A large, stylized teal recycling symbol (three chasing arrows forming a triangle) serves as a background for the title text.

CIRCLE-T

METHODOLOGICAL GUIDE

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Project code: 2024-1-IE01- KA220-YOU- 000251167

What is CIRCLE-T?

CIRCLE - T is

Circular. Innovative. Responsible. Cooperation Led. Engaging - Theatre

We are building an international community of like-minded theatre-makers. Gain access to resources and training for greener, more sustainable, and responsible theatre production and design. Contribute to the future of sustainable theatre: where art meets sustainability.

Will you join us on our journey in Creative Circular Theatre?

For more information visit our project website <https://circle-t.eu/>

Project partners:

-CHALLEDU (Athens, Greece)

-Droichead Youth Theatre (Drogheda, Ireland)

-Gaiety School of Acting – The National Theatre School of Ireland (Dublin, Ireland)

-Varsztatovnia (Warsaw, Poland)

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1 CHAPTER

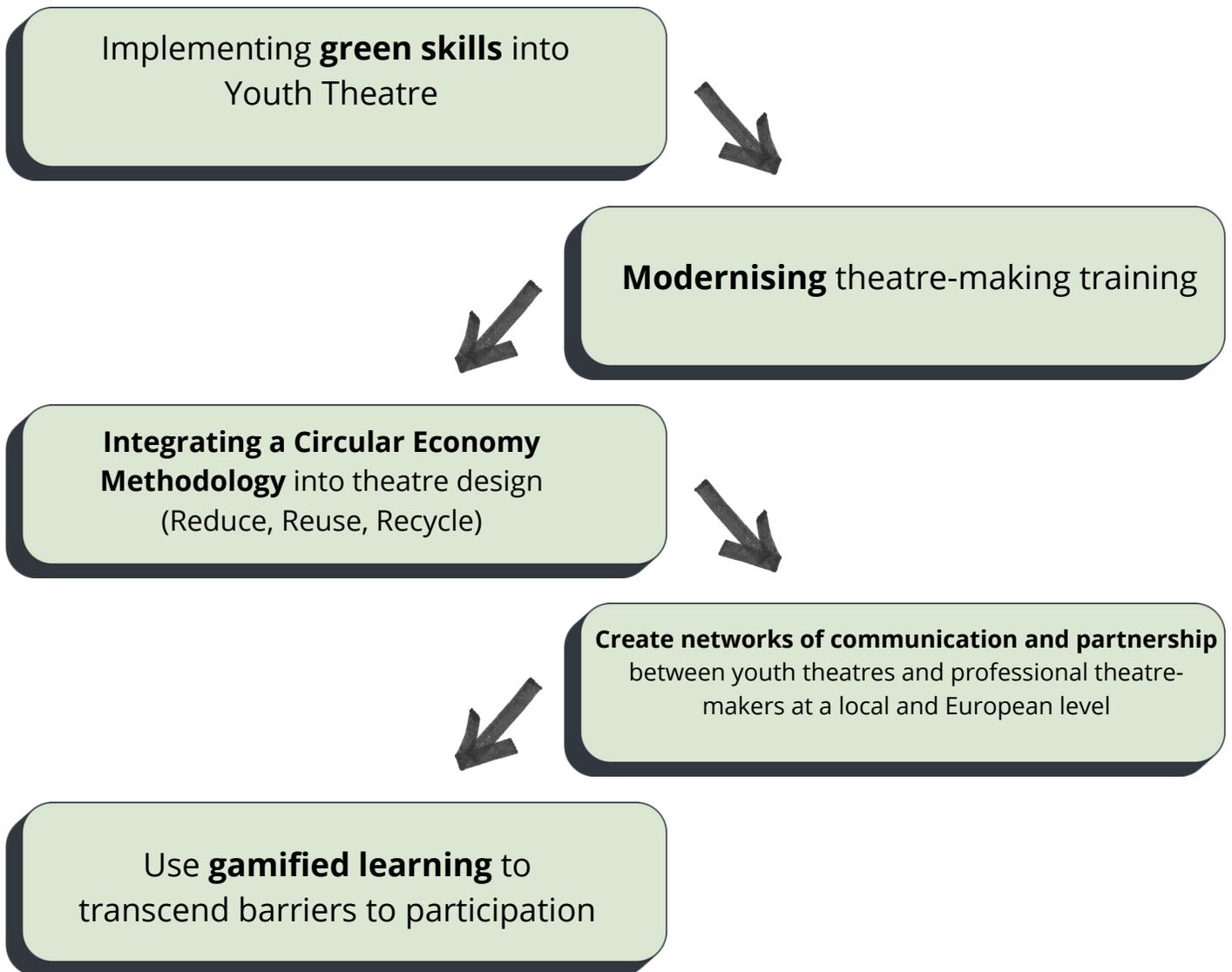
CIRCLE-T PROJECT OVERVIEW

The context

The CIRCLE-T project addresses a pressing environmental and cultural need within the European theatre landscape: **reducing waste and integrating circular economy principles into theatre design and youth theatre practice.** The traditional focus in theatre has been on artistic output, often disregarding the environmental impact of sets, props, and costumes. CIRCLE-T aims to bridge this gap by embedding sustainable practices from the outset of young theatre-makers' training.

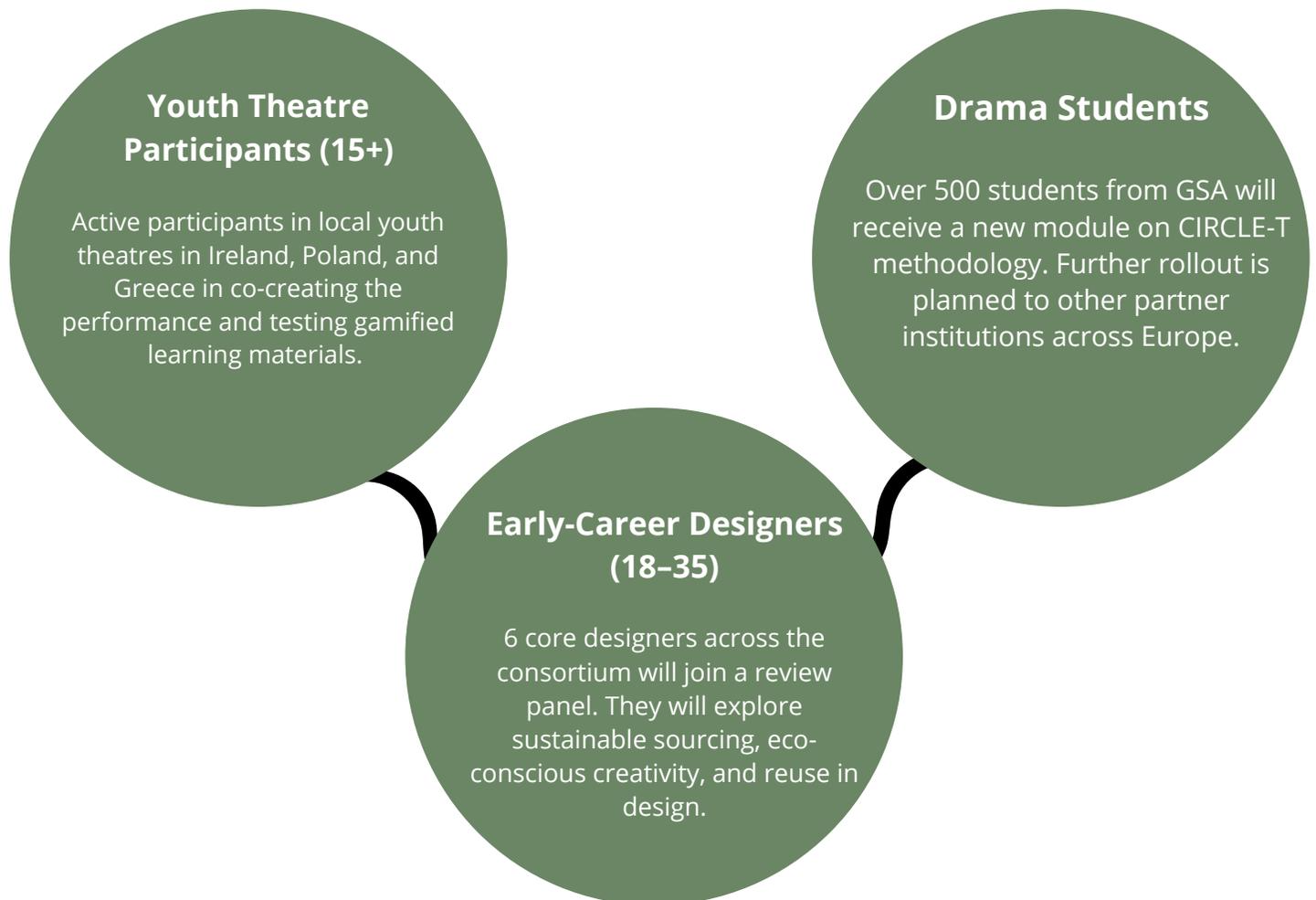
CIRCLE-T brings this green shift to the performing arts by merging artistic expression, educational innovation, and environmental responsibility. CIRCLE-T is Circular. Innovative. Responsible. Cooperation Led. Engaging - Theatre.

The CIRCLE-T project will work with Youth Theatre and Early Career designers to integrate sustainable methods into their practice by:



CIRCLE-T involves a multi-layered network of stakeholders across youth, education, and the cultural sectors.

