*Green Economy Career Orientation*

# Manual of 30 good practices

GRECO

CAREER GUIDANCE

*Project number reference:*
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# JOB SECTOR DESCRIPTION

## Production

The production sector within the consumer goods industry involves the manufacturing of products with a focus on organic agricultural practices, sustainable food processing, efficient logistics, strategic marketing, collaborative partnerships, innovative research, and technological advancements. This sector is pivotal in delivering high-quality, environmentally friendly goods to consumers, emphasizing sustainability throughout the entire value chain.

## Services

The services sector encompasses a broad range of intangible economic activities that provide value to individuals and businesses. It includes a diverse array of industries such as hospitality, finance, healthcare, education, transportation, professional services, and entertainment. Services may be delivered in person, online, or through a combination of both, depending on the nature of the service and evolving consumer preferences.

## Education

The education sector comprises institutions and activities dedicated to teaching knowledge, skills, and values to individuals. It includes formal institutions like schools and universities, as well as informal providers such as tutoring services and online platforms.Educators and support staff work to create effective learning environments, develop curriculum, and facilitate learning. Ongoing research and innovation ensure the sector adapts to evolving needs.

## Agrifood

The agrifood sector involves the production, processing, and distribution of agricultural products for consumption. From cultivating crops and raising livestock to processing food items and delivering them to consumers, various stakeholders contribute to the agrifood sector's operation. Sustainable practices and technological innovations are increasingly important in ensuring the sector's resilience and efficiency while meeting the growing demand for safe and nutritious food.

## Renewables

The renewables sector focuses on harnessing sustainable sources of energy such as solar, wind, hydroelectric, and geothermal power. It involves the development, installation, operation, and maintenance of renewable energy systems. Ongoing technological advancements and policy support drive innovation and investment in renewable energy solutions worldwide.

## Biotech / Health

The biotech/health sector revolves around leveraging biotechnology and medical advancements to improve healthcare outcomes and address health-related challenges. It encompasses various activities such as biomedical research, pharmaceutical development, medical device manufacturing, and healthcare services delivery. This sector plays a critical role in advancing medical knowledge, developing new treatments and therapies, and enhancing diagnostic tools.

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## Recycling

The recycling sector focuses on collecting, processing, and reusing materials to minimize waste and conserve natural resources. It involves activities such as collection, sorting, processing, and remanufacturing of recyclable materials like paper, plastic, glass, and metal.From community recycling programs and waste management facilities to recycling plants and remanufacturing industries, various stakeholders contribute to the recycling sector's efforts.

## Mobility

Mobility services focus on providing transportation solutions that are efficient, convenient, and sustainable. This sector encompasses various modes of transportation, including public transit, ride-sharing, cycling, walking, and electric vehicles. Mobility services aim to improve access to transportation, reduce congestion, and minimize environmental impact. From developing smart transportation systems and infrastructure to offering innovative mobility solutions like on-demand ride services and bike-sharing programs, stakeholders in the mobility sector work to enhance connectivity and mobility options for individuals and communities.

## Fashion / Textile

The fashion and textile sector involves the design, production, and distribution of clothing, accessories, and fabrics. It encompasses various stages, including textile manufacturing, garment production, retailing, and fashion design. This sector plays a significant role in the global economy and cultural expression. Sustainable fashion aims to minimize environmental impact, promote ethical practices, and enhance supply chain transparency.

## Sustainability Consulting

Sustainability consulting focuses on providing expertise and guidance to organizations seeking to integrate sustainable practices into their operations and strategies. From conducting sustainability audits and developing green policies to implementing renewable energy solutions and promoting stakeholder engagement, sustainability consultants offer a range of services to support sustainable development goals.

## Construction

The construction sector involves the planning, design, and building of infrastructure, residential, and commercial structures. It encompasses a wide range of activities, including architectural design, engineering, project management, and construction operations.  From constructing residential buildings and commercial complexes to infrastructure projects like roads, bridges, and utilities, construction stakeholders work to meet the evolving needs of communities while integrating sustainable practices. Sustainable construction focuses on minimizing environmental impact, optimizing resource use, and enhancing building efficiency.

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# INTRO

**Dear reader,**

**This Manual is developed within Erasmus plus project Green Economy Career Orientation – GRECO. GRECO is designed and is implemented by transnational consortia consisting of 6 European partners from 5 countries. The lead partner is organization Cirka cph ApS, from Denmark, and partners are: People of 2050, from Denmark; CESIE, from Italy; Smart Idea, from Slovenia; Business Development Center Kragujevac, from Serbia; and Rezos Brands, from Greece.**

The aim of GRECO project is to promote sustainable local economic development by providing career guidance in the green economy and creating concrete job opportunities for youth. The project aims to identify and disseminate best practices, improve capacities of youth workers and educators for green jobs career guidance, and engage with stakeholders in the green economy to enhance the employability of youth.

Ultimately, the project seeks to foster the growth of a sustainable and inclusive green economy in Europe.

The Manual you are reading, presents collection of best green jobs practices, identified in five partner countries – Denmark, Slovenia, Italy, Serbia, and Greece. Partnership consortia hopes that collected practices and presented jobs in different sectors of green economy will help youth workers, educators, and youth in general to understand better opportunities for employment in green economy, potential for generating new jobs in the future, as well as relevant competences demanded by these jobs.

GRECO

CAREER GUIDANCE

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## Guidelines:

The following document seeks to gather 30 good green economy practices at local, regional, or national level in Denmark, Slovenia, Greece, Serbia and Italy. For the purpose of this research, green economy practices are defined as low carbon, resource efficient and socially inclusive. In a green economy, growth in employment and income are driven by public and private investment into such economic activities, infrastructure and assets that allow reduced carbon emissions and pollution, enhanced energy and resource efficiency, and prevention of the loss of biodiversity and ecosystem services.
The green economy practices should check the following principles:

### 1. The wellbeing principles:

- The green economy is people-centred. Its purpose is to create genuine, shared prosperity.
- It focuses on growing wealth that will support wellbeing. This wealth is not merely financial, but includes the full range of human, social, physical and natural capitals.
- It prioritises investment and access to the sustainable natural systems, infrastructure, knowledge and education needed for all people to prosper.
- It offers opportunities for green and decent livelihoods, enterprises and jobs. It is built on collective action for public goods, yet is based on individual choices.

### 2. The Justice Principle

The green economy promotes equity within and between generations.

- The green economy is inclusive and non-discriminatory. It shares decision-making, benefits and costs fairly; avoids elite capture; and especially supports women's empowerment.
- It promotes the equitable distribution of opportunity and outcome, reducing disparities between people, while also giving sufficient space for wildlife and wilderness.
- It is based on solidarity and social justice, strengthening trust and social ties, and supporting human rights, the rights of workers, indigenous peoples and minorities, and the right to sustainable development.
- It promotes empowerment of MSMEs, social enterprises, and sustainable livelihoods.
- It seeks a fast and fair transition and covers its costs – leaving no-one behind, enabling vulnerable groups to be agents of transition, and innovating in social protection and reskilling.

### 3. The Planetary Boundaries Principle

The green economy safeguards, restores and invests in nature.

- An inclusive green economy recognizes and nurtures nature's diverse values – functional values of providing goods and services that underpin the economy, nature's cultural values that underpin societies, and nature's ecological values that underpin all of life itself.
- It acknowledges the limited substitutability of natural capital with other capitals, employing the precautionary principle to avoid loss of critical natural capital and breaching ecological limits.
- It invests in protecting, growing and restoring biodiversity, soil, water, air, and natural systems.
- It is innovative in managing natural systems, informed by their properties such as circularity, and aligning with local community livelihoods based on biodiversity and natural systems.

### 4. The Efficiency and Sufficiency Principle

The green economy is geared to support sustainable consumption and production.

- An inclusive green economy is low-carbon, resource-conserving, diverse and circular. It embraces new models of economic development that address the challenge of creating prosperity within planetary boundaries.
- It recognises there must be a significant global shift to limit consumption of natural resources to physically sustainable levels if we are to remain within planetary boundaries.
- It aligns prices, subsidies and incentives with true costs to society, through mechanisms where the 'polluter pays' and/or where benefits accrue to those who deliver inclusive green outcomes.

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## 5. The Good Governance Principle

The green economy is guided by integrated, accountable and resilient institutions.

- An inclusive green economy is evidence-based – its norms and institutions are interdisciplinary, deploying both sound science and economics along with local knowledge for adaptive strategy.
- It is supported by institutions that are integrated, collaborative and coherent – horizontally across sectors and vertically across governance levels – and with adequate capacity to meet their respective roles in effective, efficient and accountable ways.
- It requires public participation, prior informed consent, transparency, social dialogue, democratic accountability, and freedom from vested interests in all institutions – public, private and civil society – so that enlightened leadership is complemented by societal demand.
- It promotes devolved decision-making for local economies and management of natural systems while maintaining strong common, centralised standards, procedures, and compliance systems.
- It builds a financial system with the purpose of delivering wellbeing and sustainability, set up in ways that safely serve the interests of society.

### Selection Criteria

The good practices must meet these criteria:

- Effectiveness: Its strategic relevance in achieving a specific objective must have been proven. Its application must have been successful and had a positive impact.
- Feasibility: It must be easy and affordable to implement.
- Innovation: For the best practice to success, it must involve some innovation.
- Replicability/adaptability: It should be potentially replicable and adaptable to different situations.

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# SAVING FOOD FROM GOING TO WASTE

*Denmark*

**Website:**

https://www.toogoodtogo.com/da

**Social media link(s) or links to videos:**

Instagram

**Leading organisation/Author:**
TooGoodToGo

## 01.

### Description of Green Practices.

A Social Impact Company fighting food waste, the company was founded in Copenhagen in 2015 and its app is now the world's largest B2C marketplace for surplus food. Motivated by the huge impact food waste has on the planet, Too Good To Go goes further, running campaigns with global food producers to improve date labelling, change food waste legislation, and raise awareness of food waste amongst households. Too Good To Go is present in 17 markets across Europe and North America. Notably, Too Good To Go works with Planetly to calculate and offset its carbon footprint, and to become Carbon Neutral +, and MyClimate, to calculate and accredit the amount of CO2e saved by each magic bag.

**Practices Adopted by Too Good To Go:**

- Rescuing Unsold Food:

At the core of Too Good To Go's operations is the commitment to combat food waste. The app

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provides a platform for users to browse and purchase unsold food items from local shops and restaurants. These unsold items are carefully curated into 'magic bags,' containing an average of 1kg of food. By rescuing these items that would otherwise end up in landfills, Too Good To Go contributes significantly to reducing food waste.

- Learning: Empowering Consumers to Drive Change:

Too Good To Go's model empowers consumers to actively participate in the fight against food waste. Users have the opportunity to make a positive impact by purchasing and consuming rescued food items. The app not only facilitates affordable access to quality food but also instills a sense of responsibility among consumers towards sustainable practices. Through this, Too Good To Go fosters a community of environmentally conscious individuals who collectively contribute to reducing the carbon footprint associated with food waste.

- Learning:

The success of Too Good To Go lies in its ability to engage and mobilize consumers as change agents. This approach underscores the significance of involving end-users in sustainable practices. Businesses in other sectors can draw inspiration from this and explore ways to involve consumers actively in environmentally responsible activities, creating a ripple effect of positive change.

# 02.

## Green Practice learnings

Awareness raising: Too Good To Go is dedicated to promoting food waste prevention across multiple platforms. It regularly provides practical advice related to food waste prevention on its social media accounts. For example, it launched the food waste fighting campaign “Share, Freeze, Remix” to advise what to do with holiday leftovers. It also launched an educational campaign with companies such as Activia and Onken to demystify “best before” date labels on food to avoid food waste occurring due to date labels.

Green alternative: The Too Good To Go platform supports the sustainable consumption of food, actively influencing the food consumption behaviours of households and dominant food practices of the industry. Users can pick up surplus food in the local area.

# 03.

## Tools and approaches

Too Good To Go’s award-winning marketplace app is at the heart of everything we do, helping businesses sell their surplus food at a reduced price, preventing perfectly good products from being thrown away, and fighting for the future of our planet in the process.

**1. Intuitive User Interface and Experience: Tool: User-Centric Design**

The success of Too Good To Go's app is rooted in its intuitive user interface (UI) and user experience (UX) design. The app prioritizes simplicity, ensuring that users can effortlessly navigate and engage with the platform. The design emphasizes visual appeal, making the process of browsing and selecting surplus food items an enjoyable and straightforward experience.

Approach:

- Accessibility: The app's user-centric design ensures accessibility for a diverse user base. Clear and concise visuals, coupled with an easy-to-navigate layout, cater to users of varying technological proficiency.
- Seamless Transaction: The streamlined process, from selecting items to receiving a digital receipt, minimizes friction in the user journey, fostering a positive and efficient experience.

**2. Machine Learning for Personalized Recommendations:**

Tool: Machine Learning Algorithms
Too Good To Go harnesses the power of machine learning to enhance user engagement through personalized recommendations. The app analyzes user behavior, preferences, and historical data to offer tailored suggestions, encouraging users to explore diverse food options and discover new local businesses.

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# 04.

## Competences and Resources needed

**Software Engineer:**

Competences:

- Software Development: Proficiency in programming languages, software design, and development is crucial for creating and maintaining the robust and user-friendly Too Good To Go app.
- Database Management: Skills in managing databases are essential to handle and process the vast amount of data generated by user interactions, transactions, and business partnerships.
- User Experience (UX) Design: A deep understanding of UX principles ensures that the app remains intuitive and engaging for users, contributing to high adoption rates

**Project Manager:**

Competences:

- Project Planning and Execution: Competent project managers excel in defining project scopes, setting timelines, and managing resources to ensure the successful development and deployment of the Too Good To Go app.
- Communication Skills: Effective communication is crucial for coordinating efforts among diverse teams and stakeholders, fostering collaboration and clarity.
- Risk Management: Anticipating and mitigating potential risks is a key competence, ensuring that the project stays on course and meets its objectives.

**Sales:**

Competences:

- Customer Relationship Management (CRM): Sales professionals require skills in CRM systems to manage interactions with business partners, track sales activities, and nurture relationships.
- Negotiation Skills: Effective negotiation is essential for securing partnerships with businesses, encouraging their participation in the Too Good To Go initiative.
- Market Knowledge: A deep understanding of the food industry and local markets helps sales teams tailor their approach to different businesses.

# 05.

## Identified Green Economy Principles

Too Good To Go aligns with several key green economy principles, demonstrating a commitment to environmental sustainability, social responsibility, and the circular economy. The case reflects the integration of these principles into its business model and practices:

**1. Circular Economy:**

- Principle: Too Good To Go embodies the principles of a circular economy by intercepting surplus food that would otherwise be discarded and redirecting it back into the consumption cycle. This circular approach minimizes waste, maximizes resource efficiency, and creates value from what was previously considered waste.

**2. Waste Reduction:**

- Principle: The core mission of Too Good To Go is to prevent perfectly good food from being thrown away. By connecting consumers with businesses to rescue unsold food at a reduced price, the platform actively contributes to waste reduction. This aligns with the green economy principle of minimizing waste throughout the supply chain.

**3. Sustainable Consumption:**

- Principle: Too Good To Go encourages and facilitates sustainable consumption practices by providing consumers with affordable access to surplus food. Users are empowered to make environmentally conscious choices, supporting the reduction of overall food waste and promoting a more sustainable lifestyle.

**4. Local Economic Development:**

- Principle: The app's focus on local businesses contributes to the green economy principle of fostering local economic development. Too Good To Go provides a platform for smaller, local establishments to monetize surplus food, supporting their economic viability and strengthening community ties.

