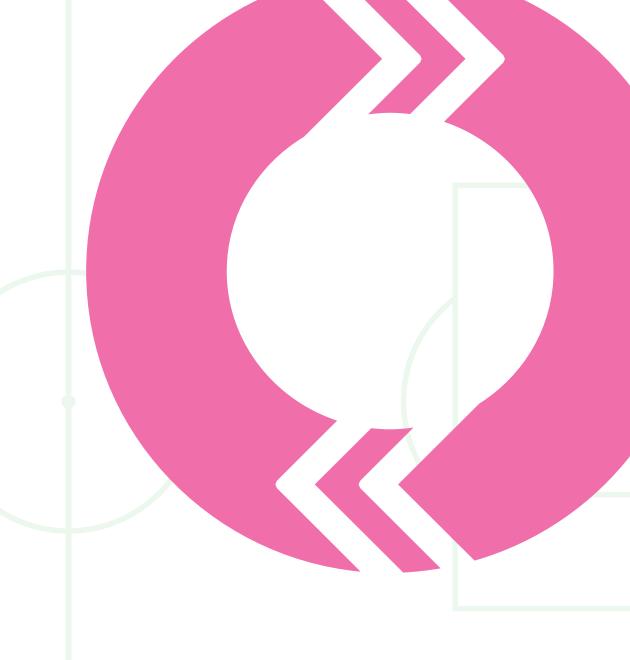
GUIDELINES





FOREWORD

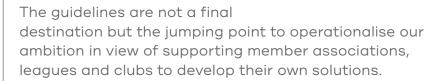
Football must unite to drive sustainable change collaborating with institutions and civil society for a strong dissemination of messages and actions that take care of our environment. Being able to play a team game by anticipating collective needs using the platform of football is one of the pillars of our strategic thinking.

Circular economy in football is a new and fascinating concept. We included it as a fundamental and strongly interlinked policy alongside three others – Climate & Advocacy, Event Sustainability and Infrastructure Sustainability – when we developed UEFA's Football Sustainability Strategy 2030, in which we identified targets, KPIs and a dedicated action plan to achieve them. All policies contribute to the strategy's mission to inspire, activate and accelerate collective action to respect human rights and the environment within the context of European football.

Collaboration and guidance will be a key ingredient to deliver solutions and impact, as well as to prevent and mitigate waste management risks that weigh on the football ecosystem.

The UEFA Circular Economy Guidelines constitute a practical idea to first engage ourselves and then the football stakeholders in this journey. We identified the 4R framework (Reduce, Reuse, Recycle, Recover) as a guide and tried to apply its concepts to football. To everyone's football, to everyday gestures, to the idea that the sum of behaviour in football could create exponential value for civil society.

We collaborated with an important partner like PepsiCo, the European Club Association (ECA) and ten clubs that are particularly attentive and sensitive to the topic. We thank them all for their contribution.



We are catalysing action together with partners and event venues, with a particular focus on product packaging, plastics, single-use items, food loss and waste. Furthermore, we are integrating circularity criteria in the UEFA regulations as well as in UEFA campus facility management. And our Football and Social Responsibility Division has created a repository of best practices targeting football, capturing innovations and lessons learned across member associations, leagues and clubs.

We are determined to play our part in accelerating football's circular economy transition, and we are happy to have our stakeholders on board

STRENGTH THROUGH UNITY!

Michele Uva

UEFA Director of Football and Social Responsibility



UEFA CIRCULAR ECONOMYGUIDELINES

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Disclaimer

PRINTING: PLEASE AVOID PRINTING AND COPYING WHEREVER POSSIBLE.

The UEFA Circular Economy guidelines are available only as a downloadable pdf file from UEFA website: <u>uefa.com/sustainability</u> (If you need to print, please ensure the printer is set to double-sided copying, on recycled paper, and in black and white.)

These guidelines provide simple, practical and essential information on key aspects of the circular economy.

It is a tool that will help national associations, event organisers, clubs, and other football stakeholders navigate this complex subject and start the journey towards zero plastic and food waste (to landfill) football matches by 2030.









CIRCULAR ECONOMY IS A CONCEPT, WITH INTERCONNECTED RAMIFICATIONS ON CLIMATE CHANGE, BIODIVERSITY, POLLUTION, CONFLICT MINERALS AND SOCIOECONOMICS.

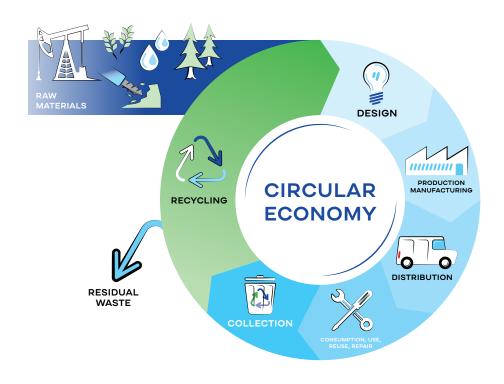


FIGURE 1
European Parliament
representation of Circular
Economy

The Circular Economy concept, as represented on Figure 1 by <u>European Parliament</u>¹, takes in account the overall life cycle of products or services we use everyday. Given the complexity of achieving a circular economy, this focused working document contains six standalone sections offering practical, concrete guidance on a specific area. For ease of reference, these sections can be consulted independently.

Central to achieving this aim are the 4R: reduce, reuse, recycle and recover waste. The 4R framework is an environmentally friendly approach to gradually reducing waste and improving waste management.

Circular economy is one of the eleven (seven social and four environmental) policies deployed by UEFA's Football Social Responsibility (FSR) team in its Football Sustainability Strategy 2030 – Strength Through Unity² – whose mission is to inspire, activate and accelerate collective action to respect human rights and the environment within the context of European football in line with UEFA's fifth strategic pillar, 'Responsibility'³.

 $^{1.\} https://www.europarl.europa.eu/news/en/headlines/economy/20151201STO05603/circular-economy-definition-importance-and-benefits - Updated: 26-04-2022.$

 $^{2. \} https://editorial.uefa.com/resources/0270-13f888ffa3e5-931c597968cb-1000/uefa_football_sustainability_strategy.pdf$

 $^{3. \} https://editorial.uefa.com/resources/0269-1267e6a556ce-3b9dd3e7e6ec-1000/together_for_the_future_of_football.pdf$

THE UEFA CIRCULAR ECONOMY GUIDELINES IS ONE OF THE DELIVERABLES OUTLINED IN THE STRENGTH THROUGH UNITY STRATEGY, AS CIRCULAR ECONOMY IS ONE OF THE 11 POLICIES ADDRESSED TO OUR STAKEHOLDERS.

ACTUAL BEST PRACTICES AND FACTSHEETS ARE PROVIDED AS A RESULT OF A JOINT PROJECT UNDERTAKEN WITH PEPSICO (UEFA CHAMPIONS LEAGUE COMMERCIAL PARTNER AND SUPPLIER OF FOOD & BEVERAGE), EXPERTS IN THE FIELD AND SOME CLUBS PARTICIPATING IN THE 2021/2022 UEFA CHAMPIONS LEAGUE PROVIDING INSIGHTS.

It features extensive data gathered about best practices through stakeholder consultations and pilot projects.

It sets targets encouraging football organisations to embed the 4R framework into their operations with the



fundamental support of all stakeholders and lays out best practices to reach them in the fastest, most practical and most cost-effective way.

Urgent action is demanded by society and necessary to be aligned with the EU's circular economy action plan. The EU's transition to a circular economy aims at reducing pressure on natural resources, supporting progress towards the EU's 2050 climate neutrality target and halting biodiversity loss.⁴

^{4.} European Parliament, 'Circular Economy Action Plan', accessed on 23 April 2022, https://www.europarl.europa.eu/committees/en/circular-economy-action-plan-/product-details/20201106CDT04441.

A. INTRODUCTION TO THE CIRCULAR ECONOMY

This working document sets out specific guidelines addressed to every stakeholder within the European football community to support the circular economy policy's target to embed best practices within European football, through collaboration and knowledge transfer and achieve **zero plastic and food waste** within UEFA and at UEFA events and will be updated periodically taking into account new best practices and innovations.

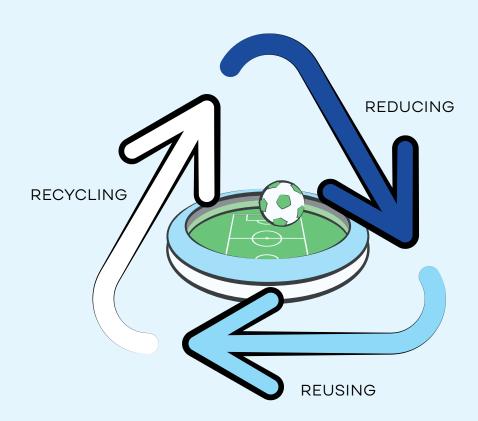
The document is composed of 4 sections:

- **1.** An introduction to the Circular Economy concept, waste minimisation and the 4R framework.
- 2. An overview of legislation and international standards related to waste management and more broadly to circular economy
- **3.** Best practice and factsheets in the Food & Beverage domain by various football stakeholders.
- **4.** An outlook into forthcoming Circular Economy focus areas: energy & water, apparel & football equipment, and event materials (signage, brand production and furniture & IT equipment).





WASTE MINIMISATION



As the governing body for association football and an event organiser, UEFA does not design, manufacture or distribute products, so its circular economy will essentially be driven by waste minimisation.

OUR ROLE IS TO BRING ABOUT CHANGE THROUGH PROCUREMENT AND ENGAGEMENT WITH SUPPLIERS.

WASTE MINIMISATION IS ONE OF THE PILLARS OF A CIRCULAR ECONOMY.

As the Ellen MacArthur Foundation, the leading promoter of the circular economy, states:

"A circular economy is a bigger idea than incrementally reducing the harm of our current model. It tackles the root causes of global challenges such as climate change, biodiversity loss, waste and pollution, while creating opportunities for better growth. A circular economy is underpinned by three principles, all led by design: eliminate waste and pollution, keep products and materials in use, and regenerate natural systems".

BY EFFECTIVELY WORKING ON WASTE MINIMISATION, WE WILL ACCELERATE THE TRANSITION TO A CIRCULAR ECONOMY.

Through consultation with various experts in the field, we have defined the methodology outlined below, which is perfectly adapted to UEFA's various processes, to address every element listed above and align with international legislation and frameworks.

These guidelines are designed to be applicable to all football clubs within the 55 national associations, from the small to those with large-scale infrastructure and from grassroots to professional levels, with no specific restrictions. This analysis was the outcome of a materiality assessment of UEFA activities that led to address food & beverage in priority, leading to joint pilot project with one of our commercial partners, **PepsiCo**, which also supplies soft drinks and fast food at UEFA Champions League finals. The objective of this pilot project, in line with UEFA's Football Sustainability Strategy 2030, is to **achieve zero plastic waste (to landfill) in the food and beverage sector at Champions League finals by 2026.**

^{5.} Ellen MacArthur Foundation, 2021, 'The Jeans Redesign Guidelines', p.6. accessed on 23 April 2022, https://ellenmacarthurfoundation.org/the-jeans-redesign.

The amount of waste generated is a global issue. Football is part of it and should address it with the required urgency as society is asking for concrete actions to be implemented. According to Life Tackle, "the average European football match generates <u>0.8 kg of waste per spectator"</u>⁶ equivalent to a fully loaded lorry (20 tonnes of waste) for a stadium with a capacity of 25,000 spectators.

Considering all the matches organised by Europe's national football associations, Life Tackle estimates that the overall waste generated amounts to <u>750,000 tonnes</u> per year⁶.

URGENT CHANGE IS THEREFORE NEEDED TO MINIMISE WASTE IN FOOTBALL: THE TIME FOR TALK IS OVER; WE NEED ACTION.



^{6.} Life Tackle, 2019, 'How to TACKLE the environmental impacts of sport and football events', accessed on 23 April 2022, https://lifetackle.eu/news/article/how-to-tackle-the-environmental-impacts-of-sport-and-football-events.

It is built around a materiality assessment and activity prioritisation based on findings and insights from an ongoing pilot project conducted in collaboration with one of our commercial partners, **PepsiCo**, which supplies soft drinks and fast food at UEFA Champions League finals.

The concrete objective of this pilot project, in line with UEFA's Football Sustainability Strategy 2030, is to achieve zero plastic waste (to landfill) in the food and beverage sector at Champions League finals by 2026.

Numerous other ambitious, collaborative projects will be implemented in the coming years and this section will be updated and refined based on their results, particularly in relation to the 'rethink' aspect, which is highly relevant to some PepsiCo solutions (e.g. SodaStream, packaging innovations, etc.).





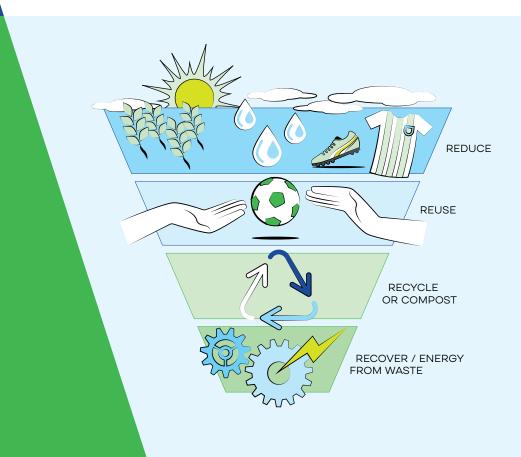


METHODOLOGY

IMPLEMENTATION

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METHODOLOGY

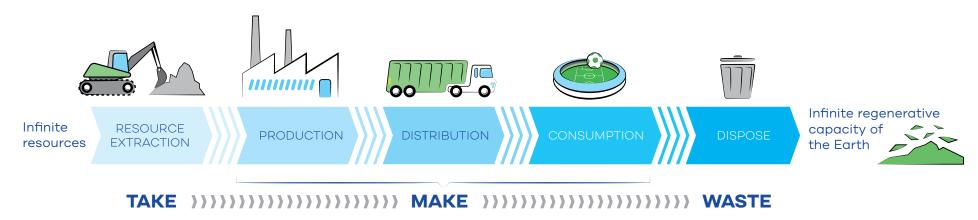
Society has traditionally followed what is now commonly known as the linear model – Take, Make, Waste – which is not sustainable within a finite environment.

Natural resources have for too long been believed to be infinite; as Sir David Attenborough said:

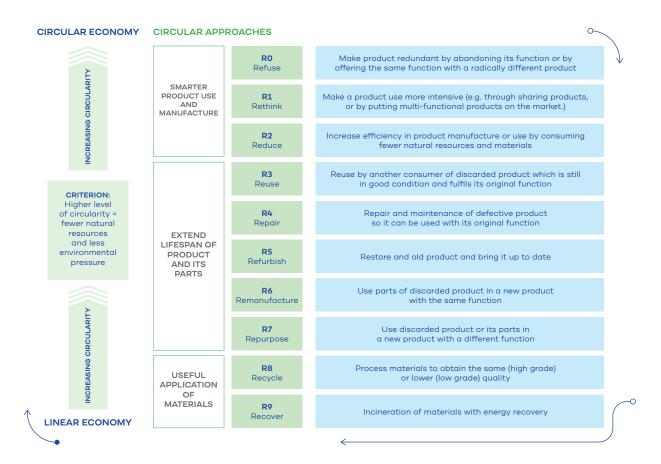
"ANYONE WHO BELIEVES IN INDEFINITE GROWTH ON A PHYSICALLY FINITE PLANET IS EITHER MAD, OR AN ECONOMIST".

For more information about the linear economy, we recommend the article form which this image is taken⁷.

FIGURE 2
Linear economy: the Take-Make-Waste model



C. THE 4R FRAMEWORK: REDUCE, REUSE, RECYCLE, RECOVER



In contrast, the 4R methodology – Reduce, Reuse, Recycle, Recover – is a contracted version of the full 9R framework of circular approaches to the production chain in order of priority (see Figure 3). These nine approaches were grouped into four in order to be more easily understood by our stakeholder community and tailored to UEFA processes.

Clearly technology availability and levels of social awareness about waste reduction differ in different countries, so they progress at different rates. The main objective of this document is to support all stakeholders within football (and beyond) to implement the 4R framework as early as possible and move up the ladder to higher levels of circularity, as shown in Figure 3.

The 9R Framework of Circular Approaches with the production chain in order of priority⁸

^{8.} Source: Adapted from Potting et al. (2017, p.5), as cited in Okorie, O., Salonitis, K., Charnley, F., Turner, C., Moreno, M. & Tiwari, A. (2018). Digitisation and the circular economy: A review of current research and future trends. Energies, 11(3009). https://doi.org/10.3390/en11113009.