Primary Target Groups

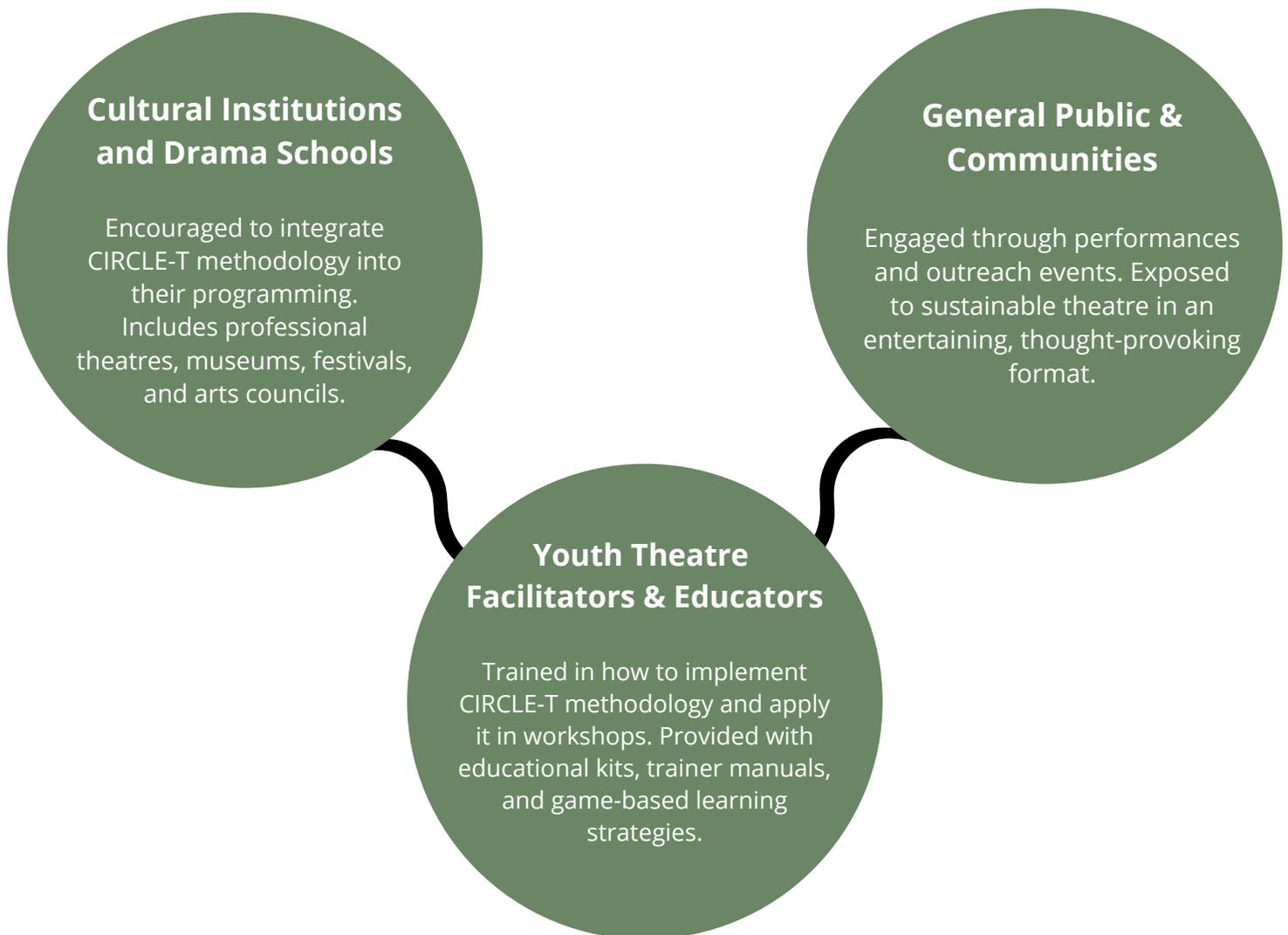


The primary target group consists of **youth theatre participants aged 15 and above**, based in Ireland, Poland, and Greece. These young people, coming from both urban and rural settings, represent diverse socio-economic and cultural backgrounds. Through the project, they will be directly involved in workshops, creative processes, and performances. They will test and provide feedback on the CIRCLE-T Game and training tools while co-developing a theatre piece that embodies circular design principles. Their participation will not only build environmental awareness and creative confidence but also offer them a first-hand experience of European collaboration and peer learning.

A second key group includes **early career theatre designers, aged 18 to 35**, who are either emerging professionals or students in scenography, costume design, stagecraft, or related disciplines. These individuals will receive tailored training and mentoring, participate in the design of sustainable theatrical elements, and contribute as reviewers in the development of the project's outputs. Their involvement will help embed circular economies train in their professional practice from an early stage and increase their visibility in the European cultural landscape.

Drama students, especially from The Gaiety School of Acting and affiliated institutions, form another core group. Over 500 students will engage with a newly developed training module on the CIRCLE-T methodology, learning how to integrate sustainability into their craft. They may also contribute to pilot activities or performances. This will prepare them as future cultural professionals capable of aligning artistic excellence with environmental responsibility.

Secondary Target Groups



The project also focuses on youth **theatre facilitators, drama educators, and youth workers**, who will be equipped with new tools, guides, and methods to deliver eco-conscious theatre training. Through participation in workshops and dissemination events, they will gain access to practical resources and become local multipliers of the methodology, contributing to long-term systemic change in drama education.

Cultural institutions, drama schools, and policy stakeholders are strategic beneficiaries of the project. Through the distribution of the Know-How Toolkit, engagement in multiplier events, and access to research outputs, they will be encouraged to integrate CIRCLE-T practices into their programming and influence national or regional cultural policies in line with EU sustainability goals.

Lastly, the **general public and community audiences** will engage with the project through the final CIRCLE-T performance, outreach events, and communications campaigns. As spectators and community stakeholders, they will be invited into the conversation on sustainability and culture, experiencing firsthand how theatre can inspire dialogue and collective action on climate issues.

In uniting these diverse groups, CIRCLE-T builds a pan-European ecosystem of practice, learning, and innovation around sustainable theatre, where youth creativity drives both artistic and environmental transformation.



The circular economy (CE) represents a shift from the traditional linear “take-make-dispose” model toward a regenerative system that prioritises resource efficiency, waste minimisation, and the extension of product lifecycles. In the context of theatre, CE translates into reusing, upcycling, and recycling materials, costumes, and props; designing sets that can be easily disassembled, reconfigured, or repurposed; and actively collaborating with local recyclers, artisans, and rental facilities to reduce the demand for “virgin” resources. Embedding CE within theatre not only mitigates environmental impacts but also encourages creative problem-solving and community engagement.

The educational value of theatre in fostering ecological awareness among young people is well documented. By engaging in a theatrical process, participants learn to negotiate creative constraints, practice collaborative decision-making, and develop empathy for both human and non-human stakeholders. Theatre inherently invites reflection on societal issues; when ecological themes are integrated into narratives and design, audiences can participate in a dialogue where environmental ethics can be discussed, questioned, and reimaged.

This theoretical framework underpins all **work packages** (WPs) within CIRCLE-T:



WP2 (Research Methodology) investigates existing circular practices in performing arts, identifies barriers and enablers, and collects quantitative and qualitative data from stakeholders.

WP3 (Game-Based Learning) harnesses pedagogical theories of active learning and “learning through play,” creating a scaffolded game environment where participants simulate resource allocation, design scenarios, and collaborate on sustainable set-making tasks.

WP4 (Training Guide) translates theoretical insights into modular curricula, ensuring that early-career scenographers and theatre instructors acquire practical skills (e.g., zero-waste design techniques, life cycle assessment basics) and interpersonal competencies (e.g., teamwork, stakeholder negotiation).



WP5 (Script & Performance) uses dramaturgical theory to center an original youth theatre piece around circular economy themes, embedding ecological principles directly into both text and stagecraft.

WP6 (Know-How Toolkit) consolidates best practices, templates, checklists, and strategic guidance, forming a lasting resource for youth theatres, cultural institutions, and policy-makers interested in adopting circular scenography.

Aligned with CIRCLE-T's commitment to authentic, context-sensitive approaches, the project respects diverse national regulations, cultural traditions, and economic conditions in Poland, Ireland, and Greece. This ensures that the resulting methodologies and tools can be adapted to local realities while sharing core CE principles—such as prioritizing reuse, optimizing transport and accommodation choices, and fostering cross-sectoral collaborations.



We are a consortium of four organisations across 3 different countries coming together to create the CIRCLE-T project. Our partners are: The Gaiety School of Acting (Ireland), Varsztatovnia (Poland), Challedu (Greece), Droichead Youth Theatre (Ireland). We are building an international community of like-minded theatre-makers - **Where art meets sustainability!**

1. The Gaiety School of Acting – The National Theatre School of Ireland



is a Not for Profit organisation founded in 1986 by the internationally renowned theatre director, Joe Dowling, in response to the lack of full-time actor training programmes in Ireland at the time. The school is now widely regarded as the country's premier training facility for actors. Our policy is to train actors for theatre, film and television. Through a committed and dedicated staff, the school has developed and expanded to its current position where over 5000 students are involved in a wide range of courses from our intensive two-year, full-time actor training programme to a range of courses available to students from overseas.

GSA trains the future Theatre makers of Ireland. As part of our Young Gaiety, Part -Time classes and Full time courses we train nearly 2,000 people annually in the process of theatre making. We have access to the next generation of theatre makers and will be able to directly include them in the project. We have 10 years of experience of producing, writing, and creating work for young people and youth as part of our Shakespeare in tour programme and various outreach projects.

2. Varsztatovnia Foundation



Varsztatovnia Foundation is a Polish non-profit organization and cultural incubator that focuses on inclusive education, mental health support, and creative innovation. It operates across Poland and combines art, psychology, and technology to empower individuals and communities through workshops, therapy sessions, and digital education.

In the CIRCLE-T project, Varsztatovnia plays a key role in promoting sustainable practices in youth theatre. Their contributions include:

- Developing a methodology that integrates circular economy principles (Reduce, Reuse, Recycle) into theatre design.
- Creating an educational online escape room game to teach sustainable scenography in an interactive way.
- Preparing a training guide for youth theatre facilitators and novice stage designers focused on ecological and civic themes.
- Leading creative youth theatre projects that culminate in performances while teaching ecological and design skills.
- Contributing to a knowledge and recommendation package for educational and artistic institutions.
- Supporting the development of the Green Youth Theatre Network in Poland, Greece, and Ireland.

Varsztatovnia brings a strong mix of ecological awareness, digital innovation, and creative education to the CIRCLE-T initiative.

3. Challedu



CHALLEDU is a non-profit organization that pioneers new models of learning, inclusion, and engagement. CHALLEDU is one of the leading R&D experts in game-solutions for education and inclusion. Our team designs and implements playful experiences, games, formal and non-formal educational programs, tools, platforms and applications based on cross-sectoral, and interdisciplinary approaches. We focus on 2 main sectors:

Social inclusion

The projects in this sector focus on inclusion and empowerment of marginalized groups, such as people with disabilities, people with health problems (i.e. dementia), older people, and NEETs. The aims are: social inclusion, improved employability, development of skills and competencies, and advocacy. The emphasis is given to create environments where people with different abilities, cultural backgrounds and skills, and different generations can interact with each other. The approaches in this sector involve non-formal and informal education, living labs, open co-creative workshops, game-based tools, and cross-sectoral approaches.

Education and innovation

We see education as a driver for positive societal, environmental, and innovative change. The projects developed in this sector focus on the promotion of entrepreneurship, STE(A)M education, civic and active citizenship, environmental and agriculture challenges, culture, and sustainable development. Our target groups include young people, adults, students, trainers and educators, professionals, and institutions. Our approach encompasses forms of non-formal and informal education, game-based methodologies, role-model methodology, open-learning and digital tools, gamification, as well as cross-sectoral approaches.

