



Virtual Marketplace

Deliverable 4.2



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1. B4C Virtual Marketplace

1.1. Introduction

The B4C Virtual Marketplace is one of the central components of the B4C Support Hub. While the Learning Suite focuses on learning materials, training modules and competence-oriented facilitation, the Virtual Marketplace connects these learning outcomes with practical project development, networking and implementation opportunities.

The original idea of the Virtual Marketplace was to create a digital space where student projects, educational approaches and local sustainability ideas could become visible to businesses, communities, public actors and private stakeholders interested in supporting innovative environmental solutions.

During the implementation of B4C, this idea was translated into a practical online platform concept with four main elements:

1. biochar applications and project examples;
2. funding opportunities and project support;
3. the B4C network and stakeholder map.
4. a virtual Exhibition of Biochar Products

In addition, the Virtual Marketplace is connected to the B4C Learning Suite. This link is important because several KA1 course descriptions were developed from the B4C pilots and are listed through the learning and support environment. The Marketplace therefore does not stand alone. It connects project examples, actors, funding information and training opportunities into one wider support structure.

Together, these elements form a marketplace for ideas, contacts, learning offers and cooperation opportunities. The Virtual Marketplace is therefore not only a presentation space, but a connection point between education, biochar expertise, local communities, businesses, municipalities and sustainability initiatives.

1.2. Purpose of the Virtual Marketplace

The purpose of the Virtual Marketplace is to make biochar and Circular Carbon Economy projects visible, accessible and transferable.

It supports users in discovering practical examples, identifying possible application fields, connecting with relevant stakeholders and developing new project ideas. In this way, the Marketplace helps bridge the gap between learning and implementation.

The Virtual Marketplace contributes to the B4C approach by:

- presenting practical biochar and Circular Carbon Economy examples;
- documenting pilot outcomes and project ideas developed by the partners;
- supporting the transfer of educational activities into real local or regional applications;
- connecting educational experts with biochar experts and sector-specific stakeholders;



- creating opportunities for cooperation between VET providers, businesses, municipalities and community initiatives;
- signposting possible funding opportunities and project development pathways;
- linking users to KA1 training offers derived from B4C pilot experiences.

The Marketplace therefore supports a core idea of B4C: learning about biochar should not remain theoretical, but should lead to practical exploration, project development, cooperation and further training.

2. Element 1 – B4C Application Tool and Project Collection

The first element of the Virtual Marketplace is the collection of practical biochar applications and project examples.

These examples are integrated into the B4C Application Tool and project collection. The tool combines existing biochar application examples with project results developed during the B4C piloting phase. It therefore functions as a growing collection of biochar and Circular Carbon Economy concepts, pilot outcomes, learning projects and practical use cases.

The project collection includes examples from different fields covered by the B4C partnership, such as:

- land use and soil;
- infrastructure and construction;
- water and environment;
- climate and energy;
- B4C pilot projects;
- other emerging application fields.

The B4C Application Tool helps users explore how biochar can be applied in different contexts. It also shows how learning activities can lead to practical project ideas, prototypes or local implementation concepts.

This is important because many users first encounter biochar as an abstract sustainability topic. The application examples make the topic more tangible by showing where biochar can be used, what problem it addresses and which actors may be involved.

The project collection includes and can further include examples such as:

- biochar in urban gardening and soil improvement;
- biochar in agriculture and nutrient management;
- biochar in slurry and manure systems;
- biochar-based construction materials;
- low-tech pyrolysis from garden waste;
- regional carbon management and biomass utilisation;
- climate farming and adapted technologies;
- water retention, filtration and environmental applications.

In this way, the tool transforms pilot results into reusable examples for future learners, trainers, municipalities, businesses and local initiatives. It also supports the wider transfer of B4C by helping users move from “What is biochar?” to “Where could this be applied in my own context?”

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Biochar Applications and Projects

The Biochar Applications Tool helps you explore how biochar can be used in different sectors and what benefits it may create. The gallery brings together practical examples from B4C, CASCADE and the THREE C network, including applications in agriculture, construction, horticulture, water management, waste treatment and regional Circular Carbon Economy projects.

