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# Ecopreneur Competency Profile



**ECOPRENEUR**  
Driving sustainable development through  
eco-inclusive entrepreneurial education  
and game-based learning

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# I. INTRODUCTION

**E**copreneurs are entrepreneurs whose business efforts are driven by a concern for environmental sustainability in addition to profit maximization, but also by a concern for environmental sustainability. Environmental sustainability is the responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future. The aim of the ecopreneur is to set up a successful business that fulfills market needs and secures financial stability by using sustainable business practices and embedding environmental innovations.

The objective of the development of a Competency Profile of an Ecopreneur is to develop a framework identifying competencies (skills and attitudes) necessary for conducting entrepreneurial activities that counteract climate change and contribute to the implementation of the Sustainable Development Goals. The Competency profile indicates the role and key competence areas of the ecopreneur and targets young people that are on the verge of entering the workforce or starting further education, students attending the last year of qualification of VET centers and professional institutes specialized in entrepreneurship, VET non-formal learners and aspiring entrepreneurs.

The Ecopreneur Competency Profile is designed as follows: after the introduction, learning objectives and the methodology of developing the ecopreneur profile structure is defined. In the following section, the types of the ecopreneurs related to different business focuses and the recommendations for the training programs are defined. Later then on, the ecopreneur competency profile is explained by outlining sustainability priorities, sustainability competences and supporting tools to develop competences. The study ends with the conclusion and suggestions. The appendix part of the study lays out the ecopreneur profiles based on the industry focuses: eco-venturing/manufacturing, agrotourism, eco-hospitality, eco-transportation and eco-construction.

## Learning Objectives

The learning objectives of the ecopreneur competency profile are:

- To gain clear industry specific knowledge
- To develop industry focuses that integrates circular economy principles
- To develop a sustainable business idea tailored to an industry focus
- To learn different business competences
- To determine and analyze the competences for the sustainable ecopreneur
- To evaluate business strategies in response to market mechanisms in eco-sector
- To analyze and evaluate the effect of environmental issues on eco-business

## Methodology and Design

The activities to develop the profile were focused on defining and validating the competences that are necessary for sustainable ecopreneurship. The development is based on the summary results of the workshops with partners, interviews of experts and stakeholders, desk research and focus groups in 5 countries to identify the competences, and survey for the Compiling and Validating Competence Matrix results. The survey covers three parts: sustainability priorities, sustainability competences and additional tools for developing ecopreneur competences. The appendix part of this profile report combined the results of the WP.2. activities for each industry focus.



# II. INDUSTRY FOCUSES RELATED TO ECO PRENEUR SHIP

Based on preliminary and consultation, the project partners agreed on the following industry focuses related to the ecopreneur profile:

**Eco-construction**

**Eco-venturing/  
manufacturing**

**Eco-transportation**

**Agrotourism**

**Eco-hospitality**



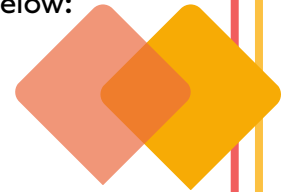


# III. ECOPRENEUR COMPETENCY PROFILE

## 1. Recommended Upskilling Training Program Topics / Titles

Recommended upskilling Training Program Topics /Titles for each ecopreneur i industry focus were defined during the Desk Research and Focus Group study and are included below:

### Eco-construction



Eco-construction refers to the application of environmental principles to the construction practices and techniques in order to minimise the environmental impact of buildings. Recommended upskilling Training Program Topics / Titles for eco-construction can be summarized as below:

#### **Green Building Practices**

Green building practices are a set of strategies that focus on creating structures that are environmentally responsible and resource-efficient throughout a building's life cycle. This includes everything from using recycled materials during construction to conserving water and energy while the building is in use.

Some examples of Green Building Practices include: using energy-efficient appliances and lighting, low-flow toilets and faucets and harvesting rainwater for irrigation, and using recycled materials like concrete, steel, and reclaimed wood.

#### **Resource Efficiency**

Resource efficiency in buildings refers to using less materials throughout a building's lifecycle and focuses on minimizing the environmental impact by using the least possible materials, minimizing construction waste, and recycling materials whenever possible.

Some examples of Resource Efficiency include: using locally sourced materials in order to reduce the transportation distances for building materials, planting drought-resistant plants and using efficient irrigation systems in order to minimise the water consumption for landscaping, and carefully taking apart a building at the end of its life in a way that salvaging and reusing a significant portion of the materials is allowed.