4. Droichead Youth Theatre



Droichead Youth Theatre (DYT) has been providing a creative, personal and social outlet for Drogheda's teenagers since 1991, through drama workshops, theatre skills, performance, social activities, trips, and public productions. They are a registered charity through our parent organisation Droichead Arts Centre, who provide administrative and artistic support and resources to the group.

Droichead Youth Theatre have a long history of collaborative arts practice, and co-creating work in partnership with professional theatre-makers and other young artists. All our work is youth-led, from project selection, grant writing and media content creation, to directing, design, and production. As a newcomer to Erasmus+, DYT brings grassroots experience and a diverse youth community. It will lead the development of the final performance and support the co-creation process with young people. DYT will also contribute to the creation of resources aimed at other youth theatres.

2 CHAPTER

GUIDE OVERVIEW

Scope of the guide

The methodological guide developed within the CIRCLE-T project serves as a comprehensive educational and practical resource aimed at promoting sustainable practices in youth theatre. It focuses exclusively on **Output 1: Developing the CIRCLE-T Methodology**, firmly anchored in the project's commitment to environmental action and the fight against climate change. It is built on rigorous desk research into existing circular-economy best practices and knowledge evaluation, complemented by hands-on upskilling visits to leading circular-economy specialists. These combined activities will forge vital industry networks for our designers and the next generation of theatre-makers, placing sustainability at the very heart of creative set design and costume processes.

Rather than attempting every tool at once, this guide lays out the core research framework: identifying pre-existing best practices, gathering expert input on their adaptation for theatre, and translating these insights into practical, step-by-step recommendations. While a fuller "how-to" compendium will follow in the final Know-How Toolkit, here we provide the conceptual backbone: clear steps for implementing circular design in theatre, foundational training frameworks, and curated examples from partner countries. By centering youth-led innovation and cross-sectoral collaboration, the guide equips emerging practitioners with the green skills and creative confidence needed to drive systemic change in the performing arts.

The main **objectives** of the CIRCLE-T methodological guide are to:

Showcase Best Practices

Introduce the National Context

Showcase circular economy principles in theatre design and production.

Address sustainability through practical strategies tailored to youth theatre and early-career designers.

The **target groups of the CIRCLE-T methodological guide** are:

1

Youth Theatre Professionals

- Facilitators, directors, and trainers working directly with young people in theatre settings.
- They will use the guide to apply sustainable, circular practices in workshops, rehearsals, and productions.

2

Early Career Designers

- Especially those working in set, costume, and production design.
- The guide supports their upskilling in eco-friendly and circular design methodologies.

3

Training Organizations

- Institutions offering vocational education and training (VET) in theatre, design, or cultural management.
- They can integrate the guide into formal and non-formal learning modules or workshops.

4

Policy Makers

- Especially those involved in youth, culture, education, or environmental policy.
- The guide offers a model for embedding sustainability into national or regional cultural strategies.

What is the Circular Economy?

The first step in creating this guide was to make a dictionary of terms that we all agreed on so there was a common understanding of terminology across the 3 partner countries. **CIRCLE-T Dictionary contains:**

CIRCULAR ECONOMY

'A model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing, and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended.'

(Source: <https://www.europarl.europa.eu/topics/en/article/20151201STO05603/circular-economy-definition-importance-and-benefits>)

SUSTAINABILITY

"meeting the needs of the present without compromising the ability of future generations to meet their own needs."

(Source: [United Nations Brundtland Commission, 1987](#))

GREEN PRACTICES

'Environmental friendly actions, which can help to environment protection and sustainability development.'

(Source: https://www.igi-global.com/dictionary/green-practices-in-supply-chain-management-to-improve-sustainable-performance/66707#google_vignette)

ECOLOGY

'study of the relationships between organisms and their environment.'

(Source: <https://www.britannica.com/science/ecology>)

GREEN WASHING

'Greenwashing refers to organisations' misleading tactics of presenting their products or operations as environmentally friendly, thereby concealing their negligible or harmful environmental impacts. This term blends "green," symbolising ecological concern, with "whitewashing," indicating the disguise of damaging practices.'

(Source: <https://plana.earth/glossary/greenwashing>)

Following the creation of the Dictionary, the consortium agreed to do the following steps:

Case Studies and best practices - 3 from each country

Literature review - International Best practice

Site visits and Interviews - To establish connections with experts

Upskilling workshops with experts in the field

This guide stands as a living document: responsive to the real-world needs of youth theatre practitioners and flexible enough to be adapted in new contexts long after the CIRCLE-T project concludes.

3 CHAPTER

RESEARCH AND DATA

Research Scope and Objectives

The Methodology seeks to answer the following research questions:



Which circular practices are currently implemented by cultural institutions and youth theatres in partner countries; and what are their environmental, social, and economic impacts?



What barriers (logistical, financial, regulatory, or cultural) inhibit the adoption of circular and sustainable practices in the Theatre Industry?



Which existing best practices both within and outside Europe, offer transferrable insights for CIRCLE-T's objectives?

To address these questions, the research team conducted:

- **Document Analysis:** The original project application, quality assurance plans, national EU policy documents on circular economy, and existing guidelines were systematically reviewed to extract conceptual frameworks and baseline indicators.
- **Site Visits:** Partners visited experts in the field and other institutions to conduct interviews to find out what resources are already available which can be tailored to our needs.
- **In-Depth Interviews:** Stakeholders were interviewed across Poland, Ireland, and Greece (including theatre directors, production managers, and set designers,). These interviews provided nuanced insights into local ecological infrastructures, financial constraints, and pedagogical priorities.

In 2024, Ireland renewed the **Climate Action Plan** for the country which sets a roadmap to half the country's emissions by 2030 and achieve zero emissions by 2050. In the 2021 version of the Climate Action Plan, the Government highlighted different sectors and actions to put in place in order to achieve those goals. One of the sectors in question is the Circular Economy. The Action Plan reports that 'with a circularity rate of 1.6%, Ireland lags some way behind the EU average of 11.9%' (p.182) and in order to provide an overall national policy framework for the circular transition the government put in place the following:

- Whole of Government Circular Economy Strategy 2022 - 2023
- Circular Economy and Miscellaneous Provisions Act, 2022

While these two are solely focused on Circular Economy, a number of policies and acts features **circular economy elements** such as:

- Waste Action Plan for a Circular Economy 2020 - 2025
- National Waste Management Plan for a Circular Economy 2024 – 2030
- Climate Action Plan 2024
- Buying Greener: Green Public Procurement Strategy and Action Plan 2024 - 2027
- National Food Waste Prevention Roadmap 2023-2025
- Bioeconomy Action Plan 2023 - 2025
- Policy Statement on Geothermal Energy for a Circular Economy
- Policy Statement on Mineral Exploration and Mining Critical Raw Materials for the Circular Economy Transition
- 4th National Biodiversity Action Plan 2023-2030

In addition to these, The Environmental Protection Agency (EPA) has created **Ireland's Circular Economy Programme** which supports national-level, strategic programmes to prevent waste and drive the circular economy in Ireland. Examples of these include:

- The Rediscovery Centre, the national centre for circular economy
- Circuléire, the national platform for circular manufacturing
- Food Waste Prevention Programme

In 2024, based on the Climate Action Plan, the Arts Council developed their own **Climate Action Roadmap** to set objectives for the Arts Council in terms of climate actions.

In order to help arts organisations achieve climate action, some initiatives have been put in place:

1. The Green Arts Initiative

Run by The Performing Arts Forum and Catriona Fallon, under the guidance of Creative Carbon Scotland, the **Green Arts Initiative in Ireland aims to:**

- Support arts organisations with practical advice on reducing their carbon footprint and overall environmental impacts.
- Provide arts organisations with opportunities to enhance their sustainability competencies through training and networking.
- Collect information about what organisations are currently doing to improve their sustainability.

The Green Arts Initiative has run **a number of pilot projects** to support organisations and practitioners:



2. The Theatre Green Book - Irish Edition

The Theatre Green Book - Irish Edition is a resource freely available to Irish Theatre Makers that is a national version of the Theatre Green Book (2021, UK). It was adapted from the original version to respond to national context and the Irish theatre industry.

The Theatre Green Book offers a roadmap to theatre-makers, freelancers, and organisations to create more sustainable theatre. **It emphasises on looking into:**

- Production
- Operations
- Buildings
- Highlighting the importance of circular economy principles.

It offers resources and toolkits to look at how to make production, operations, and buildings more sustainable. The Theatre Green Book also offers different levels to look at sustainability in theatre practice, meeting practitioners where they are, and making steps achievable at all levels. The Green Arts Initiatives and the Theatre Green Book - Irish Edition also offer free online training in order to spread the resources and make the shift towards sustainable practices more accessible.

To be sustainable, we need to...



Sustainable Productions ... make theatre **Productions** as sustainably as possible



Sustainable Operations ... run theatre **Operations** as sustainably as possible



Sustainable Buildings ... make theatre **Buildings** as sustainable as possible

Source: Theatre Green Book, <https://theatregreenbook.com/>

The Greek government has taken significant steps towards a sustainable and circular economy, aligning its policies with the European Green Deal and the 2020 EU Circular Economy Action Plan. During 2018, the Greek government set up the **National Circular Economy Strategy**, followed by an action plan with the duration of 2 years. This strategy supported Greece's economic strategy in its key quest to make the economy green in a matter that potentially could create jobs, especially for women and young people, and long-term equitable and inclusive growth based on resource efficiency (Hellenic Republic, 2018).

Although Greece's initial plan didn't manage to achieve the set goals, it laid the groundwork for the more comprehensive National Circular Economy Action Plan (National CEAP) implemented during 2022. This revised and updated plan, covering the period 2021–2025, is structured around **five key areas**:

- sustainable production,
- sustainable consumption
- waste reduction
- priority product value chains
- governance and monitoring.

This Circular Economy Action plan aims to promote sustainable production by encouraging eco-design and promoting waste reduction. Another key feature of this plan is that it also tries to foster sustainable consumption by raising public awareness and supporting eco-friendly options. Waste reduction and increase in recycling are key priorities, with investments in modern waste management infrastructure and initiatives like Recovery Recycling Facilities (RRFs) in order to efficiently discern and process recyclable and organic materials.