THE 4R CORRESPOND TO THE 9R AS FOLLOWS:

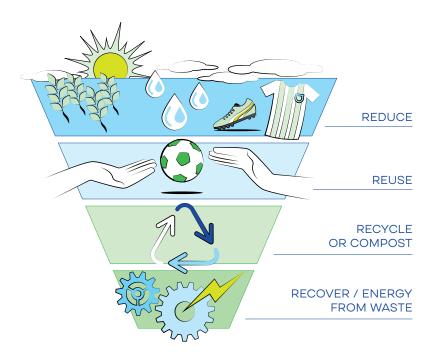


FIGURE 4 Diagram illustrating the 4R

1. REDUCE

This combines R0 (refuse), R1 (rethink) and R2 (reduce), as the first two also lead to a reduction in waste. While UEFA does not produce products or provide services itself, it is important to engage with our commercial partners and suppliers to encourage them to rethink their products and processes as early as possible in the cycle for optimal results.

3. RECYCLE

Recycling (R8) is probably what most people think of when discussing waste management, but it should not be the first choice as it has less of a positive impact on the circular economy than the previous methods, as highlighted in Figure 4.

2. REUSE

This covers R3 (reuse) and R7 (repurpose), which both relate to extending the lifespan of the products purchased for our events. R4 (repair), R5 (refurbish) and R6 (remanufacture) are less applicable to UEFA's core activities. but we must nonetheless engage with our suppliers and commercial partners to repair, refurbish and remanufacture products. Examples will be provided thoughout the document.

4. RECOVER

Finally, recovering energy through the incineration of products (R9) should be the last resort and requires a good understanding of the waste management supply chain to be done properly.



IN ORDER TO IMPLEMENT THE 4R FRAMEWORK EFFECTIVELY, UEFA RECOMMENDS THAT FOOTBALL ORGANISATIONS AND OTHER STAKEHOLDERS ADOPT A STRATEGIC APPROACH COMPRISING THE FOLLOWING SEVEN STEPS:

1. SELECT

one or more individuals in your organisation to be accountable for the strategy

2. ANALYSE

your specific context and identify key issues in your organisation, facilities and events

3. IDENTIFY

an overall mission, guiding principles and fundamental changes

4. DEFINE

topics, KPIs and targets



5. PRIORITISE

identified solutions

6. IMPLEMENTATION

execute an action plan

7. MONITORING

measure targets and KPIs

8. REPORTING

report progress



STEP 1

SELECT ONE OR MORE INDIVIDUALS IN YOUR ORGANISATION TO BE ACCOUNTABLE FOR THE STRATEGY



STEP 2

ANALYSE YOUR SPECIFIC CONTEXT AND IDENTIFY KEY ISSUES IN YOUR ORGANISATION, FACILITIES AND EVENTS



WHY IT IS IMPORTANT:

Like any strategic priority, waste minimisation (and sustainability in general) requires people to be held accountable. It is therefore critical to define roles and responsibilities, internally and externally, to allocate tasks clearly.

WHAT YOU COULD DO:

- Allocate the task to skilled staff members (or staff of your suppliers) whose position allows them to interact with all functions horizontally and vertically.
- Every department can be affected by environmental decisions, so they should all be trained to ensure that everyone shares the same vision and to establish relationships based on collaboration and mutual trust.

WHY IT IS IMPORTANT:

Identifying the most important issues to tackle in the football sector and in your organisation is essential to avoid wasting time and resources on activities that have only a minor impact.

WHAT YOU COULD DO:

- Collect data on major sources of waste in your organisation in order to identify priority issues.
- Work with relevant internal and external stakeholders to identify your biggest issues in the domain of waste management. Each organisation faces different challenges. Explore your unique context: identify the waste streams you manage separately, indicating their nature, quantities and disposal methods. Highlight what is sent to landfill, recycled or incinerated, with the aim of optimising recycling rates and minimising landfill waste.

STEP 3

IDENTIFY AN OVERALL MISSION, GUIDING PRINCIPLES AND FUNDAMENTAL CHANGES



STEP 4

DEFINE TOPICS, KEY PERFORMANCE INDICATORS (KPIS) AND TARGETS



WHY IT IS IMPORTANT:

Clarity about your guiding principles and mission helps to ensure coherent action.

WHAT YOU COULD DO:

- To guarantee alignment among all stakeholders, we actively communicate and educate our stakeholders on our policies, capabilities and objective to achieve zero waste by using the 4R as a guiding principle.
- Make sure your 4R strategy is consistent with your other sustainability principles and objectives (e.g. reducing emissions).

WHY IT IS IMPORTANT:

"You can't improve what you don't measure?".

Define specific KPIs, aligned with UEFA's strategy, to make the topic relevant to your organisation and to enable monitoring of progress in relation to your overall mission.

WHAT YOU COULD DO:

 Set improvement targets in line with our 4R roadmap.
 Make sure your targets are measurable. Do not overcomplicate your KPIs, and prioritise quality over quantity: less is more.

^{9.} Often attributed to Peter Drucker, educator and author on Management of Organisations.



5A. IDENTIFICATION

- Consult with your stakeholders

experience in these matters.

- Research existing solutions

to similar problems. New waste

management solutions emerge

every day! Make the most of them

and reach out to those who have

to find out whether they have any

WHAT YOU COULD DO:

STEP 5

PRIORITISE IDENTIFIED SOLUTIONS



5B. PRIORITISATION

WHAT YOU COULD DO:

- Use these guidelines to help you identify priority practices. Practices have been prioritised based on four criteria: technical feasibility, economic feasibility, environmental relevance and consistency with UEFA's sustainability strategy. You can also adapt the prioritisation by plotting potential solutions on a two-dimensional matrix of environmental relevance versus economic and technical feasibility.
- Combine quick wins that can be implemented in a very short time frame (low effort and big environmental impact reduction) and medium-term projects that are more complex or resource-intensive or require investment to implement but are necessary to drastically reduce impacts.



5C. SELECTING THE BEST WAY TO IMPLEMENT EACH SOLUTION

WHAT YOU COULD DO:

- Compare the potential waste reduction impact of the various options to choose the most effective and make sure you are also minimising emissions at the same time (each solution can be implemented in various ways, leading to very different outcomes in terms of waste and emissions reduction). In Appendix 1 you will find a practical case study relating to reusable cups.

to UEFA to discuss particular solutions.

- Do not hesitate to reach out

already tried them out.

STEP 6

IMPLEMENTATION: EXECUTE AN ACTION PLAN



STEP 7

MONITORING: MEASURE KPIS AND REPORT ON PROGRESS



WHY IT IS IMPORTANT:

True impact is not in setting ambitious goals for 2030 but rather in making the right changes starting right now.

WHAT YOU COULD DO:

- Define roles and responsibilities, taking into account the implementation responsibilities described later in these guidelines.
- Allocate an appropriate budget.
- List and schedule each activity.
- **-** Execute and follow up with the people responsible.

WHY IT IS IMPORTANT:

In the same way that you cannot reduce what you do not measure, you cannot keep track of your progress without monitoring KPIs.

'Greenwashing'* (i.e. creating a public image of environmentally responsible practices without actually making meaningful changes) is a serious matter. If you decide to communicate your environmental achievements externally, using scientific methods to gather data and seeking certification from respected third parties can help to ensure that your claims are valid.

WHAT YOU COULD DO:

- Monitor your KPIs at regular intervals to make sure you are on track to reach targets and create reports or dashboards for distribution. Diagrams can be useful: "A picture is worth a thousand words".
- Make necessary adjustments: change the priority or urgency of different initiatives based on your experience.
- Identify useful analyses (e.g. environmental footprint or life cycle assessment).
- Seek certifications (e.g. zero waste certification) to validate your results.

^{*} https://europa.eu/climate-pact/news/greenwashing-your-guide-telling-fact-fiction-when-it-comes-corporate-claims-2022-06-30 en

STEP 8 REPORTING: REPORT PROGRESS

WHY IT IS IMPORTANT:

Reporting efficiently allows you to communicate with your various stakeholders, show progress and celebrate milestones.

It improves productivity and boost morale of all parties involved, but also to identify problems early and addressed them (when you have time).

Reporting also facilitates decision-making and is a cost efficient process.

WHAT YOU COULD DO:

- Use meaningful KPIs to report upon and avoid losing your audience in details.
- Creating reports or dashboards for distribution is a powerful communication tool.
- Diagrams can be particularly useful as: "A picture is worth a thousand words". Think of using colours that can be distinguished when black and white printing is used, but also avoid colours that are too similar and that are difficult to distinguish for blind colour people.





LEGISLATION AND INTERNATIONAL FRAMEWORKS

UEFA follows legislation and recommendation from internationally recognised standards.

EUROPEAN UNION LEGISLATION

INTERNATIONAL STANDARDS

UNITED
NATIONS
TREATY
ON PLASTIC
POLLUTION

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EUROPEAN UNION LEGISLATION

Directive (EU) 2019/904¹⁰ issued by the European Parliament aims to prevent and reduce the environmental impact of certain plastic products and to promote the transition to a circular economy by introducing a mix of tailored measures, including an EUwide ban on single-use plastic products for which alternatives are available. Different grades of ban apply to different products, and a full list is available on the EU's website.¹¹ These bans are consistent with the EU's waste policy.¹²

WHEN DOES THE DIRECTIVE TAKE EFFECT?

- It came into legal force in all EU countries by 3 July 2021 at the latest.
- The market restrictions and rules for marking of products have been in force since 3 July 2021, while the product design requirements for bottles will come into force on 3 July 2024.
- Measures relating to extended producer responsibility will take effect on 31 December 2024.

Clubs should also consider the following guidance and initiatives from expert groups within the European Commission:

- The <u>Waste Framework Directive</u>¹³, which gives all the targets for the member states, including very strict targets for landfill or organic waste separation. Waste from football clubs or football stadiums can usually be considered similar to household waste.
- The <u>European Ecolabel</u>¹⁴, awarded to the greenest products on the market. Many products that may be of interest to clubs have this label, which guarantees no greenwashing.
- <u>Guides for public authorities</u>¹⁵ on how to buy 'green' in a very practical way, in particular the <u>EU's green</u> public procurement criteria for food, catering services and vending machines¹⁶.

^{10.} https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L0904

 $^{11.\} https://environment.ec.europa.eu/topics/plastics/single-use-plastics/eu-restrictions-certain-single-use-plastics_en$

^{12.} https://eeb.org/waste-no-more-introducing-europes-new-waste-laws/

^{13.} https://environment.ec.europa.eu/topics/waste-and-recycling/waste-framework-directive_en

 $^{14.\} https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel-home/product-groups-and-criteria_en$

^{15.} https://ec.europa.eu/environment/gpp/eu gpp criteria en.htm

 $^{16. \} https://ec.europa.eu/environment/gpp/pdf/190927_EU_GPP_criteria_for_food_and_catering_services_SWD_(2019)_366_final.pdf$



AN INTERNATIONAL STANDARD IS A TECHNICAL STANDARD DEVELOPED BY ONE OR MORE INTERNATIONAL STANDARDS ORGANISATIONS. INTERNATIONAL STANDARDS ARE AVAILABLE FOR USE WORLDWIDE TO PROMOTE CONSISTENCY.

4.2.1 ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

The most prominent standards organisation is the International Organization for Standardization (ISO).

4.2.1.1 ISO 14001

ENVIRONMENTAL MANAGEMENT SYSTEMS

ISO 14001:2015 (Environmental management systems) specifies the requirements for an environmental management system that an organisation can use to enhance its **environmental performance**. Technical information relating to ISO 14001:2015 can be found on the ISO website.¹⁷

4.2.1.2 ISO 20121

SUSTAINABLE EVENTS

ISO 20121:2012 offers guidance and best practices to help you manage events and control their social, economic and environmental impact.

Every action counts, from relying on tap water instead of plastic bottles to encouraging the use of public transport. It might also help to cut unnecessary costs.

The requirements of ISO 20121:2012 and guidance for its implementation can be found on the ISO website¹⁸.

^{17.} https://www.iso.org/standard/60857.html

^{18.} https://www.iso.org/standard/54552.html

4.2.1.3 ISO 26000

SOCIAL RESPONSIBILITY

ISO 26000:2010 provides guidance for those who recognise that respect for society and the environment is a critical success factor. As well as being the right thing to do, applying ISO 26000 is increasingly viewed as a way of assessing an organisation's commitment to sustainability and its overall performance.

Guidance (not requirements) relating to ISO 26000:2010 can be found on the ISO website.¹⁹

4.2.2 BSI

BRITISH STANDARDS INSTITUTION

BS 8001, published by the British Standards Institution (BSI), is the first practical framework and guidance of its kind aiming to help organisations to implement the principles of the circular economy. While this is a British standard, it is intended to be used by organisations irrespective of where they are located and regardless of size, sector or type. It is useful for those with varying

levels of knowledge and understanding of the circular economy, so readers do not need to be specialists in sustainability or circularity to benefit.

It suggests practical ways to secure smaller quick wins, right through to helping organisations rethink how their resources are managed to create financial, environmental and social benefits.

A guide to BS 8001 can be found on the BSI website.²⁰

4.2.3 EMAS

THE EU ECO-MANAGEMENT AND AUDIT SCHEME

The EU Eco-Management and Audit Scheme (EMAS)²¹
is a premium management instrument developed by
the European Commission to help companies and other
organisations to evaluate, report, and improve their
environmental performance. EMAS is open to every
type of organisation eager to improve its environmental
performance. It spans all economic and service sectors
and is applicable worldwide.

^{19.} https://www.iso.org/iso-26000-social-responsibility.html

^{20.} https://www.bsigroup.com/Sustainability/BS8001_Executive_Briefing.pdf

^{21.} https://ec.europa.eu/environment/emas/index_en.htm

UNITED NATIONS TREATY ON PLASTIC POLLUTION

On March 2, 2022, representatives of 175 countries gathered in Nairobi for the continuation of the fifth session of the United Nations Environment Assembly. Following a campaign led by the World Wildlife Fund and the Ellen McArthur Foundation²², the assembly made history when those countries unanimously agreed on a United Nations resolution to fight plastic pollution on a global scale²³.

The resolution calls for global rules, financing and enforcement mechanisms aimed at regulating plastics from manufacture through to disposal. The specific provisions are expected to be agreed upon by the end of **2024**.



 $^{22. \} https://ellenmacarthurfoundation.org/news/the-adoption-of-a-mandate-to-negotiate-a-legally-binding-un-treaty$

^{23.} https://news.un.org/en/story/2022/03/1113142



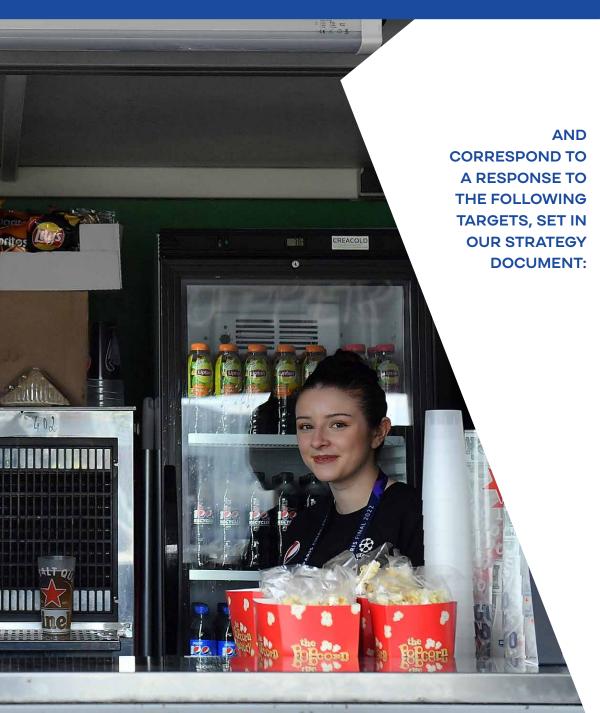
FOUR FOOTBALL AREAS OF ACTIVITY



FOLLOWING A MATERIALITY ASSESSMENT ANALYSIS, FOUR AREAS OF ACTIVITY WERE IDENTIFIED AS THE MAIN CONTRIBUTORS. THIS DOCUMENT IS INTENDED TO BE PERIODICALLY **REVIEWED, IN LINE WITH:**

- technological advances;
- ever-evolving local, national and international legislation; and
- · public awareness and sensitivity.