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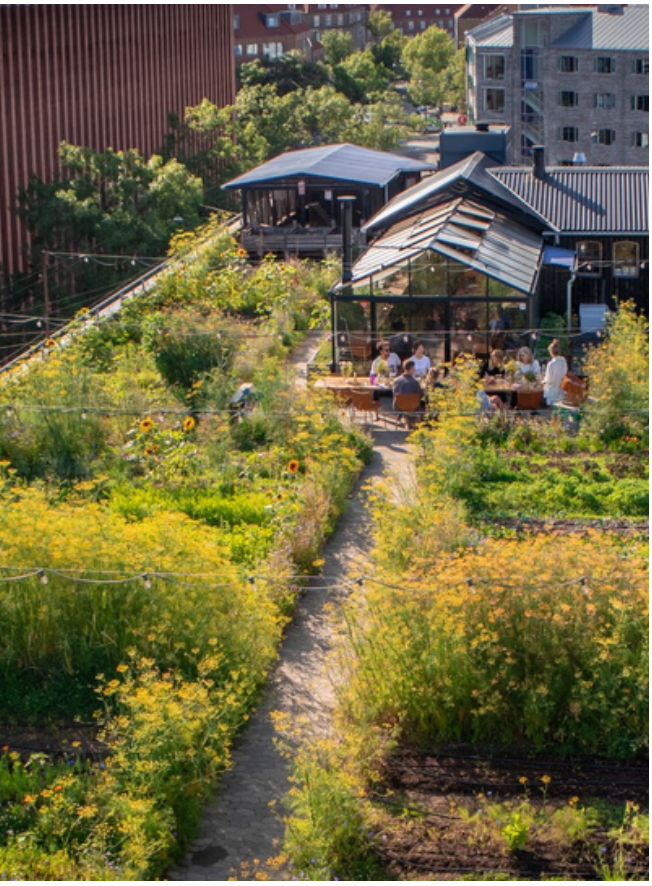

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# SUSTAINABLE RESTAURANT

*Denmark*

**Website:**

https://www.oestergro.dk

**Social media link(s) or links to videos:**

Instagram

**Leading organisation/Author:**
Østergro

## 01.

## Description of Green Practices.

In the heart of Copenhagen, ØsterGro stands as a testament to the fusion of urban living and sustainable agriculture. Established in 2014 by Kristian Skaarup, Livia Urban Swart Haaland, and Sofie Brincker, ØsterGro is not just a rooftop farm but a beacon of community-supported agriculture (CSA). The founders envisioned a local and sustainable food production system within the city, allowing urban dwellers to witness the seasons unfold in an organic vegetable garden just around the corner.

### 1. Community-Supported Agriculture (CSA) and Collaborative Farming

At the core of ØsterGro's success is the CSA model, a paradigm shift from traditional farming practices. ØsterGro has embraced the concept of community-supported agriculture, creating a direct connection between farmers and consumers. The 40 member families actively participate in this partnership, receiving weekly deliveries of freshly harvested vegetables, eggs, and honey from the rooftop farm throughout the growing season, from June to November.

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The collaboration with Stensbølgård is a noteworthy example of ØsterGro's commitment to sustainability through innovative partnerships. By teaming up with Stensbølgård, ØsterGro extends its offerings beyond what is feasible on its rooftop.

Stensbølgård supplies crops that demand more space, such as potatoes, diversifying the weekly harvest and ensuring members receive a comprehensive selection of seasonal produce. This collaboration not only enhances the variety of available crops but also strengthens the bond between ØsterGro and a nearby organic farm, fostering a sense of interconnectedness within the local food ecosystem.

**2. Urban Farming Expansion and Educational Outreach**

In 2019, ØsterGro took its commitment to sustainable agriculture a step further by opening Øens Have on Refshaleøen. This expansive urban farm, the largest in Scandinavia, goes beyond the scope of rooftop farming. It serves as a multifaceted hub with spaces for educational activities, volunteer engagement, a restaurant, and event hosting.

# 02.

## Green Practice learnings

Sustainability is the key word in ØsterGro's mindset, and involvement, communication and experiences are the means. The vision is to make the city greener, ecosystems less alien, and to spread local communities around food and ecology. ØsterGro shows a great example of green transition of a food production engine, made possible in an urban setting.

They have a wonderful restaurant inside of a rooftop greenhouse, they offer tours, teaching kindergartens and not least volunteer days every Tuesday from April to December, where anyone who wants to can come and take part in looking after the roof farm.
ØsterGro is a platform for knowledge sharing, an appetizer for young and old, a green oasis in the middle of the concrete jungle.

# 03.

## Tools and approaches

Øens Have is not merely a farm but a dynamic space for learning and community involvement. Hosting school teachings, volunteer days, and workshops, ØsterGro extends its impact beyond its member families. Schools visiting the farm gain firsthand knowledge of sustainable agriculture practices, fostering an early appreciation for where food comes from and the importance of sustainable choices.

Volunteer days further strengthen the community ties, as individuals actively participate in the cultivation process. This hands-on engagement not only aids in the maintenance of the farm but also fosters a sense of ownership and pride among volunteers, reinforcing the ethos of shared responsibility for sustainable food production. The inclusion of a restaurant and event space at Øens Have adds another layer to ØsterGro's green economy practices.

The restaurant likely emphasizes farm-to-table dining, showcasing the produce grown on-site and reinforcing the farm's commitment to local, sustainable ingredients. This not only supports the local economy but also promotes conscious consumption among visitors.

Event spaces offer a platform for community gatherings, workshops, and discussions on sustainable living. By providing a venue for such activities, ØsterGro facilitates dialogue around environmental responsibility, encouraging visitors to carry these conversations into their own lives.

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# 04.

## Competences and Resources needed

**Competences:**

**Agricultural Knowledge:**
- Understanding organic farming practices, crop rotation, and soil health is crucial. Competence in adapting traditional agricultural techniques to urban spaces is also beneficial.

**Community Engagement:**
- Skills in building and maintaining strong community ties are essential. This involves effective communication, outreach, and the ability to inspire and engage individuals in sustainable practices.

**Collaboration and Networking:**
- Developing partnerships, like ØsterGro's collaboration with Stensbølgård, requires strong collaboration and negotiation skills. Networking within the local food ecosystem is vital for resource-sharing and mutual support.

**Educational Expertise:**
- Having the ability to design and implement educational programs is essential. This includes creating engaging content, conducting workshops, and facilitating hands-on learning experiences for diverse audiences.

**Logistics and Supply Chain Management:**
- Coordinating weekly deliveries to member families involves logistical expertise. Managing the supply chain, including collaborations with external partners, requires efficient organization and planning.

**Sustainable Agriculture Advocacy:**
- Advocacy skills are crucial for promoting the benefits of sustainable agriculture within the broader community. This involves public speaking, writing, and engaging with policymakers to support environmentally friendly practices.

# 05.

## Identified Green Economy Principles

ØsterGro's rooftop farm and CSA model provide a compelling case for the green economy manual by revitalizing urban agriculture. In challenging industrialization's impact on traditional farming, ØsterGro pioneers a shift towards localized, sustainable food production in city spaces.

**Key Contributions:**

**Local and Sustainable Food Production:**
- ØsterGro's CSA model fosters a direct connection between farmers and consumers, reducing carbon emissions from transportation and promoting sustainable cultivation practices.

**Empowering Communities:**
- The farm serves as an educational hub, reconnecting people with essential cultivation skills. This knowledge transfer empowers individuals to make informed, environmentally conscious choices, contributing to a cultural shift towards sustainability.

**Green Transition in Agriculture:**
- ØsterGro challenges the dominance of industrial-scale agriculture by showcasing the viability of urban farming. Strategic partnerships, like the one with Stensbølgård, demonstrate innovative solutions to diversify produce and support the green transition.

**Multifunctional Urban Farming Spaces:**
- Øens Have, Scandinavia's largest urban farm, exemplifies versatility. Educational facilities, volunteer opportunities, a restaurant, and event spaces contribute to a holistic approach, promoting sustainable living and conscious dining practices.

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# RECYCLING CENTER WITH SKI SLOPE ON THE ROOFTOP

*Denmark*

**Website:**

https://a-r-c.dk/

**Leading organisation/Author:**
ARC

## 01.

### Description of Green Practices.

In the pursuit of a sustainable and environmentally conscious future, Amager Resource Center (ARC) stands as a beacon of innovation and responsibility in waste management. With a primary focus on the environment and climate, ARC has implemented practices that not only address the challenges of waste disposal but also contribute to the broader goal of achieving a green economy.
One of the fundamental pillars of ARC's green initiatives lies in the meticulous sorting and recycling of waste. Operating ten recycling sites and ten local recycling stations, ARC encourages citizens and businesses to actively participate in waste segregation. The emphasis is on maximizing the reuse and recycling of materials, thereby minimizing the environmental impact of waste disposal. Citizens in Tårnby, Dragør, and Copenhagen play a pivotal role in sorting waste into ten fractions, ensuring that different types of materials are appropriately processed.

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**1.Amager Bakke**
At the heart of ARC's sustainable waste management strategy is Amager Bakke, a cutting-edge waste-to-energy plant. This facility exemplifies efficiency, cleanliness, and innovation in converting residual waste into electricity and heat. With an annual utilization of approximately 560,000 tonnes of waste, Amager Bakke generates electricity and district heating equivalent to the needs of up to 90,000 households.

**2. Copenhill**
CopenHill is the artificial skiing slope and the recreational hiking path built on top of the new waste management center Amager Bakke. This is the most innovative way of using the leftover space of an recycling center. It creates opportunities for sport and culture.

**3. Sydhavn Recycling Centre**
At Sydhavn Recycling Centre, it is ensured a longer life of good things you hand over. In general, recycling will be instrumental in converting Denmark to become more sustainable. The Sydhavn Recycling Center is a living example of:

- This recycling station promote upcycling and educating people about waste sorting.
- The building layout ensures r that the recycling process is being supervised and guided so that you can sort the waste correctly.

# 02.

## Green Practice learnings

The practice of capturing up to 90% of emitted CO2 from the waste-to-energy plant aligns seamlessly with the principles of a green economy. Carbon neutrality is a critical objective in combating climate change, and ARC's efforts contribute directly to this global imperative. By significantly reducing CO2 emissions, ARC not only minimizes its environmental footprint but also sets a benchmark for other waste management facilities aspiring to embrace sustainable practices.

**1. Replicability and Scalability:**
The practices implemented by ARC, especially in waste-to-energy and knowledge sharing, are not just localized solutions but exemplars with replicability and scalability potential. The manual can serve as a guide for other municipalities, regions, and countries looking to enhance their waste management practices. The incorporation of detailed insights into waste sorting, recycling, and the operation of a sustainable waste-to-energy plant provides a roadmap for organizations seeking to align their operations with green economy principles.

**2. Holistic Approach to Sustainability:**
What sets ARC's practices apart is the holistic approach to sustainability. Beyond the technical aspects of waste management, ARC emphasizes community engagement, education, and the ambition for carbon neutrality. This comprehensive strategy is a model for the green economy, showcasing that environmental responsibility extends beyond operational efficiency to include social and educational dimensions.

# 03.

## Tools and approaches

**1. Community Engagement for Effective Waste Management:**
ARC's success in waste sorting and recycling is a testament to the power of community engagement. Encouraging citizens and businesses to actively participate in waste segregation not only enhances the efficiency of recycling efforts but also cultivates a shared sense of responsibility for environmental preservation.

2. **Waste-to-Energy Innovation:**
Amager Bakke serves as a model for the effective integration of waste-to-energy technologies into the green economy. The plant not only addresses the challenge of non-recyclable waste but also demonstrates the potential for clean energy generation. The innovative use of the plant's roof for recreational purposes further underscores the holistic approach to sustainability.

In conclusion, ARC's practices in sustainable waste management and green energy production provide valuable insights for other communities and organizations striving to embrace environmentally responsible practices.

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The combination of community involvement, waste sorting initiatives, and innovative waste-to-energy solutions positions ARC as a leader in the transition towards a greener and more sustainable future.

## 04.

## Competences and Resources needed

At the heart of ARC's success in championing green economy practices lies its commitment to attracting, developing, motivating, and challenging a cadre of talented individuals. The emphasis on passion and commitment underscores the belief that the human element is pivotal in driving sustainable change. By fostering an environment that attracts passionate professionals, ARC ensures that its workforce is not just fulfilling job roles but actively contributing to the organization's broader mission.

The following roles and competences are required for working in this environment:
Competences Needed:

- **Waste Disposal Worker:**
  - Sorting Proficiency: Competence in effectively sorting different types of waste for proper disposal and recycling.
  - Knowledge of Regulations: Understanding and adherence to waste disposal regulations and environmental guidelines.
  - Safety Awareness: Ability to operate waste disposal machinery safely and follow safety protocols.
  - Physical Fitness: Endurance and physical fitness to handle the demands of manual waste disposal tasks.
  - Environmental Awareness: Awareness of the environmental impact of waste disposal and a commitment to sustainable practices.

- **Recycling Supervisors:**
  - Technical Expertise: In-depth knowledge of recycling processes and technologies, with a focus on direct recycling methods.
  - Quality Control: Ability to monitor and ensure the quality of recycled materials to meet industry standards.
  - Team Management: Leadership skills to supervise and coordinate the activities of recycling teams effectively.
  - Problem-Solving: Capacity to address challenges in recycling processes and implement solutions for continuous improvement.
  - Environmental Stewardship: Commitment to environmentally friendly recycling practices and reducing the ecological footprint.

## 05.

## Identified Green Economy Principles

The waste management practices at Amager Resource Center (ARC) align with key green economy principles:

- **Resource Efficiency:**
  - Relevance: Emphasizing waste sorting, recycling, and waste-to-energy, ARC maximizes resource efficiency, turning waste into valuable resources.
- **Circular Economy:**
  - Relevance: ARC's recycling practices promote a circular economy by reusing materials and minimizing waste, contributing to sustainable resource use.
- **Carbon Neutrality and Climate Mitigation:**
  - Relevance: ARC's ambition for a CO2-neutral waste-to-energy plant and capturing 90% of emitted CO2 align with climate mitigation goals, showcasing environmental stewardship.
- **Community Engagement and Social Responsibility:**
  - Relevance: Involving citizens, businesses, and educational programs reflects a commitment to community engagement and building a socially responsible future generation.
- **Innovation and Sustainable Technology:**
  - Relevance: ARC's use of innovative waste-to-energy technology at Amager Bakke exemplifies a commitment to sustainable and efficient technology.
- **Collaboration and Partnerships:**
  - Relevance: Close collaboration with owner municipalities and external partners reflects the green economy principle of fostering partnerships for effective and sustainable waste management solutions.

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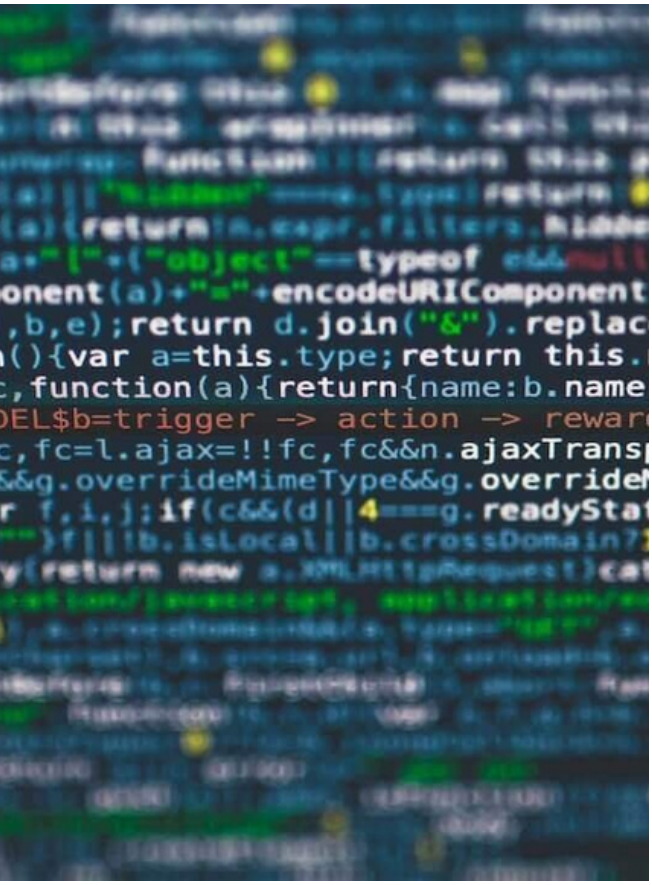

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# GREENHOUSE GAS ACCOUNTING

*Denmark*

**Website:**

https://www.sufu.co/

**Social media link(s) or links to videos:**

Instagram

**Leading organisation/Author:**
SUFU - Sustainable Future

## 01.

### Description of Green Practices.

SuFu was founded in 2021 to make climate action and emission reductions accessible to all levels of businesses, and we made it our mission to help small and medium-sized enterprises (SMEs) reduce their climate impact.
We are a small, international team of climate scientists based in Copenhagen, with varying academic and professional backgrounds.

Although we have different specialities, we are all motivated to help businesses act in line with the needs of the climate, be transparent and achieve a 1.5°C future.

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# 02.

## Green Practice learnings

We work in line with the Greenhouse Gas Protocol, the Intergovernmental Panel on Climate Change (IPCC), and the International Organization for Standardization (ISO) 14064 to ensure that our work is reliable and in line with industry standards.
Utilising AI and software automation, we are able to reduce costs and improve accuracy, making our services more affordable and efficient for our clients.

# 03.

## Tools and approaches

Standards Adherence:
- SuFu follows industry standards like the Greenhouse Gas Protocol, IPCC guidelines, and ISO 14064 to ensure reliability and alignment with best practices.

AI and Automation:
- The company employs AI and software automation to enhance efficiency, reduce costs, and improve accuracy in climate impact assessments for SMEs.