Nowadays there are some municipal initiatives like the "Pay As You Throw" which promote waste reduction at the community level. **Pay-as-you-throw (PAYT)** is a scheme in which waste fees paid by users are modulated according to the amount of mixed waste delivered to the waste management system. The aim of PAYT is to enact the polluter pays principle in a fair way leading to outstanding results in waste management performance, increasing the amount of waste that is separately collected and sent for recycling while reducing mixed waste (Joint Research Centre, 2023). Even though Greece has limited experience on the aforementioned scheme and it was gained mostly from pilot scale programs. The fact that there is a lack of appropriate legislative support has created many barriers and restricted the potential for its implementation at municipal and national level (Vitoraki, 2019).

1.Green Culture Routes

Eco-conscious practices in culture, education, and public engagement are at the heart of “Green Culture Routes”, a Greek Culture Ministry initiative running across the country from May 22 to 25. Now in its 13th year, the program invites the public to participate in a wide range of free events, including presentations, educational activities, thematic tours, walks, hikes, cycling routes, and artistic performances—all designed to promote sustainable cultural experiences.

Launched in 2012, the initiative has grown to include 46 regional antiquities and cultural heritage services in collaboration with municipalities, schools, universities, museums, environmental education centers, cultural associations, and citizen cooperatives, with significant support from volunteers.

2. SNFCC

SNFCC remains a dynamic hub of environmental sustainability, a model of accessibility and inclusion, and a platform for civic engagement. The SNFCC was created at the initiative of and with an exclusive grant from the Stavros Niarchos Foundation (SNF), which delivered it to the Greek state upon completion in 2017. It is a public space, where everyone has free access and can participate in a multitude of cultural, educational, athletic, environmental and recreational activities and events. The SNFCC hosts the new premises of the Greek National Opera (GNO) and the National Library of Greece (NLG), and at the heart of this public domain lies the Stavros Niarchos Park, the largest public Mediterranean garden in the world..



Source: SNFCC, Stavros Niarchos Park, <https://www.snfcc.org/en/snfcc/stavros-niarchos-park/>

In response to global climate challenges and European Union directives, Poland has undertaken multiple legislative and strategic initiatives aimed at aligning its economy with CE principles. A key document guiding this transition is the "**Roadmap for Circular Economy in Poland**" (Ministry of Climate and Environment, 2019), which sets out objectives focused on reducing waste, increasing recycling rates, and fostering sustainable production and consumption patterns.

The strategy emphasizes waste prevention and resource efficiency through extended producer responsibility (EPR), circular public procurement to promote the use of sustainable materials, and innovative business models designed to integrate CE principles into industrial and commercial activities.

The "**Polish Environmental Policy 2030**" (Ministry of Climate and Environment, 2020) serves as a complementary strategy that prioritizes sustainable resource management, low-carbon development, and reducing environmental degradation. To implement these policies effectively, the Polish government has introduced key legislative acts that regulate waste management and recycling, including:

- The Waste Management Act (2013, amended in 2021), establishing a framework for responsible waste disposal and circular waste handling practices.
- The Act on Packaging and Packaging Waste Management (2013), which mandates recycling obligations for producers and importers of packaging materials.
- The Act on Waste Electrical and Electronic Equipment (2005), which governs the disposal and recovery of electronic waste.
- The Act on Maintaining Cleanliness and Order in Municipalities (1996), requiring local authorities to implement waste collection and segregation systems.
- The Environmental Protection Law (2001), providing overarching regulations on environmental conservation and resource management.

In addition, Poland is preparing to launch a deposit-return system for beverage containers, scheduled for implementation in October 2025. This initiative aims to improve recycling rates by incentivizing consumers to return used packaging, thus reducing plastic and glass waste accumulation.

Sustainable Plans and Circular Economy in the Arts Sector In Poland

While the primary focus of CE policies has been on manufacturing, construction, and industrial sectors, cultural institutions are increasingly adopting circular economy principles to reduce their environmental impact. Several Polish theatres and cultural centers have pioneered **sustainability initiatives**:

1. Teatr Druga Strefa (Warsaw) has implemented waste reduction strategies by repurposing stage materials, reselling costumes, and establishing an electronic waste collection program (E-Teatr, 2023).

2. CK ZAMEK (Poznań) encourages sustainable audience mobility by promoting public transportation options and organizing waste-free events (Grotowski Institute, 2023).

3. Narodowy Stary Teatr (Kraków) has incorporated eco-friendly production techniques, including the use of energy-efficient lighting and digital stage projections to minimize material waste.

4. Teatr Powszechny (Warsaw) organizes workshops and awareness campaigns focused on sustainability in the arts sector, engaging both professionals and audiences in discussions on eco-conscious theatre practices.



Teatr Powszechny (2021), *Eco-Weekend* <https://e-teatr.pl/warszawa-weekend-ekologiczny-w-teatrze-powszechnym-13694>

4 CHAPTER

CASE STUDIES & BEST PRACTISES

This section offers an in-depth compendium of exemplary approaches from across Europe. Each case study highlights transferable strategies, inherent limitations, and contextual considerations that inform the project's methodology.

1. Greening Venues Pilot Project (Ireland)

Through environmental audits, participating venues (e.g., Pavilion Theatre, Town Hall Theatre, Axis, Visual, An Taibhdhearc, Belltable) underwent comprehensive evaluations of energy, waste, water, and biodiversity impacts. Each venue then implemented targeted recommendations: retrofitting LED lighting, optimizing HVAC systems, installing compost bins, and improving waste segregation. The pilot also facilitated networking events where venue managers shared sustainability successes and challenges, creating a community of practice that extended beyond the pilot's lifespan.

CIRCLE-T Link: We will draw from this example by creating audit templates into WP4's Module 4 and WP6's Know-How Toolkit. In particular, the emphasis on user-friendly audit frameworks, enabling venue managers to self-assess and implement incremental upgrades provides a practical roadmap for youth theatre venues lacking dedicated environmental staff.



Drawing by Lisa Fingleton

2. Greener Touring Project (Ireland)

The Greener Touring Project was a collaborative effort among Irish performing arts organizations to quantify and reduce the carbon footprint of touring. Recognizing that transport and accommodation represent the largest emission sources, Ballet Ireland, Fishamble, Catherine Young Dance, and other companies collected baseline data on vehicle fuel consumption, lodging choices, and production schedules. They then facilitated workshops where tour managers learned to implement practical measures: carpooling ensembles to minimize individual car usage, negotiating group rates on eco-friendly accommodations, and scheduling extended runs to reduce the frequency of set load-ins and load-outs.

While the recommendation for longer runs improved material usage per performance, it inadvertently risked limiting rural audiences' access to touring shows. This highlights an important trade-off: optimizing for environmental efficiency may conflict with cultural accessibility goals.

CIRCLE-T Link: We will adopt a balanced approach by encouraging hybrid touring models combining longer runs in regional hubs with pop-up community performances in satellite locations thus maintaining outreach while maximizing resource efficiency.

3. The Royal Shakespeare Company's "The Tempest" (England)

In 2023, RSC's production of "The Tempest," designed by Tom Piper, sought to reimagine existing set and costume resources rather than commission new builds. Material reuse was prioritized: existing platforms, drapes, and hardware were reworked or repainted with reversible finishes. Costumes were selected from internal archives and rented from local theatre companies. Other theatre set also had a wall of items that cost a lot for them to buy. At the end of the show they wouldn't have been able to store it (most smaller theatres can't afford to have a large storage facility), so would have had to throw it away. There's a double benefit in sharing or exchanging theatre items for cheaper prices.

CIRCLE-T Link: As the project is working with early career designers we will encourage them to create a network of sharing among themselves. We will share links with circular economy organisation already in existence. For example in an Irish Context: Re-Staging and Circular Costume.



Source: RSC, *Designing a Sustainable Tempest*, The set of *The Tempest* with the large mirror that was given away by the Kiln Theatre, <https://www.rsc.org.uk/blogs/whispers-from-the-wings/designing-a-sustainable-tempest>

4. The Cost of Living (National Theatre Wales, UK)

National Theatre Wales has embedded environmental sustainability into its core operations and production practices. For the play *The Cost of Living*, they adhered to the Theatre Green Book guidelines, repurposing an entire set from a previous London/NY run and sourcing all costumes second-hand (e.g. charity shops, Gumtree, Facebook Marketplace). As an ongoing policy, NTW ensures that every branch of the organisation—from admin to design—prioritises repurposed materials and top-down commitment to zero-carbon goals.

CIRCLE-T Link: Their approach demonstrates how leadership can mandate circular scenography early in production, showing youth theatres that repurposing existing sets and cost-effective second-hand procurement need not compromise artistic quality

5. Festival International d'Art Lyrique (Aix-en-Provence, France)

Since 2020, this major opera festival has enshrined Corporate Social Responsibility in its statutes. Beginning with a 2012 carbon audit, the festival developed an eco-design guide for sets (disassemblable, non-toxic, recyclable) and a Green Transition Action Plan involving staff, artists, and local authorities. Regular training and audience-facing initiatives round out a holistic method—from cork-based set elements to biodegradable dyes—while acknowledging budgetary limits for smaller companies.

CIRCLE-T Link: Their multi-stakeholder Green Guide and action plan offer a ready template for training modules and policy templates in CIRCLE-T's Methodology



Source: Fial has notably offered its employees climate frescoes. © DR <https://www.marcelle.media/le-festival-daix-en-provence-de-plus-en-plus-vert/>

6. EcoStage (International, online)

EcoStage is a volunteer-led network providing a seven-principle framework (“7 R’s,” “Cultivate Co-Creation,” etc.), workshops, case studies, and a community pledge to embed ecological thinking at every creative stage. Their in-depth exercises—such as nature-inspired reflection—foster participant-driven culture change, while their open glossary and resource hub support continuous peer learning.

CIRCLE-T Link: EcoStage’s reflective tools and community-building model can inform CIRCLE-T’s youth-led manifesto, kick-off exercises, and network-building strategies



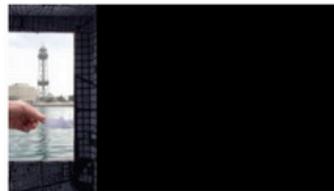
Ceschi + Lane – Holt

<https://youtu.be/Mrx2YJgu15s> Artist and performance collective specialising in body base sculpture & costume. They have been collaborating as Brave New Worlds since 2013. Valentina Ceschi is an Italian interdisciplinary artist / [...]



Metta Theatre – Three Songs from HouseFire the Musical

<https://youtu.be/eefm0SuhZ7M>
<https://youtu.be/Ds2jg98jfE8>
<https://youtu.be/BLmpbsqSd9o> Official music videos from: HouseFire | AN ECO ROCK MUSICAL Listen to the album on Spotify: <https://spoti.fi/3dTdYzi> And other streaming platforms: I want you to act as [...]