E. FOUR FOOTBALL AREAS OF ACTIVITY



MINIMISE PLASTIC WASTE AND FOOD WASTE

- within UEFA and in all UEFA events

4R PROCESSES AND TOOLS embedded in football organisations' regulations and practices:

- Embedded into the UEFA guidelines by 2025
- National associations encouraged to apply UEFA
 4R criteria

4R APPROACH for UEFA operations and events:

 4R methodology applied to all UEFA events by 2024, with a particular focus on product packaging, plastics, single-use items, and food loss and waste

KNOWLEDGE TRANSFER around UEFA 4R pilot projects: one pilot project per season until 2025 To minimise waste throughout European football, the highest level of collaboration is required. We have therefore created these guidelines not only for UEFA itself but also to support football facilities, clubs, sponsors, caterers, F&B suppliers and waste management companies in prioritising actions and working together towards more sustainable football.

E. FOUR FOOTBALL AREAS OF ACTIVITY

TO PROVIDE A 360-DEGREE VIEW OF THE FOOTBALL INDUSTRY AND FOOTBALL ORGANISATIONS, THE FOLLOWING AREAS WILL BE COVERED IN DEDICATED SECTIONS.

(Please note that this segregation is neither definitive nor inclusive and will be revisited periodically):

SECTION E1

FOOD & **BEVERAGE**

including their

SECTION E2

ENERGY & WATER SECTION E3

APPAREL & **FOOTBALL**

EQUIPMENT

SECTION E4

EVENT MATERIALS



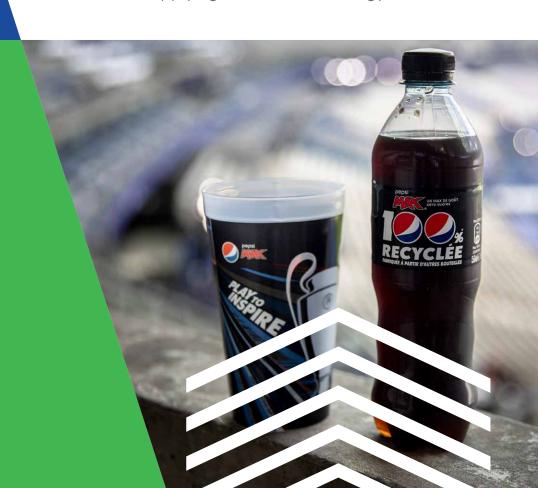


This section focuses on the aim of achieving zero waste in the food and beverage (F&B) sector within football organisations, facilities and events by applying the 4R methodology

FOOD AND BEVERAGE MANAGEMENT **UEFA'S 4R FRAMEWORK** APPLIED TO F&B

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THE GUIDELINES ARE THE OUTPUT OF A COLLABORATION BETWEEN UEFA AND ITS COMMERCIAL PARTNER PEPSICO AIMED AT REDUCING PLASTIC WASTE AND INCREASING RECYCLING AT UEFA CHAMPIONS LEAGUE FINALS, WITH THE AIM OF ACHIEVING ZERO WASTE IN THE FOOD AND BEVERAGE (F&B) SECTOR WITHIN FOOTBALL ORGANISATIONS, FACILITIES AND EVENTS BY APPLYING THE 4R METHODOLOGY (REDUCE, REUSE, RECYCLE AND RECOVER).

The choice of food & beverage being addressed first was made from a materiality assessment.

The ambition of this collaborative approach is to produce the first zero waste to landfill UEFA Champions League final in 2024 in London. The overall goal is for this to be regularly implemented from 2026, with zero waste to landfill becoming a requirement included in the selection of the hosting stadium, and across all UEFA events over the following years.

The project has led to the creation of a database of best practices and the formation of a consultation group among clubs to share knowledge and discuss common challenges, and a feasibility analysis for practical implementation of selected practices in stadiums.

Out of the 32 clubs qualified for the Champions League 2021/22 group stage, the following clubs participated, alongside their respective stadium venues:

AFC Ajax (HOL) - Johan Cruijff Arena

Borussia Dortmund (GER) – Signal Iduna Park

FC Internazionale Milano and AC Milan (ITA) - San Siro

FC Porto (POR) - Estádio do Dragão

Juventus FC (ITA) - Allianz Stadium

Liverpool FC (ENG) - Anfield

Manchester City FC (ENG) - Etihad Stadium

RB Leipzig (GER) - Red Bull Arena

S.L. Benfica (POR) - Estádio do Sport Lisboa e Benfica

Zenit St Petersburg (RUS) - Krestovsky Stadium

FOOD AND BEVERAGE MANAGENENT

Waste minimisation is required by the EU's Farm to Fork Strategy and the planned revision of its Waste Framework Directive: "As called for by the Farm to Fork Strategy, the Commission will propose legally binding targets to reduce food waste across the EU, by end 2023, defined against a baseline for EU food waste levels set following the first EU-wide monitoring of food waste levels.

The food waste reduction targets will be proposed as part of a wider initiative to revise the Waste Framework Directive which is expected to propose measures to reduce waste generation and to increase preparation for re-use or recycling of waste"²⁴.

24. European Commission, 'Food waste reduction targets', accessed on 23 April 2022, https://ec.europa.eu/food/safety/food-waste/eu-actions-against-food-waste/food-waste-reduction-targets_en.

F&B is a major source of waste in football, not only in terms of food waste itself but also because of packaging and supply chains.

Collaboration between all stakeholders is needed to address this problem, which is why UEFA has defined these guidelines to be deployed across European football.

Numerous other ambitious, collaborative projects will be implemented in the coming years and this section will be updated and refined based on their results, particularly in relation to the 'rethink' aspect, which is highly relevant to some PepsiCo solutions (e.g. SodaStream, packaging innovations, etc.).

APPLIED TO F8B

In order to collectively reach ambitious waste minimisation targets, all stakeholders are encouraged to implement the roadmap below, making the necessary adaptations based on the specific situation and maturity level.

While the roadmap is not compulsory, we encourage stakeholders to start following it as soon as possible (ideally in 2022) if they have not already begun, since it will be hard to reach the targets if it is implemented later. Performance against targets is to be measured on a yearly basis (using the average across all matches held during the year).

Please see Appendix 1 for implementation data sheets relating to the most relevant actions. For football facilities with fewer than 10,000 spectators, an adapted roadmap is available in Appendix 2.

IMPLEMENTATION ROADMAP

The implementation roadmap includes only actions deemed 'high priority' or 'very high priority' based on the prioritisation system shown in Appendix 3.



E1. FOOD AND BEVERAGE

TABLE 1 IMPLEMENTATION ROADMAP

E1. FOOD AND BEVERAGE									TABLE 1 IMPLEMENTATION ROADMAP		
AREA	PRIORITY	ACTION	4R APPROACH	2022	2023	2024	2025	2026	2027-28	2029-30	
GOVERNANCE AND STRATEGY	Very high	Define an overall circular economy strategy for F&B	Strategy	Plan and set up	Completed						
GOVERNANCE AND STRATEGY	Very high	Activate communication channels with key stakeholders and service providers involved in F&B improvement actions (e.g. regular meetings with caterer and consultations with waste management operator/municipality)	Strategy	Plan and set up com- munication channels	First consultation with each key stakeholder	Regular consultations					
GOVERNANCE AND STRATEGY	Very high	Organise waste assessments to understand waste composition, with a focus on single-use plastics	Strategy	First assessment or audit		Annual assessment or audit					
WASTE COLLECTION AND MANAGEMENT	Very high	Guarantee an effective waste management supply chain by: - choosing materials that can be recovered through the local waste management supply chain - providing separate bins (for plastic, glass, aluminium, organic, paper) to enable separate waste collection throughout the entire football facility (hospitality areas, concessions and offices/staff areas) - educating spectators and encouraging them to use bins correctly ¹	Recycle	Plan and set up		<40% of all mixed and plastic F&B packaging waste generated sent to landfill or incinerated		<30% of all mixed and plastic F&B packaging waste generated sent to landfill or incinerated	<20% of all mixed and plastic F&B packaging waste generated sent to landfill or incinerated	0% of all mixed and plastic F&B packaging waste generated sent to landfill or incinerated	
GOVERNANCE AND STRATEGY	High	Measure and analyse performance indicators in terms of waste production, waste reduction and recycling, especially in F&B	Strategy		First analysis and definition of baseline and improve- ment KPIs	First verification of KPIs	Continuous verification of KPIs				

E1. FOOD AND BEVERAGE

TABLE 1 IMPLEMENTATION ROADMAP

E1. FOOD AND BEVERAGE								TABLE 1 IMPLEMENTATION ROADMAP			
AREA	PRIORITY	ACTION	4R APPROACH	2022	2023	2024	2025	2026	2027-28	2029-30	
GOVERNANCE AND STRATEGY	High	Provide suppliers with packaging and F&B procurement guidelines, including waste minimisation targets	Strategy		Plan, set up and complete	Annual compliance verification					
F&B OFFER	Very high	Optimise menu planning and implement an effective inventory management system to minimise food waste (hospitality)	Reduce		Plan and set up	<30% of all prepared food wasted ⁷		<20% of all prepared food wasted ⁷	<15% of all prepared food wasted ⁷	<10% of all prepared food wasted ⁷	
F&B OFFER	Very high	Choose foods with minimal or no packaging (hospitality) ²	Reduce		Plan and set up	>30% food options with optimised (eliminated or reduced in weight/ volume) packaging	>50% food options with optimised (eliminated or reduced in weight/ volume) packaging	>70% food options with optimised (eliminated or reduced in weight/ volume) packaging	100% food options with optimised (eliminated or reduced in weight/ volume) packaging	Continuous optimisation	
F&B OFFER	Very high	Choose foods with minimal or no packaging (concessions) ²	Reduce		Plan and set up	>30% food options with optimised (eliminated or reduced in weight/ volume) packaging	>50% food options with optimised (eliminated or reduced in weight/ volume) packaging	>70% food options with optimised (eliminated or reduced in weight/ volume) packaging	100% food options with optimised (eliminated or reduced in weight/ volume) packaging	Continuous optimisation	
F&B OFFER	High	Train staff (including concessions staff) on how to reduce the environmental impact of F&B	Strategy		Initial training	Annual training					
F&B OFFER	High	Install refill stations for water and other beverages to reduce bottle purchases (hospitality)	Reuse		Plan and set up	>40% of all litres served in hospitality served in refillable containers	>50% of all litres served in hospitality served in refillable containers	>60% of all litres served in hospitality served in refillable containers	>80% of all litres served in hospitality served in refillable containers	Continuous optimisation	

E1. FOOD AND BEVERAGE

TABLE 1 IMPLEMENTATION ROADMAP

E1 . FOOD A	and bever	RAGE						TABLE IMPLEN	1 MENTATION	ROADMAP
AREA	PRIORITY	ACTION	4R APPROACH	2022	2023	2024	2025	2026	2027-28	2029-30
F&B OFFER	High	Promote reusable cups for drinks ³ (hospitality)	Reuse		Plan and set up		>80% of all tableware and cups used in hospitality reused in subsequent matches	Con	tinuous optimis	ation
F&B OFFER	High	Use reusable tableware ⁴ (hospitality)	Reuse		Installation		>80% of all tableware and cups used in hospitality reused in subsequent			
WASTE COLLECTION AND MANAGEMENT	Very high	Donate unused prepared food⁵	Recycle		Plan and set up	<40% of all food waste generated sent to landfill or incinerated		<30% of all food waste generated sent to landfill or incinerated	<20% of all food waste generated sent to landfill or incinerated	
WASTE COLLECTION AND MANAGEMENT	High	Train the cleaning service provider on how to sort and separate F&B waste	Strategy		Initial training		I	Regular trainin	9	
F&B OFFER	High	Install beverage draft systems to reduce bottle purchases (concessions)	Reuse			Installation	>10% of all litres served in concessions served in refillable containers	>20% of all litres served in concessions served in refillable containers	>40% of all litres served in concessions served in refillable containers	>50% of all litres served in concessions served in refillable containers

E1. FOOD AND BEVERAGE

TABLE 1 IMPLEMENTATION ROADMAP

AREA	PRIORITY	ACTION	4R APPROACH	2022	2023	2024	2025	2026	2027-28	2029-30
WASTE COLLECTION AND MANAGEMENT	Very high	Organise initiatives to encourage separate waste collection outside the football facility ⁶	Recycle			Plan and set up		Demon- strable reduction in waste generated and improved recycling rate compared with the planning and set-up phase	Continuc redu	ous waste ction
F&B OFFER	High	Promote reusable cups for drinks ³ (concessions)	Reuse				Installation	>20% of all tableware and cups used in concessions reused in subsequent matches	>40% of all tableware and cups used in concessions reused in subsequent matches	>50% of all tableware and cups used in concessions reused in subsequent matches

Alternative action 1: Install smart bins that automatically separate different types of waste. Alternative action 2: Have the cleaning service provider separate waste after each match. Each football organisation is advised to test different options and compare their respective recycling rates to identify the best option for the specific context. Separate bins are not needed in places where local authorities require all waste to be collected together and then sorted by the waste management operator.

An effective way of incentivising spectators to use recycling bins correctly is to offer rewards or prizes such as tickets, money, or similar (e.g. install machinery that collects PET bottles in exchange for a small reward). Fallback or temporary solution for waste that cannot be recycled: recover the energy generated during incineration.

2. This includes packaging used during transportation.

Please note that this action should be implemented in conjunction with the action 'Guarantee an effective waste management supply chain', choosing packaging materials that can be recovered in the local waste management supply chain.

Particular attention should be paid to minimising plastic packaging as per UEFA's zero plastic waste target. When eliminating plastic packaging, the priority should be to reduce packaging overall rather than just switching to another material. When such a switch is unavoidable, an ad hoc analysis should be carried out to confirm the best option.

- 3. Fallback or temporary solution: use compostable single-use cups with a water-based coating. Please note that the advantages of reusable cups depend on how the practice is implemented (see the relevant implementation data sheet in Appendix 1). If reusable cups are not the optimal solution, an ad hoc analysis should be carried out to confirm the best option.
- 4. Fallback or temporary solution: use compostable tableware with a water-based coating. If reusable tableware is not the optimal solution, an ad hoc analysis should be carried out to confirm the best option. Although not included in the roadmap, efforts should also be made to introduce reusable tableware in concessions.
- 5. Alternative action 1: install biodigesters (machines that decompose leftover food waste) or send food waste to a local biodigester. Alternative action 2: install organic dehydrators (machines that heat waste and dehydrate the product into a soil additive used to nourish gardens).

Fallback or temporary solution: recover the energy generated during incineration.

- 6. Possible activities may require the agreement of the local authorities and could range from awareness-raising campaigns to asking spectators not to bring bottles to the football stadium to practical recycling actions.
- 7. This includes unused food that will be donated but excludes packed food that can be taken back by suppliers and reused for later events.

^{1.} Please note that the types of waste to be separated might be different in different areas of the football organisation or facility, and bin placement should be planned accordingly.

ADDITIONAL ACTIONS

'MEDIUM PRIORITY' AND 'LOW PRIORITY'

The following additional actions may facilitate the implementation of the 4R framework.

MEDIUM PRIORITY:

- · Use reusable tableware in concessions
- Display panels informing fans about separate waste collection near concessions

LOW PRIORITY:

- Carry out surveys to understand fans' environmental awareness and behaviour
- Close the loop by recycling waste to produce other essential football items (e.g. recycle plastic bottles into seats)

Any of these actions undertaken need to be implemented in a way that is compatible with the general roadmap.