Data Collection Tools:
- SuFu uses various tools, such as sensors and meters, for effective data collection related to emissions and energy usage.

Climate Modeling Software:
- Climate scientists utilise specialised software for modelling and predicting the impact of actions on a company's carbon footprint.

Client Engagement Platforms:
- SuFu employs online platforms for communication, collaboration, and real-time reporting to engage SME clients effectively.

# 04.

## Competences and Resources needed

- Training and Education: The company provides educational materials, such as webinars and guides, to educate SMEs on sustainable practices and emission reduction strategies.
- Climate Science Expertise: Understanding of climate science principles.
- Data Analysis and Modeling: Proficiency in data analysis and climate modeling.
- Standards Compliance: Adherence to industry standards (GHG Protocol, IPCC, ISO 14064).
- AI and Automation Skills: Competence in using AI and automation tools.
- Environmental Policy Knowledge: Understanding of local and international environmental policies.
- Communication Skills: Effective communication with clients and conveying climate-related information.
- Collaboration and Teamwork: Ability to work collaboratively in a diverse team.
- Client Management: Skills in managing client relationships and providing tailored solutions.
- Education and Training: Developing and delivering educational materials for businesses.

# 05.

## Identified Green Economy Principles

Sustainability:
- SuFu's mission to help small and medium-sized enterprises (SMEs) reduce their climate impact promotes sustainability by encouraging businesses to adopt practices that are environmentally responsible and have a long-term positive effect on the planet.

Emission Reduction:
- The company focuses on assisting SMEs in reducing their greenhouse gas emissions. This aligns with the green economy principle of minimizing carbon footprints and mitigating the impact of human activities on the climate.

Transparency:
- SuFu emphasises transparency by working in line with established standards such as the Greenhouse Gas Protocol, IPCC guidelines, and ISO 14064. This commitment to industry standards ensures transparency in the assessment and reporting of climate-related data.

Co-funded by the Erasmus+ Programme of the European Union

# WORLD FOR CLIMATE ACADEMY

*Denmark*




**Website:**

https://www.workforclimate.org/

**Social media link(s) or links to videos:**

Instagram

LinkedIn

**Leading organisation/Author:**
World for Climate Academy

## 01.

### Description of Green Practices.

WorkforClimate's mission is to help you 10x your climate impact, by showing you how to deliver the most significant decarbonisation initiatives within your corporation.
If you care about the climate, you're probably already doing what you can to reduce your impact. But we know that it's going to take systemic change to transform the way we live and transition to a renewable energy, zero emissions future.

**So how do we connect our actions as individuals to this systems shift that needs to happen? What if you could apply the same changes you make in your own life, to the company you work for?**

WorkforClimate gives you clear, step-by-step playbooks that help you influence and accelerate your company's decarbonisation initiatives.
You'll have access to the tools, support and community that will help you become an effective change-maker inside your corporation.

Co-funded by the Erasmus+ Programme of the European Union

## 02.

### Green Practice learnings

WorkforClimate acknowledges the need for systemic change to address climate challenges, recognizing that individual actions alone are insufficient. The company promotes a shift towards renewable energy and a zero-emissions future, aligning with the broader goals of sustainable development.

WorkforClimate is a good practice because it combines a systemic approach to climate action with practical guidance, access to tools and support, community building, and an emphasis on corporate decarbonization. It recognizes the pivotal role of businesses and empowers individuals to drive meaningful change within their professional spheres.

## 03.

### Tools and approaches

By focusing on decarbonization initiatives within corporations, WorkforClimate targets a significant source of emissions and environmental impact. This approach recognizes the influence and responsibility that businesses have in driving positive change.

The provision of clear, step-by-step playbooks offers practical guidance for individuals to influence and accelerate decarbonization initiatives within their corporations. This actionable approach empowers individuals to translate their concern for the climate into tangible corporate initiatives.

## 04.

### Competences and Resources needed

WorkforClimate goes beyond information by providing tools, support, and a community for individuals to become effective change-makers within their companies.

This holistic support system enhances the chances of successful implementation of decarbonization strategies.
The platform encourages individuals to apply the same changes they make in their personal lives to the companies they work for, amplifying their impact. This reflects a scalable and integrated approach to sustainability.

## 05.

### Identified Green Economy Principles

WorkforClimate's practices align with green economy principles related to corporate sustainability, systemic change, renewable energy transition, individual to corporate connection, influence and acceleration, practical guidance, access to tools and support, community engagement, amplifying impact, inclusivity and accessibility, and the empowerment of change-makers.

Co-funded by the Erasmus+ Programme of the European Union

# SMÅKLIMAMONSTRE

*Denmark*

*Copyright: www.smaaklimamonstre.dk*

**Website:**

https://www.smaaklimamonstre.dk/

**Leading organisation/Author:**
Smaaklimamonstre

## 01.

### Description of Green Practices.

Små Klimamonstre offers inspiration & learning for the little ones and their families about climate and the environment . Through games, activities and play and always with a focus on fun & entertainment, the youngest are activated to become good little climate monsters. Små Klimamonstre ® was started based on a desire to be able to make a difference in the area of climate for the youngest and at the same time be a brand that parents can, and dare to, trust. As climate- and environment-conscious parents, we ourselves lacked an offer for our children that could teach them why we do what we do in a way that is at children's level and that makes them want to be part of a more conscious manner.
We have chosen to create Small Climate Monsters to meet children where they are.

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## 02.

### Green Practice learnings

Små Klimamonstre addresses the need for climate education for the youngest by creating a platform that teaches children about environmental consciousness in a way that is age-appropriate, engaging, and informative.

By aiming to be both educational and entertaining, Små Klimamonstre adopts a holistic approach to engage children in a fun and inspiring manner, creating an environment that reciprocates the joy and love that children bring into our lives.

## 03.

### Tools and approaches

The focus on meeting children where they are, understanding their perspective, and making the learning experience enjoyable aligns with the green economy principle of considering the needs and perspectives of all stakeholders, including the youngest members of society.

The commitment to thoughtful designs and quality materials demonstrates a focus on sustainability and durability, promoting responsible consumption and production.
By targeting younger children, Små Klimamonstre recognizes the potential for long-term impact, as instilling eco-conscious values early in life can lead to more sustainable and environmentally friendly choices in the future.

## 04.

### Competences and Resources needed

The company's commitment to being a brand that parents can trust reflects ethical and transparent business practices, which are essential in the green economy.
The acknowledgment that a better future for the planet is a shared responsibility and that children can play a crucial role in shaping a sustainable future aligns with the green economy principle of collective action.
Små Klimamonstre's goal to encourage better choices towards a more sustainable future reflects a commitment to the green economy principle of promoting behaviors that contribute to environmental well-being.

## 05.

### Identified Green Economy Principles

Små Klimamonstre's practices align with green economy principles related to education, trust and transparency, a holistic approach, child-centric design, sustainable materials, empowerment, long-term impact, shared responsibility, positive reinforcement, and the promotion of sustainable choices. These principles collectively contribute to the company's positive impact on children, families, and the environment.

Co-funded by the Erasmus+ Programme of the European Union


Copyright: www.lucartgroup.com

# MUNICIPAL MATERIAL FLOW CYCLE OF BEVERAGE CARTONS - NOVO MESTO

*Slovenia*

**Website:**

https://www.lucartgroup.com/

**Social media link(s) or links to videos:**

LinkedIn

**Leading organisation/Author:**
Valtrex (part of Lucart Group)

## 01.

### Description of Green Practices.

Initiated in 2015 in Novo Mesto, Slovenia, this project focuses on recycling beverage cartons into paper products for municipal use. Valtrex, alongside local schools, kindergartens, and municipal councils, has created a circular economy model that processes collected carton waste into toilet paper and kitchen towels.

These products are used in Novo Mesto's public facilities, showcasing an effective local recycling and resource optimisation strategy. The project's success has led to its replication in other municipalities, including Ljubljana, and across Italy's Friuli Venezia Giulia region.

Co-funded by the Erasmus+ Programme of the European Union

## 02.

### Green Practice learnings

The project is notable for its comprehensive approach, which includes stakeholder engagement, public education, optimised waste collection, and efficient reprocessing technology. It demonstrates a successful model for transitioning to circular systems in urban settings. The project has significantly impacted local waste management practices, reducing landfill usage and promoting environmental sustainability. By early 2017, the citizens of Novo Mesto collected enough used beverage cartons to account for 44% of the demand for sanitary paper products in their municipality, aiming to cover 60% of local demand.

## 03.

### Tools and approaches

The project adopted innovative recycling technologies to transform beverage cartons into Fiberpack®, an ecological material used for paper products. This process separated cellulose fibres, polyethene, and aluminium from the cartons. Lucart, the leading project partner, played a crucial role in this process, contributing to significant environmental benefits, including recovering over 7.6 billion beverage cartons and preventing over 195,000 tons of $CO_2$ emissions.

## 04.

### Competences and Resources needed

The project required a diverse range of skills, including waste sorting, collection logistics, process engineering, marketing, and educational program development. The success of this initiative highlights the importance of cross-functional collaboration and the development of green jobs across the recycling value chain.

## 05.

### Identified Green Economy Principles

The project exemplifies the principles of a circular economy, demonstrating how local initiatives can lead to significant environmental and economic benefits. It highlights the potential for reusing materials, reducing waste, and creating sustainable local economies.

Co-funded by the Erasmus+ Programme of the European Union


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# AVANTCAR'S ELECTRIC CAR SHARING INITIATIVE

*Slovenia*

**Website:**

https://avant2go.si/

**Leading organisation/Author:**
Avantcar - Slovenian Car Sharing Platform

## 01.

### Description of Green Practices.

Avantcar's initiative, Avant2Go, offers a 100% electric mobility experience with state-of-the-art electric vehicles, easy app-based reservation and usage, and all-inclusive rental packages that include electricity, insurance, and maintenance. It operates in multiple locations, including Ljubljana, BTC City Ljubljana, Kranj, Maribor, Murska Sobota, and Novo mesto, offering a wide range of electric vehicles for any rental period.
It is also available in Croatia.

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## 02.

### Green Practice learnings

The initiative stands out for its environmentally friendly approach, promoting electric vehicles free of CO2 emissions and noise pollution. It contributes to sustainable urban mobility by providing a cost-effective and convenient alternative to car ownership, thereby reducing urban congestion and environmental impact.

## 03.

### Tools and approaches

The Avant2Go app is the key to accessing the service. The app lets users easily find, reserve, and manage car rentals. The service includes free parking at Avant2Go spots and is available 24/7, offering significant savings over traditional car ownership.

## 04.

### Competences and Resources needed

This initiative opens up job opportunities in transportation platform development, fleet management, renewable energy integration, user research, urban planning, and policy design. It requires expertise in digital app development, demand forecasting, fleet optimisation, and customer engagement to offer a seamless shared mobility experience, as well as key aspects of digital marketing.

## 05.

### Identified Green Economy Principles

Avantcar's Electric Car Sharing Initiative aligns with green economy practices by leveraging renewable energy sources, promoting shared mobility over individual car ownership, and implementing digital solutions to optimise asset utilisation and user experience. This approach contributes to a more sustainable, efficient, and environmentally friendly urban transportation system.

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Copyright: www.vilharia.si

# VILHARIA - SLOVENIA'S GREENEST OFFICE BUILDING

*Slovenia*

**Website:**

https://vilharia.si/en

**Leading organisation/Author:**
Corwin - Slovenian Real Estate Developer

## 01.

### Description of Green Practices.

Developed by Corwin, Vilharia represents integrated green construction practices in Ljubljana. Featuring Nordic architectural design, it emphasises energy-efficient technology, green roofs, and natural materials. The building incorporates advanced rainwater retention, supports a healthy lifestyle through features like bicycle-friendly design, and fosters biodiversity with diverse flora and urban beekeeping

http://vilharia.si.

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## 02.

### Green Practice learnings

Vilharia is notable for its commitment to sustainability, evidenced by Corwin's past achievements in revitalising brownfields and building green roofs. The office complex sets a benchmark in building sustainability, aiming for LEED Platinum certification and minimising its carbon footprint through renewable energy and efficient equipment.

## 03.

### Tools and approaches

To meet sustainability goals, Vilharia employs energy modelling, climate analysis, and process integration. It features intelligent glazing and solar energy systems for net-zero operations. Rainwater harvesting and water-efficient fixtures are vital components. A centralised building management system and post-occupancy monitoring enhance efficiency.

## 04.

### Competences and Resources needed

Vilharia requires expertise across architecture, engineering, sustainability consulting, and green materials procurement. Teams integrate design creativity, analytical rigour, and ecological ethics to create sustainable structures.

## 05.

### Identified Green Economy Principles

Vilharia aligns with green building principles like carbon neutrality, energy and water conservation, and circular resource usage. It exemplifies innovation in creating sustainable, healthy, and biodiversity-supportive urban spaces

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# KMG PANORGANIC - PIONEERING ORGANIC FOOD PRODUCTION

*Slovenia*

*Copyright: www.panorganic.si*

**Website:**
http://panorganic.si/en/

**Social media link(s) or links to videos:**

Facebook

Instagram

**Leading organisation/Author:**
KMG PanOrganic

## 01.

### Description of Green Practices.

KMG PanOrganic's journey began with a focus on organic garlic production, and it has since diversified into a variety of organic crops, including goji berries, blueberries, and living vegetables. A key achievement is their "living" products, such as lettuces sold with roots intact, a step forward in organic production. Their Goji fruit spread has succeeded in various markets, including the United Arab Emirates.

http://panorganic.si/en/stories-about-us

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## 02.

### Green Practice learnings

KMG PanOrganic's success lies in its pioneering role in organic certification and its impact on local communities and economies. They have played a pivotal role in revitalising Pomurje's agriculture and contributing to regional development. Their practices in organic farming also serve an educational purpose, facilitating student internships and research in agro-ecology.

## 03.

### Tools and approaches

Their transition to organic farming involved a systematic approach, leveraging modern technology while maintaining traditional practices in some areas, such as hand-cleaning garlic. They have expanded their land use significantly, from 6 hectares of garlic to a projected 35 hectares, showcasing a scalable organic farming model.

## 04.

### Competences and Resources needed

KMG PanOrganic offers employment opportunities in various fields, such as cultivation, food processing, marketing, and more. The organisation emphasises the need for integrated expertise across domains, from soil scientists to food technologists and marketers.

## 05.

### Identified Green Economy Principles

KMG PanOrganic aligns with the green economy through organic certification, nurturing biodiversity, efficient resource utilisation, and promoting circular economy principles. They aim to become a leading agricultural holding in Slovenia, focusing on fresh, high-quality crops and innovative products.



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Copyright: www.hse.si

# GREEN HYDROGEN AND SYNTHETIC METHANE PRODUCTION

*Slovenia*

**Website:**

https://www.hse.si/en/

**Social media link(s) or links to videos:**

https://www.hse.si/en/slovenian-green-hydrogen-and-connecting-electricity-and-gas

https://balkangreenenergynews.com/

**Leading organisation/Author:**
Plinovodi, ELES, HSE, HESS - Major Slovenian Energy Companies

## 01.

### Description of Green Practices.

The SLOP2G project is a collaborative effort by Slovenian energy companies Plinovodi, ELES, HSE, and HESS. This innovative project aims to convert renewable electricity into green hydrogen through electrolysis and carbon dioxide to create renewable methane for the gas distribution grid. It integrates electricity, gas, and hydrogen infrastructures for large-scale sustainable energy storage and distribution. This project will allow renewable methane to replace fossil natural gas, reducing emissions from electricity production during peak demands and providing grid balancing services through hydrogen storage.

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## 02.

### Green Practice learnings

SLOP2G is pioneering its approach to integrating different energy domains commercially in Slovenia. It will be Europe's most significant renewable hydrogen and synthetic methane production plant upon completion. This project is crucial for Slovenia's transition to a sustainable and carbon-free society, enhancing grid resilience and providing economic benefits by reducing gas imports and enabling renewable hydrogen exports. The large-scale design of this project makes it a significant step in displacing fossil gas and advancing Slovenia's clean energy future.

## 03.

### Tools and approaches

The SLOP2G project includes feasibility studies, optimal location identification, and industry consortiums formed through Memorandums of Understanding. The project involves coordinated efforts among partners for renewable electricity generation, hydrogen production/storage, and methane synthesis. It also includes establishing a trading platform for renewable gases with certificates of origin for green gases. This project is supported by the Slovenian Ministry of Infrastructure, Environment and Spatial Planning and the Ministry of Defence, highlighting the government's commitment to renewable energy initiatives.

## 04.

### Competences and Resources needed

The project offers opportunities in power systems engineering, gas grid management, hydrogen and methane processing, and other specialised areas. It requires skills in systems thinking for energy optimisation, technical knowledge in emerging technologies like electrolysis and methanation, and understanding the integration challenges across electricity and gas sectors. The project promotes cross-functional collaboration, integrating engineering, economics, and strategy expertise to envision and implement clean energy infrastructure.