A central part of the tool is the collection of **B4C project examples** that emerged through the piloting activities of the project. These examples show how biochar and Circular Carbon Economy concepts were translated into practical learning projects, local applications, prototypes, training activities and awareness formats. They demonstrate how learners, trainers, professionals and project partners explored biochar in real educational and professional contexts.

You can browse the examples by sector or open individual applications to learn how biochar is used, what role it plays in the specific context and which additional co-benefits may arise. Some examples also include a simple calculator that allows you to explore an indicative scenario, such as the estimated amount of biochar needed, possible costs and potential CO₂ savings.

The tool is designed as an entry point for learning, inspiration and project development. It does not replace detailed technical planning, but it can help you understand the potential of biochar applications, discover B4C pilot results and identify ideas that could be adapted to your own region, organisation or learning project.

Biochar Applications Tool: Exploring Benefits and Practical Uses

Filterable by sector

ALL

LAND USE AND SOIL

INFRASTRUCTURE AND CONSTRUCTION

WATER AND ENVIRONMENT

CLIMATE AND ENERGY

B4C PROJECTS

OTHER

B4C Application Tool and Project Collection

Filterable by sector

ALL
LAND USE AND SOIL
INFRASTRUCTURE AND CONSTRUCTION
WATER AND ENVIRONMENT
CLIMATE AND ENERGY
B4C PROJECTS

OTHER

Agricultural Soils

Composting & Manure Treatment

Verge & Green Area Maintenance

Parks & Sports Fields

Urban Planting Rain Gardens

Asphalt

Concrete

Plaster & Renders

Surface Water Filtration

Odour Control

CO2 Compensation Projects

Heat Projects

Tree & Shrub Planting

Biochar in Construction

Biochar Urban Garden Boost

From Garden Waste to Biochar

From CCE to Sustainable Construction

Local CCE Development Project

Biochar in Slurry

Climate Farming

Biochar in Agriculture & CCE

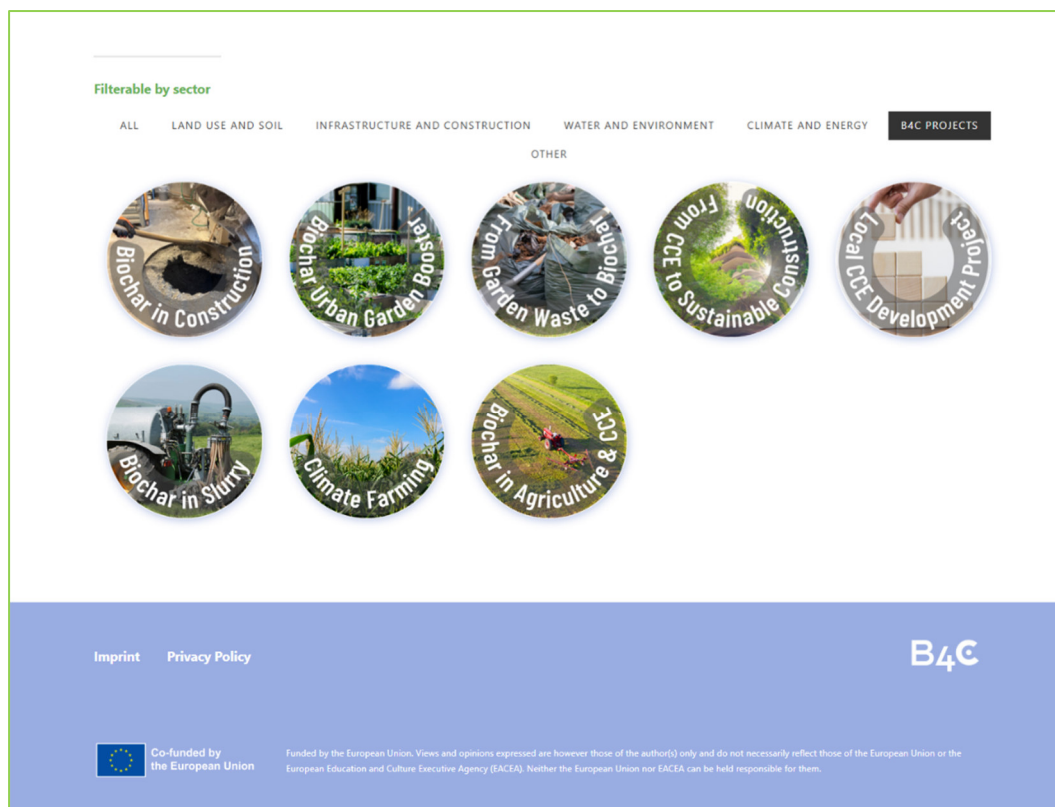
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B4C

