



## ENABLING

Enhance New Approaches in Bio-based Local Innovation  
Networks for Growth

## Deliverable

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### D5.3 Innovation Brokerage Platform

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## DISCLAIMER

The sole responsibility for the content of this publication lies with the ENABLING project and in no way reflects the views of the European Union.

## EXECUTIVE SUMMARY / ABSTRACT

The BiomassTrade Platform was created to facilitate the demand-supply match of resources and industrial needs. It resulted from the ENABLING project as Deliverable D5.3 within Work Package 5, “Dissemination and Communication. The design, development and maintenance were carried out by EPC. The development, scope and functionalities of the BiomassTrade Platform were agreed with the ENABLING consortium. EPC will continue to maintain and update the platform in cooperation with the other project partners throughout the course of the project. The BiomassTrade Platform will be the main legacy of ENABLING, it is intended to be established as a permanent platform beyond the project’s lifespan.

## SCOPE

Within the common agricultural production process, a significant number of by-products and residues accrue. Many of these sidestreams are currently unused, but exhibit a still untapped potential for valorisation. The BiomassTrade Platform was developed to give biomass producers the opportunity to add value to their unused sidestreams by offering them to interested buyers, like the biomass-processing industries. For biomass producers, the BiomassTrade Platform offers a new marketplace for their currently unused biomass residues and by-products that would otherwise be disposed. For bio-based industries, the BiomassTrade Platform displays a tool that helps to acquire new sources for desired biomass feedstock and to increase the radius of possible suppliers. Other benefits of the BiomassTrade Platform are direct trading without intermediaries, with the possibility to trade EU-wide, with no costs at all, using a simple and self-explanatory design to make the process of trading as easy as possible.

To meet the above-mentioned objectives, EPC in cooperation with the consortium members has developed and implemented a target group and topic specific structure for the BiomassTrade Platform. As a result, the platform consists of five main pages: Home, Marketplace, About Us, Contact and Account.

## 1 Basic description

Within the Horizon 2020 project ENABLING, the BiomassTrade Platform for trading of biomass residues, bio-based products (BBPs) and services was developed. In an online poll within the ENABLING consortium, the name “BiomassTrade” was chosen, the platform will be hosted as a stand-alone website with the URL <http://www.biomass-trade.eu>, which will be linked to relevant websites (e.g. ENABLING website, ENABLING partners’ websites, key stakeholders from bio-based industry (BBI), agricultural extension services, bioeconomy clusters).

### 1.1 Objectives of the platform

The aims of the BiomassTrade Platform are:

- Connecting stakeholders from target groups to exchange products
- Creating new distribution channels for currently unused biomass residues
- Supporting the development of new value chains
- Allowing interested users to search or offer products, processes, technologies or services relevant for the bio-economy sectors
- Finding partners and initiation of sustainable cooperation within their regions (as well as cross-border networking activities where applicable)

### 1.2 Target groups

Specific target groups are the intended end-user for the BiomassTrade Platform:

- Farmers, as potential biomass suppliers
- Industries, particularly in the BBP sector
- Knowledge actors that are involved in innovation services and technology transfer

### 1.3 Target countries

The BiomassTrade Platform will operate in all countries that are participating in Enabling (Germany, UK, Norway, Czech Republic, Bulgaria, Italy, Ireland, Austria, Israel, Belgium, Netherlands, Greece, France) and will operate in the respective languages of these countries. Later, the BiomassTrade Platform is planned to operate EU-wide.

## 2 Structure of BiomassTrade Platform

### 2.1 Platform navigation tree map

The structure of the pages of the BiomassTrade Platform is as displayed in the following figure. The actual subcategories (level 1-3) for trading can be found in the Annex.