#### **Low-Impact Construction Techniques**

Low-impact construction techniques minimize environmental impact during building. This means using recycled or local materials, employing energy-efficient methods, and preserving natural features on the construction site with the goal of building structures with a lighter environmental footprint on the land.

Some examples of Low-impact Construction Techniques involve: Minimizing excavation or disruptions to the natural landscape as much as possible (often achieved by building on stilts), and installing greywater systems to reuse water for irrigation or non-potable purposes.

#### **Environmental Certification and Standards**

They provide a legislative framework for designing and building structures with the least possible environmental impact. These frameworks assess factors like energy efficiency, water use, and material selection. Achieving certification demonstrates a building's commitment to sustainability and can offer benefits like tax deductions or increased occupancy rates.

An example of Environmental Certifications and Standards for construction includes: the Certification ISO 21930:2007 "Sustainability in buildings - Procedures for life cycle assessment" that sets out the principles and requirements for creating Environmental Product Declarations specifically for building products.





## Eco-Venturing/Manufacturing

**Eco-venturing/manufacturing** refers to the application of environmental principles to develop sustainable business practices, and sustainable production. Recommended upskilling Training Program Topics /Titles for eco-venturing/manufacturing can be summarized as below:

### Circular Economy Initiatives

Circular Economy (CE) has been proposed as a concept to help address sustainability issues, particularly focusing on economic and environmental issues. CE is based on 'closing loops' from the 3Rs (Reduce, Reuse and Recycle) to the 9Rs (refuse, rethink, reduce, reuse, repair, refurbish, remanufacture, repurpose, recycle, recover). Some examples of Circular Economy include recycling plastic to manufacture sports jackets, recycling drink cans and bottles (made of plastic, aluminum, and glass), and reusing platinum from catalytic converters.

### Impact Investment and Funding

Impact investment and funding refers to investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return. It includes topics such as blended finance (i.e. using public or philanthropic funds to attract private investment), green bonds (i.e. fixed-income securities that raise capital for projects with environmental benefits), and social impact bonds (i.e. pay-for-success contracts where private investors provide upfront funding for social programmes and the government repays the investors if the programmes succeed).

### Assessing Environmental Impact

Environmental Impact Assessment (EIA) is a process of evaluating the likely environmental impacts of a proposed project or development. The issues that are covered in EIA include: pollution and emissions (e.g. emissions into the air, soil, and waterways, and evaluations of noise, vibration, and light and heat emissions); natural resource utilisation; and hazardous substances.

### Green Production Processes

Green production processes, also known as green manufacturing or sustainable manufacturing, focus on producing goods in a way that minimizes environmental impacts while maximizing resource efficiency. These processes involve using eco-friendly practices and technologies to reduce energy use, waste, and emissions, ultimately decreasing the ecological footprint of manufacturing operations.

### Sustainable Materials Sourcing:

Green production processes, also known as green manufacturing or sustainable manufacturing, focus on producing goods in a way that minimizes environmental impacts while maximizing resource efficiency. These processes involve using eco-friendly practices and technologies to reduce energy use, waste, and emissions, ultimately decreasing the ecological footprint of manufacturing operations.

### Clean Technologies and Practices

Clean technologies and practices refer to a wide range of processes, products, and services that aim to reduce negative environmental impacts. These include: renewable energy; energy efficiency; sustainable materials; green chemistry; environmental finance; and corporate sustainability. Green Production Processes

### Certifications and Standards for Environmental Management /Green business (ISO 14000, 14020)

Environmental Management Systems (EMS) are frameworks designed to help organizations monitor, control, and continuously improvement of their environmental performance. These standards are based on continuous improvement.



## **Eco-Transportation**

**Eco-transportation** refers to the application of environmental principles to the logistic sector and supply chain practices in order to achieve sustainability. Recommended upskilling Training Program Topics /Titles for eco-transportation can be summarized as below:

### **Smart Mobility Solutions and Circular Economy Initiatives**

Smart mobility solutions involve integrating technology to improve transportation efficiency and reduce environmental impact. These include electric vehicles, ride-sharing platforms, and smart traffic management systems that optimize routes to reduce congestion and emissions. Circular economy initiatives in transportation focus on creating closed-loop systems to reduce waste and promote recycling. Examples include repurposing materials from end-of-life vehicles and using recycled components in manufacturing new transportation solutions.