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B4C Application Tool and Project Collection: Gallery



B4C Application Tool and Project Collection: B4C Projects

3. Element 2 – Funding Your Project

The second element of the Virtual Marketplace is the area on funding opportunities and project support.

The original project idea foresaw a support mechanism that could help local projects, student initiatives and educational approaches find financial or practical support. During the implementation of B4C, this idea was developed into a more realistic and useful support function: the Marketplace can provide orientation on how small-scale biochar and Circular Carbon Economy projects may be planned, described and connected to suitable funding or cooperation opportunities.

This element should not be understood as a guaranteed funding instrument. Its main value is to help users prepare better project ideas and understand what is usually needed to move from an initial idea to a fundable or supportable project concept.

The funding and support area can help users by providing:

- orientation on possible funding routes;
- guidance on how to describe a biochar project idea;
- templates for project descriptions;
- links to relevant learning and planning resources;
- information on criteria that funders or partners may consider;
- references to B4C methods, tools and competence-oriented planning;
- inspiration from previous pilot projects and application examples.

Possible project ideas may come from schools, vocational education, adult education, community gardens, local sustainability initiatives, municipalities, professional development contexts or informal learning environments.

Projects that are aligned with open learning, sustainable development and community-oriented innovation can use the B4C resources to structure their ideas. Relevant criteria for project development may include:

- originality of the idea;
- sustainability relevance;
- feasibility;
- clarity of target group and stakeholder involvement;
- practical implementation potential;
- connection to biochar or Circular Carbon Economy;
- use of B4C learning resources, templates or tools;
- potential for competence development and reflection.

This funding element supports the transition from learning to action. It encourages users of the platform to develop their own local biochar projects and to connect learning outcomes with possible implementation pathways.

BIOCHAR FOR COMPETENCE DEVELOPMENT FOR THE CIRCULAR CARBON ECONOMY



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Funding Your Project

The funding mechanism to support a biochar learning project

As part of the project, a support mechanism has been set up with the reveal association to enable small local projects to plan and implement their biochar learning projects.

The following background and steps should be considered:

Basic Principle

- The reveal association was already founded in 1980, however adapted its statutes in 2017 to become the European Network to promote informal Learning and Development projects.
- Following its motto is "because learning happens everywhere!" reveal supports initiatives which create non-formalised learning to create personal, professional and community development, following humanistic values and a holistic learning approach.
- Since 2021 the reveal association has been supporting local projects and initiatives which follow an open learning approach with a focus on the development of a culture of sustainable development, according to the SDGs.
- If your projects are in line with these values please approach us with innovative and sustainable ideas for open learning and development projects and quantify your demand of funding. The support may range from 200 to 5.000€ and will be calculated on a co-funding basis of 75-90%.
- Our board members will decide on basis of available resources and on originality and professional quality of the application.





How to apply?

The basic prerequisites for funding are:

- the application of the B4C methodology in project design with the aim of developing concrete prototypes
- describing the projects using a provided template so that competence-oriented planning and validation are possible
- the use of the exhibition tools and templates.

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B4C Funding concept

4. Element 3 – Networking Map

The third element of the Virtual Marketplace is the B4C network and stakeholder map.

Each partner collected possible contacts from the fields of education, biochar, sustainability and regional development. These contacts include businesses, educational institutions, technical experts, researchers, municipalities, local initiatives and sector-specific organisations.