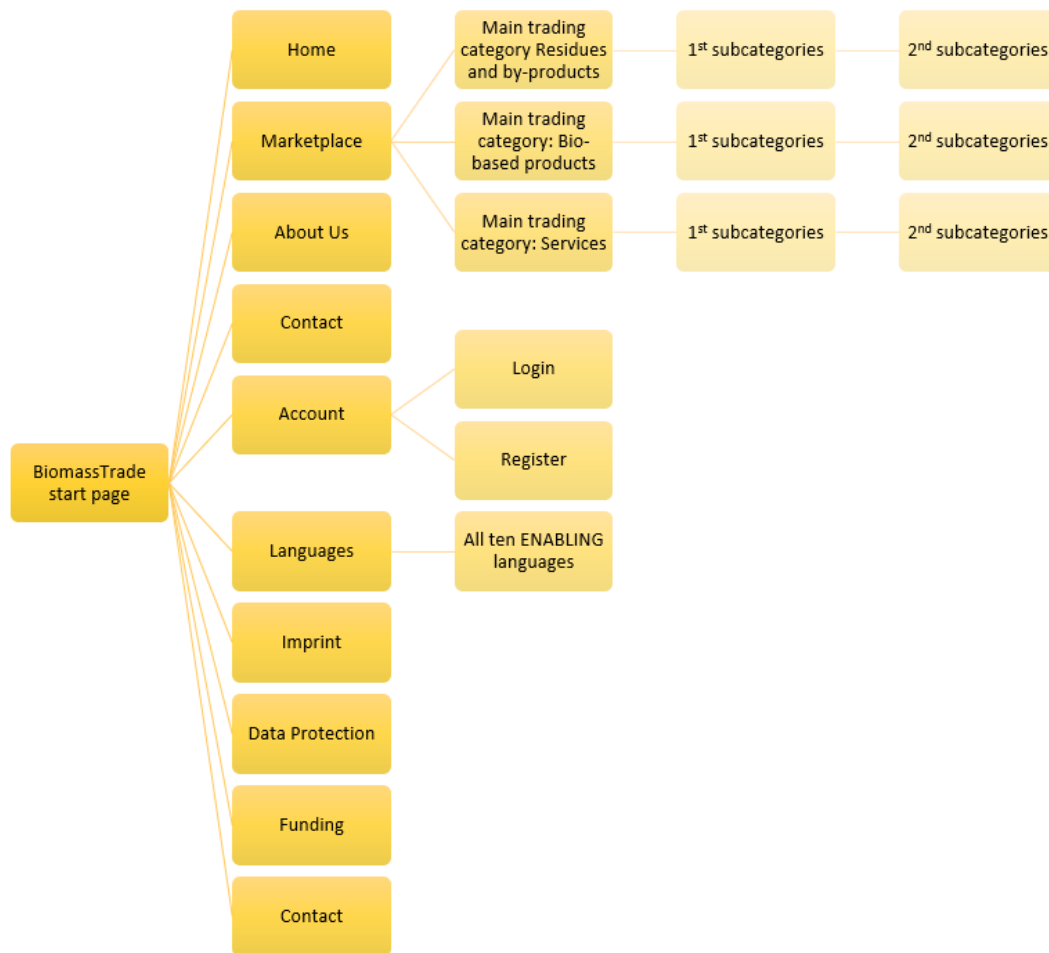


Figure 1: BiomassTrade Platform navigation tree map.

## 2.2 Essential technical features

The technical features adopted in the BiomassTrade Platform are:

- Fully responsive: all platform contents and pages have a mobile-ready version
- Cross platform desktop browsers compatibility: the BiomassTrade Platform supports five major desktop browsers (Chrome, Internet edge, Firefox, Safari, and Opera) each with several active versions

## 2.3 Languages

All text provided by the BiomassTrade Platform will be available in the ten languages of the countries represented in ENABLING: German, English, Norwegian, Czech, Bulgarian, Italian, Hebrew, Dutch, French, Greek. The navigation pane provides an icon with a drop-down menu to switch between the available languages, indicated by the respective flags. Offer and request entries will be written in the language chosen by the costumer, there will be no translation.

