, and the reactions can be serious, making it difficult for people to sleep, socialise, work, and regulate their emotions. Repeated discussions about climate crises and focus on green transition in the institution can be very hard for some, and they will need time and qualified talks to protect their mental health. However, taking action and the feeling of doing something has proved to be a way of dealing with climate anxiety and climate shame.

FREE ART AND ARM'S LENGTH

In the Nordic countries, the arm's length principle plays an important part in cultural politics. The absolute freedom of art and the lack of interference from the cultural sector are important for our cultural life and must never be compromised. For some, the green transition can feel like an interference, but it is important to clearly differentiate between the art itself and the framework around culture. The cultural field needs to be equally responsible and committed to openness and transparency, and just as willing to change as any other sector. In many cases the changes to the framework of culture and the increasing focus on use of resources and level of production will be positive for art and artists.

INFLUENCE AND SCOPE X

As well as the three 'scopes' used in calculating emissions outlined above, there is also a fourth: scope x. This refers to the responsibility beyond the institution to society at large. It refers to a commitment to restore and regenerate and to change unsustainable systems.

It's an enormous task, but a relevant one for cultural institutions whose credibility value gives them a huge influence on large audiences. Cultural events are transformative, and culture is a powerful influencer whose impact can contribute to community well-being, and to addressing systemic issues related to sustainability. This may include initiatives focused on ecological restoration, social equity, community resilience, and transformative change to create a more sustainable and regenerative business context. Scope X requires a holistic and integrated approach that goes beyond traditional environmental accounting and incorporates broader societal and ecological considerations.

BEHAVIOUR CHANGE AND INTERVENTIONS

Behavioural science teaches us that, to be able to change, we need capability, motivation and opportunity. Capability is achieved through education and training, building knowledge and skills. Motivation can be achieved through persuasion and incentives and knowledge about individual motivating factors such as saving time, enjoying small everyday pleasures or nurturing local nature. Opportunity is created through regulations, enablement and restrictions. All three are connected to complex physical, psychological, and social factors, and insight into every aspect of behaviour is necessary to create change through interventions. Interventions can take many forms. These can include economic measures, changes to the environment, information, education, nudging, change of social norms and legislation.

EQUITY, DIVERSITY, INCLUSION (EDI)

The battle against climate change is not an equal fight. Climate resilience differs hugely, and existing inequality is dramatically increased by climate change. This applies to, for instance, the economy, race, gender, ethnicity and physical ability. Therefore it is important for the viability of the arts sector that cultural institutions make efforts towards equity, diversity and inclusion (EDI). In short, Equity is about recognising advantages and disadvantages and ensuring fairness. Diversity is about acknowledging and valuing differences. Inclusion ensures that everyone is heard, seen, respected and given equal access to resources and opportunities. Statistics show that the arts and culture sector is behind the times in cultivating EDI, which might be explained by lack of funding, uncertain employment, complex power structures or general conservatism. However, there is plenty of low hanging fruit for the sector here, such as working with accessibility, representation in programming, unconscious bias training for workforce and audience analysis.

LOCAL COMMUNITY AND CO-CREATION

Imposing solutions on people does not work; participation and engagement are necessary for the acceptance of change. In and around a cultural institution there are many human resources – artists, technicians, audiences, neighbours, curators, café staff and many more – who can be engaged and contribute to change through co-creation. By changing the way we are working and using methods for co-design, we can achieve significant mutual benefits and create inclusive and sustainable communities. To achieve co-creation, factors such as trust, sense of ownership, empathy and solidarity need to be in place and valued highly. Individual, institutional and sectorial self-assessment is equally important. Several process plan models for co-creation are available, including advice on how to create awareness and involvement, share knowledge, form plans, take action, anchor and measure results together.

**CROSS-SECTORAL TOOLS
AND BROAD COOPERATION**

Climate change concerns us all. When dealing with the green transition in arts and culture, it is beneficial to think holistically and not solely focus on the cultural sector. There are several common interests and challenges between sectors, and even more importantly there are tools, research and solutions already attained in other professional areas, which can dramatically speed up the transition.

Cross-sectoral work relies on both top-down and bottom-up approaches. The political system can be made responsible for connecting people and creating partnership strategies and formal networks, whereas the cultural sector can inform,communicate and involve architects responsible for the cultural buildings, suppliers, universities and many more in their work. The political system can find common interests in regulations and legal requirements, the possibility of creating common indicators of change and agreed ways of measuring, whereas the cultural sector can use tools from elsewhere, such as the social sector, and tweak existing models to fit art and culture.