Francesc Serra Vila – Let’s Go Out For A Walk?

<https://youtu.be/g-2AbVuWnvl>
<https://vimeo.com/573327296> LET’S GO OUT FOR A WALK? is a project specifically designed for elderly people; their local stories from childhood to the present, are eventually transformed in a performative [...]



Helen Storey – LOVECOATS Project with the TIGER girls

https://www.youtube.com/watch?v=Fr_fXZQy_Zs Working alongside the refugees, Professor Helen Storey’s Dress For Our Time projects continue to evolve at Za’atari Refugee Camp in Jordan. Helen Storey MBE, RDI is Professor of Fashion [...]



Tanya Beer – The Living Stage NYC

<https://youtu.be/GE7iBYyLI08> Dr Tanya Beer is an ecological designer, community artist and Senior Lecturer in Design at the Queensland College of Art, Griffith University, Australia. The Living Stage The Living Stage [...]



Jennifer Leach – The Graveyard

<https://youtu.be/xC6BPrxNjNo> Go small! I keep hearing this message. It struck me forcibly one day as I chanced upon a small village graveyard, with the sleepy atmosphere of peace that pervades [...]



HandMade Theatre – Creating WilderNests: Sustainable Theatre

<https://www.youtube.com/watch?v=2OdCtkSJNyo> Sustainability at HandMade Theatre HandMade Theatre use live performances and creative therapy approaches to bring experiences of wonder and joy to children and communities across the UK. We perform at [...]



Paul Burgess – Apples and Snakes: Plot 17

<https://youtu.be/dSBkbokfCv8> PLOT17: A hip-hop garden block party written and performed by Kenny Baraka for audiences aged 7+ Four pieces of woodEight nailsAnd a hammerSome compostA hand full of seedsAnd some [...]

Source: EcoStage, Global Voices and Case studies, <https://ecostage.online/global-voices/>

7. Circular Costume Ireland (Co. Wicklow, Ireland)

Circular Costume Ireland is Ireland's first non-profit circular costume hub. They collect, repair, and rent/sell used clothing and theatrical garments, reinvesting any proceeds into expanding their collection and services. By offering a centralized, easy-to-browse repository of era-specific pieces, CCI cuts down search time and waste, building a growing community of costume professionals dedicated to reuse.

CIRCLE-T Link: CCI's fast, locale-tailored rental model shows youth designers how to access quality second-hand costumes efficiently—directly reducing sectoral waste without adding complexity.



circularcostumeireland

Join us on our mission to create a more sustainable costume industry.



Source: Circular Costume Ireland, <https://circularcostumeireland.com/>



8. Educational Puppet Theatre Workshop – Επί Stagon, Greece

This workshop's success in using recycled materials to construct puppets demonstrates how performing arts can directly engage children in environmental education. Children not only learn puppet-making skills but also internalize recycling behaviors through hands-on practice. The program's limited long-term impact assessment points to the need for systematic evaluation frameworks.

CIRCLE-T Link:

We will track the success of Workshops by embedding robust evaluation mechanisms into WP3 (GBL surveys) and WP5 (audience impact questionnaires), ensuring all educational workshops have a clear method for measuring knowledge retention and behavioral change.



Source: E-Kalampaka.gr. (2014). Monastery on the Meteora rocks [Photograph]. E-Kalampaka.gr.

9. “Antigone” at the International Festival of Ancient Greek Drama (Cyprus)

This production of “Antigone” exemplifies how large-scale festival settings can incorporate circular strategies. The use of local recycled materials—reclaimed wood for staging and upcycled fabrics for costumes—demonstrates that cost savings and environmental gains can coexist. Additionally, the production’s extensive media coverage increased public awareness of green theatre practices, showing that visibility is a powerful tool for cultural change.

CIRCLE-T Link: We will leverage this case by including guidelines on media engagement and communications, encouraging youth theatres to document and publicise their circular initiatives. Establishing partnerships with local environmental NGOs (as seen with “Green Dot” in Cyprus) provides both credibility and potential funding avenues.



Source: International Festival of Ancient Greek Drama, ANTIGONE by Sophocles, <https://assitej-international.org/2023/12/08/a-sustainable-antigone/>

10. PATARI Project: “Four Seasons” Music Theatre (Greece)

By collaborating with the Greek National Opera and private sponsor Lidl Hellas, the PATARI Project illustrates how cross-sector partnerships can facilitate sustainable material sourcing for high-profile productions. Recycled costumes (constructed from plastic bags, bottles, straws) serve a dual role: as artistic statement pieces and as catalysts for environmental conversations among children and families. The performance’s aesthetic success and subsequent tours indicate that young audiences—and parents—are receptive to eco-theatre when presented in an engaging, musical context.

CIRCLE-T Link: forging partnerships with local businesses (e.g., sponsoring circular materials) is a practical strategy to obtain resources, leverage funding, and enhance community ties. WP6’s Toolkit will include a “Public–Private Partnership Guide” outlining steps to approach and secure support from local businesses for circular theatre initiatives.



Source: Greek National Opera. (n.d.). View of the Greek National Opera foyer [Photograph]. Greek National Opera

11. Handmade & Recycled Theatre Festival – Fabrica, Greece

Fabrica’s festival showcases how community-driven events can thrive on circular principles. By centering festival programming on performances, installations, and workshops made entirely from recycled or handmade materials, the festival created a vibrant platform for environmental education. Its use of local artists, volunteer labor, and minimal infrastructure underscores a sustainable, low-barrier model for festival organization.

CIRCLE-T Link: CIRCLE-T can replicate this model for local “Circular Theatre Showcases,” where youth theatre groups present short, recycled material-based performances in public parks or community centers.



Source Elculture.gr. (2023). Participants during the HRTFest event [Photograph]. Elculture.

12. “Eko Syrena” Program – Teatr Syrena, Warsaw, Poland

Developed spontaneously during the COVID-19 pandemic, the “Eko Syrena” program has grown from sorting waste and printing double-sided to installing solar panels on a heritage building—making it a pioneer among Warsaw theatres for environmental retrofitting. The program’s grassroots origin, grounded in collective brainstorming across departments (administration, production, promotion), contributed to a strong sense of ownership and continuous improvement. From reusing existing costume and scenography stock to strategic reductions in show frequency (to avoid overproduction), “Eko Syrena” exemplifies a bottom-up approach to cultural transformation that gradually formalizes into a strategic plan.

CIRCLE-T Link: Allowing small, practical steps to accumulate over time can lead to systemic changes (e.g., Eko Syrena’s solar panels). A Distributed Leadership Model Empowers individuals across departments—rather than centralizing decisions—fosters innovation and buy-in. Cost savings from lower energy bills and reduced material purchases provide direct incentives to continue green practices.



Source: Syrena Theater, ecological spectacle *Glonus and the Eco-Syrena Team* <https://teatrsyrena.pl/glonus-i-druzyna-eko-syreny/>

13. Bohema Theater (Warsaw, Poland)

Bohema Theater operates as the world's first ecological theatre company, blending aerial acrobatics, digital projections, and upcycled scenography to promote environmental awareness. They rely on reclaimed wood, biodegradable props, second-hand costumes, and energy-efficient lighting to create fully immersive, low-impact performances.

CIRCLE-T Link: Bohema's technical integration of circular materials and green tech illustrates advanced scenographic possibilities for CIRCLE-T training modules



Source: BohemaTheater, ecological spectacle The Magic of Recycling. <https://bohemahouse.pl/video/zapowiedz-magia-recyklingu/>

14. Jerzy Grotowski Institute (Wrocław, Poland)

The Grotowski Institute embeds sustainability into daily cultural operations—minimizing printed programs, prioritizing digital communication, and sourcing recycled/eco-friendly materials. They demonstrate how ecological management strategies can coexist seamlessly with artistic programming.

CIRCLE-T Link: Digital-first alternatives and institutional policy shifts from Grotowski offer transferable management strategies for CIRCLE-T’s administrative guidelines.

15. Centrum Kultury ZAMEK “Castle for Climate” (Poznań, Poland)

CK ZAMEK’s “Castle for Climate” committee, launched in 2020, steers institutional operations toward sustainability. They run green events, embed eco-education in programming, and introduce recycled/upcycled materials across exhibitions and workshops.

CIRCLE-T Link: Establishing a dedicated sustainability team—as they did—ensures continuity and accountability, a key recommendation for CIRCLE-T partner organizations.

 <p>Byłyśmy na seminarium Odbiorcy Instytucji Kultu... Jak było?</p>	 <p>Drzewa i byliny na Otwartym Dziedzińcu Od grudnia 2024 r. dziedzińiec przed Zamkiem wypełniony jest drzewami, krzewami i bylinami. Zasadziliśmy 21 nowych...</p>	 <p>Zielone pożegnania i powitania Projektowanie zieleni miejskiej i dbanie o nią to spore wyzwania. Trzeba wziąć pod uwagę szereg okoliczności, które...</p>	 <p>Wymianka ubrań Masz w swojej szafie półkę, na którą starsza się nie zaglądasz? Wyciągnij ubrania, odwróć wzrok z predkością...</p>
 <p>Przez Poznań rowerem! Czy wiesz, że Poznań może pochwalić się najwyższym ruchem rowerowym w całej Polsce? Mamy wynik na poziomie około 10%...</p>	 <p>Mniej śmieci w sieci Przez wakacyjne miesiące trwał w ZAMKU konkurs „Czas czyścić skrzynki!” Podczas trwania akcji udało się nam...</p>	 <p>Cyfrowy ślad węglowy. Jak go zmniejszyć? Mechaniczne uruchamianie aplikacji Facebooka tak często jak zagłębienie do lodówki w poszukiwaniu przekąsek?...</p>	 <p>EkoKompas Mamy EkoKompas! Spisaliśmy go dla siebie, aby uporządkować kierunki myślenia o naszym działaniu w sytuacji kryzysu...</p>
 <p>Wspólne zakupy: warzywa prosto z pola Bataty z USA, mango z Brazylii, kiwi z Włoch, mandarynki z Hiszpanii. Warzywa i owoce, które trafiają na półki...</p>	 <p>Zabytki, zieleni i samochody Siedziba Centrum Kultury ZAMEK w Poznaniu mieści się zabytkowym gmachu. Obiekt powstał na początku XX wieku jako...</p>	 <p>Zielony Regał W ZAMKU bliska jest nam idea wymiany i współdzielenia. W tym duchu kilka lat temu powstała w naszej instytucji...</p>	 <p>Mniej gadżetów! Torby, smycze, długopisy, ołówki, koszulki, kubki, magnesy, breloczki. Z logotypem miasta, instytucji, wydarzenia...</p>

Source: Centrum Kultury ZAMEK, *Castle for Climate Events*, <https://ckzamek.pl/podstrony/5807-zamek-dla-klimatu/>

5 CHAPTER

INTERVIEWS & SITE VISITS

To anchor the CIRCLE-T Methodology in lived experience, WP2 engaged directly with practitioners and specialists through rich, exploratory interviews and immersive site visits. Rather than a dry catalog of activities, these encounters revealed the mindsets, challenges, and enabling factors that shape circular theatre in practice—and pointed toward the guide’s core recommendations.