1. AWARENESS Broad understanding of F&B items produced for the event and their impact on event sustainability COMMITMENT Define an overall circular economy strategy in F&B Broad understanding of F&B items produced for the event and their impact on event sustainability Organise waste assessments to understand waste composition High organise waste assessments to understand waste composition Organise waste assessments or spectator awareness campaigns regarding the commitment to manage waste streams, reduce the production of single-use items, and promote recycling, recovery and upcycling programmes in F&B Define an overall circular economy strategy in F&B Very	E1 . FOOD A	ND BEVERAGE	TABLE 2 ADVANCEMEN	T PHASES
1. AWARENESS produced for the event and their impact on event sustainability Organise waste assessments to understand waste composition 2. BASIC: COMMITMENT Public commitment to considering the 4Rpolicy during F&B procurement for the event upcycling programmes in F&B Define an overall circular economy strategy in F&B Organise waste assessments to understand waste composition High Organise waste assessments to understand waste composition Provide evidence of public statements or spectator awareness campaigns regarding the commitment to manage waste streams, reduce the production of single-use items, and promote recycling, recovery and upcycling programmes in F&B Very	PHASE	GOAL	ACTIONS	PRIORITY
2. BASIC: COMMITMENT 4Rpolicy during F&B procurement for the event 4Rpolicy during F&B procurement for the upcycling programmes in F&B Define an overall circular economy strategy in F&B Very	1. AWARENESS	produced for the event and their impact	Organise waste assessments to understand waste composition	High
		4Rpolicy during F&B procurement for the	manage waste streams, reduce the production of single-use items, and promote recycling, recovery and	Very high
Circularity strategy in place for F&B Collect and analyse performance indicators in terms of waste production and recycling, especially in F&B High			Define an overall circular economy strategy in F&B	Very high
		Circularity strategy in place for F&B	Collect and analyse performance indicators in terms of waste production and recycling, especially in F&B	High
Train staff (including concessions staff) on how to reduce the environmental impact of F&B High			Train staff (including concessions staff) on how to reduce the environmental impact of F&B	High
Provide suppliers with packaging and F&B procurement guidelines , including waste minimisation targets High			Provide suppliers with packaging and F&B procurement guidelines , including waste minimisation targets	High
3. INTERMEDIATE: ACTION 4R integrated into discussions with suppliers and partners 4R integrated into discussions with suppliers and suppliers a			actions (e.g. regular meetings with caterer service provider and consultations with waste management	Very high
Train the cleaning service provider on how to sort and separate F&B waste High			Train the cleaning service provider on how to sort and separate F&B waste	High
Guarantee an effective waste management supply chain by: choosing materials that can be recovered through the local waste management supply chain recycling system optimisation in place providing separate bins (for plastic, glass, aluminium, organic, paper) to enable separate waste collection throughout the entire football facility (hospitality areas, concessions and offices/staff areas) educating spectators and encouraging them to use bins correctly ¹		Recycling system optimisation in place	 choosing materials that can be recovered through the local waste management supply chain providing separate bins (for plastic, glass, aluminium, organic, paper) to enable separate waste collection throughout the entire football facility (hospitality areas, concessions and offices/staff areas) 	Very high
Choose foods with minimal or no packaging (hospitality) ²			Choose foods with minimal or no packaging (hospitality) ²	Very high
Choose foods with minimal or no packaging (concessions) ²			Choose foods with minimal or no packaging (concessions) ²	Very high
			Install refill stations for water and other beverages to reduce bottle purchases (hospitality)	High
Install beverage draft systems to require hottle hurchases (concessions)		Packaging minimisation and phase-out of single-use items Install beverage draft systems to reduce bottle purchases (concessions) Promote reusable cups for drinks³ (hospitality)		High
				High
4. ADVANCED: Promote reusable cups for drinks ³ (concessions) High			Promote reusable cups for drinks³ (concessions)	High
Use reusable tableware ⁴ (hospitality) High	RESOLIS		Use reusable tableware ⁴ (hospitality)	High
Food waste minimisation Optimise menu planning and implement an effective inventory management system to minimise food waste (hospitality)		Food waste minimisation		Very high
Donate unused prepared food ⁵			Donate unused prepared food ⁵	Very high
Initiatives to encourage waste reduction outside the football facility Organise initiatives to encourage separate waste collection outside the football facility Very		_	Organise initiatives to encourage separate waste collection outside the football facility ⁶	Very high
ASPIRATIONAL: BEST PRACTICE Zero-waste packaging, with special attention to plastics Activate all best practices (listed in the 'Packaging minimisation and phase-out of single-use items' goal) to reach targets		, , ,		NA
Zero food waste Activate all best practices (listed in the 'Food waste minimisation' goal) to reach targets NA	DEST PRACTICE	Zero food waste	Activate all best practices (listed in the 'Food waste minimisation' goal) to reach targets	NA

IMPLEMENTATION RESPONSIBILITIES

Roles and responsibilities in relation to the implementation roadmap have been defined using the RACI matrix:

RESPONSIBLE (R):

Responsible stakeholders are those who actively implement the action concerned.

ACCOUNTABLE (A):

The accountable stakeholder has ownership of the action concerned and gives final approval. There should be only one accountable stakeholder for each action.

CONSULTED (C):

Consulted stakeholders for a given action are those who can provide relevant expertise, information and insights and need to be actively involved in decision-making.

INFORMED (I):

Informed stakeholders for a given action are those who are not actively involved in its decision-making or implementation but need to be informed of its progress as they might be affected.



TABLE 3 RACI MATRIX OF STAKEHOLDER INVOLVEMENT

STAKEHOLDERS INVOLVED

ACTION	UEFA	FOOTBALL FACILITY OPERATORS/CLUBS	NATIONAL ASSOCIATIONS	F&B SPONSORS AND SUPPLIERS	CATERING SUPPLIERS	CLEANING AND WASTE MANAGEMENT SERVICE PROVIDERS
Define an overall circular economy strategy for F&B	С	R/A	С	С	С	С
Organise waste assessments to understand waste composition	I	А	-	I	I	R
Measure and analyse performance indicators in terms of waste production and recycling, especially in F&B	I	R/A	I	I	I	R
Train staff (including concessions staff) on how to reduce the environmental impact of F&B	С	R/A	С	С	С	С
Provide suppliers with packaging and F&B procurement guidelines, including with waste minimisation targets	C (R/A for matches managed by UEFA)	R/A	-	С	С	I
Guarantee an effective waste management supply chain by: - choosing materials that can be recovered through the local waste management supply chain - providing separate bins (for plastic, glass, aluminium, organic, paper) to enable separate waste collection throughout the entire football facility (hospitality areas, concessions and offices/staff areas) - educating spectators and encouraging them to use bins correctly	I	R/A	I	С	С	R
Optimise menu planning and implement an effective inventory management system to minimise food waste (concessions)	-	А	-	I	R	I
Choose foods with minimal or no packaging	- (R/A for matches managed by UEFA)	R/A	-	R	R	I
Install refill stations for water and other beverages to reduce bottle purchases	- (R/A for matches managed by UEFA)	R/A	-	R	I	I
Promote reusable cups for drinks ¹	- (R/A for matches managed by UEFA)	R/A	-	R	R	I
Use reusable tableware²	- (R/A for matches managed by UEFA)	R/A	-	R	R	I
Donate unused prepared food ⁵	- (R/A for finals)	А	-	R/I	R	R
Organise initiatives to encourage separate waste collection outside the football facility ⁶	-	R/A	-	I	-	R
Train the cleaning service provider on how to sort and separate F&B waste	-	R/A	-		I	С

E1. FOOD AND BEVERAGE

ACTORS

TABLE 4
KEY SUCCESS FACTORS
AND STAKEHOLDER ENGAGEMENT

AOTORO	RET GOODES THE TOTAL AND STARETISEDER ENGAGEMENT
ALL STAKEHOLDERS	Walk the talk: sustainability is a shared responsibility and everyone must play their part.
ALL STAKEHOLDERS	If an activity seems economically unfeasible (because of high initial costs or reduced profits), calculate the return on investment as many initiatives have a short payback period or provide economic benefits in the medium term.
ALL STAKEHOLDERS	Educate spectators but focus on maximising waste control and reduction at the source to minimise risk.
ALL STAKEHOLDERS	Collaborate with the marketing and communication departments: a well-communicated project improves brand image and is therefore better received by external partners whose support is essential for the project's success. If partners have conflicting priorities, prepare a strong case for how not committing to sustainability would damage branding and sales. Collaboration with the marketing and communication departments is also necessary as many activities (e.g. phasing out single-use items) require a rethinking of the on-product marketing strategy.
ALL STAKEHOLDERS	Collect data and use quantitative tools to make decisions: sustainability is a science requiring a scientific approach and the time frame to drastically reduce our impact is short.
ALL STAKEHOLDERS	Adopt a science-based and holistic approach: do not focus on claims but on real impact, considering the whole life cycle of products and materials. For example, while compostable products reduce waste, they do not necessarily lead to reduced emissions, and the overall impact of the product should be taken into account when making a decision about its use.
ALL STAKEHOLDERS	Follow the zero waste hierarchy: although zero waste can theoretically be achieved in many ways, including focusing mostly on recycling, UEFA follows the international consensus on how to prioritise the 4R: • Reduce: A reduction in the amount of waste generated by changing the design, manufacture, purchase or use of materials or products and by refusing unnecessary production to stop waste at the source. • Reuse: The repeated use of a product or component for its intended purpose without significant modification. • Recycle: The transformation of a product or component into its basic materials or substances and to reprocess them into new materials. • Recover: This is the last resort when the other options are not feasible. It can be defined as the incineration of material with energy recovery. More broadly, recovery refers to waste that is not recycled, but that is used as a source of energy or valuable biochemical compounds. The overarching R is 'refuse', which stops waste from being produced at the source by avoiding unnecessary production. The pyramid should be followed in combination with the principle 'Adopt a science-based and holistic approach'.
FOOTBALL FACILITY OPERATORS/CLUBS	To avoid the risk of parties shifting responsibility to one another, clearly allocate them to the various parties (football facility operator/club, caterer, F&B sponsors, cleaning service provider) with KPIs. This should be done jointly to maximise commitment from all parties and ensure the optimal distribution of tasks.
FOOTBALL FACILITY OPERATORS/CLUBS	If a supplier has conflicting priorities, evaluate whether to encourage them to align with the football organisation's policies (e.g. by providing solutions to address their concerns) or to switch to a different supplier. Sustainability should be one of the selection criteria for all partners and suppliers. If commercial partners have conflicting priorities, sustainability should be one of the common objectives.

KEY SUCCESS FACTOR AND STAKEHOLDER ENGAGEMENT

^{25.} Life Tackle, accessed on 23 April 2022, https://lifetackle.eu/assets/files/OM_PR2_SUSTAINABLE_PROMOTIONAL_PRODUCTS.pdf

^{26.} Ellen MacArthur Foundation, 'Finding a common language – the circular economy glossary', accessed on 23 April 2022, https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/glossary.

^{27.} Piero Morseletto, 2020, 'Targets for a circular economy', Resources, Conservation and Recycling, Volume 153, 104553, ISSN 0921-3449, accessed on 23 April 2022, available at https://www.sciencedirect.com/science/article/pii/S0921344919304598.



ENERGY AND WATER

THIS SECTION WILL BE EXPANDED IN THE COURSE OF THE YEAR 2023.

The circular economy entails getting the most out of materials, keeping products and resources in use and designing them to be cycled back into the economy, thereby eliminating waste.



E2. ENERGY AND WATER



It is also a vital pillar of the energy transition.
Reflecting our holistic approach to the circular economy, this section focuses on wasted energy and water in the football context and provides guidance and best practices on how to best use those resources within the 4R framework and in accordance with international standards such as those used by the World Bank²⁸ and the Ellen McArthur Foundation²⁹.

THIS SECTION WILL FOCUS ON

- Active and passive energy
- The role of renewable energy
- The full water cycle

PURPOSE

Support football stakeholders in reducing their energy and water usage through collaboration and sharing of best practices.

OBJECTIVE

Reduce energy and water usage to a strict minimum.

^{28.} https://www.worldbank.org/en/topic/water/publication/wicer#:~:text=Circular%20 economy%20principles%20offer%20an,of%20nutrients%20and%20other%20materials

^{29.} https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview



APPAREL AND FOOTBALL EQUIPMENT

THIS SECTION WILL BE EXPANDED IN THE COURSE OF THE YEAR 2023.

The circular economy entails getting the most out of materials, keeping products and resources in use and designing them to be cycled back into the economy, thereby eliminating waste.



Our materiality assessment identified sports equipment as a significant source of waste. The sports apparel market (for all sports, with football being the largest contributor) was valued at \$167.7bn in 2018 and is estimated to reach \$248.1bn by 2026, registering a compound annual growth rate (CAGR) of 5.1% from 2019 to 2026.

Furthermore, fashion production in general makes up 10% of humanity's carbon emissions, dries up water sources, and pollutes rivers and streams. Moreover, 85% of all textiles are sent to landfill (UNECE, 2018³⁰), and washing

some types of clothes releases significant amounts of microplastics, which end up in the sea.

Due to its nature, sports equipment is often designed for a specific season or event, meaning that it has a limited lifespan and tends to be single-use or not used to its full potential. In collaboration with football stakeholders, UEFA will undertake a review of suppliers and processes and of the material composition of the products purchased in collaboration with football stakeholders with a view to identifying initiatives, best practices and concrete projects that can be put in place to optimise product life cycles and minimise waste.

30. https://unece.org/DAM/RCM_ Website/RFSD_2018_Side_event_ sustainable_fashion.pdf



WHAT APPAREL AND FOOTBALL EQUIPMENT IS COVERED?

Apparel encompasses all clothing, including footwear, worn for physical exercise, merchandising and marketing purposes. In football, this typically includes shorts, T-shirts, polo shirts, tracksuits, bibs, socks, shin guards and footwear (football boots and trainers). The fabrics most commonly used to manufacture these items are artificial polymers, but alternatives such as cotton, wool and silk exist and can be coupled with spandex for added extra elasticity.

Football equipment includes balls in particular, but also goal nets, corner flags and training equipment (e.g. cones...), among others.

BUSINESS OPPORTUNITIES

UEFA is determined to tackle all negative effects of football on the environment and society, which means supporting football stakeholders in reducing the amount of waste generated through collaboration and sharing of best practices. No specific targets have been set yet for the reduction in apparel and equipment waste owing to the sector's wide reach, which limits UEFA's influence. This section will therefore be developed in collaboration with the whole football ecosystem (clubs, leagues, players, referees, officials, coaches and volunteers) and in accordance with the UEFA Football Sustainability Strategy 2030.

OBJECTIVE

No apparel or football equipment sent to landfill and increased product lifespans as a result of following the 4R framework.







This section will be expanded in the course of the year 2023. The circular economy entails getting the most out of materials, keeping products and resources in use and designing them to be cycled back into the economy, thereby eliminating waste.

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FURNITURE AND IT EQUIPMENT

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EVENT MATERIALS

OUR MATERIALITY ASSESSMENT IDENTIFIED SIGNAGE AS SIGNIFICANT SOURCE OF WASTE. DUE TO ITS NATURE, SIGNAGE IS OFTEN DESIGNED TO BE EVENT-SPECIFIC AND THEREFORE TENDS TO BE SINGLE-USE. UEFA WILL UNDERTAKE AN IN-DEPTH REVIEW OF SUPPLIERS AND PROCESSES AND OF THE MATERIAL COMPOSITION OF THE PRODUCTS PURCHASED WITH A VIEW TO ACHIEVING ZERO-WASTE FOOTBALL MATCHES.

WHAT IS SIGNAGE?

UEFA's signage unit is responsible for branding and dressing UEFA's venues, using various visual elements to ensure that all UEFA competitions and events are clearly recognisable as such.

The signage unit works closely with all of UEFA's competence centres since branding is required in different areas. For example, this unit ensures the visibility of UEFA's partners, most notably in media backdrops and pitch perimeter advertising. The signage unit is also responsible for installing directional signs to help people find their way around inside the venue.

SUSTAINABILITY

UEFA's signage unit cares about sustainability and tries to improve practices whenever possible. The unit's

corporate social responsibility activities are presented in reports shared with the FSR division. Various measures have been introduced to improve sustainability, such as reusing and recycling season and final branding materials, tracking waste management KPIs and testing new eco-friendly branding materials.

BUSINESS OPPORTUNITIES

UEFA's signage unit helps to increase the visibility of UEFA's brand, but the materials used create waste. The unit is committed to reducing its CO₂ footprint by planning the use and disposal of materials mindfully and aligning with UEFA's environmental policy.

OBJECTIVE

No signage items sent to landfill and increased product lifespans as a result of following the 4R framework.

BRAND PRODUCTION

OUR MATERIALITY ASSESSMENT IDENTIFIED BRAND PRODUCTION AS SIGNIFICANT SOURCE OF WASTE. DUE TO ITS NATURE, BRANDING MATERIALS ARE OFTEN DESIGNED TO BE EVENT-SPECIFIC AND THEREFORE TEND TO BE SINGLE-USE. UEFA WILL UNDERTAKE AN IN-DEPTH REVIEW OF SUPPLIERS AND PROCESSES AND OF THE MATERIAL COMPOSITION OF THE PRODUCTS PURCHASED WITH THE AIM OF ACHIEVING ZERO-WASTE FOOTBALL MATCHES.

WHAT IS BRAND PRODUCTION?

UEFA's brand production unit is responsible for the procurement, design and production of all non-signage branded materials and clothing, including bibs, gifts and giveaways for most UEFA competitions. The unit's activities encompass sourcing, purchasing, quality control, budget control, product research, development and testing, internal stakeholder research and collecting regular feedback on all items.

SUSTAINABILITY

International freight is currently estimated to account for around 30% of all transport-related CO2 emissions and more than 7% of all global emissions. It is therefore important for the brand production unit to reduce the impact of transporting branded items, which is why we have increased by 60% the proportion of our products manufactured in Europe over the last two years.

Furthermore, we avoid air freight of items produced further afield, favouring slower transportation modes such as train and boat whose emissions are up to 150 times lower than those of planes.