## 05.

### Identified Green Economy Principles

SLOP2G aligns with green economy principles by focusing on renewable energy systems, efficient energy storage and distribution, and circular resource flows. It also emphasises evidence-based and integrated policymaking for sustainable infrastructure, multi-stakeholder coordination, developed technical and institutional capacities, and workforce reskilling for the green transition https://www.eles.si/

Co-funded by the Erasmus+ Programme of the European Union

Copyright:www.ouslovenia.net

# OPENING UP SLOVENIA INITIATIVE

*Slovenia*

**Website:**
https://ouslovenia.net/

**Social media link(s) or links to videos:**

Video Lectures

**Leading organisation/Author:**
Ministry of Education, Science and Sports

## 01.

### Description of Green Practices.

The Opening Up Slovenia Initiative is a national effort led by the Ministry of Education, Science and Sports, aiming to revolutionise education through digitalisation, open educational resources, and innovative learning approaches. The initiative emphasises collaborative learning environments, free knowledge access, and the integration of new technologies in education. It focuses on training educators in digital skills, developing open-source educational materials, and fostering multi-sector partnerships.
Key projects include X5gon334, which combines learning analytics and content aggregation for personalised education, and MyMachine Slovenia, which promotes experiential learning through joint design projects by children and university students.

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## 02.

### Green Practice learnings

This initiative is exemplary in sustainable education because it emphasises open access, cross-sector coordination, and preparation for green economy transitions. It takes a systemic, collaborative approach to education, integrating sustainability into learning.
The initiative is particularly impactful in providing equitable learning access, fostering creativity in addressing environmental and social challenges and aligning educational policy with local needs and sustainability goals.

## 03.

### Tools and approaches

The initiative employs a multi-faceted approach, including public consultations for policy co-creation, cross-ministerial coordination, collaborations with European agencies like EIT Climate-KIC, and public procurement to support educational technology startups.

It has established a distributed model for localised solution development, engaging international experts for knowledge exchange and awareness campaigns to improve digital literacy.

## 04.

### Competences and Resources needed

The initiative has created job opportunities in online course development, content curation, instructional design, and more. It requires skills like digital literacy, change management, and understanding intellectual property laws.

Key roles include instructional designers, content creators, technologists, and outreach coordinators, with opportunities for collaborations across education, technology, and sustainability sectors.

## 05.

### Identified Green Economy Principles

The initiative aligns with Green Economy principles through its focus on equity, empowerment, multi-sector coordination, evidence-based policy, decentralised governance, and reskilling of educators. It invests in human, social, and intellectual capital for sustainable development.

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Copyright:www.coffe-eco.gr

# COFFE-ECO

*Greece*

**Website:**

https://coffe-eco.gr/

**Social media link(s) or links to videos:**

Facebook

LinkedIn

**Leading organisation/Author:**
Alexis Pantziaros (Co-founder of Coffeeco)
Marios Vlachogiannis (Co-founder of Coffeeco)

## 01.

### Description of Green Practices.

Coffe-eco, an eco-friendly startup in Patras, Greece, is revolutionizing waste management and sustainability practices in the beauty, hospitality, and plastics industries. Operating under a "circular by design" philosophy, the company focuses on upcycling waste from coffee, beer, and wine consumption to create positive environmental impacts.
One key practice involves upcycling skincare ingredients through a meticulous collection process from cafes and wineries. The innovative processing of coffee, beer, and wine waste extracts natural antioxidants and caffeine, which are then used to develop skincare products. The key takeaway is the transformative potential of waste, showcasing that circular economy principles can turn waste into valuable resources, addressing waste reduction and promoting sustainability. Coffe-eco also implements circular services for hotels, collaborating with them to repurpose used coffee grounds into skincare ingredients. This closed-loop system reduces waste disposal costs for hotels while providing

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guests with eco-friendly amenities made from repurposed waste. The collaborative efforts emphasize that closed-loop systems benefit both businesses and consumers, influencing consumer choices towards sustainability. In another practice, Coffe-eco creatively produces biodegradable bioplastics with higher degradation capacity. These bioplastics are sourced from cellulose fibres found in used coffee grounds and other food waste, providing a sustainable alternative to traditional plastics. The key takeaway is the innovation in the plastics industry, emphasizing the creation of sustainable alternatives by repurposing coffee and food waste. This aligns with the circular economy model, highlighting the significance of resource efficiency and reducing dependency on traditional raw materials.

Coffe-eco's practices offer critical learnings in waste transformation, circular economy principles, and innovation in sustainable alternatives. The key takeaways include the potential of waste as a valuable resource, the effectiveness of collaborative circular services, and the importance of resource efficiency in creating sustainable alternatives to traditional plastics. These learnings can inspire businesses to adopt similar practices.

## 02.

### Green Practice learnings

Coffe-eco's commitment to sustainable practices places it at the forefront of the green economy. By upcycling coffee, beer, and wine waste, the company actively reduces environmental impact, addressing pollution and carbon emissions associated with conventional waste disposal. Embracing circular economy principles, Coffe-eco not only minimizes waste but fosters resource efficiency, contributing to a paradigm shift in industries toward sustainability. The company's innovative upcycling processes position it as an industry leader, appealing to eco-conscious consumers and building brand loyalty. In contrast to the misconception that sustainability is costly, Coffe-eco's practices demonstrate economic viability by reducing costs for hotels and creating new revenue streams.

Aligned with the UN's Sustainable Development Goals (SDGs), Coffe-eco's efforts contribute to global responsibility, addressing goals such as responsible consumption and production, climate action, and life on land and below water. These impactful practices, detailed in the Green Economy Manual, serve as a comprehensive guide for businesses and policymakers. The manual empowers them to adopt sustainable practices, foster innovation, and address environmental, social, and economic dimensions effectively. Through shared knowledge and inspiring examples like Coffe-eco, the manual becomes an influential tool for building a more sustainable, resilient, and prosperous future.

## 03.

### Tools and approaches

Coffe-eco’s commitment to sustainability is demonstrated through a combination of innovative approaches and carefully selected tools integrated into their eco-friendly practices. Careful waste collection and sorting employ specialized containers and processes, ensuring the effectiveness of subsequent upcycling. The innovative upcycling process utilizes state of the art machinery to extract antioxidants and caffeine with precision, contributing to the creation of skincare and bioplastic products. Circular service collaborations, facilitated by logistical tools, create a closed-loop system with hotels. The development of sustainable products involves laboratory equipment, blending scientific expertise with sustainability in the creation of skincare and bioplastic innovations.
Life Cycle Assessment (LCA) tools track environmental impact transparently and accountably. The company’s dedication extends to eco-friendly packaging, employing biodegradable and recyclable materials. Collaboration with skincare manufacturers, facilitated by communication tools and logistical planning, amplifies Coffe-eco’s impact, promoting mainstream adoption of sustainable practices across the beauty industry.

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# 04.

## Competences and Resources needed

**Competences:**

Coffee-eco requires a diverse range of competences crucial for driving sustainability initiatives. Waste management expertise, including collection, sorting, and disposal, is essential, with roles like waste management specialists and recycling coordinators. Innovation and research skills contribute to continuous development, with roles such as innovation researchers and sustainable product developers. Scientific proficiency in cosmetic formulation and plastics processing is vital, supporting roles like cosmetic scientists and plastics processing technicians. Collaboration specialists and partnership managers are needed to expand sustainability impact through alliances with hotels and skincare manufacturers. LCA (Life Cycle Assessment) skills are integral for understanding environmental impacts, with roles like LCA analysts and environmental sustainability consultants. Effective communication and branding skills are vital, with experts in sustainability communications and branding strategists building a positive brand image for the company.

**Resources:**

Coffee-eco utilizes a diverse array of resources to drive its sustainable practices. Waste materials, including used coffee grounds, beer, and wine waste, serve as foundational raw materials for upcycling processes. Cutting-edge technology and machinery, equipped for antioxidant and caffeine extraction, facilitate the innovative upcycling process, transforming waste into valuable resources.

Laboratory facilities play a crucial role in cosmetic formulation and plastics processing, providing essential infrastructure for skincare ingredient and biodegradable bioplastic development. Logistical infrastructure ensures efficient waste transportation and storage, supporting circular service collaborations and maintaining material flow.

Communication tools across various platforms facilitate engagement with hotels and skincare manufacturers, fostering collaboration and partnership building to amplify sustainable practices' impact. Packaging materials, made from biodegradable and recyclable components, align with Coffee-eco's sustainability commitment, extending eco-friendly choices to product packaging. Human capital emerges as the driving force, with a skilled workforce proficient in waste management, innovation, logistics, and collaboration.

# 05.

## Identified Green Economy Principles

Coffe-eco prioritizes people-centred prosperity, emphasizing financial, human, social, physical, and natural capitals. The creation of green livelihoods aligns with collective action for public goods. Inclusivity and non-discrimination are evident in Coffe-Eco's decision-making, benefit-sharing, and cost distribution. The company promotes equitable opportunity, reducing disparities and supporting women's empowerment.The company employs the precautionary principle, investing in protecting biodiversity and natural systems. Coffe-Eco supports sustainable consumption and production with a low-carbon, resource-conserving, diverse, and circular approach. The company aligns prices, subsidies, and incentives with true societal costs. The company's evidence-based approach, transparency, and democratic accountability contribute to effective governance.

Co-funded by the Erasmus+ Programme of the European Union

Copyright:www.liofyllo.com

# LIOFYLLO

*Greece*

**Website:**

https://liofyllo.com/en/

**Social media link(s) or links to videos:**

Facebook

LinkedIn

Instagram

**Leading organisation/Author:**
Alexandra Makrygeorgou

## 01.

### Description of Green Practices.

Liofyllo, a social cooperative enterprise, was established in Patras in 2018 and is rewriting the history of sustainable business practices. This company, which is based in the heart of the Mediterranean, finds inspiration in Greece's rich cultural legacy, especially in relation to its long-standing association with the olive tree, which is seen as a symbol of prosperity in the region. Liofyllo's green practices exemplify a sustainable and innovative approach to utilizing agricultural waste, particularly olive leaves, to create eco-friendly materials.

Liofyllo's dedication to the circular economy's principles is remarkable. They have created a profitable resource out of what was originally considered as waste by gathering and processing the olive leaves that are normally thrown away during the production of olive oil to create an innovative material and products of both general and special use. It is the only company on a global scale that uses olive leaves in this way. This novel material, with its enormous applications, versatility and potential for product development, is used to produce the

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Welia and Marelia panels. These pieces are the basis of Liofyllo's distinctive creations. For the Welia panel there is a special sorting process. In particular, the leaves are arranged in such a way as to advance the material's resilience. The panel is used by Liofyllo to decorate wooden boxes of premium packaging (boxes), thereby adding value to green-and not only-products! Marelia panel is made of all forms of olive leaves either mixed or of a single type. The various shades of colour come naturally from the olive tree palette. The products are customized for those who adore creativity as Liofyllo is the only company that has the right to use this international patent. They exude nature in any possible space! The creations are designed by a team known for its incompatible commitment to quality!

The olive leaf panels Welia and Marelia present a circular concept that minimizes environmental effect by reusing materials. By challenging the conventional linear economy, this approach demonstrates how industries might embrace more environmentally friendly manufacturing techniques. Liofyllo's creative application of olive leaves to produce new materials, such as these panels, is an example of how innovation and technology can support environmental protection. The company's dedication to sustainable industrialization and innovation is demonstrated by its investment, which includes lab work to uncover workable solutions. This method not only reduces waste but also offers a sustainable substitute for products that are not ecologically friendly. It establishes a standard for other companies to fund research that encourages the growth of the green industry and lessens their environmental impact.

These examples from Liofyllo's practices show that green economy initiatives can be both environmentally conscious and economically viable. They emphasize the importance of rethinking waste, embracing innovation, and incorporating circular economy principles to create products that contribute positively to both society and the environment.

## 02.

### Green Practice learnings

Liofyllo, emerges as a beacon of circular economy principles. The Welia and Marelia panels, crafted from discarded olive leaves, epitomize a transformative shift from the linear economy model. Their story, a testament to reusing and recycling agricultural waste, stands as a compelling example for businesses aiming to minimize waste and embrace circular practices. By documenting Liofyllo's approach in the green economy manual, we spotlight a tangible illustration of circular economy principles in action.

The history of Liofyllo goes beyond resource efficiency and circular practices. The Welia panels, designed as an alternative to traditional wood-based panels, contribute to halting deforestation, aligning with broader goals of preserving biodiversity. Their commitment to ongoing research and development not only fosters innovation but also exemplifies a culture crucial for the growth of green industries. Moreover, Liofyllo's diverse team, promoting gender parity, showcases the positive social impact of inclusive work environments. Their engagement in climate-related activities becomes a catalyst for inspiring businesses to actively participate in climate action, promoting sustainable consumption patterns.

In essence, Liofyllo's practices are a combination of circular economy principles, resource efficiency, environmental impact mitigation, and positive social engagement. Documenting their journey in the green economy manual offering valuable insights and inspiration for businesses seeking a meaningful and sustainable impact.

## 03.

### Tools and approaches

Liofyllo's green practices are fuelled by an innovative toolset that exemplifies their commitment to sustainability. Their innovative process of turning waste olive leaves into useful resources, which combines scientific knowledge with creative problem-solving, is the key to their success. Their adoption of circular design thinking ensures that products like the Welia and Marelia panels not only serve a purpose but also follow a lifecycle that minimizes waste. Collaboration with local olive oil mills emerges as a practical tool, efficiently managing agricultural waste.

Social entrepreneurship and a deliberate commitment to team diversity serve as powerful tools, fostering an environment of innovation and rapid development. Actively engaging in conventions, workshops, and

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social actions amplifies their impact, spreading awareness and inspiring a broader community. Collectively, this toolkit provides a blueprint for businesses seeking effective and impactful tools within the green economy.

## 04.

### Competences and Resources needed

Liofyllo's green practices require a diverse skill set, from expertise in bio-based materials and circular design principles to effective supply chain management and social entrepreneurship. The innovative material development relies on continuous research and development, utilizing agricultural waste, specifically olive leaves, from local partnerships with olive oil mills. A diverse team fosters creativity, and community engagement tools, including conventions and workshops, rely on effective communication and marketing strategies. This comprehensive approach creates a spectrum of job opportunities within the green economy.

Roles range from material scientists and product designers focusing on sustainable materials to supply chain managers overseeing local collaborations. Social impact leaders drive initiatives for gender parity and social entrepreneurship, while communication specialists and event coordinators play pivotal roles in outreach and sustainability-related events. Together, these competences and resources forge a workforce aligned with the principles of the green economy.

## 05.

### Identified Green Economy Principles

Liofyllo's green practices seamlessly align with key principles of the green economy. Their innovative use of discarded olive leaves not only fosters shared prosperity, touching on human, social, and natural capitals, but also embraces collective action for public goods. Inclusivity and non-discrimination are evident through their commitment to gender parity, while efforts to reduce disparities and support women's empowerment resonate with the justice principle.

By safeguarding nature and adhering to the precautionary principle, Liofyllo contributes to the planetary boundaries' principle. Their circular model and consideration of true costs reflect a commitment to a low-carbon, resource-conserving, and efficient green economy. Finally, Liofyllo's evidence-based, integrated, and collaborative approach to decision-making aligns with the good governance principle, highlighting their dedication to inclusive, equitable, and sustainable development.

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# KOZANI SOLAR PARK

*Greece*

**Social media link(s) or links to videos:**

Youtube

**Leading organisation/Author:**
Hellenic Petroleum RES SA (HELPE RES)

## 01.

### Description of Green Practices.

Located in the heart of Kozani's scenic surroundings, the Kozani Solar Park is a cutting-edge project in the field of renewable energy. This chapter explores the important role that the Kozani Solar Park plays in promoting environmental and economic sustainability, as well as the compelling factors that led to its development.

- **Sustainable energy production:**

The Kozani Solar Park's dedication to producing electricity sustainability is its main component. The park harnesses the plentiful sunshine of the Kozani region by employing an extensive network of solar panels that are carefully positioned across the length of the area. Thanks to the advanced photovoltaic technology in these panels, sunlight can be converted into clear power. This strategy places Kozani as a leader in the worldwide endeavour to switch to sustainable energy sources while also reducing reliance on conventional, carbon-intensive energy sources.

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- **Technological innovation and efficiency**

Kozani Solar Park produces electricity, but it accomplishes so with the highest level of efficiency and cutting-edge technology. The optimal acquisition and consumption of energy is ensured by the combination of innovative solar panels with cutting-edge energy storage systems. This dedication to efficiency raises the standards for sustainable practices in the renewable energy industry while also optimizing the park's energy production. Kozani Solar Park is a live demonstration of the theory that technology innovation is essential to the green energy revolution.