CIRCULAR ECONOMY

Circular economy involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials, so that the life cycle of products is extended. Cultural institutions typically acquire a lot of equipment and materials for set designs, stages or exhibitions that are only used a few times and then stored or thrown away, but we are standing on a burning platform, where raw materials are becoming fewer, and we must think regeneratively. Circular economy is therefore a necessary model in the cultural field, which is challenging the mindset of the sector. The quality of an institution should not be measured by the amount of equipment, but rather by its ability to reduce waste and redesign materials and products, and its willingness to cooperate with other institutions and cross sectors, to share knowledge and experiences in order to overcome barriers in the transition towards a more circular economy. Those barriers could be anything from regulations, legal requirements and taxes on reuse to tradition within the sector, where knowledge is connected to people and not to systems and formal networks.

RESOURCES

USEFUL GUIDES AND WEBPAGES
A Green Nordic Region, Vision 2030:
www.norden.org/en/information/
action-plan-vision-2030

Center for Behaviour Change – modells
and methods:
www.ucl.ac.uk/behaviour-change

Circular Economy Strategies:
www.researchgate.net/figure/The-9R-
Framework-Source-Adapted-from-
Potting-et-al-2017-p5_fig1_320074659

Diet for a Green Planet:
https://dietforagreenplanet.se

European Green Festival Roadmap
2030, YOUROPE:
https://yourope.org/know-how/
green-roadmap/

Festival Carbon Footprints, AGF:
www.agreenerfuture.com/
carbonimpactsassessment

Norwegian Green Roadmap for the
Arts and Culture Sector:
www.grøntveikart.no

THE 17 GOALS | Sustainable
Development (un.org):
https://sdgs.un.org/goals

IPCC Synthesis Report 2023:
www.ipcc.ch/site/assets/uploads/2018/
02/SYR_AR5_FINAL_full.pdf
www.ipcc.ch/reports/

Bio Diversity KPI Targets:
www.brightest.io/biodiversity-kpi-
measurement-targets-strategy

EcoLighthouse Performing Arts
Certification:
www.miljofyrtarn.no

Zero rapporten 20023:
https://zero.no/arrangement/
zerorapporten-2023/

Offsetting in the Nordic Region:
https://pub.norden.org/temanord2022
-563/#120584

UNEP Climate Action:
www.unep.org/explore-topics/climate-
action/what-we-do/climate-action-note/
state-of-climate.html

Cleaning and organizing is often an underestimated tool in the green transition. It is necessary to know exactly what you own and where it is located. Systems must be created so that everyone has access to this knowledge. There are many good apps for inventory management, several Nordic cultural institutions use the app trail.fi

Theatre Greenbook:
https://theatregreenbook.com

Bæredygtig Kulturliv NU:
www.baeredygtigtkulturliv.nu

Harpa Green Policy:
www.harpa.is/en/green-policy

Heritage Protection:
https://icom.museum/en/news/
international-repatriation-of-
human-remains-of-indigenous-peoples/

ICOM Environmental Guidelines:
www.icom-cc.org/en/environmental-
guidelines-icom-cc-and-iic-declaration

Climate and temperature in exhibitions
and storage:
https://slks.dk/fileadmin/user_
upload/0_SLKS/Dokumenter/Museer/
Museernes_arbejdsopgaver/
Anbefalinger_for_klima__C_og_
RF__2021_endelig.pdf

The Material Pyramid:
www.materialepyramiden.dk

WHO, Health on Earth:
www.who.int/europe/news/item/
07-04-2022-health-on-earth--a-
healthy-planet-benefits-us-all---
world-health-day-2022

Resources on Food in the Nordic Region
www.matvalget.no/content/uploads/
sites/2/2019/04/Matvalget-Handbok.pdf
Matvetts tiltaksbank
Matvetts veileder for trygg gjenbruk av
mat i serveringsbransjen
'National action plan for reduced food
waste in Sweden'
Denmark against food waste, the food
industry's guide to reducing food waste
'Stop food waste' tips for what can you
do

Sustainable Fish in the Nordic Region
www.wwf.no/sjømatguiden
www.wwf.se/fiskguiden/
https://pub.norden.org/nord2023-003/
nord2023-003.pdf