In our quest for sustainability, we are opting for materials offering a reduced environmental impact throughout their entire life cycle, from the extraction of the raw materials, through the production process to use and disposal. We also prioritise items made from a higher percentage of recycled materials or using less water or chemicals.

About 8% of the world's oil is used to make plastic, even though substitutes requiring fewer fossil fuels and greenhouse gas emissions exist (namely recycled, biobased and biodegradable plastics). We have reduced by 70% the use of plastic our products' packaging over the last two years.

However, our journey towards a low-carbon, circular economy has only just begun. The brand production unit is committed to improving practices and implementing performance indicators to ensure that the environmental impact of branding during events is kept to a minimum.

BUSINESS OPPORTUNITIES

Like signage, branded items increase the visibility of UEFA's brand.

The brand production unit is committed to producing less waste by implementing best practices, producing durable items and aligning with UEFA's environmental policy. We also anticipate financial savings as a result of managing quantities in accordance with the 4R model, in particular the focus on reducing, reusing and recycling.

OBJECTIVE

No brand production items sent to landfill and increased product lifespans as a result of following the 4R framework.



FURNITURE AND IT EQUIPMENT

During UEFA events, a large amount of furniture and IT equipment is used, so this was identified in the materiality assessment as having a significant impact.

Due to its nature, furniture and IT equipment is often designed for a specific season or event, meaning that it has a limited lifespan and tends to be single-use or not used to its full potential. In collaboration with football stakeholders, UEFA will undertake a review of suppliers and processes and of the material composition of the products purchased, suppliers and processes with a view to identifying initiatives, best practices and concrete projects that can be put in place to optimise product life cycles and minimise waste.

WHAT FURNITURE AND IT EQUIPMENT IS COVERED?

Relevant furniture includes welcome desks, support structures for signs, desks, chairs, tables, wall dividers, retractable barriers, etc. IT equipment usually consists of laptops, screens, phones, TV sets, headsets, projectors, printers, conference devices, etc.

BUSINESS OPPORTUNITIES

Support football stakeholders in reducing the amount of waste generated through collaboration and sharing of best practices.

OBJECTIVE

No furniture or IT equipment used during football events sent to landfill.





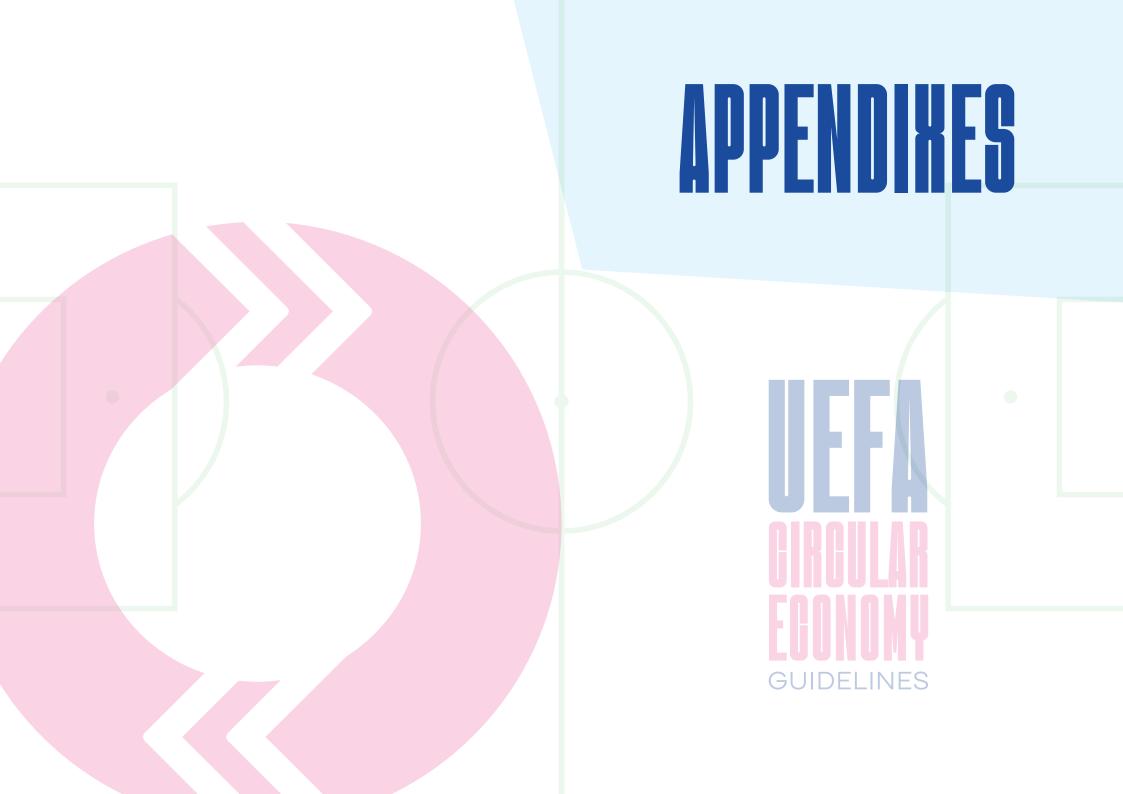
NEXT STEPS

IN THE COURSE OF THE YEAR 2023
THE CIRCULAR ECONOMY GUIDELINES WILL
BE EXPANDED TO THE THREE FOLLOWING
FOOTBALL FOCUS AREAS:

Energy & water, apparel & football equipment, and event materials (signage, brand production and furniture & IT equipment).

In addition, the guidelines will be shared across the European football ecosystem. UEFA will actively engage with National Associations' and Clubs' sustainability officers to support the implementation of best practices through knowledge transfer workshops and accurate monitoring of the various activities.







TO IDENTIFY THE BEST WAY TO IMPLEMENT ACTIONS DISCUSSED IN THE 4R FRAMEWORK, WE HAVE CONSULTED CLUBS PARTICIPATING IN THE 2021/22 UEFA CHAMPIONS LEAGUE.

- We conducted surveys of 15 clubs, individual interviews with five clubs and a consultation group with ten clubs as well as piloting some practices in selected football facilities.
- Implementation data sheets were produced only for activities for which the consultation groups, surveys, individual interviews and pilot projects yielded sufficient data.

VERY HIGH PRIORITY

- Define an overall circular economy strategy for F&B
- Guarantee an effective waste management supply chain by:
 - choosing materials that can be recovered through the local waste management supply chain
 - providing separate bins (for plastic, glass, aluminium, organic, paper) to enable separate waste collection throughout the entire football facility (hospitality areas, concessions and offices/staff areas)
 - educating spectators and encouraging them to use bins correctly
- Optimise menu planning and implement an effective inventory management system to minimise food waste (hospitality)
- Install biodigesters (machines that decompose pre-consumer food waste) or donate unused food

HIGH PRIORITY

- · Promote reusable cups for drinks
- Install refill stations for water and other beverages to reduce bottle purchases

MOST COMMON BENEFITS

ECONOMIC	BRANDING	
Although setting a strategy requires an initial investment (effort and money, if external professionals are involved), it guarantees that the best decisions are made → Reduced costs relating to trial and error.	A circularity strategy can be communicated to external stakeholders \rightarrow Improved image in relation to sustainability efforts.	

MOST COMMON CHALLENGES

CULTURE	EFFORT	INFRASTRUCTURE/LOCATION
No challenges identified.	 The scope of a sustainability strategy can be quite broad (food, merchandising, etc.) → Start from the most pressing issues (please see step 2 of the methodology: 'Analyse your specific context and identify key issues in your organisation, facilities and events'). Setting a circularity and sustainability strategy requires experienced professionals, which the organisation might not have → May require external support. 	No challenges identified.

TECHNICAL WARNINGS

Suppliers who are not aligned with the football organisation's sustainability agenda might limit the strategy's effectiveness \rightarrow It might be necessary to make policies mandatory/include sustainability criteria in the supplier selection process.

BEST PRACTICES BASIC	BEST PRACTICES INTERMEDIATE	BEST PRACTICES ADVANCED
 Use these guidelines to identify priority activities relating to waste management. To reduce the scope of the strategy, start with the most pressing issues (please see step 2 of the methodology: 'Analyse your specific context and identify key issues in your organisation, facilities or event'). 	Calculate the return on investment of possible activities. An activity that seems expensive might actually offer positive returns in the medium term.	 Circularity does not only relate to waste: combine a 4R strategy with an emissions reduction strategy. Perform analyses such as calculating environmental footprint of the organisation/facility/match to identify major sources of waste.

VERY HIGH PRIORITY ACTIVITIES DEFINE AN OVERALL CIRCULAR FCONOMY STRATEGY FOR F&B

CASE STUDY

MANCHESTER CITY FC'S OVERALL F&B CIRCULAR ECONOMY STRATEGY

Requiring catering services provided by a contractor to be sustainable is no longer only a moral decision but also increasingly a business decision. It can lead to both a smaller impact on the environment and higher-quality ingredients that improve the product delivered to clients. The club's caterer (F3) has investigated a range of initiatives over the last two years, including the following:

WASTE MANAGEMENT

REDUCING food waste is a major focus at the club's City of Manchester Stadium, and the F3 team have made huge strides in reducing levels of waste by 80% over the last season. This was achieved by reengineering the menus and raising awareness among guests and employees. F3 have also successfully implemented an ORCA biodigester that 'eats' food waste and turns it into wastewater. The caterer has also established partnerships with local and international charities and food banks³¹ to redistribute any unwanted food that cannot be utilised within its shelf life.

PACKAGING: F3 have instigated several initiatives to **reduce** the amount of packaging used for products that they receive and deliver, such as: reducing the use of cardboard and replacing vacuum bags with peach paper.

mission to eradicate all single-use plastic from the stadium. The 2022/23 season will see the introduction of soft drink dispensing towers in newly designed spaces to reduce the number of plastic drinks bottles used.

FOOD SOURCING: F3 aims to showcase the very best food produced in northwest England, sourcing ingredients from local suppliers to drive down the carbon

OVERALL BENEFITS ACHIEVED

footprint.

By collaborating with and across the club, it has been possible to maintain the best value while improving the overall provision of local, high-quality produce. This has also enabled F3 to focus on smarter ordering, thereby reducing waste, transportation costs and food miles. Sharing these practices with fans and customers adds value and improves options to attract additional events and functions, ensuring that F3 is contributing to the club's annual 14% CO2 reduction target.



- Choose materials that can be recovered through the local waste management supply chain
- Provide separate bins (for plastic, glass, aluminium, organic, paper) to enable separate waste collection throughout the entire football facility (hospitality areas, concessions, and offices/staff areas)
- Educate spectators and encourage them to use bins correctly

MOST COMMON BENEFITS					
ECONOMIC	BRANDING				
The higher the waste separation rate, the lower the cost of waste management.	Very visible to spectators → Good tool to show the football organisation's awareness of sustainability.				

MOST COMMON CHALLENGES

CULTURE	EFFORT	INFRASTRUCTURE/LOCATION
Football organisations cannot control spectators' behaviour and many have found relying on spectators to put waste in the correct bin to be a challenge→ The focus on recycling should be a preliminary step while working towards waste reduction. This is also in line with the zero waste hierarchy, whereby recycling needs to be secondary to reducing and reusing. However, waste cannot be completely eliminated → Recycling still plays a fundamental role in circularity and efforts must be made to raise awareness among all parties.	 Requires investment in equipment. Various parties need to be involved to ensure that waste is disposed of in the correct bins → This activity needs to be implemented in conjunction with the activity 'Activate communication channels with key stakeholders and service providers involved in F&B improvement actions (e.g. regular meetings with caterer and consultations with waste management operator/municipality'). 	 Local security regulations might be an obstacle. Many football facilities have a binary system for spectators in concessions, with one bin for plastics and one for general waste. While this is simple from a spectator's perspective, it has two limitations: It hinders innovations in packaging (e.g. switching to compostable food packaging), as any packaging that is not plastic is put in the general waste bin. The plastic bin serves little purpose during matches at which spectators are not given plastic bottles for safety reasons. Enough space to accommodate multiple bins is needed. → Recycling multiple types of waste requires rethinking the recycling system as a whole, especially in concessions.



TECHNICAL WARNINGS

- · The football organisation can only influence, not control, spectators' behaviour.
- The risk of contamination is high (a whole bin bag might be refused by the recycling partner if it contains an item placed in the wrong bin) → In addition to maintaining recycling only as a secondary action after reducing and reusing, various ways of maximising the recycling rate can be tested. Below are some examples implemented by different football organisations:
- Use rewards to engage fans in separate waste collection campaigns (e.g. by adopting reverse vending machines that collect PET bottles in exchange for a reward, as was done by Inter Miami CF).
- Raise awareness among spectators about the issue of waste (e.g. by showing impactful videos of waste generated during a match or by having staff collect waste from the floor in front of spectators to show the effort required).
- Have the cleaning service provider separate waste after the match, especially waste found under seats.

BEST PRACTICES BASIC BEST PRACTICES BEST PRACTICES BEST PRACTICES ADVANCED

- To support the introduction of more environmentally friendly packaging (e.g. compostable food packaging), test the switch from a binary system to bins for multiple types of waste.
- Try to ensure that different suppliers of products offered
 to spectators use the same type of packaging in order
 to reduce the risk of confusion (e.g. if a beverage
 supplier switches to compostable cups and this is
 confirmed to have a lesser impact than for other food
 packaging and cups given to spectators, ask all other
 suppliers to switch to the same type of compostable
 packaging so that spectators can throw all their waste
 away in the same bin).
- Place sorting bins at the gates of the football facility, especially bins for plastic bottles and caps.
- Train suppliers on the sustainability agenda and on recycling best practices.

- One possible solution to encourage correct recycling by catering employees is to apply penalties for failing to separate waste correctly.
- Test different incentives to encourage spectators to recycle, including those listed in under 'Technical warnings'.
- Focus on waste reduction and make recycling a secondary action.
- To guarantee consistency, make policies mandatory/ include sustainability criteria in the supplier selection process.
- When collecting water bottles at the gates, separate those that have been opened from closed bottles that can be reused/donated
- Have stewards going around the stands not only to sell F&B during the match but also to collect recyclable waste in a specific bin bag only accessible by the football facility's staff → This both raises awareness among spectators and maximises the recycling rate by maintaining control of waste sorting.

VERY HIGH PRIORITY ACTIVITIES GUARANTEE AN EFFECTIVE WASTE MANAGEMENT SUPPLY CHAIN

CASE STUDY

ALIGNING DIFFERENT SUPPLIERS TO IMPROVING RECYCLING RATES

- UEFA was organising a final at football facility
 X (name cannot be disclosed) and had contracted two beverage suppliers and a food supplier for concessions.
- The cups and food packaging were made of paper with a low-density polyethylene (LDPE) coating and therefore could not be recycled and had to be thrown away in general waste bins.

- Beverage supplier A was interested in reducing the environmental impact of its cups. It was evaluating the options of choosing a specialist recycling supplier that could separate the plastic coating from the paper or of switching to single-use cups made of paper with water-based coating. Such a switch posed three challenges:
- The need for the football facility to manage an additional waste stream during the match
- The complexity of using cups made of two different materials, as beverage supplier B was still using cups with a plastic-based coating
- The difficulty of finding facilities available for recycling or composting single-use cups with a water-based coating
- In the meantime, the food supplier wanted to introduce food packaging made from paper with a special compostable coating. The packaging itself was potentially recyclable, but dirty food packaging could only be composted, which would have required separate collection. Adding bins

before the final was not feasible. However, the supplier identified a composting facility through a partner and so was able to agree with the football facility to separate its compostable food packaging after the match and take it to the composting facility.

- The solution identified by the food supplier also made it possible for beverage supplier A to separate and compost paper cups with a water-based coating after the match. Thanks to the exchange of information between the football facility and its suppliers, single-use cups made of paper with a water-based coating became a feasible option for beverage supplier A.
- Finally, beverage supplier B was also encouraged to adopt paper cups with a water-based coating. This meant that one solution could be adopted by all three suppliers working towards the same goal.
- NB: In the end, the measures planned for this match could not be implemented for major external reasons.

VERY HIGH PRIORITY ACTIVITIES

OPTIMISE MENU PLANNING AND IMPLEMENT AN EFFECTIVE INVENTORY MANAGEMENT SYSTEM TO MINIMISE FOOD WASTE (HOSPITALITY)

MOST COMMON BENEFITS

ECONOMIC	BRANDING
Less production and waste → economic savings.	Switching from buffets to table service is generally appreciated by spectators, as it elevates the experience to that of a restaurant.