## 2.4 Aesthetic elements

The website follows a scenic design, with high quality images that are related to bioeconomy and bio-based industry. All photos are royalty free, respecting their usage rights. The aim of the BiomassTrade Platform design is to be clear, simple, and as user-friendly as possible.

# 3 Platform pages

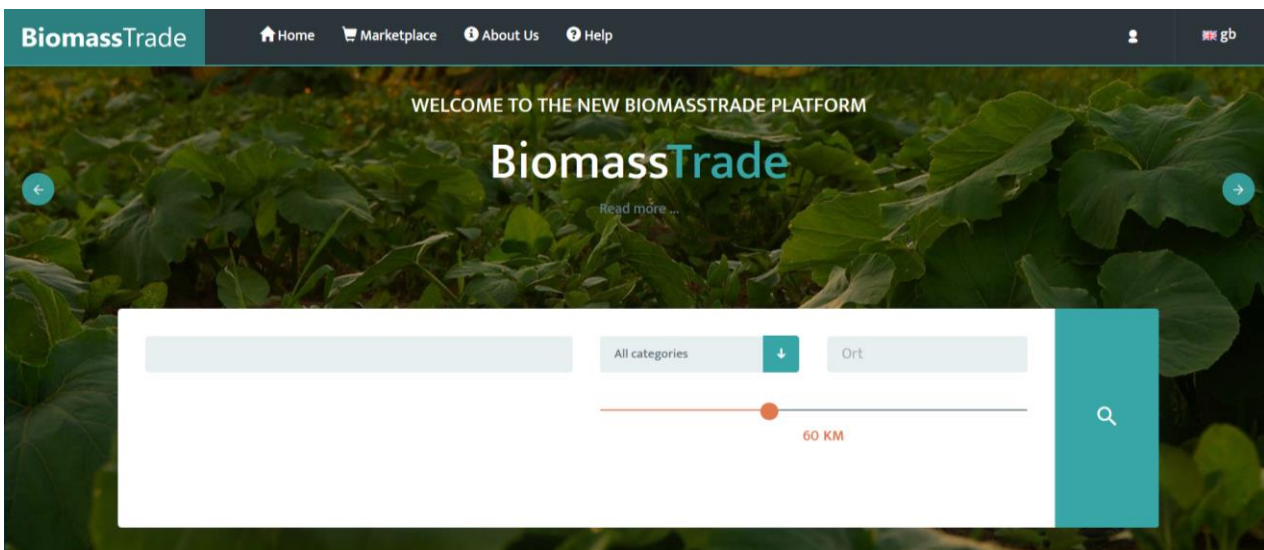
The BiomassTrade Platform pages are divided into five main pages.

1. Start page
2. Marketplace
3. About Us
4. Help
5. Account

The texts for the main pages are shown in the Annex.

### 3.1 Start page

The start page introduces the BiomassTrade Platform to its potential users. It presents the platform at a glance with six bullet-pointed key messages, focusing on the main objectives and benefits of using the BiomassTrade Platform. To give the site an interesting and changing look, a slider will be installed with different pictures, linked to bio-based products.



#### „BiomassTrade” PLATFORM – ADDS VALUE TO CURRENTLY UNUSED RESIDUES

The BiomassTrade Platform is an online venue where biomass producer and biomass processors meet to exchange currently unused biomass residues and by-products. The BiomassTrade Platform allows interested users to search and offer biomass residues and by-products, bio-based products as well as services in the different sectors of bioeconomy. The BiomassTrade Platform operates EU-wide but aims to connect stakeholders on a regional level to foster the exchange of goods and services on a regional level.

<b>WHY BiomassTrade?</b>	Adds value to currently unused residues.
	Directly brings together supplier and customer.
<b>6 REASONS !</b>	Creates new commercial opportunities for biomass producer.
	Increases biomass availability for the bio-based industry.
	Offers a simple and easy-to-use design.
	Provides all services for free with no hidden costs at all.

→ To the Marketplace

Figure 2: BiomassTrade start page.