Reducing Food Waste:
www.regjeringen.no/contentassets/
1c911e254aa0470692bc311789a8f1cd/
matsvinnavtale.pdf

CHANGE MANAGEMENT MODELS
The Behaviour Change Wheel is a comprehensive framework that provides a systematic approach for designing effective interventions to promote behaviour change. It consists of three layers: Capability, Opportunity and Motivation. The Capability layer focuses on enhancing an individual's psychological and physical abilities to perform the desired behaviour. Opportunity aims to create a supportive environment that facilitates behaviour change through alterations of physical, social, and economic factors. Motivation addresses the psychological and emotional aspects that drive behaviour change, including intrinsic and extrinsic motivations. The Behaviour Change Wheel enables intervention designers to identify the specific behaviour they want to target, understand the factors influencing that behaviour, and select appropriate interventions. By using this framework, interventions can be tailored to individuals, communities, or organisations.

Nudges (or 'choice-architecture interventions') utilise subtle changes in the presentation of choices to influence decision-making. By strategically framing options or altering the environment, nudges can steer individuals towards more desirable behaviours without restricting their freedom of choice. These interventions are effective in guiding people towards healthier, more sustainable, and socially responsible decisions.

GLOSSARY

SUSTAINABILITY

Sustainable development: A development that ensures that the present generation meets its needs without compromising the opportunities for future generations.

Sustainability goals: 17 goals outlining how UN member states should work towards sustainable development by the year 2030.

Sustainability leadership: The top management should demonstrate leadership and commit to facilitating a sustainable, strategic direction, integrating it into the organization's operations, ensuring necessary resources, securing intended results, guiding and supporting, and promoting continuous improvement.

Greenwashing: A form of misleading marketing in which a product or business is portrayed as being better than it is in terms of its impact on climate, nature, and people.

Action plan: An overview of strategic actions to help the organisation achieve its established goals. It may span several years but should be reviewed annually. It is also important that it is communicated within the organisation.

Stakeholders: An individual or organization actively involved in a project/business or with interests affected by the project's/business's implementation or end result.

Stakeholder analysis: Through analysis, stakeholders can be grouped based on their influence and interest. The result of such an analysis is an important management tool for project/business leaders.

Participation: Providing various stakeholders and contributors with the opportunity to participate by expressing their opinions in a process.

Systems thinking: Systems thinking is an approach that examines and understands how individual elements within a system interact and influence the whole.

CLIMATE AND ENVIRONMENT

Environment: In this context, it refers to the natural environment, climate, and everything related to environmental sustainability.

Climate: Climate is the average weather conditions in a place, measured over time, typically 30 years.

Greenhouse Gas Accounting: An account of an organisation's or business's direct and indirect emissions of gases with properties that can lead to an increased greenhouse effect.

Emission Factor: Information used to calculate emissions in cases where physical measurements of emissions are not available, along with activity data:
Emissions = ∑ Activity Data x Emission Factor

Emission Source: The origin of an emission. For example, passenger cars are an emission source for emissions generated from the use of cars.

WASTE AND CIRCULAR ECONOMY

Circular Economy: In a circular economy, we efficiently utilise natural resources and products for as long as possible, in a cycle where minimal resources are wasted. A circular economy is the opposite of a linear economy, which is based on extraction, production, use, and the incineration or disposal of waste.

Reuse: Means using products or materials again for the same purpose as before, without much processing. This can include clothes or building elements like steel beams, bricks, or windows that are reused by others.

Recycling: Is a collective term for material recycling and energy recovery.

Recovery: Is often used somewhat imprecisely, referring to reuse, material recycling, and energy recovery.
- Material recycling means that waste is converted into new products, such as when plastic materials are melted into plastic pellets that can be used to create new plastic products.

- Energy recovery is used for processes where energy from waste that is burned is utilised in district heating systems to heat buildings or to generate electricity.

Resource Efficiency: Is a term used to describe how we efficiently use the resources available to us, so that as little as possible is wasted, such as when we convert food waste into biogas and various types of bio-fertilisers.

Value Chain: Refers to the different stages that materials/products go through during their lifetime, from the extraction of raw materials and production through the use phase to waste management.

Cycle/'Circular': are value chains where products/materials are used for as long as possible and reused in a cycle.

Recycling: Is a general term describing a process where resources, raw materials, and products are in circulation and reused in a cycle.

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