MOST COMMON CHALLENGES

CULTURE	EFFORT	INFRASTRUCTURE/LOCATION
Spectators are used to having a full buffet available for the whole match \rightarrow Some awareness-raising might be needed to change this. However, as indicated above, switching to table service can be appreciated by spectators.	No challenges identified.	Switching from buffets to table service may require changes to the, but this is easily done at a low cost. If multiple clubs co-own the same football facility, it is essential that they are all involved in the change to ensure that they all manage the VIP areas in the same way.

TECHNICAL WARNINGS

No technical warnings identified.

BEST PRACTICES BASIC BASIC BEST PRACTICES INTERMEDIATE	BEST PRACTICES ADVANCED
 Evaluate the waste rate of each dish prepared in order to determine consumption habits by dish type and weight. Do not replenish buffets in lounges until absolutely necessary (since food cannot be donated once it has been placed in the buffet, even if not eaten). Switch from buffets to table service. The need f distancing due to the COVID19 pandemic can do to justify the change. 	3

APPENDIX 1

ERY HIGH PRIORITY ACTIVITIES

OPTIMISE MENU PLANNING AND IMPLEMENT AN EFFECTIVE INVENTORY MANAGEMENT SYSTEM TO MINIMISE FOOD WASTE (HOSPITALITY)

OCASE STUDY

SMART ORDERING

AT MANCHESTER

CITY FC

- → F3's catering managers and chefs have devised menus that, above all, meet the expectations of customers and fans at the City of Manchester Stadium – both on match and event days and throughout the year.
- By working with the hospitality events team, F3 is able to anticipate the food required according to the number of guests in every suite or space in order to both meet customers' needs and reduce waste by avoiding overprovision or ordering.
- Various options are developed to provide choice, and staff work hard to ensure that appropriate alternatives options are available when initial preferences run short.

- The process requires a whole team effort.
- The greatest challenge is the initial effort required.

APPENDIX 1

ERY HIGH PRIORITY ACTIVITIES

OPTIMISE MENU PLANNING AND IMPLEMENT AN EFFECTIVE INVENTORY MANAGEMENT SYSTEM TO MINIMISE FOOD WASTE (HOSPITALITY)

CASE STUDY
CHANGING FROM
BUFFETS TO TABLE
SERVICE AT
AC MILAN AND
FC INTERNAZIONALE
MILANO

Historically, the hospitality service at San Siro has always been split between buffet and table service. The decision to offer table service stemmed from the need to offer a premium option for sponsors and VIPs.

- During the 2021/22 season, due to COVID-19 restrictions, no buffet service was possible in the hospitality areas. It became crucial for the clubs to plan another type of service in order to guarantee that the lounges could be used and avoid a huge reduction in the number of guests.
- Although some reduction in the capacity of the lounges was unavoidable. this change may have led to an improvement in the experience offered at the football facility. Both clubs decided, with their shared caterer, to change all the buffet lounges to table service, with each guest having an assigned seat. Thus social distancing was respected at all times and there was no physical contact between guests and food during preparation.
- The caterer provided tables and chairs and the layout of the lounges was approved by the local authorities

- Hosts were provided with name lists and escorted each guest to their seat to avoid crowding at the entrance.
- Not having a kitchen in every lounge was identified as a benefit: the food was prepared in advance by the caterer and plated on-site.
- This method also made it easier to donate unprepared food after matches. This policy led to several achievements:
- Food waste was reduced thanks to menu planning
- Catering costs were reduced as a result of inventory management
- All crockery was reusable in order to meet high standards of quality, thereby reducing plastic waste
- Given these positive results, the clubs will continue to use this type of service in future seasons even after COVID19 restrictions have been lifted.

VERY HIGH PRIORITY ACTIVITIES

INSTALL BIODIGESTERS (MACHINES THAT DECOMPOSE FOOD WASTE) OR DONATE UNUSED PREPARED FOOD

MOST COMMON BENEFITS

ECONOMIC	BRANDING	
Some biodigester providers will support the football organisation in applying for fiscal incentives from the EU. Using biodigesters can lead to savings on electricity generation, heating/cooling and fertiliser. Food donation comes at no cost, it only implies some forward planning.	On-site biodigesters can also process food waste generated by other companies and the community, contributing to a positive perception of the football organisation in the local area. Food donation is supported by local communities and often brings positive social impacts within the realm of the stadium.	

MOST COMMON CHALLENGES

CULTURE	EFFORT	INFRASTRUCTURE/LOCATION
No challenges identified.	Installing a biodigester requires an initial investment but, as noted above, incentives are available from the EU and some biodigester providers can help with the bureaucracy.	 Food donations may be restricted by local regulations. On-site biodigesters require less equipment and are easier to move than one may think.

TECHNICAL WARNINGS

- Food that is wrapped is the most suitable for donation,, but could lead to increased food packaging and consequently increased emissions. Reducing packaging is a very high priority under UEFA's 4R Framework → If food donation requires changes in food choices and packaging, this should be taken into account when comparing options. One solution may be to donate food that has to be wrapped in any case but use biodigesters for food from hospitality that cannot be donated, as was done at the Stade de France).
- Please note, however, that using biodigesters is not always preferable to increasing packaging to allow for donation; the optimal solution must be determined on a case-by-case basis.
- For food donation, select a reliable partner that recovers the leftover food, stores it and immediately transports it safely to the final beneficiaries. The catering supplier may be able to assist in the selection of such a partner. Access to the stadium can be an issue so the facility must plan for the partner's arrival before the match or organise food pick-up early the morning after the match, once the general public vacates and there are no more hazards.

BEST PRACTICES BASIC BEST PRACTICES INTERMEDIATE

- Sell sandwiches at very discounted prices at the end of a match to avoid wasting them.
- When collecting water bottles at the gates, separate those that have been opened from closed bottles that can be reused/donated.
- If purchasing a biodigester is not possible, send food waste to an external partner that has biodigesters.
- Try to use foods that are suitable for donation (e.g. that do not need to be heated).
- Implement food donation in conjunction with waste reduction (e.g. better menu planning) to minimise food waste at the source.
- Arrange for unused food to be picked up by food banks based on the type of food and packaging (fresh, wrapped, etc.).
- Take advantage of fiscal incentives to install biodigesters offered by the EU.

BEST PRACTICES ADVANCED

Evaluate and compare the environmental benefits (e.g. using (Life Cycle Assessments) LCAs) of the various solutions to managing food waste (food donation, biodigesters, organic dehydrators, etc.), in order to select the best one based on the football facility's specific characteristics. If necessary, adopt a combination of solutions for different types of food (e.g. wrapped versus unwrapped).

APPENDIX 1

ERY HIGH PRIORITY ACTIVITIES

INSTALL BIODIGESTERS (MACHINES THAT DECOMPOSE FOOD WASTE) OR DONATE UNUSED PREPARED FOOD

CASE STUDY

INCENTIVISING SALES
OF UNSOLD FOOD AFTER
RB LEIPZIG MATCHES

- → In addition to trying to minimise food waste in its public concessions through continuous monitoring and optimisation of the volume provided and sold each matchday, RB Leipzig and its caterer sell unsold food (e.g. salads, sandwiches, bread, sausages) to staff, employees and service providers at the reduced price of €1 per item.
- This post match 'happy hour' sale starts after the public gates have been closed each matchday.
 - For legal and hygiene reasons, RB Leipzig is not allowed to donate food (particularly food that is not still in its packaging) to local NGOs, so the club had to be creative and explore other options to avoid wasting unsold food.
- The 'happy hour' idea both helps to tackle matchday food waste and creates additional benefits for hardworking staff and third-party service providers.

- Moreover, the money earned collected through these sales is donated to Welthungerhilfe, a German aid agency.
- In the future, members of the public may offered the chance to buy food cheaply after matches if the amount of unsold food justifies it.

APPENDIX 1

ERY HIGH PRIORITY ACTIVITIES

INSTALL BIODIGESTERS (MACHINES THAT DECOMPOSE FOOD WASTE) OR DONATE UNUSED PREPARED FOOD

CASE STUDY
ADOPTION OF
BIODIGESTERS
AT JOHAN CRUIJFF
ARENA

Food waste is everywhere and is certainly not always avoidable; the question is how to maximise its value. For Johan Cruijff ArenA, a biodigester is the solution and will be installed in early 2023. The aim is to preserve all possible value locally.

- The digester will turn food waste into biogas, which will in turn be converted into electricity and used to heat and cool the stadium. It will also produce digestate a nutrient-rich product that will be used to fertilise the arena's grass fields. The digester will process 600 tonnes of food waste each year, not only from the arena itself but also from neighbouring organisations such as ING, ABN Amro and the Academic Medical Centrum of Amsterdam.
 - An EU grant helped to kick-start this initiative and it is clear that there is a solid business model for similar projects in the future. Increased waste and energy prices and the awareness of the need to shift to a regenerative society add extra value to this initiative.

- In addition, waste collection and processing will provide at least five additional FTE jobs for members of the local community struggling to enter the labour market. Employees will have the opportunity to be trained and supported in advancing their careers, thereby creating turnover and vacancies for new employees.
- Moreover, visitors to the arena will see the impact of the biodigester, so it will help to raise awareness of how we can combine social, environmental and economic benefits. This iconic, pioneering project can easily be replicated by other stadiums and cities worldwide in the near future.

MOST COMMON BENEF	ITS
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ECONOMIC	BRANDING
Waste reduction reduces waste management costs.	Spectators generally appreciate reusable cups.

MOST COMMON CHALLENGES

CULTURE	EFFORT	INFRASTRUCTURE/LOCATION
Reusable cups are designed to create a closed loop whereby the football facility continues to use them: this entails educating spectators on returning them and not taking them home.	Logistics and cleaning costs need to be taken into account.	Transportation and washing both have an environmental impact. It is therefore important to: • identify a washing location very close to the football facility, if not inside the facility itself; • ensure that the energy used to wash the cups is not too dependent on fossil fuels; • make sure that cups are reused inside the football facility. More details are provided in the case study below.

TECHNICAL WARNINGS

- Decorative cups risk having a low return rate, which compromises the closed loop whereby reusable cups are kept and reused for their whole useful life (up to 500 uses, depending on the cup). It is therefore important to adopt a design that spectators are unlikely to want to take home.
- · Reusable cups should not feature branding that impedes their reuse (e.g., dates or mentions of specific events).

BEST PRACTICES BASIC	BEST PRACTICES INTERMEDIATE	BEST PRACTICES ADVANCED	
 Carry out a preliminary screening of the various possible options and make sure that all the conditions are met for reusable cups to reduce the environmental impact compared with single- use cups (see the case study below). 	Try to reduce not only waste but also emissions: conduct an LCA to compare the environmental impacts of	Implement a system for washing reusable cups at concessions.	
 If those conditions are not met, consider other solutions such as paper cups with a water-based coating (in this case, check whether your local recycling system accepts used cups for recycling or make sure that they are composted, and check how far away the supplier is as such cups are less common than those with an LDPE coating). 	reusable cups and single-use cups. An initial screening method can be found in the case study below, but should be used only as preliminary analysis.		
• Encourage spectators to return their cups after use (e.g. by implementing a deposit system and by using a plain design).			

COMPARISON

OF DIFFERENT TYPES
OF SINGLE-USE AND
REUSABLE CUPS

To verify whether best practices to reduce waste would also reduce emissions, we performed a screening assessment, using secondary data, of the carbon footprint of different solutions for cups used during football matches.

The methodology adopted was life cycle assessment (LCA): an analytical and systematic means of assessing the environmental footprint of a product or service along its entire life cycle (i.e. from the production/extraction of raw materials up to the end of its life). Owing to the lack of primary data, the methodology was simplified for the purposes of this assessment. Processes were modelled using datasets available in version 3.6 of the Ecoinvent³² database and the SimaPro calculation software.

The Product Environmental Footprint (PEF)³³ methodology, which uses the Circular Footprint Formula (CFF), was used only for the end-of-life

assessment. This formula determines how the impacts and benefits derived from the processes of material and/or energy recovery are distributed among the different actors in the value chain of a product (i.e. the producer of the waste and the user of the secondary raw material or recovered energy).

This summary outlines how the LCA method (specifically considering the carbon footprint) was applied to compare different cup options solutions at professional football events. However, this analysis cannot be considered a complete LCA, because no data was collected from primary sources (for example from the manufacturers of the various solutions).

The products compared were 0.5l single-use cups (11.5g) made of various different materials and with different end-of-life scenarios, and 0.5l reusable cups (30g).

The objective of the study was to understand the different impacts of the various solutions analysed and to provide a basis for future, more indepth studies involving primary data collection.

^{32.} https://ecoinvent.org/the-ecoinvent-database/

^{33.} https://www.openlca.org/project/pef/#:~:text=A%20 Product%20Environmental%20Footprint%20 (PEF,wishing%20to%20market%20their%20product.

COMPARISON

OF DIFFERENT TYPES
OF SINGLE-USE AND
REUSABLE CUPS

THE FOLLOWING PHASES WERE CONSIDERED IN THE ASSESSMENT:

- 1. Production of raw materials
- 2. Transportation of raw materials
- 3. Product manufacture
- 4. Product distribution
- 5. Washing (in the dishwasher) in the case of reusable cups
- End-of-life disposal (transportation, end-of-life treatment process and whether sent to landfill)

ASSUMPTIONS:

1. Cups with a plastic inner film are assumed to be coated with low-density polyethylene (LDPE).

- 2. Compostable cups are assumed to be made of polylactic acid (PLA).
- 3. Disposable cups are assumed to have the same weight regardless of the material.
- 4. A 50km distance for transportation of raw materials was assumed as conservative
- 5. The water-based plastic film was modelled by replacing the quantity of solvent used to wash with an equal quantity of water in the production process, thereby eliminating solvent emissions.
- 6. The process of washing a cup in the dishwasher was modelled on the basis of the indications given in the document 'Product environmental footprint category rules guidance', version 6.3 (May 2018).
- 7. The process of recovering paper cups coated with a plastic film is simplified; it takes into account transportation to the plant for pretreatment (separation of the

two components) but ignores the impact of that pretreatment. Both the recovery process and transportation to the plant are considered in relation to recycling of the two components.

- The impact is assessed using the environmental footprint methodology, version 2.0, as developed by the Environmental Footprint initiative and adapted by PRé Consultants in order to be compatible with the SimaPro databases.
- The impact category analysed is climate change, defined as the ability of a greenhouse gas to influence changes in the global average air temperature at ground level along with subsequent changes in various climatic parameters and their effects (expressed in CO2-equivalent units (CO2 eq) and over 100 years).

COMPARISON
OF DIFFERENT TYPES
OF SINGLE-USE AND

REUSABLE CUPS





0.0430

0.0404

FIGURE 5
Impact category
assessment

THE RESULTS SHOW THAT:

- 1. The solution with the highest impact is compostable disposable cups made of PLA.
- 2. The solution with the lowest impact is reusable PP cups washed at the football facility after two uses, with a difference in footprint of more than 65%

FOCUSING ON REUSABLE CUPS:

3. When washed using the energy mix used in

Russia (heavily dependent on non-renewable sources), their footprint is higher than that of disposable cups coated with LDPE film and sent to landfill. This result is in line with findings of the United Nations Environment Program's report on 'Single-use beverage cups and their alternatives' (2021)³⁴, which highlights how the impact of reusable cups is strongly connected to the efficiency of the dishwashing process.

^{34.} https://sdg.iisd.org/news/unep-report-spotlights-best-alternatives-to-single-use-plastic-products/

COMPARISON

OF DIFFERENT TYPES OF SINGLE-USE AND REUSABLE CUPS

- 4. When washed with the average European energy/electricity mix, they become the fourth best solution.
- 5. When used more than once before being washed, they have by far the lowest impact, even in the Russian energy mix scenario.
- In all cases, we have assumed that washing takes place inside the football facility, requiring no transportation to a different location.

FOCUSING ON RECYCLING SINGLE-USE CUPS:

- 7. While recycling single-use cups made of paper and a water-based coating is the second-best solution, various recycling facilities in the country where the study was carried out refuse to recycle used paper cups. Football organisations considering this solution are therefore advised to research recycling possibilities in the local area.
- 8. A cup made of paper and an LDPE plastic film sent to a landfill located 50km away has a smaller footprint than the same cup sent to a recovery plant located 850km away (this distance was chosen due to the absence of closer facilities able to separate paper from LDPE plastic film in the country where the study was carried out). This simulation demonstrates the relevance of the transportation process,

which can outweigh the benefits of a lower-impact end-of-life process (i.e. recycling), meaning that a higher-impact process (i.e. landfill) is preferable overall. The transportation distance at which sending a cup for recycling at a specialist recovery plant has the same carbon footprint as sending it to a landfill nearby is 727km; if the recovery plant is closer than this, recycling has a lower impact than sending it to a landfill 50km away.