Figure 3: Three different sliders.

### 3.2 Marketplace

The marketplace is the main site of the BiomassTrade Platform. Within this page, the trading of the platform is conducted. All entries are visible for all platform visitors. However, trading will only be possible after log-in following registration.

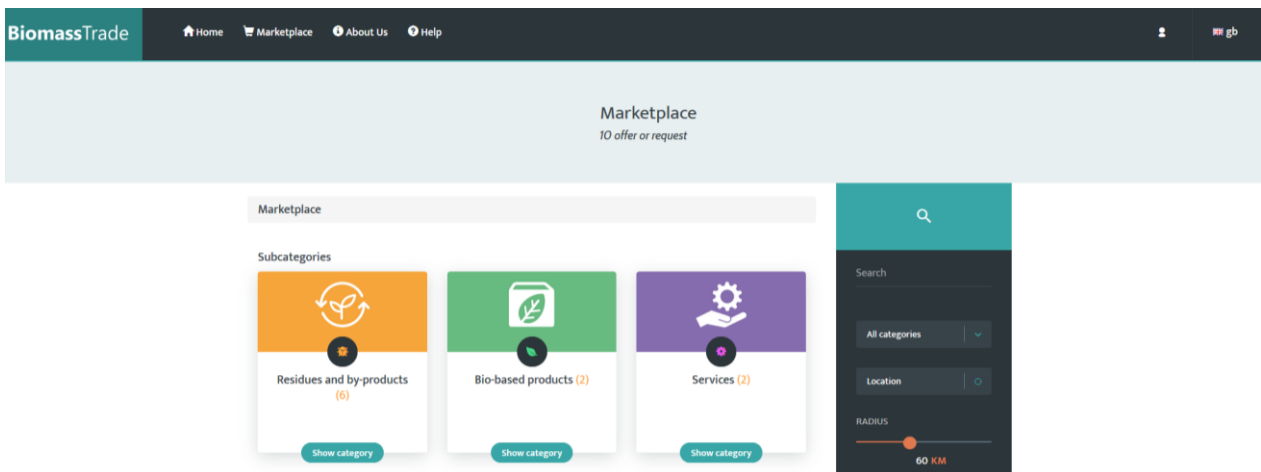


Figure 4: Marketplace, displaying the main trading categories.

In the marketplace, the three main trading categories are displayed: Residues and by-products, Bio-based products and Services. When clicking on the respective field, the user will be linked to the next level of subcategories. For details of the marketplace, please see chapter 4.

### 3.3 About Us

This page will contain basic information about the BiomassTrade Platform and about the ENABLING project, in which the BiomassTrade Platform was developed.

### 3.4 Help

The help page will show Frequently Asked Questions (FAQs) and a contact form, inquiries will be forwarded to the team that is in charge of the maintenance of the BiomassTrade Platform. As this team cannot be as multi-lingual as the BiomassTrade Platform, inquiries can only be made in English.

### 3.5 Account

Watching of offers and requests is possible without registration, whereas trading requires a registration. For this reason, a user account will be created. Clicking on the account icon allows platform users to register and registered users to log in. When logged in, this icon navigates the user to Own entries (in the marketplace), Profile, Settings and Log out.

#### 3.5.1 Registration

When registering, the user will be asked to agree to the storage of his/her data. Only with this affirmation, registration can be finalised. After complete registration request, an automatic confirmation e-mail will be sent to the user.

Registration data will be saved on a secure server space of the web hosting company of the BiomassTrade Platform (1&1 Internet, Germany), according to the European General Data Protection Regulation (EU) 2016/679 ("GDPR").

#### 3.5.2 Login

When successfully registered, the user can use the full functionality of the BiomassTrade Platform.