# 02.

## Green Practice learnings

By utilizing solar energy to create electricity, the Kozani Solar Park promotes sustainable energy. The park greatly lessens its need on conventional energy sources that are dependent on fossil fuels via the use of this renewable resource. This, in turn, leads to a substantial decrease in carbon emissions, which is vital in the battle against climate change. The Kozani Solar Park's utilization of solar energy is in perfect harmony with international initiatives to move toward a future with less carbon emissions.

In addition to being environmentally superior, the Kozani Solar Park stimulates economic growth. The park's creation and management provide jobs in the rapidly expanding renewable energy industry. The development of jobs benefits the local community and promotes a sense of economic empowerment. In addition, the park's existence encourages the expansion of associated businesses, which advances the area's general development. Kozani is actively promoting the rise of the green economy and ensuring a sustainable future by making solar energy investments.

# 03.

## Tools and approaches

Kozani Solar Park's success depends on cutting-edge photovoltaic technology. Modern cells in distributed solar panels efficiently convert sunlight into electrical power, ensuring high energy collection rates and performance for clean, renewable energy production.

Advanced energy storage technologies mitigate solar electricity's intermittent nature, using battery storage to provide electricity even on cloudy days by storing excess energy from peak solar hours. This strategy enhances regional energy grid stability by improving output consistency and dependability.

Seamlessly integrated into a smart grid infrastructure, the park enables real-time monitoring and management of energy production and consumption, reducing waste, enhancing grid reliability, and facilitating efficient power distribution. This maximizes its contribution to the broader energy ecosystem.

Prior to establishment, a thorough environmental impact assessment evaluated the project's effects on the local ecosystem, air quality, and communities. Findings informed design and implementation, prioritizing environmental considerations throughout the project.

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## 04.

### Competences and Resources needed

The successful implementation of Kozani Solar Park relies on a team of skilled engineers and technical experts versed in solar energy systems, photovoltaic technology, and energy storage solutions. Their expertise ensures efficient design, installation, and maintenance, enhancing the park's performance and reliability.
Navigating complex environmental regulations is essential, managed by environmental and regulatory specialists who conduct impact assessments, obtain permits, and ensure sustainable practices. Balancing energy goals with environmental preservation is their focus.
Integration into a smart grid demands a team of data analysts and technicians to monitor real-time energy data, optimizing contributions to the grid and ensuring smooth integration into broader infrastructure.
Positive community relationships are crucial, managed by engagement and outreach teams that communicate benefits, address concerns, and involve the community, fostering social sustainability.
Strategic financial planning, led by business and financial strategists, secures funding, minimizes expenses, and explores revenue prospects, ensuring long-term financial viability.

Apart from the workforce, the Kozani Solar Park is dependent on various resources:

- Solar panels and photovoltaic technology
- Sophisticated battery storage solutions for storing and releasing energy as needed.
- A robust smart grid system for real-time monitoring and efficient energy distribution.
- Environmental impact assessment tools
- Community engagement platforms

## 05.

### Identified Green Economy Principles

Kozani Solar Park embodies a holistic approach that primarily aligns with the Planetary Boundaries and Efficiency and Sufficiency Principles.

- The Planetary Boundaries Principle: The Kozani Solar Park aligns with this principle by safeguarding, restoring, and investing in nature.
- Kozani Solar Park supports sustainable consumption and production through its low-carbon, resource-conserving, diverse, and circular practices.

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# HELBIO S.A.

*Greece*

**Website:**

https://helbio.com/

**Social media link(s) or links to videos:**

LinkedIn

**Leading organisation/Author:**
Thomas Chalkidis (CEO)

## 01.

### Description of Green Practices.

Helbio S.A., a high-tech company based in Patras, Greece, is at the forefront of sustainable hydrogen and energy systems development, specializing in solutions for industrial use and integrated fuel cells for Combined Heat and Power (CHP) production. Helbio has positioned itself as a global leader in hydrogen production from biofuels, showcasing expertise in catalysis, reaction engineering, process design, and system integration.

One of Helbio's flagship products is the H2PS-5 power system, a 5 kW Combined Heat & Power (CHP) unit that operates on natural gas, biogas, propane/LPG, and ethanol. This innovative system demonstrates a commitment to sustainability through its highly efficient, environmentally friendly, and cost-effective design. By utilizing advanced processes dealing with hydrogen and fuel cells, Helbio contributes to the reduction of greenhouse gas emissions and air pollution.

Learning Points:
Diverse Energy Sources: Helbio's multi-fuel systems can use different fuels like biogas and

bioethanol, demonstrating the versatility of sustainable energy practices.
Efficient Power Generation: The H2PS-5 system is highly efficient, operating between 40-100% of its capacity. This shows the importance of optimizing energy production for both economic and environmental sustainability.
Helbio's practices offer valuable insights into the integration of diverse energy sources, efficient power generation, and community-focused sustainability, contributing significantly to a broader discussion on green economy principles.

## 02.

### Green Practice learnings

Helbio S.A. offers valuable insights for the Green Economy Manual, showcasing sustainable energy models, promoting circular economy principles, emphasizing technological integration, and providing a global perspective on green practices. The manual can use Helbio's case to illustrate real-world applications, promote circular economy principles, emphasize integrated approaches for efficient solutions, and highlight global impacts of green initiatives.

Helbio's contributions align with the manual's goals of promoting sustainability, resource efficiency, and global relevance.They serve as a guide for businesses shifting to sustainable practices, by highlighting the efficiency of multi-fuel systems and biofuels. They also emphasize the need for energy solutions through technological integration.

Additionally, Helbio's global impact offers a valuable example for businesses aiming to contribute to the green economy on a global scale, providing key lessons in carbon footprint reduction, energy efficiency, fuel source versatility, economic growth stimulation, and technological innovation.

Overall, Helbio S.A.'s practices emphasize the importance of reducing carbon footprints, focus on energy efficiency, using diverse fuel sources, stimulating economic growth, and driving technological innovation.

## 03.

### Tools and approaches

Helbio S.A. relies on a sophisticated toolkit and strategic approaches to champion sustainable practices in hydrogen and energy systems. The company's mastery of advanced catalysis and reaction engineering, exemplified by its patented Heat-Integrated Wall-Reactor, ensures rapid and efficient heat exchange crucial for hydrogen production and fuel cell operations. Helbio's tailored hydrogen production systems, ranging from 20-300 m3/h, underscore a personalized approach, allowing flexibility in meeting specific industrial and energy-related needs. The integration of energy production systems with fuel cells, particularly the H2PS-5 power system, reflects Helbio's commitment to clean and efficient power generation.

Notably, the company's emphasis on multi-fuel systems, capable of utilizing natural gas, propane/LPG, biogas, and ethanol, showcases versatility and resilience in adapting to evolving energy landscapes. The incorporation of smart power management systems optimizes the performance of the Combined Heat & Power (CHP) system, contributing to efficient energy distribution. Helbio's active participation in global collaborative projects, co-funded initiatives, and in-house research and development exemplify its commitment to continuous innovation and the advancement of sustainable energy solutions. The use of proprietary environmental impact assessment tools underscores Helbio's dedication to evaluating and minimizing its ecological footprint.

Collectively, these tools and approaches position Helbio S.A. as a dynamic force in shaping the landscape of sustainable practices within the green economy.

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## 04.

### Competences and Resources needed

The successful implementation of Helbio S.A.'s green economy practices relies on a diverse range of competences and resources. Skilled engineers and technical experts leverage their expertise in catalysis, reaction engineering, and process design to develop and maintain efficient hydrogen and energy systems. Environmental and regulatory specialists ensure compliance with sustainable practices while balancing energy generation goals and environmental preservation. Data analysts and smart grid technicians integrate Helbio's systems into smart grids, optimizing contributions to the broader energy infrastructure. Community engagement teams foster positive relationships with local communities, promoting social sustainability. Strategic financial planning is crucial for financial sustainability, involving business strategists in securing funding and minimizing expenses. Helbio also relies on various resources, including solar panels, battery storage solutions, and a robust smart grid system. Job competencies within Helbio encompass technical skills, environmental knowledge, community engagement, and financial planning, reflecting the multidisciplinary nature of its green economy practices.

## 05.

### Identified Green Economy Principles

Helbio S.A.'s practices align seamlessly with the principles of the green economy, embodying a commitment to shared prosperity, equity, and environmental stewardship. By focusing on sustainable energy solutions, promoting inclusive development, and prioritizing nature conservation, Helbio serves as a model for businesses transitioning to more responsible practices. The company's adherence to justice, global relevance, and evidence-based governance underscores its role as a key player in the green economy landscape. In summary, Helbio S.A. stands as a beacon of excellence, contributing valuable lessons to the Green Economy Manual and embodying the principles of wellbeing, justice, planetary boundaries, efficiency, and good governance.

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# PHEE

*Greece*

**Website:**

https://phee.gr/

**Social media link(s) or links to videos:**

Facebook

LinkedIn

Instagram

**Leading organisation/Author:**
Stavros Tsompanidis (Founder)

## 01.

### Description of Green Practices.

Founded in 2015, PHEE stands as a beacon in the realm of green economy practices, pioneering the transformation of waste into valuable, low-embodied carbon, and non-toxic composites. Based in Patras, Greece, the company's commitment to sustainability is evident in its unconventional manufacturing process, which harnesses the dead leaves of Posidonia Oceanica, one of the oldest living organisms on earth. PHEE's flagship product, PHEE board, is a highly aesthetic cellulose-based material that reflects the company's dedication to circularity. By giving a second life to this plentiful, yet underutilized, resource PHEE is redefined the possibilities of material science in a circular economy.

The learning from PHEE's practices lies in the power of creative resource utilization and the potential for diverse, eco-friendly applications across industries. PHEE's circular approach, showcases the transformative power of resourcefulness in waste management.

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This challenges convectional waste perceptions. PHEE's diverse product range, from beach rackets to sunglasses, and their unique design highlights the versatility of sustainable materials and the aesthetic appeal of sustainability. This learning encourages businesses to diversify their product lines sustainably, reducing reliance on traditional, less eco-friendly materials and to enhance product design, attracting environmentally conscious consumers. PHEE's proactive environmental and social impact measurement underscores a commitment to transparency and improvement which emphasizes the importance of assessing and communicating the holistic impact of sustainable practices.

## 02.

### Green Practice learnings

PHEE's methods exemplify sustainability, making a significant contribution to the green economy. Their innovative use of Posidonia Oceanica dead leaves aligns with green economy principles and offers compelling reasons for inclusion in the manual. By repurposing waste, PHEE reduces environmental impact, utilizing a plentiful and renewable resource to promote sustainable consumption and production.
Moreover, PHEE's dedication to preserving biodiversity by preventing disposal of dead leaves supports the planetary boundaries principle of the green economy. Their circular practices demonstrate how waste can be valuable resources in a circular economy, promoting closed-loop systems and challenging the linear model.
PHEE's innovative material development fosters creativity and economic opportunities while advancing green economy goals of shared prosperity. Including their practices in the manual guides businesses toward sustainable and circular solutions, emphasizing the importance of underutilized resources, innovation, and environmental responsibility.

## 03.

### Tools and approaches

PHEE gathers and processes dead leaves from Posidonia Oceanica using specialized machinery, emphasizing the unique selection of this abundant yet often overlooked resource. State-of-the-art equipment is employed for meticulous collection, cleaning, and extraction of vital ingredients like antioxidants and caffeine. Logistical tools ensure effective storage, transportation, and collaboration with hotels for closed-loop waste systems.

Investing in laboratory facilities equipped with advanced tools for formulation and processing, PHEE tracks environmental impact using Life Cycle Assessment (LCA) techniques. Their commitment to evidence-based practices is evident in monitoring progress by the quantity of repurposed waste. Using environmentally friendly packaging materials further demonstrates their dedication to sustainability.

PHEE's methods offer a comprehensive and creative approach to sustainability, emphasizing waste utilization and circular activities to support the green economy.

## 04.

### Competences and Resources needed

PHEE's green economy practices require a diverse range of skills, highlighting the multifaceted nature of sustainable operations. Waste Management Expertise is essential for efficient waste utilization, with roles like Recycling Coordinators and Waste Management Specialists playing key roles in circular practices. Innovation and research skills are crucial for exploring novel upcycling techniques, with positions like Innovation Researchers and Sustainable Product

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Developers driving product development. Scientific and laboratory skills are vital for plastics processing and cosmetic formulation, filled by roles such as Plastics Processing Technicians and Cosmetic Scientists. Proficiency in logistics and supply chain management is essential for effective garbage collection and collaboration with hotels, managed by Supply Chain Coordinators and Logistics Managers.

Collaboration Specialists and Partnership Managers expand the impact of sustainable practices through alliances with hotels and skincare manufacturers. Roles like LCA Analysts and Environmental Sustainability Consultants contribute to assessing and improving environmental impact. Communication and branding skills are essential for conveying sustainability efforts and building a positive brand image, with positions like Sustainability Communications Specialists and Branding Strategists.

PHEE's sustainable practices rely on various resources, including waste materials like used coffee grounds and innovative technology for extracting valuable components. Laboratory facilities support plastics processing and cosmetic creation, while logistical infrastructure ensures efficient waste transportation. Communication tools facilitate collaboration, and packaging materials align with sustainability goals. Human capital, represented by a skilled workforce, drives PHEE's success in waste management, innovation, logistics, collaboration, and communication, creating job opportunities that strengthen its green economy practices.

## 05.

## Identified Green Economy Principles

PHEE's practices deeply align with the core principles of the green economy. Rooted in a people-centred approach, the company actively engages in sustainable practices that extend beyond environmental benefits, contributing significantly to the prosperity of communities. By transforming seemingly overlooked waste materials into valuable products, PHEE aligns with the green economy's goal of growing wealth across diverse human, social, physical and natural capitals.

The company's commitment extends to investments in sustainable natural systems, fostering overall wellbeing within the ecosystem.

PHEE's practices further reflect the principles of justice, inclusivity, and empowerment, promoting equity within and between generations. Through the innovative use of Posidonia Oceanica, PHEE safeguards and invests in nature, recognizing and nurturing its diverse values. The company's dedication to sustainable consumption and production demonstrates an awareness of planetary boundaries, addressing the challenge of creating prosperity within these limits. Moreover, PHEE's evidence-based interdisciplinary approach, coupled with transparent and participatory practices, aligns seamlessly with the principles of good governance, fostering a holistic and inclusive green economy. In essence, PHEE emerges as a beacon of sustainable practices, embodying the ideals and principles crucial for a resilient and prosperous future.

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# STAVROS NIARCHOS FOUNDATION CULTURAL CENTER

*Greece*

**Website:**

https://www.snfcc.org/en

**Social media link(s) or links to videos:**

Facebook

Instagram

LinkedIn

Youtube

**Leading organisation/Author:**
Stavros Niarchos Foundation

## 01.

### Description of Green Practices.

The Stavros Niarchos Foundation Cultural Center (SNFCC) in Athens serves as a pioneering example of sustainable architecture and cultural innovation, skilfully blending creativity with environmental care. Its practices, spanning sustainable architectural design, community education, technological innovation, and a holistic environmental impact, offer valuable learnings. SNFCC's intentional integration of green elements, such as planted roofs, not only enhances energy efficiency but also creates visually appealing and functional spaces, showcasing the potential for sustainable design to enrich both aesthetics and functionality.

Beyond its cultural role, SNFCC acts as an educational hub, engaging the community in environmental programs and fostering a sense of responsibility, highlighting how cultural institutions can actively contribute to environmental education. The adoption of advanced technologies underscores the importance of a forward-thinking approach to energy efficiency, setting new standards and showcasing the impact of embracing innovation.

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SNFCC's comprehensive sustainability approach, considering economic, cultural, and environmental aspects, provides crucial insights for diverse projects, emphasizing the potential for holistic sustainability to enrich communities culturally and economically.

# 02.

## Green Practice learnings

The Stavros Niarchos Foundation Cultural Center (SNFCC) stands out as a prime example of sustainable architecture and cultural innovation. Achieving the LEED Platinum certification in 2016 underscores its commitment to green building standards, showcasing a seamless integration of nature and structure. SNFCC's innovative energy conservation initiatives, such as planted roofs for seasonal insulation, reflect a forward-thinking approach that sets high sustainability benchmarks.

Global recognition, including the LEED Platinum certification and the Green Roof Leadership Award, confirm SNFCC's leadership in eco-friendly cultural development. These honors position it as an international role model, demonstrating how culture can coexist harmoniously with the nature. SNFCC also educates visitors about the environment, inspiring everyone to support sustainability.  Moreover, its sustainable practices contribute to job creation and local economic growth.