Teatr Syrena “Eko Syrena” Interview

When the CIRCLE-T team met with Teatr Syrena’s collective of eco-champions, what emerged was a portrait of organic transformation driven by everyday decisions. The “Eko Syrena” programme began not as a top-down mandate, but as a grassroots reflection sparked by the enforced pause of the pandemic. Staff from production, technical, administrative, and educational departments pooled ideas in a series of informal “brainstorming huddles,” questioning whether every resource really needed to be new.



Source: Syrena Theater, ecological spectacle *Glonus and the Eco-Syrena Team* [each puppet was made of ecologically sourced materials] <https://teatrsyrena.pl/glonus-i-druzyna-eko-syreny/>

From those early ideas—**double-sided printing, sorting waste, switching off lights**—grew a broader culture: technicians learning to retrofit existing flats, costume staff combing the theatre’s archives instead of ordering new garments, and even solar panels crowning the historic building despite heritage-zone hurdles. Across this journey, distributed leadership proved vital: rather than a single sustainability officer, small eco-teams across every department owned discrete interventions—**from repurposing set bolts to organizing community upcycling workshops**.

Perhaps the most striking insight was how small, consistent acts build momentum. One technician remarked, “I never imagined that swapping to LED bulbs would pave the way to installing solar panels,” illustrating how incremental wins seed confidence for larger projects. Young audiences responded enthusiastically to productions like *Glonoś*, eagerly identifying recycling bins and reciting correct waste-sorting rules—proof that theatre itself can be a powerful classroom for ecological values.

Above all, the Syrena interview underscored that sustainable theatre is a collective, ongoing experiment. Staff readily acknowledged gaps in their knowledge, openly inviting external audits and international exchanges. As one coordinator reflected, “We’re convinced we still have much to learn”—a humility that CIRCLE-T carries into its own research and ensures room for adaptation as best practices evolve .



Tomasz Jacyków (left) and Krzysztof Broda-Żurawski, stylists and supporters of fashion recycling
<https://teatrsyrena.pl/misja-i-historia/ekologiczna-syrena/>

Cerebral Productions Interview

In a wide-ranging conversation with Christos of Cerebral Productions—a social enterprise spun out of Greece’s burgeoning LARP community—the CIRCLE-T team uncovered how grassroots theatrical gaming translates circular-economy principles into lived practice.

Founded by a core group of five former corporate professionals seeking meaningful creative work, Cerebral Productions leverages donated, second- and third-hand costumes, 3D-printed accessories, and volunteer support to stage immersive outdoor theatre games for 30–50 participants. Their ethos rests on resourcefulness and community collaboration: every armour piece, tunic, or helmet has its own provenance story—rescued from closing costume shops in Athens, up-cycled from players’ personal collections, or fabricated in-house using streetwear as a structural base.



Interview with Christos of Cerebral Productions

Key insights include:

- **Costume Lifecycle Management:** By collecting unwanted garments from vestiaires and experienced LARPer, then reworking them with minimal sewing (pleats, overlays) and comfort-driven modern understructures, they cut costume costs from €200–300 to under €50 per set.
- **Volunteer-Powered Operations:** A wider circle of 15–20 dedicated volunteers supports event logistics—providing fields, organizing registrations, and co-hosting workshops—demonstrating how a small core team can mobilize a sustainable volunteer network.
- **Educational Aspirations:** Building on LARP’s pedagogical potential, they plan a dedicated children’s programme (ages 10–12) in partnership with Avalon, marrying role-play mechanics with age-appropriate psychological tools.
- **Adjacent Ecological Actions:** While not yet running explicitly “green” narratives, they leave natural sites undisturbed—staking trails to prevent erosion—and express keen interest in future collaborations with environmental NGOs (e.g., Anima’s botanical-park LARP) to embed ecological storytelling directly into game scenarios.
- This interview underlines how low-tech upcycling, open volunteer engagement, and narrative innovation can position theatre-game makers as community-based catalysts for sustainability—insights that CIRCLE-T incorporates into its training frameworks and partnership guidelines.



Unwanted garments and items collection

6 CHAPTER

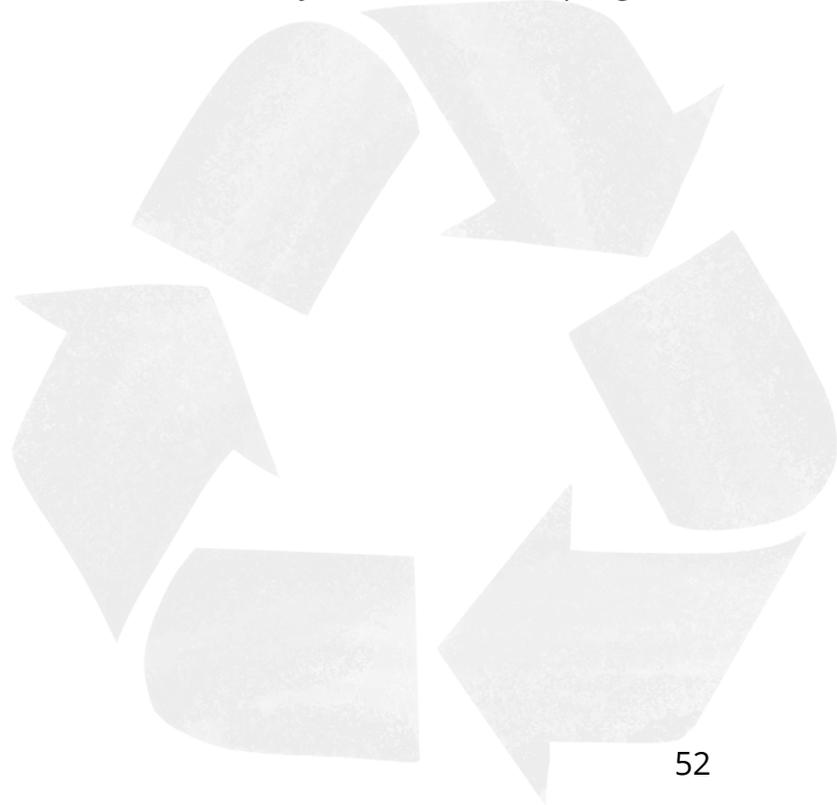
FINDINGS & RECOMMENDATIONS

The research has shown that there is a strong desire among cultural organisations to be sustainable and they are clear leaders in the field. However there remains clear structural, financial and educational barriers to embrace the circular economy.

Below are the **key points and findings** that we found in our research:

- **Knowledge Gaps and Training Needs:** While many early-career set designers and theatre maker possess strong design instincts, they often lack formal training in life cycle assessment (LCA) and ecological impact measurement. Our research indicated that participants are eager for short modules on ecological audit methods, basic material sciences (e.g., durability of reused fabrics vs. new textiles), and cost-benefit analyses comparing linear and circular pieces. A modular curriculum, integrated into existing theatre education programs (such as GSA's full-time actor training), must address these needs.
- **Policy and Funding Barriers:** Several stakeholders noted that existing grants for theatre production rarely allocate dedicated funds for sustainable materials or eco-certification processes. In Ireland, film industry incentives have successfully driven sustainable practices through ring-fenced funding—an approach that theatre could emulate. In Greece, rigid heritage regulations sometimes delay eco-upgrades (e.g., installing solar panels) in older venues. Advocacy with national cultural authorities and dedicated “green theatre” grant schemes would help alleviate these structural barriers.
- **Community Engagement and Public Awareness:** Circular theatre practices can extend beyond set building into audience education. For instance, interactive puppet workshops (Epí Stagon) and sustainable festival models (Fabrica) demonstrate how theatre can actively engage local communities, schools, and families in conversations about recycling and environmental stewardship. CIRCLE-T should embed community outreach activities into our Script & Performance and Training, thus encouraging youth theatres to hold post-show discussions, “open studio” days at local recycling centers, and eco-workshops for parents and educators.
- **Access to Materials and Logistics:** Across all three partner countries, the most significant challenge identified is the procurement and storage of suitable recycled materials. Workshops and interviews revealed that many youth theatres lack dedicated storage facilities or partnerships with recycling centers.