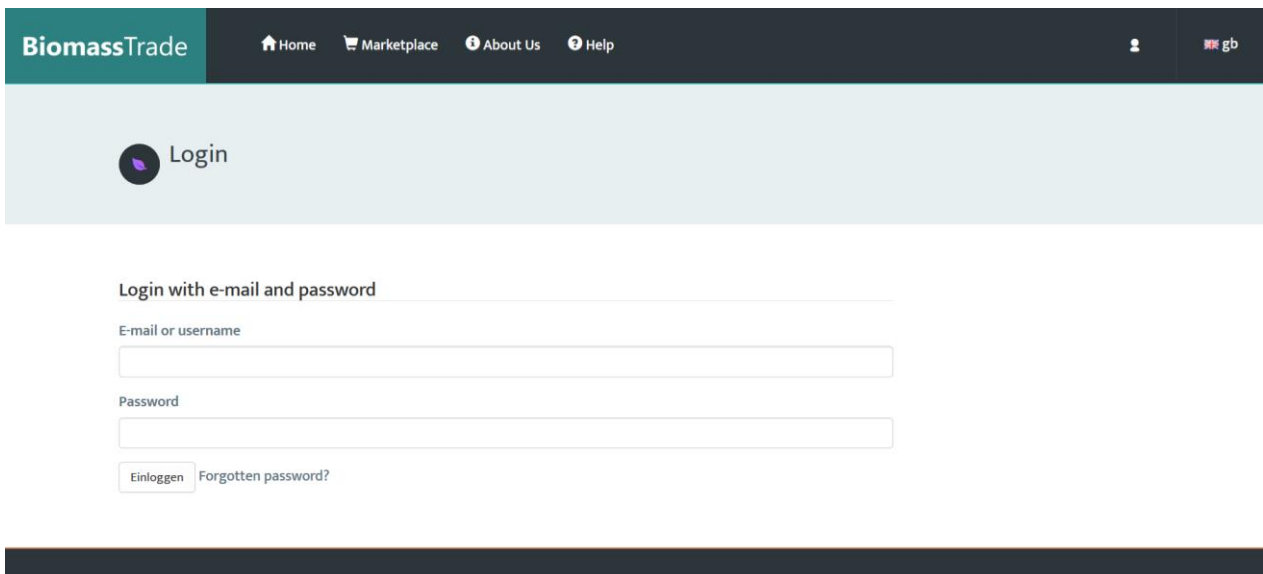


Figure 5: Login entry mask.

#### 3.5.3 Own entries

In this page, own offers and requests are listed as followed, including two examples:

Type	Label	Creation date	Due date	Actions
Offer	Grass clippings	26.11.2018	31.08.2019	Show/Edit
Request	Looking for straw (bales)	26.11.2018	31.02.2019	Show/Edit

For the actions "Show" and "Edit", icons will be integrated into the list that link the user to a complete view of the respective entry, including location of the offer/request on a map. When choosing "Edit", the input mask to create an entry will appear with the entries already made.

### 3.5.4 Profile

The following fields will be requested for registration, data indicated by an asterisk is mandatory:

- Username\*
- E-mail\*
- Street\*
- Postal code\*
- City\*

Of the above-mentioned fields, only the username will be public. The profile site also offers the opportunity to generate a public profile up to 1000 characters that can be viewed by registered user. Indication of an own website address is voluntary, the user may choose if the address will be displayed for all users, only for registered users, or not at all.

### 3.5.5 Settings

The settings page allows the user to change the password and to delete the account.

## 3.6 Main structural elements

On all pages, the main elements navigation pane and footer are displayed.

### 3.6.1 Navigation pane

The navigation pane contains the ENABLING logo on the left, icons to link to the main pages (Start page, Marketplace, About Us, Help), on the right one icon to link to the account, and one to switch between the different languages, displayed by the respective flags.

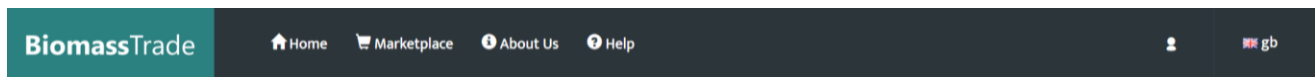


Figure 6: Navigation Pane.