All the findings presented in this report could change substantially if the analyses were repeated using primary data, so they should be considered indicative only, taking into account the limitations of the assessment, and not exhaustive.

MOST COMMON BENEFITS

ECONOMIC	BRANDING	
No specific benefits identified. A common objection to this action is that selling bottles earns profit. However, users can also be charged to use refill stations, and the cost to the facility is usually lower than bottles.	This action is very visible to spectators.	
мозт соммо	N CHALLENGES	

CULTURE	EFFORT	INFRASTRUCTURE/LOCATION			
No challenges identified.	The logistical effort needs to be taken into account.	No challenges identified.			

TECHNICAL WARNINGS

Some suppliers/countries recycle refill tanks instead of reusing them. This significantly reduces the benefit (see the case study below).

BEST PRACTICES BASIC	BEST PRACTICES INTERMEDIATE	BEST PRACTICES ADVANCED
Start by installing refill stations in offices and staff areas.	Incentivise the use of reusable bottles in offices and staff areas.	Expand the activity to spectator areas, possibly combining it with the introduction of reusable cups (after performing an analysis to confirm the environmental benefit of reusable cups; see the dedicated implementation data sheet)

COMPARISON

OF DIFFERENT WATER DISPENSING SYSTEMS

To verify whether best practices to reduce waste would also reduce emissions, we performed a screening assessment, using secondary data, of the carbon footprint of different water dispensing solutions that can be used during a football match.

- The objective of the study was to understand the different impacts of the various solutions analysed and to provide a basis for future, more indepth studies involving primary data collection.
- The methodology adopted was the life cycle assessment (LCA): an analytical and systematic means of assessing the environmental footprint of a product or service along its entire life cycle (i.e. from the production/extraction of raw materials up to the end of its life). Owing to the lack of primary data, the methodology was simplified for the purposes of this assessment. Processes were modelled using datasets available in version 3.6 of the Ecoinvent database and the SimaPro calculation software.
- The Product Environmental Footprint (PEF) methodology, which uses the Circular Footprint Formula (CFF),

was used only for the end-of-life assessment. This formula determines how the impacts and benefits derived from the processes of material and/or energy recovery are distributed among the different actors in the value chain of a product (i.e. the producer of the waste and the user of the secondary raw material or recovered energy).

- This summary outlines how the LCA method (specifically considering the carbon footprint) was applied to compare different beverage dispensing solutions at professional football events. However, this analysis cannot be considered a complete LCA, because no data was collected from primary sources (for example from the manufacturers of the various solutions).
- Functional unit used for comparison: 0.51 container (beverage excluded).

COMPARISON

OF DIFFERENT WATER DISPENSING SYSTEMS

- THE FOLLOWING PHASES WERE
 CONSIDERED IN THE ASSESSMENT
 OF THE BEVERAGE DISPENSING
 SERVICE:
 - · Production of raw materials
 - Transportation of raw materials
 - · Product manufacture
 - Product distribution
 - Washing in the case of water tanks for water refill stations
 - End-of-life disposal (transportation, end-of-life treatment process and whether sent to landfill)

- Washable water tanks, regardless the type of end-of-life treatment (reuse or recycle) are always returned to the supplier (round trip).
- The transportation of water refill stations from the supplier to the football facility is included, but the return journey is excluded because it is assumed that refill stations will be kept on-site.

ASSUMPTIONS:

 Water refill stations are used in combination with different types of 0.2l cups. Scenarios involving 100% single-use cups and 30% single-use cups/70% reusable bottles brought from home by customers were analysed.

- The impact is assessed using the environmental footprint methodology, version 2.0, as developed by the Environmental Footprint initiative and adapted by PRé Consultants in order to be compatible with the SimaPro databases.
- The impact category analysed is climate change, defined as the ability of a greenhouse gas to influence changes in the global average air temperature at ground level along with subsequent changes in various climatic parameters and their effects (expressed in CO₂-equivalent units (CO₂ eq) and over 100 years).

→ COMPARISON OF DIFFERENT WATER DISPENSING SYSTEMS

PRODUCT	PRODUCT CODE	KG CO₂ eq
Washable water PC tank, supply distance 25km, tank sent back to supplier for reuse. Combined with 30% paper + LDPE cups sent to landfill	Refill PC+30paper-LDPE0,2_landfill_25km	0.0164
Washable water PC tank, supply distance 770km, tank sent back to supplier for reuse. Combined with 30% paper + LDPE cups sent to landfill	Refill PC+30paper-LDPE0,2_landfill_770km	0.0221
Washable water PC tank, supply distance 25km, tank sent back to supplier for reuse. Combined with 100% paper + LDPE cups sent to landfill	Refill PC+100paper-LDPE0,2_landfill_25km	0.0372
10g PET bottle, supply distance 25km, 80% recycled (50km away)	Bottle PET10_25km	0.0399
Washable water PC tank, supply distance 770km, tank sent back to supplier for reuse. Combined with 100% paper + LDPE cups sent to landfill	Refill PC+100paper-LDPE0,2_landfill_770km	0.0429
PET water tank, supply distance 25km, tank sent back to supplier for recycling. Combined with 30% paper + LDPE cups to landfill	Recyclable refill PET+30paper-LDPE0,2_ landfill_25km	0.0532
20g PET bottle, supply distance 25km, 80% recycled (50km away)	Bottle PET20_25km	0.0798

HIGH PRIORITY ACTIVITIES

INSTALL REFILL STATIONS FOR WATER AND OTHER BEVERAGES TO REDUCE BOTTLE PURCHASES

COMPARISON

OF DIFFERENT WATER DISPENSING SYSTEMS



Bottle PET20_25 km

Recyclable refill PET + 30 paper - LDPE, 2_lanfill_25 km

Refill PC + 100 paper - LDPE, 2_landfill_770 km

Bottle PET10 25 km

Refill PC + 100 paper - LDPE, 2_landfill_25 km

Refill PC + 30 paper - LDPE, 2_landfill_770 km

Refill PC + 30 paper - LDPE, 2_landfill_25 km

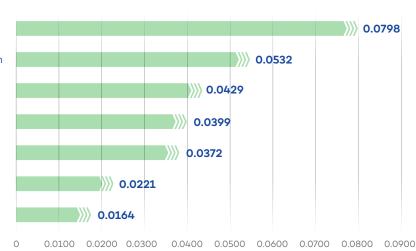


FIGURE 6 Comparison of different water dispensing systems

OPTIONS WITH THE HIGHEST IMPACT:

• The 20g PET bottles has the highest impact, followed by disposable PET water tanks.

OPTION WITH THE LOWEST IMPACT:

· Refill stations with washable or reusable water tanks have the lowest impact, especially if combined with only 30% of drinks being served in 0.21 disposable cups(and the remainder in consumers' own

bottles). Increasing the distance from the supplier to the water refill station from 25km to 770km results in an increase in the carbon footprint of about 10%.

All the findings presented in this report could change substantially if the analyses were repeated using primary data, so they should be considered indicative only, taking into account the limitations of the assessment, and not exhaustive.



with a capacity of fewer than 3000 spectators

IN ORDER TO COLLECTIVELY REACH AMBITIOUS WASTE MINIMISATION TARGETS, ALL STAKEHOLDERS ARE ENCOURAGED TO IMPLEMENT THE ROADMAP BELOW, MAKING THE NECESSARY ADAPTATIONS BASED ON THE SPECIFIC SITUATION AND MATURITY LEVEL.

While the roadmap is not compulsory, we encourage stakeholders to start following it as soon as possible (ideally in 2022), since it will be hard to reach the targets if it is implemented later.

Performance against targets is to be measured on a yearly basis (using the average across all matches held during the year).

Please see Appendix 1 for implementation data sheets relating to the most relevant actions.

The implementation roadmap includes only actions deemed 'high priority' and 'very high priority' based on the prioritisation system shown in Appendix 3.

TABLE 5 IMPLEMENTATION ROADMAP FOR SMALLER FACILITIES

APPENDIX 2									5 MENTATION MALLER FAC	
AREA	PRIORITY	ACTION	4R APPROACH	2022	2023	2024	2025	2026	2027-28	2029-30
GOVERNANCE AND STRATEGY	Very high	Activate communication channels with key stakeholders and service providers involved in F&B improvement actions (e.g. regular meetings with caterer and consultations with waste management operator/municipality)	Strategy	Plan and set up com- munication channels	First consultation with each key stakeholder		Reg	gular consultati	ons	
GOVERNANCE AND STRATEGY	Very high	Assess waste composition for one month to identify improvement priorities	Strategy	Plan, set up and complete	Annual verification					
WASTE COLLECTION AND MANAGEMENT	Very high	Guarantee an effective waste management supply chain by: - choosing materials that can be recovered through the local waste management supply chain - providing separate bins (for plastic, glass, aluminium, organic, paper) to enable separate waste collection throughout the entire football facility (hospitality areas, concessions and offices/staff areas) - educating spectators and encouraging them to use bins correctly ¹	Recycle	Plan and set up		<40% of all mixed and plastic F&B packaging waste generated sent to landfill or incinerated		<30% of all mixed and plastic F&B packaging waste generated sent to landfill or incinerated	<20% of all mixed and plastic F&B packaging waste sent to landfill or incinerated	0% of all mixed and plastic F&B packaging waste generated sent to landfill or incinerated
F&B OFFER	Very high	Optimise menu planning and implement an effective inventory management system to minimise food waste (hospitality)	Reduce		Plan and set up	<30% of all prepared food wasted ⁶		<20% of all prepared food wasted ⁶	<15% of all prepared food wasted ⁶	<10% of all prepared food wasted ⁶
F&B OFFER	Very high	Choose foods with minimal or no packaging (hospitality) ²	Reduce		Plan and set up	>30% food options with optimised (eliminated or reduced in weight/ volume) packaging	>50% food options with optimised (eliminated or reduced in weight/ volume) packaging	>70% food options with optimised (eliminated or reduced in weight/ volume) packaging	100% food options with optimised (eliminated or reduced in weight/volume) packaging	Continuous optimisation

TABLE 5 IMPLEMENTATION ROADMAP FOR SMALLER FACILITIES

APPENDIX 2										ROADMAP CILITIES
AREA	PRIORITY	ACTION	4R APPROACH	2022	2023	2024	2025	2026	2027-28	2029-30
F&B OFFER	Very high	Choose foods with minimal or no packaging (concessions) ²	Reduce		Plan and set up	>30% food options with optimised (eliminated or reduced in weight/ volume) packaging				
F&B OFFER	High	Train staff (including concessions staff) on how to reduce the environmental impact of F&B	Strategy		Initial training	Annual training				
F&B OFFER	High	Install refill stations for water and other beverages to reduce bottle purchases (hospitality)	Reuse		Plan and set up	>40% of all litres served in hospitality served in refillable containers	>50% of all litres served in hospitality served in refillable containers	>60% litres served in hospitality served in refillable containers	>80% of all litres served in hospitality served in refillable containers	Continuous optimisation
F&B OFFER	High	Promote reusable cups for drinks ³ (hospitality)	Reuse		Plan and set up		>80% of all tableware and cups used in hospitality reused in subsequent	Continuous optimisation		
F&B OFFER	High	Use reusable tableware ⁴ (hospitality)	Reuse		Installation		>80% of all tableware and cups used in hospitality reused in subsequent matches	Continuous optimisation		
WASTE COLLECTION AND MANAGEMENT	Very high	Donate unused prepared food ⁵	Recycle		Plan and set up	<40% of all food waste generated sent to landfill or incinerated		<30% of all food waste generated sent to landfill or incinerated	<20% of all food waste generated sent to landfill or incinerated	0% of all food waste generated sent to landfill or incinerated

TABLE 5 IMPLEMENTATION ROADMAP FOR SMALLER FACILITIES

AREA	PRIORITY	ACTION	4R APPROACH	2022	2023	2024	2025	2026	2027-28	2029-30
WASTE COLLECTION AND MANAGEMENT	High	Train the cleaning service provider on how to sort and separate F&B waste	Strategy		Initial training	Regular training				
F&B OFFER	High	Install beverage draft systems to reduce bottle purchases (concessions)	Reuse			Installation	>10% of all litres served in conces- sions served in refillable containers	>20% litres served in concessions served in refillable containers	>40% of all litres served in conces- sions served in refillable containers	>50% of all litres served in conces- sions served in refillable containers
F&B OFFER	High	Promote reusable cups for drinks ³ (concessions)	Reuse				Installation	>20% of all tableware and cups used in concessions reused in subsequent matches	>40% of all tableware and cups used in concessions reused in subsequent matches	>50% of all tableware and cups used in concessions reused in subsequent matches

Alternative action 1: Install smart bins that automatically separate different types of waste. Alternative action 2: Have the cleaning service provider separate waste after each match. Each football organisation is advised to test different options and compare their respective recycling rates to identify the best option for the specific context. Separate bins are not needed in places where local authorities require all waste to be collected together and then sorted by the waste management operator.

An effective way of incentivising spectators to use recycling bins correctly is to offer rewards or prizes such as tickets, money, or similar (e.g. install machinery that collects PET bottles in exchange for of a small reward). Fallback or temporary solution for waste that cannot be recycled: recover the energy generated during incineration.

2. This includes packaging used during transportation.

Please note that this action should be implemented in conjunction with the action 'Guarantee an effective waste management supply chain', choosing packaging materials that can be recovered in the local waste management supply chain.

Particular attention should be paid to minimising plastic packaging as per UEFA's zero plastic waste target. When eliminating plastic packaging, the priority should be to reduce packaging overall rather than just switching to another material. When such a switch is unavoidable, an ad hoc analysis should be carried out to confirm the best option.

- 3. Fallback or temporary solution: use compostable single-use cups with water-based coating. Please note that the advantages of reusable cups depend on how the practice is implemented (see the relevant implementation data sheet in Appendix 1). If reusable cups are not the optimal solution, an ad hoc analysis should be carried out to confirm the best option.
- 4. Fallback or temporary solution: use compostable tableware with a water-based coating. If reusable tableware is not the optimal solution, an ad hoc analysis should be carried out to confirm the best option. Although not included in the roadmap, efforts should also be made to introduce reusable tableware in concessions.
- 5. Alternative action: send food waste to a local biodigester (a machine that decomposes food waste). Fallback or temporary solution: recover the energy generated during incineration.
- 6. This includes unused food that will be donated but excludes packed food that can be taken back by suppliers and reused for later events.

^{1.} Please note that the types of waste to be separated might be different in different areas of the football organisation or facility and bin placement should be planned accordingly.

ANY OF THESE ACTIONS UNDERTAKEN NEED TO BE IMPLEMENTED IN A WAY THAT IS COMPATIBLE WITH THE GENERAL ROADMAP.

ADDITIONAL ACTIONS
MEDIUM PRIORITY' AND
'LOW PRIORITY'

The following additional actions may facilitate the implementation of the 4R framework.

MEDIUM PRIORITY:

- Use reusable tableware in concessions
- Display panels informing fans about separate waste collection near concessions

LOW PRIORITY:

- Carry out surveys to understand fans' environmental awareness and behaviour
- Close the loop by recycling waste to produce other essential football items (e.g. recycle plastic bottles into seats)



(an international project co-funded by the EU LIFE programme that aims to improve the environmental management of football matches and the overall level of awareness and attention towards environmental issues in the football sector)

 Surveys of 15 clubs participating in the 2021/22 UEFA Champions League

Individual interviews, a consultation group involving ten clubs and the pilot implementation of practices in selected football facilities. WE HAVE COMPILED A LIST OF THE MOST MEANINGFUL ACTIONS TO ADDRESS THE ISSUE OF F&B WASTE MANAGEMENT IN FOOTBALL FACILITIES. DATA WAS OBTAINED FROM THE FOLLOWING SOURCES:

ACTIONS WERE DIVIDED INTO THE FOLLOWING CLUSTERS:

- Governance and strategy: the strategy, decision-making process, management and system of responsibility needed to make sure that the most pressing issues are tackled and the most effective actions are taken
- F&B offer: the food, beverages and packaging selected with a view to minimising waste and maximising the useful life of materials
- Waste collection and management: the handling of waste to minimise the amount sent to landfill or for incineration

Actions were prioritised using an impact and feasibility expert analysis involving sustainability consultants, UEFA's FSR division, eight clubs randomly selected from those participating in the consultation group and an F&B sponsor. The steps followed are described below:

- 1. Each group of stakeholders ranked each action against the criteria of 'Environmental relevance', 'Technical feasibility' and 'Economic feasibility'. The FSR team also ranked each action for its 'Consistency with UEFA's sustainability strategy'.
- 2. The stakeholders' rankings were averaged and each action's overall priority was calculated taking into account the weightings of the different criteria ('Environmental relevance' weighted 60%; 'Technical feasibility', 'Economic feasibility' and 'Consistency with UEFA's sustainability strategy' each weighted 13.33%).
- 3. Rankings were reparameterised on a scale of 0 to 100 using a logistic function and actions were grouped into three priority levels ('very high priority', 'high priority'

and 'medium priority'). Activities with an 'Environmental relevance' ranking lower than 15/100 ('Carry out surveys to understand fans' environmental awareness and behaviour' and 'Close the loop by recycling waste to produce other essential football items (e.g. recycle plastic bottles into seats)') were considered to be 'low priority'.