In conclusion, SNFCC's inclusion in the green economy manual isn't just about listing achievements, it serves as an invitation to innovate and aspire toward a greener future. This chapter aims to inspire architects, urban planners, and cultural institutions globally, showcasing that sustainability is both aspirational and achievable through initiatives like those undertaken by SNFCC.

# 03.

## Tools and approaches

In this chapter, we'll explore the tools and approaches driving SNFCC's sustainable practices, showcasing a holistic and innovative approach to energy efficiency, environmental conservation, and architectural design. The integration of these elements underscores SNFCC’s dedication to creating a cultural center that harmonizes with both human activities and the surrounding environment.

Green roofs adorn the National Library of Greece, the Greek National Opera, and the Parking buildings, serving a dual purpose by providing natural insulation and cooling. This strategic use enhances energy efficiency and showcases SNFCC's commitment to sustainable building practices. SNFCC opts for energy-efficient heating and hot-water production, choosing natural gas combustion over traditional oil-based methods to reduce environmental impact. Heat recovery technology preheats water for various uses, minimizing energy waste and optimizing resource use.

SNFCC employs free cooling air systems, utilizing outdoor temperatures during mid-seasons to reduce electricity consumption by air-conditioning units. Lighting is controlled by a central smart management system, ensuring lights are activated only when necessary and maximizing natural lighting, showcasing meticulous consideration for sustainable practices in design and operation.

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# 04.

## Competences and Resources needed

Stavros Niarchos Foundation Cultural Center (SNFCC) relies on a diverse team and resources to embrace green economy principles effectively. Energy management specialists optimize heating and cooling systems for efficiency. Skilled horticulturists care for Mediterranean plants on green roofs, enhancing sustainable landscaping. Architects and designers integrate sustainable design ideas into the overall vision.

Professionals in smart building technology implement control systems for HVAC and lighting, enhancing energy efficiency. Educators and community outreach professionals ensure diverse audiences understand and appreciate environmental concepts, fostering shared responsibility. Project managers coordinate complex projects, ensuring green objectives are met. Collaborations with governmental entities and environmental groups maximize resources and support, extending SNFCC's impact.

SNFCC's dedication to environmentally friendly methods highlights the importance of teamwork and expertise. Cutting-edge technology, native plants, instructional materials, and efficient project management techniques are integral to its approach.

# 05.

## Identified Green Economy Principles

The case study of SNFCC demonstrates a strong dedication to sustainable practices and inclusive development, which is consistent with several green economy principles. SNFCC embodies key green economy principles with a focus on shared prosperity and wellness. The center promotes sustainable living by integrating human, social, physical, and natural capitals, aligning with holistic welfare ideals.

Justice is upheld through equity, inclusion, and support for women's empowerment, fostering social justice and narrowing opportunity gaps. SNFCC actively contributes to the Planetary Boundaries Principle by preserving and nurturing nature, emphasizing biodiversity and ecological values. In terms of efficiency and sufficiency, the center advocates sustainable consumption and production, endorsing low-carbon, circular methods for economic growth. SNFCC exemplifies good governance by employing interdisciplinary approaches, evidence-based practices, and inclusive, transparent institutions, ensuring democratic accountability and societal engagement.

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# NEWPEN, ECO-FRIENDLY PENCILS

*Serbia*

**Social media link(s) or links to videos:**

Facebook

**Leading organisation/Author:**
NewPen llc.

## 01.

### Description of Green Practices.

Newpen company was founded in 2018, in Central Serbia. This company is very innovative and ''green''. They produce eco-friendly pencils and crayons, from recycled old newspapers. It's a small family company, which came to this idea by learning that eco-friendly pencils have been produced already in China and India, yet no one else in Europe or other parts of the world produces anything similar. This initiative uses newspapers – already read and thrown by citizens, or unused, unsold newspapers by publishers and newsstands to produce pencils and crayons. Newpen won one of the awards within the project ''EU Green Agenda in Serbia''.

Thanks to this award they will buy additional necessary equipment for production of eco-friendly pencils.

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## 02.

### Green Practice learnings

Newpen is not only innovative business initiative, but also very ''green'' business, as it re-uses already produced things, in this case, newspapers, to produce new products – pencils and crayons. It is completely ecologically friendly, given that it uses ecological adhesives for production, produced pens are dried naturally (air drying method is applied). Pens are attested in European laboratory and are completely safe. Newpen's current capacity is to produce daily around 2500 – 3000 pencils. 95% of their production is exported in Europe. They are planning to triple the production with new machines they will procure thanks to the above-mentioned award.

## 03.

### Tools and approaches

The whole process is consisted of several phases. The first step is procurement of old newspapers from individuals, caffes, newspapers stands, publishers. The second step is careful folding newspapers so that it can be cut into strips. It is very important that all the grinders are the same length to get all the pencils with the same thickness (7mm). The third, and the slowest phase is manual inserting graphite into each pencil. Next, 4th step is rolling of newspapers with graphite inserted with automatic and semi-automatic machines. 5th step is drying pencils. At first, company was using ovens for drying. However, to prevent use of energy, they decided to move to natural air-drying system. It takes maximum 2 days for drying pencils this way. 6th phase is cutting on specially made cutters. Final step is quality control of each pencil and packaging.

## 04.

### Competences and Resources needed

This practice to be implemented successfully needs different jobs and competences. They include manual work with newspaper – folding newspapers, inserting graphite, packaging. Then there is operating and maintenance of machines – cutters, automatic and semi-automatic machines for rolling pencils. It also requires management competences for running the business, presentation, marketing and communication skills for promotion and presentation of products, and finally selling. It is very collaborative and client centred practice, and thus requires a lot of collaboration and maintenance network of suppliers and customers. In addition, project writing skills and business planning skills are desirable and relevant, to enable fundraising and business development.

## 05.

### Identified Green Economy Principles

Newpen meets all green economy principles. It is people centred, very inclusive and non-discriminatory. It safeguards and preservers the nature. It is circular and uses already used products and materials to produce something new, to create prosperity and wealth, and at the same time to preserve the environment. This initiative aligns well with local, national and EU policy agendas and priorities, and is supported by institutions, national and EU funds for green transition.

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# SOMA BIOSPORIN

*Serbia*

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**Social media link(s) or links to videos:**

Facebook

LinkedIn

Youtube

Instagram

**Leading organisation/Author:**
Soma

## 01.

### Description of Green Practices.

Soma is developing new designs, technologies and biotic materials, aimed at reducing pollution, enabling sustainable industry and boosting circular economy.
Soma is also producing health and wellness supplements using environmentally friendly processes.

SOMA Labs work to unlock natural properties of microorganisms and fungi and develop practical uses to help achieve our vision of healthy people in a healthy environment.

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# 02.

## Green Practice learnings

Soma is both, extremely innovative and extremely “green” business.
Biosporin is the material which has all the characteristics of styrofoam, but unlike styrofoam, it is an environmentally friendly solution. Although biosporin can be used in various industries, Soma is focusing on single-use packaging and construction.
The material is biodegradable, but it will not decompose in normal, room conditions, but in contact with soil and moisture. It then turns into fertilizer within 4 to 6 months, leaving no waste behind. This closes the circle that begins with the "rescue" of agricultural waste, which is normally burned in developing countries, such as Serbia.
The ecological advantages of biosporin compared to Styrofoam are indisputable. Our interlocutor explains that tests have shown that 1 ton of biosporin, compared to 1 ton of Styrofoam, reduces methane pollution by 3 tons, CO2 pollution by 8.9 tons, solid waste by 300 kilograms and ash by 150 kilograms.
- The production of biosporin requires 98 percent less energy than the same amount of Styrofoam. The product is carbon negative, because while growing, it absorbs carbon dioxide from the atmosphere. Not to mention the fact that we are reducing the emissions generated by the production of plastic, as well as the plastic waste generated when Styrofoam is thrown away - Stanojević points out.

# 03.

## Tools and approaches

The Biosporin is not being produced but grown. The only resource they use is agricultural waste and technology. First, agricultural waste is collected, which is shredded and thermally processed for sterilization, then a special mushroom-based liquid is injected into it, which is made in their laboratory. They use a local type of mushroom from Serbian forests that is cloned in a laboratory and turned into a liquid form that is injected into the waste. The mushroom then grows through the waste, and when it eats it, it produces a biosporin that can form into any shape.
Chitin and Chitosan Vege-sourced versatile biomaterials, produced from vegetal sources - mushrooms and mushroom waste.
Appropriate for usage in research or biomedical, nutritional, pharmaceutical, or cosmetic industry.

Organic mushrooms are produced sustainably and organically grown mushrooms for medical purpose. They are available as whole, shredded, ground or liquid and powder extracts of desired strength. SOMA also has medicinal mushroom spores, broken or unbroken.
IMUNIM are wellness product mushroom-based, natural and sustainably produced. Imunin is a unique product derived from combining potent abilities of natural substances. It is intended to support the immune system and immune response. The main ingredient in the preparation, organically grown mushroom extract Ganoderma Lucidum —known as Reishi — has been known for millennia as an extremely powerful tool in Traditional Chinese Medicine. Science has only recently proven the healing effects of this mushroom. The active ingredients in the Reishi mushroom are immunomoduators, which means they affect immunity by regulating, strengthening and restoring it to normal function. Imunin is fully manufactured in Serbia! The medicinal mushroom Ganoderma Lucidum is grown locally, so it does not contain ingredients imported from China.

# 04.

## Competences and Resources needed

This practice to be implemented successfully needs different jobs and competences. They include manual work with newspaper – folding newspapers, inserting graphite, packaging. Then there is operating and maintenance of machines – cutters, automatic and semi-automatic machines for rolling pencils. It also requires management competences for running the business, presentation, marketing and communication skills for promotion and presentation of products, and finally selling. It is very collaborative and client centred practice, and thus requires a lot of collaboration and maintenance network of suppliers and customers. In addition, project writing skills and business planning skills are

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desirable and relevant, to enable fundraising and business development.

## 05.

### Identified Green Economy Principles

SOMA practice meets all green economy principles. It is people centred, very inclusive and non-discriminatory. It safeguards and preservers the nature. It is circular and uses naturally grown and already used products and materials to produce something new and valuable, to create prosperity and wealth, and at the same time to preserve the environment. It is supported by institutions and aligns well with local, national and EU policy agendas and priorities.


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# MT KOMEX

*Serbia*

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**Website):**

https://mt-komex.co.rs/

**Social media link(s) or links to videos:**

Facebook

**Leading organisation/Author:**
MT Komex doo

## 01.

### Description of Green Practices.

MT Komex is one of the leading construction companies in Serbia, specialized for solar power plants construction and installation. They were established in 1993. Since then, they constructed and installed 200 solar power plants. Beside solar power plants, they have expertise in installation of chargers for electric cars. MT Komex offers services of developing projects – project-technical documentation for solar power plants, as well as construction and installation works. There are two types of solar power plants, MT Komex has expertise with: roof solar power plants and ground solar power plants. Both types of plants, are constructed to produce electricity out of sun's non-accumulated radiation for the purpose of placing energy into electrical distribution system.
MT Komex key and most important projects are: construction and installation of the first solar power plant in Serbia, located in East Serbia (municipality Kladovo), built in 2013, and another solar power plant in Central Serbia (municipality Lapovo), open in 2023. Both power plants produce green energy for the placement in the electricity distribution system.

Co-funded by the Erasmus+ Programme of the European Union

## 02.

### Green Practice learnings

This initiative is pure green economy case, given that its expertise enables increase in usage of solar – renewable energy and decrease in usage of traditional energy sources, such as coal energy production. There are many benefits and positive impacts of solar energy use: it is sustainable over time; it produces little to no greenhouse gas emissions during operation, it generates electricity without emitting pollutants into the air or water, and it typically requires less land area compared to other forms of power generation.

The primary environmental benefit is the reduction of carbon dioxide (CO2) and other greenhouse gases that contribute to climate change. By displacing the use of fossil fuels, solar power helps mitigate global warming. This initiative can contribute to green manual as an example of the company which provides green solutions in the community, and thus generates wide spectrum of green jobs.

## 03.

### Tools and approaches

MT Komex is designing, constructing, and installing solar power plants, both on the roofs of buildings, and on the ground. The most important tool they use in their work is their knowledge and expertise, knowledge of mechanical and electricity engineers. Furthermore, they are using necessary equipment for building solar power plants, like be-facial solar power panels, which can yield electricity from both sides of the panel, and thus to produce more electricity. Beside solar panels, necessary equipment includes string inverters as well which convert one direction electricity produced in solar power plant into alternating electricity. The solar panels are placed on specially made construction that allows greater absorption of reflected radiation. MT Komex offers holistic approach, and provides comprehensive service to its clients, from development of project-technical documentation, over procurement of necessary equipment, to matching with financial sources which provide funds for green projects, to construction and installation of solar power plants.

## 04.

### Competences and Resources needed

Solar power sector demands the whole spectrum of different jobs, with different levels of complexity and formal education background. In this specific case from Serbia, MT Komex employs engineers, both mechanical and electric engineers, with specific technical competences, as well as project management competences. Engineers are relevant in the phases of design and installation of plants, as well as in the phase of maintenance and monitoring of plants work. Beside engineers, MT Komex employs operators, solar electro fitters – installers, whose job is to install solar panels. They are one of the key positions in solar power sector. They need to have electrical competences and very specific knowledge and skills related to solar power panels functionalities and installation. Moreover, technicians are needed for the maintenance and repairs. Both engineers, installers and technicians should have competences related to installation, maintenance, and optimisation of energy storage system, and inverting solar energy into electricity. Additional knowledge and skills relevant in this sector: knowledge of energy regulations, compliance management, research skills for further development of solar technologies, budgeting and financial analysis, environmental science competences, social impact analysis, sales and presentation skills, teaching, and training competences.

## 05.

### Identified Green Economy Principles

MT Komex meets all green economy principles. It is people centred, very inclusive and non-discriminatory. It creates jobs and enables employment of not only higher educated persons, but also persons with fewer opportunities, with disadvantaged backgrounds.  Given that it uses renewable energy from sun, and uses less lend then traditional energy producers, it is completely environmentally friendly, it protects and preservers the environment. This initiative aligns well with local, national and EU policy agendas and priorities, and is supported by institutions, national and EU funds for green transition.

Co-funded by the Erasmus+ Programme of the European Union

Copyright:www.facebook.com/PGDJUKIC

# FARM DJUKIC

*Serbia*

**Social media link(s) or links to videos:**

Facebook

**Leading organisation/Author:**
Farm Djukic

## 01.

### Description of Green Practices.

Farm Djukic is a family farm from Vojvodina, Serbia. It produces vegetables by applying sustainable agriculture technologies, in particular hydroponic production. Family Djukic have had hydroponic greenhouse production of pepper and tomato for the last 20 years. They are one of the very few farms in Serbia which are applying these modern sustainable agriculture technologies.

Hydroponic production is easier and more stable compared to conservative, ground production. It enables one to produce vegetables during the whole year. According to science, on the surface of 1ha it is possible to cultivate 30,000 tomato plants and to expect 400 tons of tomatoes.

Co-funded by the Erasmus+ Programme of the European Union

## 02.

### Green Practice learnings

This initiative is considered as good practice for several reasons. First of all, conservative agriculture is facing many challenges, like: negative impact on environment, lack of interest among youth for old fashion agriculture jobs, strong dependence on weather conditions and factors outside human control. All these challenges could be overcome with new, modern, sustainable agriculture approaches. One of them is hydroponic production. These new, modern, and at the same time environmentally friendly agriculture approaches can be more attractive choice for younger generation, as they require additional, complex skills, such as digital skills.

## 03.

### Tools and approaches

Farm Djukic, from Gospodjinci, produces tomatoes and pepper in greenhouses, by applying hydroponic technology approach. Namely, they are planting plants into rockwool boxes. Each plan has its own box. All plant boxes are connected to the water supply system ''drop by drop'' installed in the green house. Water supply system is a main source of nutrients for the plants, as the water used contains necessary fertilizers which provide relevant nutrients - microelements for the plants. All greenhouses are heated, to enable necessary temperature for the plants. The whole system is digitalized and enables farmers to control and maintain necessary conditions (humidity, temperature, level of nutrients supplied) and provide adequate inputs for the plants. The whole process includes production of plant from the seed, then planting and breeding the plant, and finally, harvesting the products.

https://www.youtube.com/watch?v=SCnQgRtvd3Q

https://www.youtube.com/watch?v=jutnyOnrnrA&t=6s

## 04.

### Competences and Resources needed

This farm requires different skills and competences to enable successful production of vegetables, from simple workers responsible for harvesting, sorting, and packaging products, over those who transport these products, to more complex jobs, like technologist who sets-up and monitors the whole system, as well as farm manager, who is responsible for managing the business, finding clients, purchasing and procurement of demanded inputs.