The networking map is intended to make relevant actors visible and easier to find. It helps users identify who could support, advise, cooperate or participate in a biochar or Circular Carbon Economy project.

The contacts are clustered across different fields, including:

- agriculture;
- construction;
- horticulture;
- water and wastewater;
- research and development;
- VET institutions;
- forestry;
- waste management;
- municipal and regional development;
- nature conservation;
- renewable energy;
- social economy;
- other relevant biochar and sustainability fields.

The map therefore works as a networking point for educational experts, biochar experts and potential project partners. It supports the development of cooperation opportunities, project ideas and application pathways.

This is especially relevant for B4C because biochar projects usually require cooperation between different actors. A local project may need biomass suppliers, technical experts, trainers, municipalities, businesses, learners and community stakeholders. The networking map helps make these possible connections more visible.

The B4C network also supports the sustainability of the project results. It creates a basis for future cooperation beyond the project lifetime and helps keep the Support Hub connected to real actors, not only to static online materials.

BIOCHAR FOR COMPETENCE DEVELOPMENT FOR THE CIRCULAR CARBON ECONOMY

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B4C NETWORK

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39 locations found

Adriaan Hellemans

Organisation: Gemeente Apeldoorn

Show on map

View details

Bernhardt Schäfer

Organisation: blinc eG

Show on map

View details

Boaz de Jong

View details

Alan Downey

Organisation: Reviens Engineering Ltd., Carbon Nua

Show on map

View details

Bernhardt Schirutschke

Organisation: Ökologisch Mähen

Show on map

View details

Camille Hermans

View details

Alex Wilcox Brooke

Organisation: SWEA (Severn Wye Energy Agency)

Show on map

View details

Bernie ter Steege

Organisation: Gemeente Apeldoorn

Show on map

View details

Colin Keyse

View details

B4C: Networking Map

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5. Element 4 – The Virtual Product Exhibition

The virtual Biochar Product Exhibition has been included to inspire both educational institutions, trainers and learners, as well as practical and professional stakeholders working in the CCE to develop their own new products and services.



B4C: Start Page of the Virtual Product Exhibition

6. Link to the Learning Suite and KA1 Course Offers

A further added value of the Virtual Marketplace is its connection to the B4C Learning Suite.

The Learning Suite provides the learning and methodological foundation of the Support Hub. The Virtual Marketplace complements this by showing how learning can lead to concrete projects, cooperation and further training opportunities. This link is especially important for the KA1 course offers that were developed from the B4C pilots.

The KA1 course descriptions translate B4C pilot experiences into reusable European mobility formats. They can be used by teachers, trainers, VET organisations, adult education providers and professional stakeholders who want to participate in structured short-term training on biochar and Circular Carbon Economy topics.

The KA1 offers developed from the B4C context include:

- **Building with Carbon-Storing Materials: Biochar in Sustainable Construction**
A course based on the IFSB pilot, introducing biochar as an innovative material for sustainable construction and practical testing of biochar-based concrete.
- **Biochar Urban Garden Booster: Climate-Smart Gardening and Soil Learning**
A course based on the FUU pilot, connecting biochar, soil improvement, water retention and urban gardening through hands-on micro-experiments.
- **From Garden Waste to Biochar: A Low-Tech Pyrolysis Approach**
A course based on the blinc local development pilot, showing how garden waste and woody biomass can be transformed into biochar through low-tech pyrolysis.
- **From Circular Carbon Economy to Sustainable Construction**
A course based on the blinc sustainable construction pilot, focusing on biochar-clay materials, natural construction materials and carbon-storing building approaches.
- **Climate Farming Project**
A course based on the blinc climate farming pilot, exploring farm-level biochar applications, biomass assessment, adapted technologies and carbon management.
- **Biochar in Slurry: Nutrient Management and Manure Systems**
A course based on the DEULA pilot, addressing nutrient management, manure systems, slurry experimentation and agricultural sustainability.
- **Biochar in Agriculture and Circular Carbon Economy**
A course based on the DEULA agricultural learning pathway, introducing learners to biochar, biomass resources, carbon cycles and sustainable farming systems.
- **Design Thinking Workshop – Teaching Biochar in Agriculture**
A teacher-training course based on the DEULA Design Thinking pilot, supporting educators in designing learner-centred activities on biochar and climate-friendly agriculture.