An implementation roadmap was developed based on the results of this prioritisation exercise. An adapted roadmap was also created for smaller football facilities (see Appendix 2).

The roadmap includes only actions deemed 'very high priority' or 'high priority'. Those deemed 'medium priority' and 'low priority' have instead been indicated as additional actions that can facilitate the implementation of the 4R framework.

In cases where various actions are possible, only one action has been included in the roadmap while alternatives are listed in the notes below the table.

The activity 'Offer vegetarian or plant-based options', despite having received the highest ranking, was not included in the implementation roadmap as its impact is mostly on climate change rather than waste management.

Where necessary, a distinction has been made between concessions and hospitality.

Some actions were adapted/ reformulated on the basis of subsequent consultations with football organisations.

The resulting impact and feasibility expert analysis is presented below.

TABLE 6 IMPACT AND FEASIBILITY **EXPERT ANALYSIS**

APPENDIX 3						1				FEASIBILITY YSIS
AREA	ACTION	ENVIRONMENTAL RELEVANCE	TECHNICAL FEASIBILITY	ECONOMIC FEASIBILITY	CONSISTENCY WITH UEFA'S SUSTAINABILITY STRATEGY	FINAL SCORE	REPARAMETERISED FINAL SCORE	REPARAMETERISED ENVIRONMENTAL SCORE	OVERALL PRIORITY LEVEL	ENVIRONMENTAL IMPACT PRIORITY LEVEL
F&B OFFER	Offer vegetarian or plant-based options in the hospitality area	2.81	2.88	2.63	3	2.82	88	81	Very high priority	Very high priority
F&B OFFER	Offer vegetarian or plant-based options in concessions	2.86	2.89	2.36	2	2.68	80	83	Very high priority	Very high priority
F&B OFFER	Optimise menu planning and implement an effective inventory management system to minimise food waste	2.8	2.11	2.39	3	2.68	80	80	Very high priority	Very high priority
GOVERNANCE AND STRATEGY	Carry out regular meetings with the caterer to discuss initiatives related to environmental sustainability	2.53	2.72	2.69	3	2.64	77	62	Very high priority	High priority
GOVERNANCE AND STRATEGY	Define an overall circular economy strategy for F&B	2.72	2.09	2.44	3	2.64	76	75	Very high priority	Very high priority
F&B PACKAGING	Choose foods with minimal or no packaging	2.69	1.91	2.57	3	2.61	74	73	Very high priority	Very high priority
WASTE COLLECTION AND MANAGEMENT	Provide separate bins (for plastic, glass, aluminium, organic, paper) to enable separate waste collection throughout the entire football facility, particularly in hospitality areas and concessions	2.75	2	2	3	2.58	72	77	Very high priority	Very high priority
WASTE COLLECTION AND MANAGEMENT	Organise initiatives to encourage separate waste collection outside the football facility	2.48	2.36	2.64	3	2.56	70	57	Very high priority	High priority
WASTE COLLECTION AND MANAGEMENT	Donate unused prepared food	2.34	2.88	2.66	3	2.54	68	45	Very high priority	High priority
F&B PACKAGING	Compost leftover food and compostable tableware	2.59	2.25	1.91	3	2.51	65	67	High priority	Very high priority
GOVERNANCE AND STRATEGY	Train the cleaning service provider on how to sort and separate F&B waste	2.59	1.97	2.09	3	2.5	64	67	High priority	Very high priority

TABLE 6 IMPACT AND FEASIBILITY **EXPERT ANALYSIS**

AREA	ACTION	ENVIRONMENTAL RELEVANCE	TECHNICAL FEASIBILITY	ECONOMIC FEASIBILITY	CONSISTENCY WITH UEFA'S SUSTAINABILITY STRATEGY	FINAL SCORE	REPARAMETERISED FINAL SCORE	REPARAMETERISED ENVIRONMENTAL SCORE	OVERALL PRIORITY LEVEL	ENVIRONMENTAL IMPACT PRIORITY LEVEL
GOVERNANCE RELATED TO F&B	Collect and analyse performance indicators in terms of waste production and recycling, especially in F&B	2.56	2.03	2.18	3	2.5	64	64	High priority	High priority
GOVERNANCE RELATED TO F&B	Organise waste assessments to understand waste composition	2.47	2.38	2.21	3	2.49	64	56	High priority	High priority
GOVERNANCE AND STRATEGY	Train staff (including concessions staff) on how to reduce the environmental impact of F&B	2.34	2.28	2.14	3	2.4	54	45	High priority	High priority
F&B OFFER	Promote reusable cups for drinks	2.53	2.5	1.93	2	2.38	52	62	High priority	High priority
F&B OFFER	Use reusable tableware in the hospitality area	2.41	2.41	2.34	2	2.34	48	51	High priority	High priority
F&B OFFER	Use cups made of bio-based or recycled material in concessions	2.22	2.41	1.94	3	2.31	45	35	High priority	High priority
F&B PACKAGING	Install refill stations for water and other beverages to reduce bottle purchases	2.64	1.8	1.61	2	2.31	44	70	High priority	Very high priority
F&B OFFER	Use compostable tableware in concessions	2.29	2.18	1.71	3	2.29	42	40	High priority	High priority
WASTE COLLECTION AND MANAGEMENT	Promote the recycling of PET bottles by offering monetary rewards or prizes such as tickets (e.g. install machinery that collects PET bottles in exchange for a reward)	2.38	1.79	1.63	3	2.28	41	48	High priority	High priority
WASTE COLLECTION AND MANAGEMENT	Engage fans in waste collection campaigns (e.g. implement a reward system for waste collection)	2.43	2.07	1.89	2	2.25	39	53	High priority	High priority
F&B OFFER	Use compostable tableware in hospitality areas	2.29	1.93	1.71	3	2.26	39	40	High priority	High priority
F&B OFFER	Use cups made of bio-based or recycled material in hospitality areas	2.19	2.16	1.91	3	2.25	39	33	High priority	Medium priority

TABLE 6 IMPACT AND FEASIBILITY **EXPERT ANALYSIS**

APPENDIX 3						1				FEASIBILITY YSIS
AREA	ACTION	ENVIRONMENTAL RELEVANCE	TECHNICAL FEASIBILITY	ECONOMIC FEASIBILITY	CONSISTENCY WITH UEFA'S SUSTAINABILITY STRATEGY	FINAL SCORE	REPARAMETERISED FINAL SCORE	REPARAMETERISED ENVIRONMENTAL SCORE	OVERALL PRIORITY LEVEL	ENVIRONMENTAL IMPACT PRIORITY LEVEL
WASTE COLLECTION AND MANAGEMENT	Install biodigesters (machines that decompose pre-consumer food waste)	2.44	1.38	1.25	3	2.21	35	54	High priority	High priority
GOVERNANCE RELATED TO F&B	Provide suppliers with packaging and F&B procurement guidelines, including waste minimisation targets	2	2.5	2.09	3	2.21	35	20	High priority	Medium priority
WASTE COLLECTION AND MANAGEMENT	Install organic dehydrators (machines that heat waste and dehydrate the product into a soil additive used to nourish gardens)	2.41	1.28	1.25	3	2.18	32	51	Medium priority	High priority
WASTE COLLECTION AND MANAGEMENT	Display panels informing fans about separate waste collection near concessions	2	2.44	1.88	3	2.18	31	20	Medium priority	Medium priority
WASTE COLLECTION AND MANAGEMENT	Collect waste all together but have an agreement with the waste management operator to sort it and channel each component to appropriate recycling scheme	2.32	2.29	1.36	2	2.15	28	43	Medium priority	High priority
GOVERNANCE AND STRATEGY	Carry out surveys to understand fans' environmental awareness and behaviour	1.77	2.61	2.71	2	2.04	20	10	Low priority	Low priority
WASTE COLLECTION AND MANAGEMENT	Close the loop by recycling waste to produce football items or promotional products (e.g. recycle plastic bottles into seats)	1.79	1.71	2	3	1.97	16	11	Low priority	Low priority
F&B OFFER	Use reusable tableware in concessions	2.11	1.38	1.61	2	1.93	14	27	Medium priority	Medium priority
WASTE COLLECTION AND MANAGEMENT	Use smart bins that separate different types of plastics and measure their amounts	1.95	1.38	1.06	3	1.89	12	17	Medium priority	Medium priority



CARBON NEUTRALITY VERSUS NET ZERO

Carbon neutrality is explained by the Carbon Trust as follows: "Carbon neutrality is defined by an internationally-recognised standard – PAS 2060 – which sets out requirements for the quantification, reduction and offsetting of greenhouse gas emissions. In this standard, the definition of a carbon neutral footprint is a 'condition in which during a specified period

there has been no net increase in the global emission of greenhouse gases to the atmosphere as a result of the greenhouse gas emissions associated with the subject during the same period'."

Net zero is a more ambitious goal that applies to the entire organisation and its value chain. According to the Carbon Trust, it means achieving a scale of value-chain emission reductions consistent with the depth of abatement achieved in pathways that limit warming to 1.5°C, with no or limited overshoot, and neutralising the impact of any source of residual emissions that remains unfeasible to be eliminated by permanently

removing an equivalent amount of atmospheric carbon dioxide.³⁵

CIRCULAR ECONOMY VERSUS LINEAR ECONOMY

A circular economy is a systems solution framework that tackles global challenges like climate change, biodiversity loss, waste and pollution. It is based on three principles, driven by design: eliminate waste and pollution, circulate products and materials (at their highest value), and regenerate nature.³⁶

In contrast, in a linear economy – our current type – we take materials from the Earth, make products from them, and eventually throw them away as waste.³⁷

^{35.} Carbon Trust, 2022, 'Briefing: Net Zero for corporates', accessed on 5 June 2022, https://www.carbontrust.com/resources/briefing-net-zero-for-corporates.

^{36.} Ellen MacArthur Foundation, 'Finding a common language - the circular economy glossary', accessed on 23 April 2022, https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/glossary.

^{37.} Ellen MacArthur Foundation, 'What is circular economy?', accessed on 23 April 2022, https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview.

LCA AND CARBON FOOTPRINT

LIFE CYCLE ASSESSMENT (LCA): a methodology used to quantify the environmental pressures related to goods and services (products), the environmental benefits, the trade-offs and areas for achieving improvements taking into account the full life cycle of the product. The reference standard is ISO 14040.³⁸

CARBON FOOTPRINT: a widely used term referring to the overall quantity of CO₂ and other greenhouse gas emissions caused directly and indirectly by a product or an activity, or associated with

the activities of an individual or an organisation. Carbon footprint is a measure of the total greenhouse gas emissions generated by organisations according to the ISO 14064³⁹ standard or generated by a product, from the extraction of its raw materials to the end of its life, according to ISO 14067. It is measured in carbon dioxide equivalents (CO2 eq).

REDUCE

The reduction of waste generated by changing the design, manufacture, purchase or use of materials or products.⁴⁰

REUSE

The repeated use of a product or component for its intended purpose without significant modification.⁴¹

RECYCLE

The transformation of a product or component into its basic materials or substances and for <u>reprocessing</u> into new items.³⁶

^{38.} European Commission, 'European Platform on Life Cycle Assessment (LCA)', accessed on 23 April 2022, https://ec.europa.eu/environment/ipp/lca.htm.

^{39.} ISO, 2018, 'Greenhouse gases - Carbon footprint of products - Requirements and guidelines for quantification' (ISO 14067:2018), accessed on 23 April 2022, https://www.iso.org/standard/71206.html.

40. United States Environmental Protection Agency, 2022, 'Managing and Reducing Wastes: A Guide for Commercial Buildings', accessed on 23 April 2022, https://www.epa.gov/smm/managing-and-reducing-wastes-guide-commercial-buildings.

^{41.} Ellen MacArthur Foundation, 'Finding a common language - the circular economy glossary', accessed on 23 April 2022, https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/glossary.

RECOVER

The incineration of material with energy recovery. More broadly, recovery refers to waste that is not recycled, but that is used as a source of energy or valuable biochemical compounds.⁴²

SUSTAINABLE DEVELOPMENT

This was defined in the World Commission on Environment and Development's 1987 Brundtland report, 'Our Common Future' as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". It seeks to reconcile economic development with the protection of social and environmental balance.⁴³

ZERO WASTE

The conservation of all resources by means of responsible production, consumption, reuse and recovery of products, packaging and materials without burning and with no discharges to land, water or air that threaten the environment or human health.⁴⁴

ZERO WASTE TO LANDFILL

No material from a facility will go to landfill. Having a focus only on landfill implies that it is preferable, for example, to derive energy from waste by burning it. Therefore, unlike the term 'zero waste', this term does not demand a redesign of our entire cycle of extraction, production, consumption and waste management.⁴⁵

^{45.} Zero Waste International Alliance, 2022, 'Zero Landfill is Not Zero Waste', accessed on 23 April 2022, https://zwia.org/zero-landfill-is-not-zero-waste/



^{42.} Piero Morseletto, 2020, 'Targets for a circular economy', Resources, Conservation and Recycling, Volume 153, 104553, ISSN 0921-3449, accessed on 23 April 2022, https://www.sciencedirect.com/science/article/pii/S0921344919304598

 $^{43.\} https://www.environmentandsociety.org/mml/un-world-commission-environment-and-development-ed-report-world-commission-environment-and-development-ed-report-world-commission-environment-and-development-ed-report-world-commission-environment-and-development-ed-report-world-commission-environment-and-development-ed-report-world-commission-environment-and-development-ed-report-world-commission-environment-and-development-ed-report-world-commission-environment-and-development-ed-report-world-commission-environment-and-development-ed-report-world-commission-environment-and-development-ed-report-world-commission-environment-and-development-ed-report-world-commission-environment-and-development-ed-report-world-commission-environment-and-development-ed-report-world-commission-environment-and-development-ed-report-world-commission-environment-and-development-ed-report-world-commission-environment-and-development-ed-report-world-commission-environment-ed-report-world-commission-environment-ed-report-world-commission-environment-ed-report-world-commission-environment-ed-report-world-commission-environment-ed-report-world-commission-environment-ed-report-world-commission-environment-ed-report-world-commission-environment-ed-report-world-commission-environment-ed-report-world-commission-environment-ed-report-world-commission-environment-ed-report-world-commission-environment-ed-report-world-commission-environment-ed-report-world-commission-environment-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-report-ed-repor$

^{44.} Zero Waste International Alliance, 2022, 'Zero Waste Definition', accessed on 23 April 2022, https://zwia.org/zero-waste-definition/





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> No individual guideline is, on its own, sufficient to achieve a circular economy in football. However, all the guidelines contribute to that vision, and collectively they constitute an important and necessary step forward. These guidelines should be considered a minimum threshold. All stakeholders are encouraged to take additional and/or more ambitious steps to contribute to achieving the goal. This minimum threshold will be reviewed regularly and may be raised where appropriate after consultation.





UEFA FOOTBALL SUSTAINABILITY STRATEGY

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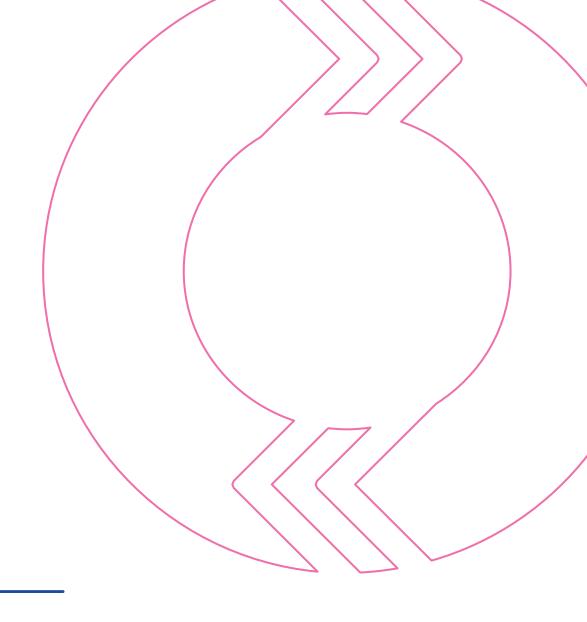
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