### **Green Logistics and Supply Chain Management**

Green logistics and supply chain management aim to reduce the carbon footprint of transportation and distribution networks. Initiatives include optimizing delivery routes, using energy-efficient vehicles, and implementing sustainable packaging solutions to minimize waste and emissions.

### **Zero-Emission Vehicles and Vehicle Efficiency Technologies**

Zero-emission vehicles (ZEVs) are designed to eliminate tailpipe emissions, significantly reducing the environmental impact of transportation. Examples include electric cars, hydrogen fuel cell vehicles, and plug-in hybrids, which contribute to cleaner air and reduced greenhouse gas emissions. Vehicle efficiency technologies focus on improving fuel efficiency and reducing emissions in transportation. Examples include hybrid and electric drivetrains, lightweight materials, and advanced aerodynamics that enhance vehicle performance while minimizing environmental impact.

### **Networking in Eco-Transportation**

Connecting with government agencies and public transportation authorities can provide insights into grants and funding opportunities for eco-transport solutions. Collaborating with established businesses in the transportation sector and joining eco-transport organizations can enhance networking, access to educational resources, and policymaker engagement.

### **Tips and Advice for Eco-Transportation Ecopreneurs**

Ecopreneurs should familiarize themselves with eco-friendly manufacturing practices, including waste reduction, energy conservation, and using recycled materials. Conducting market research to identify niche opportunities and developing a robust communication strategy can enhance market presence and consumer awareness.

### **Impact Investment and Funding**

Impact investment and funding in eco-transportation involve attracting financial support for sustainable transportation projects. Options include green loans, impact investment funds, and government grants that support the development and implementation of eco-friendly transportation solutions.

### **Assessing Environmental Impact**

Assessing the environmental impact of transportation projects involves evaluating emissions, resource utilization, and potential pollution. This assessment helps in designing strategies to mitigate negative effects and enhance the sustainability of transportation systems.

### **Sustainable Materials Sourcing**

Sustainable materials sourcing in transportation involves using eco-friendly and socially responsible materials. This includes sourcing lightweight, recyclable, and renewable materials to minimize environmental impact and support sustainable manufacturing practices.

### **Clean Technologies and Practices**

Clean technologies and practices in transportation encompass renewable energy, energy efficiency, and green chemistry. Implementing these technologies helps reduce the ecological footprint of transportation operations and promotes sustainable development.

### **Certifications and Standards for Environmental Management**

Certifications such as ISO 14001 and EMAS help organizations in the transportation sector monitor and improve their environmental performance. These standards ensure compliance with environmental regulations and demonstrate commitment to sustainability.





## Agrotourism

**Agrotourism**, also known as agricultural tourism, signifies a type of tourism where the tourist gets to experience agricultural life, farming practices and various activities related to agriculture. Sustainable agritourism entails the application of green practices and techniques to the agricultural production side of this type of business.

### **Organic Farming Practices and Techniques**

Organic farming practices are agricultural methods that prioritize sustainability, environmental health, the use of natural resources and other natural and ecologically friendly practices and techniques.

Examples: pest and disease management, soil health, ecosystem health and animal welfare.

### **Agro-ecological Design**

Agro-ecological design indicates a sustainable approach to farming and land management that integrates ecological principles into agricultural systems to promote biodiversity and conserving natural resources. Thus, agro-ecological design creates farming systems which that work with the environment.

Examples: crop diversity, water conservation, climate change and pest management.



### **Water Conservation and Management**

Water conservation and management are management processes and policies designed to efficiently use of water resources while minimizing waste by considering water scarcity. Water conservation and management also help to improve crop yields, and reduce negative environmental externalities.

Examples: rainwater management, water storage systems, soil and water conservation techniques.

### **Culinary and Food Safety**

Culinary and food safety indicates the practices, policies and techniques that ensure food is prepared, cooked, stored and served in a way that prevents endangering the health of consumers.

Examples: food safety, culinary practices, and food safety standards. Tips and Advice for Eco-Transportation Ecopreneurs.



## Eco-Hospitality

**Eco-hospitality** refers to the application of environmental principles to the hospitality sector which minimize negative environmental externalities by considering sustainability. Recommended upskilling Training Program Topics / Titles for eco-hospitality can be summarized as below:

### Green Building and Design

Green building in eco-hospitality refers to the design, construction, and operation of hotels and resorts in a sustainable, environmentally friendly manner. This involves using energy-efficient systems, renewable energy sources, and sustainable materials to minimize environmental impact.