### 3.6.2 Footer

Included in the footer section are links to the imprint, information regarding the funding, data protection and contact.

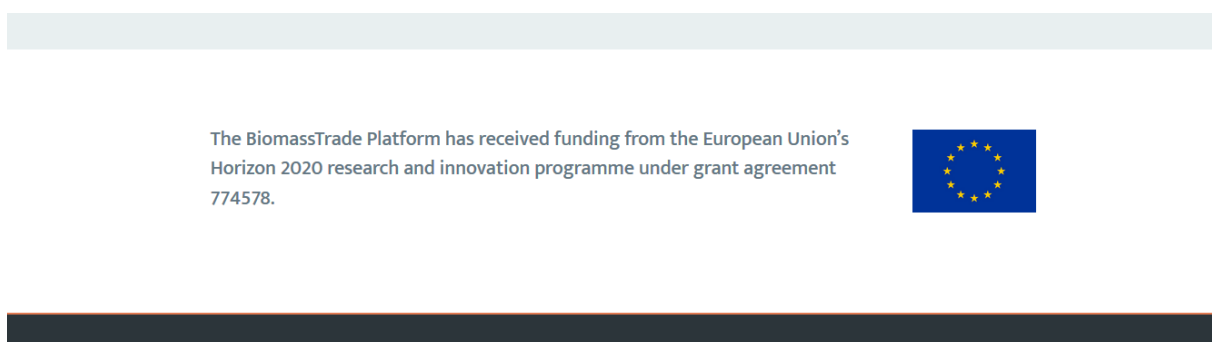


Figure 7: Footer of the BiomassTrade Platform.

#### 3.6.2.1 Imprint

On the imprint page, the contact details of the organisation in charge of platform maintenance will be displayed according to §5 TMG of German law. Additionally, the sources of figures and graphs used will be shown. This subpage will be completed before the platform is public available.

### 3.6.2.2 EU funding

The subpage “EU funding” refers to the HORIZON 2020 funding by the European Union, with the official EU logo and the Project’s Grant Agreement number 774578.

### 3.6.2.3 Data protection

On this subpage, it is stated that data protection of the BiomassTrade Platform is in line with the General Data Protection Regulation (EU) 2016/679 (“GDPR”). This subpage will be completed before the platform is public available.

### 3.6.2.4 Contact

Contact details to the organisation in charge of platform maintenance will be displayed and a contact form will be provided.

## 4 Functionality of search within the marketplace

The centrepiece of the BiomassTrade Platform is the marketplace. This is where offers and requests match, and where the users can find their potential trading partners.

### 4.1 Input of search categories

To enable an efficient matching, clear inputs in form of search categories were identified. The user can choose from the three main trading categories

- Residues and by-products
- Bio-based products
- Services

These main categories split up into two to three subcategories that are displayed in the following figures.