These KA1 offers strengthen the Virtual Marketplace because they create a direct training pathway from project examples to future mobility, professional development and transnational cooperation. Users who discover a biochar application or project idea through the Marketplace can be guided towards relevant learning opportunities in the Learning Suite.

The link between the Virtual Marketplace and the Learning Suite therefore creates a useful circular structure:

1. users explore biochar applications and project examples;
2. users identify relevant actors and cooperation opportunities;
3. users access funding and project development guidance;
4. users find KA1 courses and learning materials to deepen their competence;
5. users develop or adapt their own local project ideas.

This connection makes the Support Hub more coherent. It prevents the different elements from becoming isolated and supports the long-term use of B4C results in education, mobility, project development and regional implementation.

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B4C Courses and Learning Opportunities

The B4C courses introduce biochar and the Circular Carbon Economy as practical learning fields for vocational education, adult education, professional training and local sustainability projects. They show how climate action, green skills and innovation can be connected with real applications in agriculture, horticulture, construction, urban gardening and regional development.

Each course was developed from the B4C piloting activities and is based on hands-on learning, competence-oriented education and practical project development. The courses are designed to help learners, trainers and professionals move from understanding biochar towards applying it in their own context.

Through the course gallery below, you can explore different learning opportunities, including:

- biochar in agriculture and nutrient management;
- biochar in urban gardening and soil improvement;
- low-tech biochar production from garden waste;
- carbon-storing materials for sustainable construction;
- climate farming and regional carbon management;
- Design Thinking approaches for teaching biochar;
- Circular Carbon Economy applications in professional and community settings.

The courses can be used for Erasmus+ KA1 mobility, continuing professional development, vocational training, adult education or local sustainability workshops. They are suitable for educators, trainers, learners, professionals, municipalities, NGOs and community initiatives interested in practical climate action and circular carbon solutions.

Select a course from the gallery to learn more about its topics, target groups, learning outcomes, methodology and European dimension.

Carbon-Storing Materials

Nutrient Management

Urban Garden

CCT to Sustainable Construction

Garden Waste to Biochar

Agriculture and CCE

Teaching Biochar

Climate Farming

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B4C KA1 courses



B4C KA1 example

7. Added Value of the Virtual Marketplace

The Virtual Marketplace adds value to the B4C Support Hub because it connects learning with practical implementation.

It helps users move from understanding biochar towards identifying opportunities, developing ideas and connecting with potential partners. It also gives visibility to small local projects, pilot results and sector-specific applications that might otherwise remain isolated.

The Marketplace supports:

- transfer of pilot results into future learning and project contexts;
- visibility of biochar and Circular Carbon Economy applications;
- networking between education, business, municipalities and communities;
- project development based on real examples;
- access to possible funding opportunities and support structures;

- visibility of KA1 course offers derived from B4C pilots;
- long-term sustainability of the B4C results.

In this way, the Virtual Marketplace strengthens the practical orientation of B4C. It shows that biochar education can lead to real projects, local cooperation, future training activities and new sustainability ideas.

Outlook

The Virtual Marketplace is designed as an expandable platform element.

Further development can include additional project examples, new stakeholder contacts, updated funding opportunities, more regional application cases and improved links between the Learning Suite, Application Tool and KA1 course offers.

In the long term, the Virtual Marketplace can support the continued growth of a European biochar and Circular Carbon Economy learning network. It can help educators, learners, businesses, municipalities and local initiatives find each other, develop ideas and turn learning into practical sustainability action.

The strongest future development would be to keep the platform dynamic: new project examples, KA1 course dates, stakeholder contacts and funding opportunities should be updated regularly. Without this maintenance, the Marketplace risks becoming a static collection. With regular updates, however, it can become a practical gateway for cooperation, training and implementation beyond the B4C project lifetime.