## 05.

### Identified Green Economy Principles

Farm Djukic meets all green economy principles. It is people centred, very inclusive and non-discriminatory, as it employs not only high educated, high skills workers, but also simple workers, with manual skills. It safeguards and preservers the nature and cares about environment. It produces healthy products, safe for the humans. Finally, sustainable agriculture is supported by institutions and aligns well with local, national and EU policy agendas and priorities.

Co-funded by the Erasmus+ Programme of the European Union

# ENERGY PORTAL

*Serbia*

Copyright:www.energetskiportal.com

**Website:**

https://www.energetskiportal.com/

**Social media link(s) or links to videos:**

Facebook

Instagram

LinkedIn

Twitter

**Leading organisation/Author:**
Energy portal

## 01.

### Description of Green Practices.

Energy portal (EP) is a specialized public broadcasting medium on sustainable energetics that daily updates the most important news and information necessary for investors and other parties in renewable energy sources (RES), improvement of energy efficiency in industry, transportation and buildings (EE) in Serbia interested in production of "clean" energy, energy efficiency improvement and sustainable development. EP is the mediator for implementation of sustainable projects and costeffective "green" investments. It is also a guide through regulations, procedures, materials, design, technologies, research, sources of funding…

Co-funded by the Erasmus+ Programme of the European Union

## 02.

### Green Practice learnings

EP's activity is directed to creating sustainable, humane, energy independent, economically stabile and environmentally aware community through promoting renewable energy sources, energy efficiency, waste management and environmental protection.
They familiarize investors with the procedures with a view to implement projects and investments in the field of RES.
EP also gather people, funds and resources on sustainable projects with aim to their implementation.
The portal initiates systemic regulatory and legislative changes with the aim of improving the conditions and simplifying the procedures and regulations for the production of energy from renewable resources, restoring thus the trust in institutions.

## 03.

### Tools and approaches

ED is affecting improvement in the environment through the promotion of 'clean' energy and thus reducing the emissions of CO2 and other harmful products of fossil energy use through:

- accumulating and dissemination the information on projects, innovations, procedures, investments and the news in the field of RES and EE;
- Raising awareness and expanding the knowledge of RES and EE, with systematic support to development of the scientific and educational institutions dedicated to 'green' energy;
- Motivating individuals to invest in RES and EE and encouraging the development of the domestic industry in accordance with the development of the domestic energy sector;
- Connecting investors, banks and project holders with the aim to create common sustainable projects in the field of RES and EE;
- Initiating the development of sustainable financial mechanisms and establishing the confidence in banks' support of RES and EE sectors;

## 04.

### Competences and Resources needed

The practice is very specific form of online media which demands for competences related to collection and processing of relevant information in the field renewable energy sources, energy efficiency, waste management and environmental protection of production of specific content and its dissemination online. It requires specific skills related to journalism, such us copy writing, blog production but also some technical domain knowledge. EP employs journalists, engineers, online marketing experts, IT experts etc.

## 05.

### Identified Green Economy Principles

EP meets all green economy principles. It is people centred, very inclusive and non-discriminatory. It contributes to improvement of the environment through the promotion of 'clean' energy and thus reducing the emissions of CO2 and other harmful products of fossil energy use. This initiative aligns well with local, national and EU policy agendas and priorities, and is supported by institutions, national and EU funds for green transition.

Co-funded by the Erasmus+ Programme of the European Union

# B-FRESH

*Serbia*


*Copyright:www.b-fresh.rs*

**Website:**

https://b-fresh.rs/

**Social media link(s) or links to videos:**

Instagram

**Leading organisation/Author:**
B-fresh Technologies

## 01.

### Description of Green Practices.

B-fresh Technologies is a startup dedicated to innovations in the field of food waste reduction and environmental protection.
It produces B-fresh preparation based on natural products that prevents rotting and spoilage of fresh fruits and vegetables, thereby extending the shelf life by up to 100%. The preparation is completely safe for health and the environment, and the basic idea is to avoid direct application to fruits and vegetables, but to apply it to the inside of the packaging.
In this way, B-fresh contributes to the improvement of business in production, trade and food processing, environmental protection through the reduction of food waste and health protection thanks to its harmless components.

Co-funded by the Erasmus+ Programme of the European Union

# 02.

## Green Practice learnings

B-fresh contributes to environmental protection by increasing the utilization of food in households and in industrial processing. Using the B-fresh preparation also reduces food distribution costs thanks to the extended shelf life.
Humanity annually produces 1.3 billion tons of food waste, of which 40% is unused fruit and vegetables. Food waste is not only a financial problem but also a humanitarian and environmental problem.
The largest financial support for the development of B-fresh was received thanks to the contribution to the reduction of food waste.
Food waste is not only an ethical and economic issue, but also depletes the environment and limited natural resources. Since the human population is constantly growing, the food industry is facing more and more challenges to provide sufficient quantities of quality food. At the same time, it is necessary to reduce food wastage caused by the short and limited shelf life of food and especially fresh products, such as meat, fruit and vegetables.
How does B-fresh help?

- Reduces food waste by doubling the shelf life.
- It replaces toxic preparations to prevent food spoilage.
- It offers an alternative to harmful packaging materials.

# 03.

## Tools and approaches

B-fresh products are based on a biopolymer emulsion that contains active components that extend the shelf life of fresh foods. The content of the emulsion can be adjusted to customer needs to enhance the effect on specific causes of rot.
According to tests performed in a certified laboratory, B-fresh extends the shelf life of fresh fruits and vegetables by up to 100%. Tests were performed on organic foods, berries and salads, packed in cardboard and plastic boxes coated with B-fresh preparation. Tests have proven the high efficiency of B-fresh in protecting fresh food from rotting and spoilage.

The shelf life of raspberries packed in boxes sprayed with B-Fresh was 8 days compared to 4 days for the control samples. The shelf life of lettuce packaged in boxes sprayed with B-Fresh was 8 days compared to 5 days for the control samples.
The emulsion can be easily spread on any packaging material, such as paper, cardboard, plastic, wood, etc. Thus, a colorless, water-soluble coating is formed that prevents rapid rotting and spoilage of fresh food.
Active components that show high antioxidant activity, even at low concentrations, are encapsulated in a biopolymer matrix.
B-fresh shows great results pest control and rejection in organic farming through its application in the last spraying. The latest research shows positive effects in protecting fruit from spoilage if B-fresh is applied for the last spray of fruit 5 to 7 days before harvest. Also, research has shown that B-fresh can be used as a repellent to protect against snails. Initial experiments show that it can also be used against powdery mildew. The use of B-fresh in plant protection and as a biopesticide is in the phase of research and preparation of documentation for registration.
The products are made from biodegradable non-toxic components that are all on the GRAS list and are safe for people and the environment.

# 04.

## Competences and Resources needed

This practice offers jobs in research and development in the field of biotechnology and agriculture as well as jobs in production, marketing and sales. The competences needed are: researching, microbiology, biochemistry, agronomy, environmental science, IT and big data analyses, quality control, communication, sales… The practice is supported by European Institute of Innovation and Technology for food and Climate.
The practice strongly relies on collaboration with various stakeholders, such as Ministry of innovation, science, technological development, Ministry of agriculture, Institute for multidisciplinary researches of the University of Belgrade, Chamber of Commerce of Serbia, Innovation Fund of Serbia etc.

Co-funded by the Erasmus+ Programme of the European Union

# 05.

## Identified Green Economy Principles

Agrounik meets all green economy principles. It is people centred, very inclusive and non-discriminatory. It successfully faces the food waste problem and positively affects the problem of poverty and hunger. It safeguards and preservers the nature and cares about environment. Finally, sustainable agriculture and reduction of food waste are supported by institutions and aligns well with local, national and EU policy agendas and priorities.


*Copyright:www.b-fresh.rs*

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# OPEN 336 - NET CARBON ZERO BUILDING

*Italy*

**Website :**

https://www.open336.it/en/

**Social media link(s) or links to videos:**

Video presentation

**Leading organisation/Author:**
Park Associati (Architecture studio) and Fervo group (Facility and Energy management)

## 01.

### Description of Green Practices.

Open 336 is a zero carbon emissions building constructed in Milano in 2022 for which a pioneering approach was adopted for the project's development in an effort to minimise:

- Environmental impact during the design process;
- environmental impact of the building's construction;
- building's emissions;
- building's consumption.

Innovative technologies were used to reduce by 100% the building's emissions during its life cycle. It is inspired from principles of responsible and livable architecture, and thought for the people who will occupy the space. Its design answers a request to reduce emissions of CO2 produced by real estates. Open 336 was designed as a building sustainable from an economic, human and environmental point of view.

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## 02.

### Green Practice learnings

Open 336 is a pertinent good practice as it highlights new opportunities for change in the architecture and construction sector that puts decarbonisation at its core. With Open 336, Park Associati together with Fervo is not only pioneering in minimising the carbon footprint generated during the construction of the building, but goes beyond by thinking about the future of the building. As such it answers to the fundamental objective to take into consideration the reduction of environmental impact and consumption of buildings during their entire cycle of life.

## 03.

### Tools and approaches

Open 336 can be defined as a net zero emission building during its entire cycle of life thanks to the Eco2Air technology designed by Fervo, a company specialised in providing innovative solutions in the field of Facility and Energy Management. The technology Eco2Air consists of a biological and biodegradable filter of material. The filter acts as a tree which captures carbon dioxide present in the outdoor atmosphere and releases, in the building, purified air rich in oxygen. This filter has a capacity of decarbonisation for only 10 kg of product, which is 10 to 15 times higher to that of magnolias pines. In 20 years, the filter is able to absorb more that 24 thousands kilograms of $CO_2$.
The Eco2Air filters the absorbed air and injects purified air into the indoor environment, extracting and retaining the $CO_2$ present in the atmosphere. All of that thanks to a material that is biological and biodegradable. The carbonic anhydride captured by the filter is reused, from a perspective of circular economy, for processes such as vertical farming or gasification of beverages. Once the filter is saturated (after 600 hours), it has to be emptied of the accumulated $CO_2$ and can be regenerated and reused for a total of 7 years.

## 04.

### Competences and Resources needed

The achievement of a good practice like Open 336 requires two main different type of profile in the green economy:

- Architecture: Architects knowledgeable in sustainable architecture and sustainable construction.
- Research and Innovation for the Open Air technology: structural engineers specialised in innovation for energy efficiency in buildings.

## 05.

### Identified Green Economy Principles

Open 336 thanks to the technology Open air that makes it a zero carbon net building, becomes a model of building that addresses the challenge of creating prosperity within planetary boundaries but also invests in restoring air. Therefore, the following good practice reaches the efficiency and sufficiency principle but also the planetary boundaries principles.

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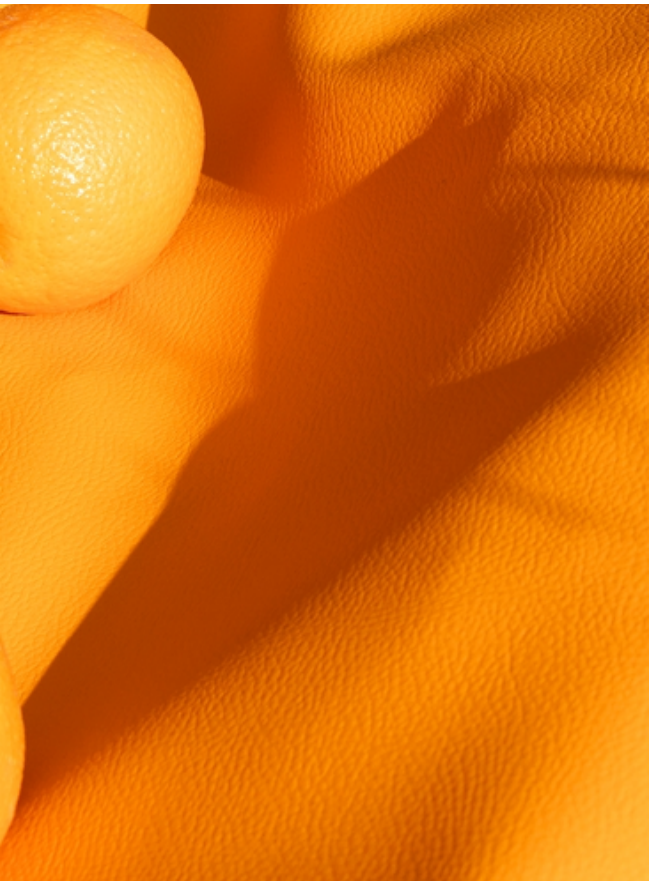

Copyright:www.ohoskin.com

# OHOSKIN - LEATHER ALTERNATIVE MADE OUT OF ORANGE AND CACTUS BYPRODUCTS

*Italy*

**Website :**

https://www.ohoskin.com/

**Social media link(s) or links to videos:**

Facebook

Instagram

LinkedIn

**Leading organisation/Author:**
Ohoskin

## 01.

### Description of Green Practices.

Ohoskin is a Sicilian startup which proposes the first made-in-Italy, eponymous bio-based material that is an alternative to luxury leather. The Ohoskin is a Barbarian fig cactuses and orange-based coated textile which provides the feeling of high quality animal leather but is 100% vegan, 70% non-fossil,and partly plant based. Ohoskin was born to give a new life to the yearly 1.4 millions tons of by-products produced from oranges and Barbarian fig cactuses. While Ohoskin is partly made out of PVC, the PVC used by the company is made of recycled plastics, thus contributing to reducing carbon emissions by 90% thanks to the non-extraction of fossil fuels. The motto of the company is: “Enjoy luxury while saving animals, the economy, the planet. Change the world, not your lifestyle.”

Co-funded by the Erasmus+ Programme of the European Union

# 02.

## Green Practice learnings

Ohoskin is a pertinent good practice as its activity is based in the circular economy. Indeed, Ohoskin resorts to the by-products of organic grown oranges and barbary fig cactuses from the food and cosmetic industry. If they are not transformed, these by-products have a high economic and environmental cost. The company therefore creates raw material for the textile industry out of the by-products from the two former industries. The by-product, whose destiny was to become yet another waste for the land, is given a new value which generates profit for each player in the production chain. As such, companies from the food and cosmetic industry who produce these by-products reduce their organic footprint and waste impact. Additionally, Ohoskin's production is cruelty free and products being bio-based, they are also recyclable.

# 03.

## Tools and approaches

Ohoskin came up with an innovative way to upcycle orange and barbarian figs by-products into raw material for the textile industry. Through this innovative process, the co-founders of Ohoskin challenged the view of this by-product as "useless waste" to transform it into "useful raw material". Beyond the positive environmental and economic impact it has with regards the upcycling of the by-products, it is crucial to underline that this alternative to leather production has a positive impact on the environment in comparison to traditional leather production which has a highly deleterious impact on the environment from animal agriculture (water pollution, land use and deforestation) to leather processing which generates a large amount of waste and contributes highly to water pollution.

Ohoskin is committed to the following principles:

- Reduce the environmental impact of its artificial leather.
- Introduce a block-chain based traceability system to ensure the traceability of raw materials.
- Ensure a fossil-free composition of its products, in order to reduce the use of raw materials from fossil sources.
- Guarantee a carbon neutral production in order to reduce CO2 emissions.

# 04.

## Competences and Resources needed

A company like Ohoskin needs profiles that have competencies in research and development for new materials and sustainable technologies in the textile industry. A solid foundation of knowledge and expertise in sustainability is crucial, meaning that one has a deep understanding of the environmental and social impact of the fashion and design industry but also the ability to develop sustainable practices and innovative solutions aiming at offering innovative sustainable solutions.

# 05.

## Identified Green Economy Principles

Ohoskin contributes highly to the green economy agenda. The innovative use of by-products from another sector of activity, that is by-products of cactuses and oranges, means that Ohoskin's activity is part of the circular economy. In addition, Ohoskin's commitment to always make efforts for the environment (through aiming at net zero GHG, seeking to reach 100% fossil free composition of products, efforts for full traceability of production and general reduction of emissions during the whole process of production) is additionally relevant to the green economy. Eventually, not only are Ohoskin products environmentally friendly but also durable and recyclable. As such Ohoskin reaches the Planetary boundaries principle of the green economy as well as the efficiency and sufficiency principle.

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Copyright:www.kitenrg.com

# KITENRG - GENERATING ENERGY FROM HIGH-ALTITUDE WINDS INTO REALITY

*Italy*

**Website:**

https://kitenrg.com/about-us/
https://impresasocialeland.org/en/

**Social media link(s) or links to videos:**

https://kitenrg.com/

**Leading organisation/Author:**
Kitenergy

## 01.

### Description of Green Practices.

Kitenergy is an Italian innovative engineering company who is dedicated to making the innovative idea of producing electricity from winds at high altitudes a reality. The company has developed a prototype of an ultralight kite that is tethered to a generator based on the ground. The kites' aerodynamic forces are transferred to the generator to produce energy. The automatic flight controller of the kite elaborates the collected data in real time in order to calculate the best trajectories to increase the power output of the kite while satisfying its flight constraints. In addition these kites can operate up to 600 metres above the ground level.