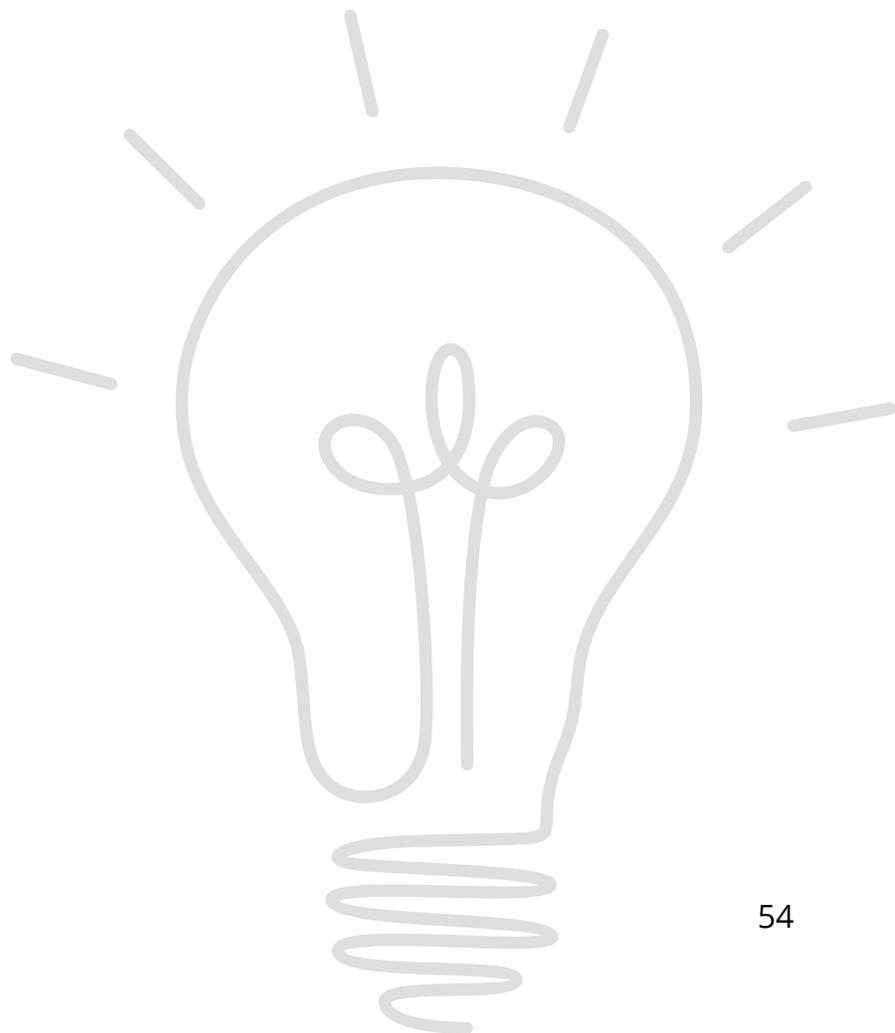
- A clear recommendation is to map local resources (e.g., woodworking shops, textile recyclers, second-hand stores) and to establish formal agreements (e.g., barter contracts, preferential rental rates) to streamline material flows.
- **Motivational Drivers and Cultural Perceptions:** Interviews revealed a deep sense of responsibility among youth theatre participants toward environmental issues. However, some early-career designers expressed frustration that eco-practices might compromise aesthetic or artistic vision. Addressing this requires showcasing flagship examples (e.g., The Lir Academy’s Green Book performance) where ecological choices enhanced, rather than detracted from, artistic quality. Encouraging open dialogue about reconciling artistic excellence with ecological constraints is essential.
- **A Distributed Leadership Model:** Empowers individuals across departments—rather than centralizing decisions—fosters innovation and buy-in.
- **Lack of time:** sourcing second-hand or finding alternative solutions takes longer. It also highlight that some shows might have specific requirements that are not always possible to find environment-friendly solutions for in little time. Moreover, communication and collaboration at all level is necessary for this to happen as it might require designs to be more flexible.
- **Institutional Commitment and Leadership:** Case studies (e.g., Eko Syrena, highlight the importance of appointing a designated sustainability champion or “green coordinator” within each partner organization. While grassroots initiatives can spark change, formalizing roles (with allocated time and resources) ensures accountability and continuous progress.



Recommendations

- Assigning clear responsibility to a sustainability champion, thereby **clarifying accountability**.
- **Setting realistic, department-specific targets** (e.g., percentage of costumes upcycled, tech equipment repurposed).
- A balanced approach by encouraging hybrid touring models combining longer runs in regional hubs with pop-up community performances in satellite locations thus maintaining outreach while **maximizing resource efficiency**.
- Documenting all processes in real time—ensuring transparency, facilitating training, and building a repository of practical knowledge.
- **Craftsmanship Expertise:** In-house artisans' skill in salvaging and reconditioning materials is invaluable; investing in in-house technical training ensures long-term circular viability.
- Track the success of Workshops by embedding robust evaluation mechanisms into WP3 (GBL surveys) and WP5 (audience impact questionnaires), ensuring all educational workshops have a clear method for measuring knowledge retention and behavioral change.
- CIRCLE-T should include guidelines on media engagement and communications, encouraging youth theatres to document and publicise their circular initiatives. Establishing partnerships with local environmental NGOs (as seen with "Green Dot" in Cyprus) provides both credibility and potential funding avenues.
- As the project is working with early career designers we will encourage them to create a network of sharing among themselves.
- Share links with circular economy organisations already in existence. For example in an Irish Context: Re-Staging and Circular Costume.
- Leveraging existing networks (other theatres, local thrift shops) to secure materials at low or no cost.

- We will draw from this example by creating audit templates into WP4's Module 4 and WP6's Know-How Toolkit. In particular, the emphasis on user-friendly audit frameworks, enabling venue managers to self-assess and implement incremental upgrades, provides a practical roadmap for youth theatre venues lacking dedicated environmental staff.
- EcoStage's reflective tools and community-building model can inform CIRCLE-T's youth-led manifesto, kick-off exercises, and network-building strategies
- "Circular Theatre Showcases," where youth theatre groups present short, recycled material-based performances in public parks or community centers.
- Bohema's technical integration of circular materials and green tech illustrates advanced scenographic possibilities for CIRCLE-T training modules.



7 CHAPTER

NEXT STEPS

CIRCLE-T Methodological Guide - Completed

CIRCLE-T Game - an interactive game based on the Circle Theatre Methodology

CIRCLE-T Training Guide - a training handbook putting in practice the recommendations developed in the Circle Theatre Methodology

CIRCLE-T Script - a script developed by Youth Theatre participants and a professional playwright putting the Circle Theatre Methodology into action

CIRCLE-T Know-How - a document compiling all the learning and recommendations of the project for the attention of institutions, youth theatres and youth theatre professionals

Aligned with CIRCLE-T's commitment to authentic, context-sensitive approaches, the project respects diverse national regulations, cultural traditions, and economic conditions in Poland, Ireland, and Greece. This ensures that the resulting methodologies and tools can be adapted to local realities while sharing core CE principles—such as prioritising reuse, optimising transport and accommodation choices, and fostering cross-sectoral collaborations.

As the project partners come from a variety of backgrounds we are combining different learning techniques which we will introduce in this chapter, namely Game Based Learning and Universal Design for Learning. These techniques and approaches will underpin all our next steps

As far as it concerns the field of games and their definitions, we may encounter many suitable definitions for them. For instance, the Oxford Learner's Dictionaries defines games as, "...an activity that you do to have fun, often one that has rules and that you can win or lose", or the necessary equipment for it. Research of various experts, for instance, Laamarti et al. (2014) define games as " physical and/or mental contest that is played according to specific rules, with the sole goal of amusing or entertaining the participant(s)"

The learning environment is somewhat comparable with the gaming environment as it includes aspects such as psychological, emotional, motivational as well as sociocultural interactions. Meanwhile, the ways in which education is delivered keep on changing. As is the case for the vast majority of other educational systems, in traditional settings learners tend to be rather passive, mostly hearing the instructor talk while having limited scope of doing or testing the knowledge they gain.

There has also been a gravitation towards more engaging and interactive models of teaching and education such as **GBL in game based**. GBL is a collective concept that also encompasses "the use of serious games, gamification and playful learning strategies" in the context of a student centered and creativity oriented approach. It refers to the use of game elements and game principles in ordinary learning activities. In other words, game based learning means using games or some of the elements of games and applying them to real life situations for the learners (Abou Hashish et al., 2024).

Whitton (Whitton, 2012) defines game-based learning (GBL) as, "learning that is facilitated by the use of a game." In general, game-based learning could be characterized as an educational approach that utilizes games and game mechanics as the main means of learning in order to improve the process of learning, increase the interactivity and engagement of students/learners, and create a more effective learning experience for them. GBL could act as an alternative to the traditional learning methods and can offer a lot of benefits for the adult learners of different generations (Nistor & Iacob, 2018).

A very common issue regarding game-based learning is that GBL is mistakenly conceived as gamification. These two approaches are very closely related to each other but there are some basic and substantial differences. The approach of Gamification utilizes game-like elements (e.g. points, badges, leaderboards) in existing activities within a non-game context. In comparison, GBL constitutes a complete learning experience built around a game, while gamification attempts to create more engaging already existing activities through the implementation of some game-like elements (Kapp, 2012).

During the play time, players are free to act as they wish. The research of Osterweil et al in their paper "Are Games All Child's Play?" identifies four basic axes of freedom which are commonly shared between the players/learners (Osterweil and Klopfer, 2011).

Players can experience the following (Haas, Groff and Roy, 2009), (Osterweil and Klopfer, 2011):

- ✓ **Freedom to Fail:** Freedom to fail means that all players can make as many attempts without considering them as failures. This kind of freedom allows the players to experiment freely, learn from their mistakes, and progressively develop a certain skill.
- ✓ **Freedom to Experiment:** This means that learners have the opportunity to creatively explore. For instance, learners can have the chance to discover new uses, which leads players/learners towards fostering innovation and problem-solving skills.
- ✓ **Freedom to fashion identities:** Playing allows learners to explore and experiment with various identities through role playing. Through make-believe and exploration, players/learners learn to perform/recognize social cues, appropriate behaviour in various situations, and ultimately discover who they are.
- ✓ **Freedom to Effort:** While playing, the learners/players rarely exert a great amount of effort, which is the paradox to this axis. However, play requires some level of challenge to be engaging. This effortful play can lead to the most rewarding experiences, highlighting the importance of pushing ourselves and being challenged within the playful environment.

Gamification:

In a lot of cases, the term gamification is mistakenly perceived as Game based Learning. The term Gamification is a relatively new term referring to and focusing on the application of game mechanics into non-game contexts. The purpose of this is to engage the audience and to offer an element of fun into ordinary activities and through this process to generate motivational and cognitive benefits. Gamification has already been used in many different fields such as in Business, Marketing and e-Learning.

Pedagogical Foundations

The theoretical underpinnings of GBL include concepts such as:

- **Constructivist Learning:** Learners build knowledge through active engagement, experimentation, and reflection. By setting up a simulated environment where players must design a sustainable set under resource constraints, they construct ecological and technical understanding through practice.
- **Situated Learning:** The game's scenarios replicate real-world challenges—traversing local recycling networks, negotiating material exchanges, and balancing budgets—thus giving learners contextually relevant knowledge.
- **Collaborative Learning:** The game is designed for team play, requiring roles such as Project Manager, Material Coordinator, Logistical Officer, Scenic Designer, and Content Developer. Interdependence and communication are core to success.

Universal Design for Learning:

Universal Design for Learning (UDL) is a framework that aims to make learning accessible and challenging for all students. It does this by proactively designing learning experiences to minimise barriers and provide multiple means of engagement, representation, and action/expression. UDL is not just for people with disabilities; it benefits everyone by offering flexibility and choice in how they access information, engage with content, and demonstrate their understanding.

Universal Design (UD)

UD is the design and composition of an environment so that it can be accessed, understood, and used to the greatest extent possible by all people regardless of their age, size, ability, or disability (National Disability Authority, 2019).

Universal Design for Learning (UDL)

UDL is a framework with a set of principles for learning and teaching, based on scientific insights into how humans learn. The Centre for Applied Special Technology's (CAST) framework is outlined through three key learning guidelines: (i) to provide multiple means of engagement, (ii) to provide multiple means of representation, and (iii) to provide multiple means of action and expression.