Water conservation, waste reduction, and indoor environmental quality are prioritised to enhance guest well-being. The approach also includes integrating natural landscapes and promoting biodiversity. Green building in eco-hospitality aims to create a harmonious balance between luxury, sustainability, and environmental stewardship.

Examples: hotels use recycled and locally sourced materials to reduce environmental impact); hotels/restaurants buildings are designed to maximize natural sunlight and minimize heating and cooling needs; hotels/restaurants utilize advanced insulation materials to enhance energy efficiency and reduce heat loss

### Waste Management and Recycling

Waste management and recycling in eco-hospitality encompass strategic processes to systematically reduce, segregate, and dispose of waste, aiming to minimize environmental impacts. These practices include comprehensive

recycling programs for materials such as paper, glass, plastic, and metal, and the implementation of composting systems to handle organic and food waste efficiently. By eliminating single-use plastics and introducing waste reduction initiatives, hotels and resorts strive to promote sustainability and resource conservation. Sustainable purchasing, employee training programs, regular waste generation tracking and community donation actions further enhance these efforts. Overall, the objective is to create a sustainable closed-loop system that emphasizes environmental stewardship.

Examples: Tourism providers provide separate bins for paper, glass, plastic, and metal to facilitate recycling; restaurants compost food scraps and organic waste to produce soil for gardens and landscaping; hospitality establishments replace single-use plastic items with reusable or

biodegradable alternatives; hotels use bulk dispensers for toiletries to reduce packaging waste; Resorts provide reusable containers for takeout and room service to decrease disposable waste; Implementing digital check-in and check-out processes minimizes paper usage; Guests receive clear instructions on how to recycle properly in their rooms; hotels offer e-waste

recycling programs for old electronics and batteries.

### Resource Conservation

Resource conservation in eco-hospitality involves the strategic management and efficient use of natural resources to minimize environmental impact and enhance sustainability. This includes implementing energy-saving technologies, water conservation measures, and sustainable sourcing practices to reduce consumption and waste. Hotels, restaurants and resorts adopt green building standards and eco-friendly operational practices to preserve and to maximise the utilisation of the resources.



**Eco-Hospitality**

Resource conservation efforts also focus on educating staff and guests on sustainable behaviours and practices.

The main goal is to achieve long-term environmental stewardship while maintaining high standards of service.

Examples: Hospitality providers: use LED lighting and smart controls, install high-efficiency heating, ventilation, and air conditioning systems to reduce energy consumption; use low-flow showerheads, faucets, and toilets to minimize water usage; integrate solar panels or geothermal systems to generate sustainable energy; collect and reuse rainwater for irrigation; prioritize purchasing locally produced and eco-friendly products to reduce their environmental footprint.

**Guest education and engagement**

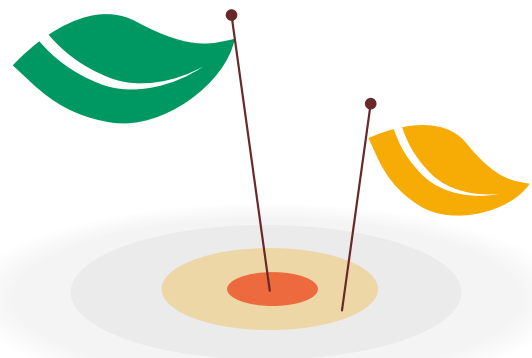
Guest education and engagement in eco-hospitality entail systematically informing and involving guests in the sustainable practices and environmental initiatives of the hospitality provider. This process includes disseminating information about the hospitality provider's green practices, offering choices that support eco-friendly behaviors, and actively involving guests in sustainability programs. Educational and engagement methods include workshops, informative campaigns, and experiential learning opportunities that highlight the significance of environmental stewardship. The objective is to cultivate a deeper understanding and commitment among guests toward sustainable practices, thereby extending the impact of eco-hospitality beyond the duration of their stay. Ultimately, this approach aims to foster a culture of environmental responsibility and awareness among tourists.

Examples: Hospitality providers run awareness campaigns via various channels with newsletters, brochures, signs, videos, and social media content to inform guests about their own sustainability policies, initiatives, and achievements; Restaurants offer farm-to-table dining options, featuring locally sourced and organic ingredients, along with information on the benefits of sustainable agriculture and food practices; Guests earn rewards for participating in environmentally friendly actions, such as reusing towels or opting for digital receipts.