The technology was conceived with the perspective of operating at a higher altitude compared to other similar size wind mills because winds are stronger and more constant at higher altitude.

Co-funded by the Erasmus+ Programme of the European Union

## 02.

### Green Practice learnings

Kitenergy is a good practice since the objective of the technology developed by the company is to produce renewable energy. It is increasingly relevant as a good practice for its innovative aspect. Indeed, the technology goes beyond the limitations of traditional renewable energy specialised in exploiting wind as an energy source, to propose a technology that seeks to be even more efficient in terms of resources exploitation.

## 03.

### Tools and approaches

The kites developed by Kitenergy are not limited by the 200m limitation of windmill blades. With this regard, they operate well above to reach unexploited altitudes above the ground where gusts of winds are way stronger. As a consequence, higher amounts of energy can be generated yearly. Indeed, capacity Factor (CF) is the factor used to determine, on a given site, as a function of wind variations in speed and direction, the energy produced by a wind generator in a single year. The higher the wind is captured, the higher the CF is.

Another key principle behind the technology developed by Kitenergy is to exploit high-altitude wind energy while minimising the generator structure, cost and land occupation in a logic of complying with the circular economy principles. In comparison to a wind turbine of the same size, the Kytenergy generator is not only way lighter, but also utilises much less material. Additionally, the main structure of the generator being on the ground, maintenance costs and installation costs are way less important than those of a wind tower.

## 04.

### Competences and Resources needed

Kitenergy, in order to develop the technology is composed of professionals ranging from a variety of disciplines but mainly within the engineering disciplines:

- Engineering: mechanics, environmental science, mechatronics, electronics and aerospace.
- Economy and business management.

## 05.

### Identified Green Economy Principles

This case is reaching the Efficiency and Sufficiency principle of the green economy because, in comparison to a wind turbine of the same size, the technology developed by Kitenergy is made out of way less material and produces a consequently greater amount of energy.

Co-funded by the Erasmus+ Programme of the European Union


Copyright:www.biovaproject.com

# BIOVA PROJECT - PRODUCING BEER OUT OF FOOD SURPLUS

*Italy*

**Website:**

https://www.biovaproject.com/

**Social media link(s) or links to videos:**

Youtube

LinkedIn

Instagram

**Leading organisation/Author:**
BIOVA Srl

## 01.

### Description of Green Practices.

BIOVA Project is a project from the circular economy. It was born in 2019 from the observation that, in Italy alone, more than 1,300 tonnes of bread are thrown away. Biova was created to tackle this problem and chose to focus on giving a second life to surplus bread to use in the production of beer. It then expands its activities to use surplus pasta for beer production. To date Biovia has launched six different types of beer on the market, brewed by artisanal short supply chain breweries. Five of these beers are using surplus bread while one of them is using surplus pasta. Biova, in the perspective to always reduce its impact on the planet, came out with a snack recipe that reuses all waste of Barley malt used in the production of their beers: Ri-Snack.

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## 02.

### Green Practice learnings

The Biova Project is a good practice because it is an amazing example of innovation in the food sector which fights against food waste. By giving new value to bread and pasta that is deemed to end up in the dumpster, but also giving a second life to barley malt used in beer production, the Biova project can be considered as an innovative project of the circular economy.

## 03.

### Tools and approaches

Biova can be considered a good practice due to the positive impact that reusing surplus is having. By giving a second chance to surplus bread and pasta, the impact produced by Biova is the following:

- food waste is avoided by giving a second chance to food surplus,;
- up to 40% raw material is saved as a smaller amount is required;
- public expenditure is saved from not having to manage surplus in landfills;
- CO2 emissions are avoided.

To provide a more concrete example, for each 150 kg of surplus bread, Biova produces 2500 litres of premium beer, saves 30% of malt, and avoids the emission of 1365 kilograms of CO2. Eventually, thanks to the reuse of barley malt waste produced during the production of beer, the Biova project brings the waste from their beer production to zero.

## 04.

### Competences and Resources needed

Considering that the Biova Project was born as a startup, competences in entrepreneurship were fundamental to the creation and development of the company.

Since the Biova Project produces beers and snacks, it is a project whose success relies much on the marketing of the products that are produced. As a consequence, competencies are required in Marketing and Communication for the circular economy. These competencies aim at targeting consumers in a circular economy but also educating customers on adapting circular practices and guiding them in transitioning to more sustainable models.
From a perspective of continuously improving sustainable growth in the company, the role of circular economy manager is pivotal.
The position of Product development manager is also key in this kind of circular economy that favours the identification of new opportunities for developing new marketable products based on the use of food surplus, from concept to distribution.

## 05.

### Identified Green Economy Principles

Biova contributes highly to the green economy agenda. The innovative use of surplus bread from the agro-alimentary industry means that Biova's activity is part of the circular economy. Biova's brings the process of circular economy farther by finding new ways of recycling material used during the brewing process like the barley malt which is transformed into the RI-Snacks. By reusing these different ressources, Biova is reaching the Planetary Boundaries Principle and the Efficiency and Sufficiency Principle.

Co-funded by the Erasmus+ Programme of the European Union

# ORANGE FIBER

*Italy*

Copyright:www.orangefiber.it

**Website:**

https://orangefiber.it

**Social media link(s) or links to videos:**

Facebook

Youtube

LinkedIn

Instagram

**Leading organisation/Author:**
Orange Fiber

## 01.

### Description of Green Practices.

Orange Fiber creates circular fabrics from citrus fruit waste from Italy with the aim to actively contribute to an environmentally friendly future of the textile industry. When making citrus juice, after extraction, 60% of fresh fruit is left over. The start-up Orange Fiber takes advantage of this leftover also known as "pastazzo" to transform this food waste, through their transparent supply chain, into yarn and fabric for brands and designers who care about sustainability of raw material. Orange Fiber takes pride in being the first company to use by-products of citrus juice to create sustainable fabrics: the innovative method was patented in 2014 and has since then been patented in the main citrus producing countries across the world. The process is the following:

1. citrus juice leftovers are collected;
2. cellulose is extracted from the "pastazzo";
3. fibre is made out of the cellulose;
4. fibre is spinned into yarn;
5. yarn is woven into fabric;

To further their innovation process, Orange Fiber partnered with the Lenzing Group, a

preeminent manufacturer of wood-based specialty fibres worldwide, to develop the first-ever TENCELTM branded Lyocell fibre composed of wood pulp and orange. TENCELTM Limited Edition x Orange Fiber is a unique cellulosic fibre that is produced utilising the same innovative closed loop production process as conventional TENCELTM Lyocell fibres, but with further impact on improving sustainability in the textile and clothing industries.

## 02.

### Green Practice learnings

Orange fibre can be considered as a good practice for its commitment to the greening of the fashion industry. By giving a second life to citrus fruit waste from the agrifood sector to transform them into raw material for the textile industry, the Sicilian textile producing brand did not reinvent fashion but rather focused on reinventing citrus to create sustainable textile fibre. To keep waste to a minimum, the company is extending the life cycle of citrus fruit from the agri-food sector, creating a bridge between the agri-food sector and the textile industry through the circular economy. Thanks to this innovative method of using unconventional sustainable raw materials, the enterprise is not only taking proactive steps towards a more sustainable future but also minimising the environmental and economic cost that the citrus waste would have had. This good practice epitomises possibilities to not only green fashion but also create virtuous synergies between different economic sectors for a more sustainable future.

## 03.

### Tools and approaches

Orange Fiber has licensed its innovative cellulose extraction method which has by now been extended to the main citrus juice producing countries. A success for the company whose aim was to increase their impact by having other stakeholders applying their technology in the most promising markets. Indeed, Orange Fiber has been promoting the use of their registered trademark to inform and engage their large network of sustainable fashion enthusiasts. Up to now, the company has partnered with diverse fashion brands such as H&M, Ferragamo and E. Marinella, Orange Fiber to make its way in the sustainable fashion industry.
Eventually, it is important to underline the importance of Orange Fiber's network in the success of the company. Investors, accelerators programme and industry partners are key to the success story of the company and to their continuous commitment to create value in terms of sustainability and impact.

## 04.

### Competences and Resources needed

A company like Orange Fiber needs profiles that have competencies in research and development for new materials and sustainable technologies in the textile industry. A solid foundation of knowledge and expertise in sustainability is crucial, meaning that one has a deep understanding of the environmental and social impact of the fashion and design industry but also the ability to develop sustainable practices and innovative solutions aiming at offering innovative sustainable solutions.
Effective sustainability communication skills are also essential because effective articulation of sustainable concepts facilitates collaboration across sectors and engagement with stakeholders.

## 05.

### Identified Green Economy Principles

Orange Fiber meets the following green economy principles:

- The Planetary Boundaries Principles: Orange Fiber by using agri-food sector by-products to create fibre for the textile industry, is creating an alternative to cotton production which is known to severely degrade soil quality, emit consequent amounts of GHG and pollute drinking water. As such it indirectly invests in protecting biodiversity , soil water, air and natural systems.
- The Efficiency and Sufficiency Principle: Orange Fiber's innovation is resource-conserving and a perfect example of the circular economy.

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# VALDIBELLA A COOPERATIVE OF FARMERS IN RURAL SICILY - AGROECOLOGY AND AGRI ECOTOURISM

*Italy*

**Website:**

https://valdibella.com/en/

**Social media link(s) or links to videos**:

Facebook

Youtube

**Leading organisation/Author:**
Cooperative Valdibella

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## 01.

### Description of Green Practices.

Valdibella is an agricultural cooperative of organic farmers based in Camporeale, in rural Sicily. Their motto is "to cultivate the land and human relationships in respect of natural and social balances". This cooperative which was founded in 1998 can be considered as a pioneer of the green economy in the agrifood sector in Sicily. The common and cooperative agricultural project of Valdibella enables the production of wine, wheat, pasta, almonds, oil, legumes and veggies. While veggies are sold in the region of Sicily, other products produced by the cooperative are sold across Italy and abroad. Through its activities, the cooperative seeks to put down the cultural stratifications which have, over the last centuries, dominated Sicily. As such, Valdibella restores dignity to farmers by supporting concrete actions against labour exploitation and promoting agricultural methods that are focused on biodiversity and native food crops from the Sicilian region.
Valdibella is also oriented towards agri-ecotourism. Indeed, the cooperative is pioneer in the region in offering sustainable touristic

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experiences thanks to the bed and breakfast 'La Casa delle Pigne', but also different activities such as visits to the winery and wine tasting, products tasting, picnic experiences etc. As a matter of fact, agro ecotourism represents a certain number of activities from hospitality, to direct sales, education, outdoor recreation and entertainment).
Valdibella additionally offers courses for both adults and children. For adults, courses are offered through the annual practical School of agroecology which invites specialists from across the region to deliver theoretical and practical courses on diverse thematics ranging from: apiculture, ecological management and pruning of the vines, pruning of the olive tree, pruning of the almond tree, biostimulants, phytosanitary treatment for organic culture of citrus fruits. For children, courses are offered through the Food school which is all about playful educational paths to encourage young individuals to be close to positive agricultural practices in an effort to foster positive eating habits, and later in time, critical decisions with regards food consumption. The Food school invites kids to plant vegetables, observe the work of the bees, follow the production chain of wheat, harvesting the grapes etc.
The cooperative adheres to the Addiopizzo Committee's mafia-free network which promotes a virtuous economy free of mafia.

# 02.

## Green Practice learnings

The cooperative Valdibella is a significant good practice of the rural green economy. Indeed, through its holistic approach to agriculture that aims at cultivating lands and human relationships in respect with natural and social balances, the cooperative epitomises the future of resilient agri-food systems that prioritise natural and human resources over sole profit.
Beyond agricultural production, Valdibella is a relevant rural green economy example thanks to its offer of sustainable tourism experience in a region of Italy that is facing challenges due to mass tourism. Agri-ecotourism is a kind of tourism where ecotourism and agrotourism intersect, creating positive effects on the socio-cultural, economic and natural environment. It is a socially responsible and ecofriendly type of tourism that involves tourists participating in sustainable farming and learning about local food products. In the green economy approach, attention is drawn to the positive effects created by agri-ecotourism in terms of economic welfare, quality of life and environmental protection. Additionally, agri-ecotourism is a relevant way to teach people to be more responsible with regards to their habits of consumption. Agri-ecotourism thus embodies a service that can foster change in mindset and be transformative for our society.
Eventually, the transfer of theoretical and practical knowledge for adults and and children respectively enabled by the School of agroecology and the Food school is a key component to the diffusion of sustainable agricultural practices and to fostering critical consumption (i.e., one's ability during the acquisition process to consider characteristics of a product and process of realisation, such as environmental sustainability and respect of workers' rights).

# 03.

## Tools and approaches

Valdibella is considered a brilliant example of the green economy in the agrifood sector for the following:

- Choosing to be a cooperative: generally speaking in agriculture, the cooperative model plays a non-negligible role in the economic sustainability of a project which can enhance the environmentally friendly practices adopted at the core of the project. The cooperative model therefore embodies a powerful lever for the promotion of decent employment and preservation of the environment. In addition, the cooperative is democratically controlled and out of the stock market, meaning that any surplus that is produced is reinvested in the development of the cooperative.
- Resorting to organic farming and agroecology: organic farming as an approach to food production that seeks to create economically and environmentally sustainable food products through the use of local and renewable resources and while minimising the use of external inputs, is de facto part of the green economy. Nevertheless, beyond organic farming, Valdibella adopts an agroecological approach to its way of doing organic farming. As defined by the Food and Agriculture Organization (FAO) .

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- Agroecology is a holistic and integrated approach that simultaneously puts into practice ecological and social concepts and principles to the design and management of sustainable agriculture and food systems. The holistic and integrated approach is not only expressed through the optimisation of interactions between plants, animals, humans and the environment but also through tackling the need for food systems that are socially equitable and enable people to choose what they eat as well as how and where it is produced.
- Proposing agro-ecotourism experiences: by choosing to offer agro-ecotourism experiences, Valdibella made the choice to embrace a sustainable type of tourism that contributes to the green economy. Indeed, developed in rural areas, agro-ecotourism generally benefits both farmers and local communities because it creates jobs, contributes to improving the food supply chain while strengthening traditional farming practices, conserving natural habitats and increasing landscape diversity.
- Adhering to the Addiopizzo network: through its adhesion to Addiopizzo's mafia free network, Valdibella ensures to its consumers that the products they acquire or services they acquire or pay to the cooperative do not support a business that pays the pizzo ( i.e, the fee periodically collected by the Mafia from businesses).
- Offering learning opportunities: through its School of agroecology and School of Food, Valdibella contributes to (1) disseminating knowledge that is key to a sustainable future of agriculture and (2) encouraging sustainable food choices.

# 04.

## Competences and Resources needed

As an agricultural cooperative that not only sells their own products both in Italy and abroad but also offers agri-eco tourism experiences, Valdibella's team gathers people with different types of profiles.The main profile required in the cooperative is that of farmers and technicians that are specialised in agroecology. However, the cooperative also has a production manager, export manager and different sales manager in charge of developing the local and international markets for the sale of products. The sales managers are required to have good communication skills that enable them to sell the products for their sustainable feature. For the agritourism experiences offered by the cooperative, mastering foreign languages, eco-consciousness and skills and knowledge on sustainable tourism are fundamental.

# 05.

## Identified Green Economy Principles

The cooperative Valdibella meets different principles of the green economy. First of all, through the choice of being a cooperative, Valdibella has a shared decision making (one person, one vote), as well as shared benefits and costs and is absolutely away from the stock exchange, thus avoiding elite capture. In addition, the cooperative because of the pooling of resources is a model that enables the promotion of decent employment and ensures the safeguard of the rights of workers. The model of the cooperative speaks to the Justice Principle, the Good Governance and the Well-being Principle of the green economy. Valdibella by resorting to agroecology goes beyond organic farming to embrace a holistic approach of farming that combines ecological and social concepts to the design and management of sustainable agriculture and food systems.

This aspect speaks to the Planetary Principle but also the Efficiency and Sufficiency Principle of the green economy. Through the offer of agri ecotourism experiences, Valdibella provides services that respect the local natural and social ecosystem and goes against a logic of mass tourism that has a deleterious impact on the environment. Adhering to Addioizzo, although it is not directly linked to the environment, is an important element that makes the cooperative a relevant example of the green economy. Indeed, it is important from a holistic approach of the green economy that the cooperative promotes social justice by publicly announcing that they refuse Mafia's extortion racket. This element resonates to the Justice Principle of the Green economy.

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