The CIRCLE-T Game is an online, non-formal learning tool developed by Challedu in close cooperation with all partners to translate the Methodological Guide’s principles into an engaging, accessible digital experience. Designed as a browser-based “escape-room”-style simulation, the game distils key circular-economy concepts—material lifecycles, up-cycling strategies, resource audits—into a storyline that challenges players to make sustainable scenographic decisions while advancing through a sequence of progressively more complex tasks.

GENERAL CONCEPT

The Theatre of Recycling is set in a theatre where everything aligns with the principles of the circular economy. A few hours before a performance, the player—one of the actors—learns that the director is missing.

Collaborating with the rest of the cast, the player must prepare everything needed for the show to proceed. The game integrates educational elements focused on recycling, reuse, and environmental responsibility, presented through objects and puzzles.

Overview of CIRCLE-T Training Guide

The CIRCLE-T Training Guide Programme will provide youth theatre leaders / theatre & performing arts professionals with a set of skills on how to implement the CIRCLE-T Methodology. The informal learning Methodology will use drama and applied drama and multi-sensory and active tools, which link emotional and cognitive inner parts and are highly memorable.

The training guide will be developed in conjunction with the Methodology and in parallel with CIRCLE-T Game to ensure that both resources are complementary, interrelated, and based on the findings of the research.

A draft version of the Training Guide will be tested in the Learning, Teaching, Training Activity, alongside with testing the Game. All partners will be trained to deliver the Training and will then roll out the Training to youth theatre leaders and theatre & performing arts professionals.

The Guide will be available on the CIRCLE-T Website.



TRAINING AND GUIDE FOR YOUTH THEATRE PRACTITIONERS

We will perform various training activities for emerging theatre practitioners to teach and disseminate what we have learned. During those trainings we will test and improve our methodology. For wider reach and availability we will also create a guide with best green practices in theatre, allowing Youth Theatre Facilitators/Directors and Designers to implement the mindset of Reduce, Reuse, Recycle, Recreate in their actions.

Source: CIRCLE-T Website <https://circle-t.eu/>

Overview of CIRCLE-T Script & Performance

The CIRCLE-T Script & Performance will put in practice all the learnings from previous results and apply the CIRCLE-T Methodology and Training into the production of a play.

Scripts will be developed by the partner Youth Theatres in each partner country supported by a professional playwright. Droichead Youth Theatre will finalise the scripts and decide to combine them into one piece or keep them as 3 separate scripts, this will depend on the topics and themes used, their relevance in the different partner countries and the involvement of the young people.

During this process, young people will meet each other online to share ideas about scripts and implement the Methodology into their performances, thus contributing to the creation of new networks between youth theatres and professional theatre-makers and designers across Europe.

The final script will be submitted to Youth Theatre Ireland's Playshare initiative - a collection of plays suitable for young performers, extending the play's life far beyond the scope of this project.

The production will be a great way to assess the Methodology, Game and Training and their application in a real-life context of theatre production. All the learnings from this will be compile in the Know-How Toolkit.



CIRCLE-T SCRIPT & PERFORMANCE

In this part of the project, young creatives don't just talk change—they perform it. In cooperation with emerging and professional theatre makers we are creating a play – the performance will integrate elements of circular theatre design—such as reused materials and minimal-waste practices—while promoting inclusive, socially engaged narratives.

Source: CIRCLE-T Website <https://circle-t.eu/>

Overview of CIRCLE-T Know-How Toolkit

The CIRCLE-T Know-How Toolkit will be a complementary document to this Methodological Guide. It will review the partner's learnings across the lifetime of the project and put together final recommendations and amendments to make the whole CIRCLE-T Methodology's application as easy and relevant as possible, thus contributing to real-life change in the theatre-making process.

The CIRCLE-T Know-How Toolkit will be a collection of evaluation and reflection, culminating in a series of recommendation for practitioners and an insight on how to best implement the Methodology.



CIRCLE-T KNOW-HOW

We want to make the change last by providing institutions and training colleges with clear and practical guidelines on how to implement and integrate the Circle Theatre Methodology into their pre-existing techniques and how the Circle Theatre project can support their transition towards greener practices.

Source: CIRCLE-T Website <https://circle-t.eu/>

8 CHAPTER

REFERENCES

Bibliography

ASSITEJ International (2023), spectacle *A Sustainable Antigone*, available: <https://assitej-international.org/2023/12/08/a-sustainable-antigone/>

Catriona Fallon, Performing Arts Forum, Green Arts Initiative, available: <https://performingartsforum.ie/green-arts/> [accessed 25/03/2025]

Catriona Fallon, Sinéad Wallace, Mike O'Halloran, (2024), *The Theatre Green Book - Irish Edition*, available: <https://www.performingartsforum.ie/assets/uploads/Final-Correct-Irish-TGB-Nov-2024-FINAL-5.12.pdf> [accessed 25/03/2025]

Circular Economy and Miscellaneous Provisions Act 2022, Dublin: Minister for the Environment, Climate and Communications, No.26/2022 available: <https://www.irishstatutebook.ie/eli/2022/act/26/enacted/en/print> [accessed 25/03/2025]

Climate Action Plan 2024, Dublin: Minister for the Environment, Climate and Communications and Transport, Minister for Foreign Affairs and Defence, Simon Harris TD Taoiseach, available: <https://www.gov.ie/pdf/?file=https://assets.gov.ie/296414/7a06bae1-4c1c-4cdc-ac36-978e3119362e.pdf#page=null> [accessed 25/03/2025]

Environment Protection Agency, (2021), *THE CIRCULAR ECONOMY PROGRAMME: The Driving Force for Ireland's Move to a Circular Economy*, available: https://www.epa.ie/publications/circular-economy/resources/Circular_Economy_Leaflet_2021.pdf [accessed 25/03/2025]

European Environment Agency, (2024), *Circular economy country profile 2024 – Ireland*, available: https://www.eea.europa.eu/en/topics/in-depth/circular-economy/country-profiles-on-circular-economy/circular-economy-country-profiles-2024/ireland_2024-ce-country-profile_final.pdf/@@download/file [accessed 25/03/2025]

European Theatre Convention, *Sustainable Theatre*, available: <https://www.europeantheatre.eu/page/key-themes/sustainability> [accessed 25/03/2025]

European Environment Agency (EEA) (2024). *Greece 2024 Circular Economy Country Profile*. Retrieved from :[https://www.eea.europa.eu/en/topics/in-depth/circular-economy/country-profiles-on-circular-economy/circular-economy-country-profiles-2024/greece_2024-ce-country-profile_final.pdf/@@download/file#:~:text=2021%2D2025%20\(13%20\)%20through,well%20as%20the%20market%20development.](https://www.eea.europa.eu/en/topics/in-depth/circular-economy/country-profiles-on-circular-economy/circular-economy-country-profiles-2024/greece_2024-ce-country-profile_final.pdf/@@download/file#:~:text=2021%2D2025%20(13%20)%20through,well%20as%20the%20market%20development.)

European Theatre Convention, Theatre Green Book, available: <https://www.europeantheatre.eu/page/resources/etc-tgb/etc-theatre-green-book/about> [accessed 25/03/2025]

E-Teatr (2023). Zero Waste in Polish Theatre: The Case of Teatr Druga Strefa. Retrieved from <https://e-teatr.pl/>

Grotowski Institute (2023). Ecology in Cultural Institutions. Retrieved from <https://grotowski.net/performer/performer-19/ekologia-w-instytucjach-kultury>

Hellenic Republic, Ministry of Environment & Energy (2018). National Circular Economy Strategy. Retrieved from https://circulareconomy.europa.eu/platform/sites/default/files/national_circular_economy_strategy_0.pdf.

Joint Research Centre (2023). Green Best Practice Community - Circular Economy. Retrieved from <https://greenbestpractice.jrc.ec.europa.eu/node/7>.

Vettas, N., Demian, I., Valaskas, K., Stavraki, S., Moustakas, A., Danchev, S. and Maniatis, G. (2022). Κυκλική οικονομία: Ευκαιρίες, προκλήσεις και επιδράσεις στην ελληνική οικονομία

Julie's Bicycle Europe, available: <https://juliesbicycleeurope.org/> [accessed 25/03/2025]

Kowalski, T. & Nowicka, M. (2023). Circular Economy in the Performing Arts: A Critical Review. *European Journal of Environmental Studies*, 12(4), 55-82.

La Scène Durable (France). Retrieved from <https://scene-durable.com/>

Ministry of Climate and Environment (2019). Roadmap for Circular Economy in Poland. Retrieved from <https://www.gov.pl/web/klimat/gospodarka-o-obiegu-zamknietym>

Ministry of Climate and Environment (2020). Polish Environmental Policy 2030. Retrieved from <https://www.gov.pl/web/klimat/polityka-ekologiczna-panstwa-2030>

Nowakowska, K. (2022). Sustainability and Performing Arts: A New Perspective on Circular Economy in Theatre. *Journal of Cultural Sustainability*, 15(2), 45-63.

Performing Arts Employers Association League Europe, The Ultimate Cookbook for Cultural Managers: The EU Green Deal and Live Performance Organisations, available: <https://www.pearle.eu/publication/the-ultimate-cookbook-for-cultural-managers-the-eu-green-deal-and-live-performance-organisations> [accessed 25/03/2025]

Performing Arts Forum (2023), Summary of Greening Venues Pilot Project, available: <https://performingartsforum.ie/forum-notice/summary-of-greening-venues-pilot-project/>

Szmytkowska, A. (2021). The Role of Theatre in Promoting Circular Economy Principles. Sustainability Studies Review, 10(3), 78-94.

STAGES, available: <https://sustainablestages.eu/> [accessed 25/03/2025]

Syrena Theater (2020), ecological spectacle Glonús and the Eco-Syrena Team, available: <https://teatrsyrena.pl/glonus-i-druzyna-eko-syreny/>

The Arts Council Climate Action Plan 2024, Dublin: The Arts Council, available: https://www.artscouncil.ie/uploadedFiles/wwwartscouncilie/Content/Arts_in_Ireland/Climate_Action/Arts%20Council%20Climate%20Action%20Roadmap%202024.pdf [accessed 25/03/2025]

Theatre Green Book (UK). Retrieved from <https://theatregreenbook.com/>

Whole of Government Circular Economy Strategy 2022 - 2023, Dublin: Department of the Environment, Climate and Communications
<https://www.pearle.eu/publication/the-ultimate-cookbook-for-cultural-managers-the-eu-green-deal-and-live-performance-organisations>

Vitoraki, M. (2019). Implementation of pay-as-you-throw schemes in Greece: major benefits and future potential. Environmental Studies Program, DERE – The American College of Greece. Retrieved from http://uest.ntua.gr/heraklion2019/proceedings/pdf/HERAKLION2019_Vitoraki.pdf.