**Community integration and support**

Community integration and support in eco-hospitality involve actively engaging with and contributing to the local community to foster socio-economic development and environmental sustainability. This encompasses forming partnerships with local businesses, sourcing products and services locally, and creating employment opportunities for community members. Eco-hospitality initiatives often include supporting local conservation efforts, cultural heritage preservation, and educational programs. By integrating community needs and values into their operations, eco-hospitality providers aim to enhance the well-being of the local population while promoting sustainable tourism practices. The ultimate goal is to create a strong relationship between the hospitality industry and the community, ensuring long-term mutual benefits.

Examples: Hotels/restaurants purchase food, beverages, and products from local farmers and artisans to support the local economy); employment opportunities (hospitality providers prioritize hiring local residents, providing job training and career development programs); community partnerships (hotels/restaurants collaborate with local organizations on conservation projects, cultural events, and social initiatives); cultural preservation (hotels incorporate local art, traditions, and cultural practices into their guest experiences to promote cultural heritage); educational outreach (hospitality providers sponsor or participate in local educational programs about sustainability and environmental stewardship).



## 2. Competencies for the Ecopreneur

Entrepreneurial competency means having sufficient skills, knowledge, and personal traits to succeed in business. In this section, the competencies related to ecopreneurship are examined keeping the sustainability priorities in mind.

### 2.1. Competency in Job Description

The level of sustainability competence for each ecopreneur profile may vary (see.2.3. Sustainability competence). So, it is crucial to develop the necessary competences for ecopreneur, and the competency and the competency in job description as can be seen in the table below.

Table.1. Competency in Job Description

Competency	Competency in job description
Creativity	Creative thinking
Working in a team	Teamwork/collaboration, communication, deliberation and negotiation skills, and empathy.
Ability to reason critical thinking	Reasoning, ability to challenge norms, practices, and opinions
Motivation/self-development	Motivation for professional development and gaining new knowledge, self-motivation, energetic mindset
Pedagogical skills	Educational competencies
Gaining new knowledge	Ability to learn
Possessing an eye for detail	Attention to detail
Work capacity under pressure	Stress resistance
Risk taking	Risk management
Willingness to be open to continuous improvement	Self-development
Synthesis and analysis, analytical mindset	Analytical thinking
Effective problem solving	Problem solving
Communication skills	Communication (written/verbal), using appropriate information and communication technologies
Systems thinking	Analysis of complex systems, understanding, empirical verification, and articulation of a system's key components, structure, and dynamics, including feedback, inertia, stocks and flows, and cascading effects
Interdisciplinary work	Appreciation, evaluation, contextualisation, and use of knowledge and methods of different disciplines and contexts
Anticipatory thinking	Envisioning, analysis, and evaluation of possible future scenario, including scenarios with multi-generational timescales, and dealing with risks and changes
Justice, responsibility, and ethics	Application of concepts of ethics, justice, social and ecological integrity, and equity, including responsibility for one's actions in the professional milieu
Justice, responsibility, and ethics	Application of concepts of ethics, justice, social and ecological integrity, and equity, including responsibility for one's actions in the professional sphere
Strategic action	Planning and executing projects, organisation, leading, and controlling processes, projects, interventions, and transitions, as well as motivating others
Tolerance for ambiguity and uncertainty	Coping with conflicts, competing goals and interests, contradictions, and setbacks

## 2.2. Sustainability Priorities

Competence Matrix examines the sustainability priorities: economic issues, environmental issues, social issues, term-based issues (short-term, mid-term and long-term) based on the four levels: low-priority, moderate priority, and high priority, and not a priority. The results show that short-term issues and mid-term issues have relatively moderate priority while the below mentioned issues have relatively higher priority as can be seen in the Figure.1.:

**Economic issues, Environmental issues, Social issues and Long-term issues.**

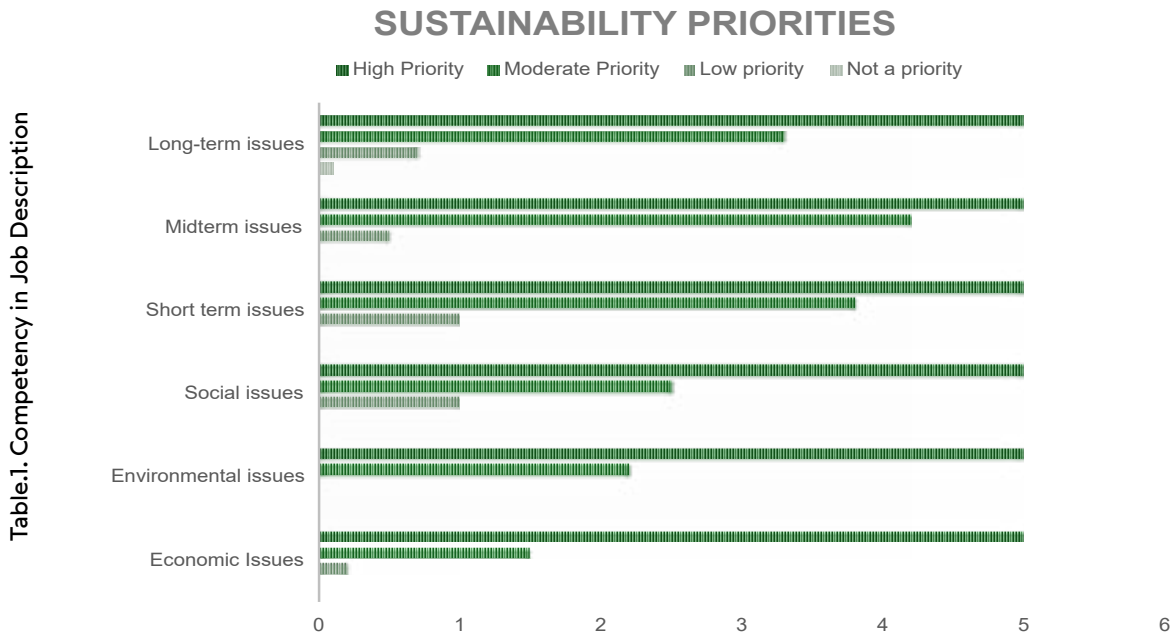


Table.1. Competency in Job Description

## 2.3. Sustainability Competence

Competence Matrix also evaluates the sustainability competencies based on different levels: not necessary, optional, somehow necessary, very necessary, essential. The results indicate that only the risk-taking competence may not be necessary while almost all the indicated competencies are essential or very necessary for the ecopreneur profile. In more detailed, survey results show that the below mentioned competencies have a relatively higher amount of responses that indicate them as “essential”:

- Creativity,
- Work in a team,
- Ability to reason, critical thinking,
- Working under pressure,
- Willingness to be open to continuous improvement,
- Effective problem solving,
- Communication skills with different kinds of clients/partners,
- Systems thinking
- Strategic action
- Tolerance for ambiguity and uncertainty.

On the other hand, the results also indicate that the below mentioned competencies have a relatively higher number of responses that define them as “very necessary”:

- Motivation for professional development and gaining new knowledge, self-motivation, energetic,
- Gaining new knowledge,
- Possessing an eye for detail,
- Risk taking,
- Synthesis and analysis, analytical mindset,
- Interdisciplinary work,
- Anticipatory thinking,
- Justice, responsibility, and ethics.

Additionally, the results of the Competency Profile of Ecopreneur Survey (see.A.2.3.) mainly indicate the importance of the characteristics of each county, adapting/following new technologies, developing strategies to promote eco-friendly applications/trainings/networks in all fields of business.





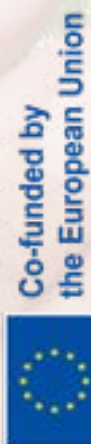
## 2.4. Support Tools to Develop Ecopreneur Competences

There are many support tools to develop ecopreneur competences. The detailed suggestions to the potential Ecopreneur about Networking according to the specific profile are available in a Survey Report. However, these support tools can be summarized as below:

- Financial support and guidance,
- Eco-friendly policies/products,
- Lifelong Learning, and training,
- Role models, and good practice examples,
- Networking,
- Experience,
- Collaboration,
- Management (resource, time and priorities),
- Social understanding.

## IV. CONCLUSION & SUGGESTIONS

**As a result**, although environmental issues are determined to be relatively the highest priority, it can be said that other sustainability issues (economic, social, short term, medium term and long term) have almost the same level of priority, i.e. medium and high priority. On the other hand, the results of the competence matrix show that among the given competences, working in a team and effective problem solving are relatively more important than other competences. In addition, professional development, training, risk taking, being detailed oriented, analytical and foresighted thinking, synthesis, justice, responsibility and ethics are also required. Finally, financial support and guidance, environmentally friendly policies/products, lifelong learning and education, role models and good practice examples, networking, experience, cooperation, management (management of resources, time and priorities) and social skills are the supporting tools that can be used to develop **Ecopreneur competences**.



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