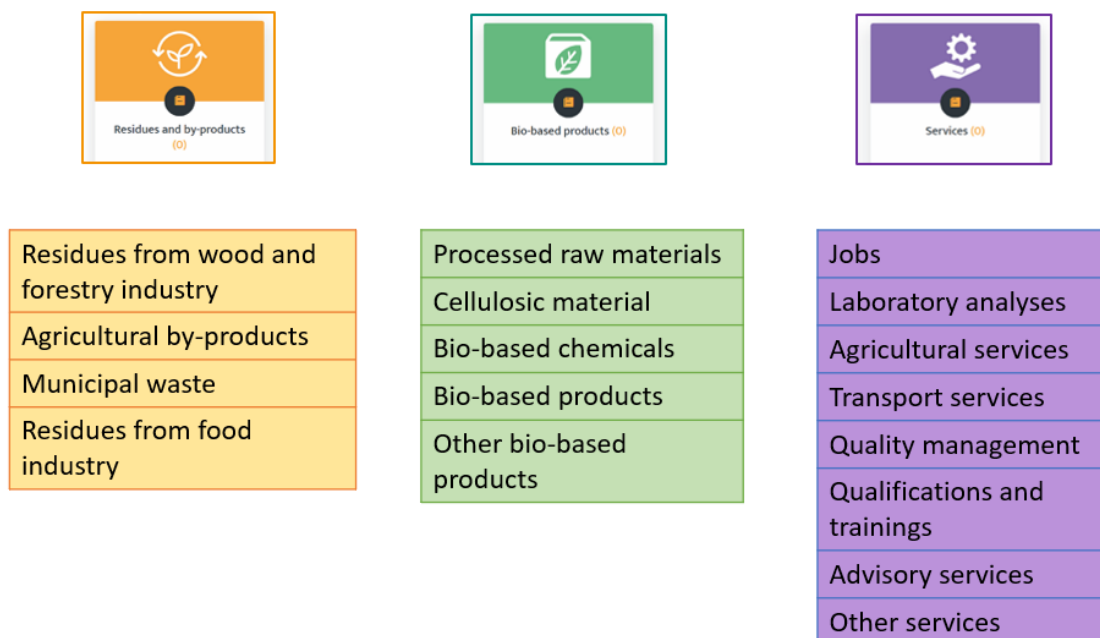


Figure 8: Main trading categories and first respective subcategories.

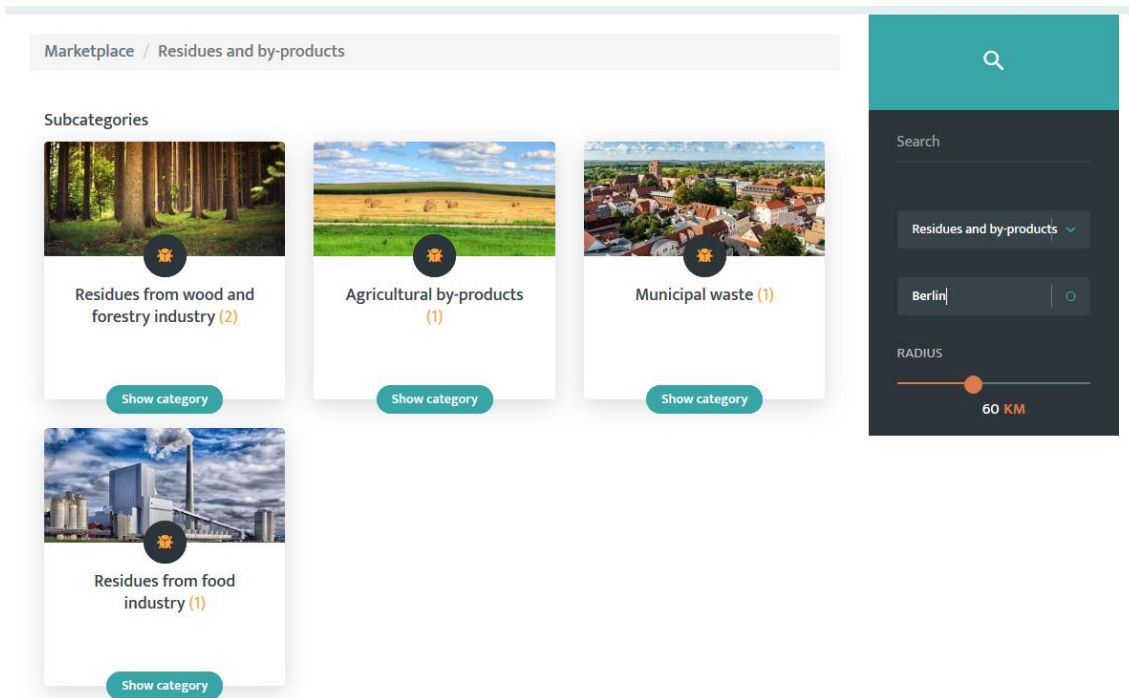


Figure 9: Screenshot of first subcategory of residues and by-products.

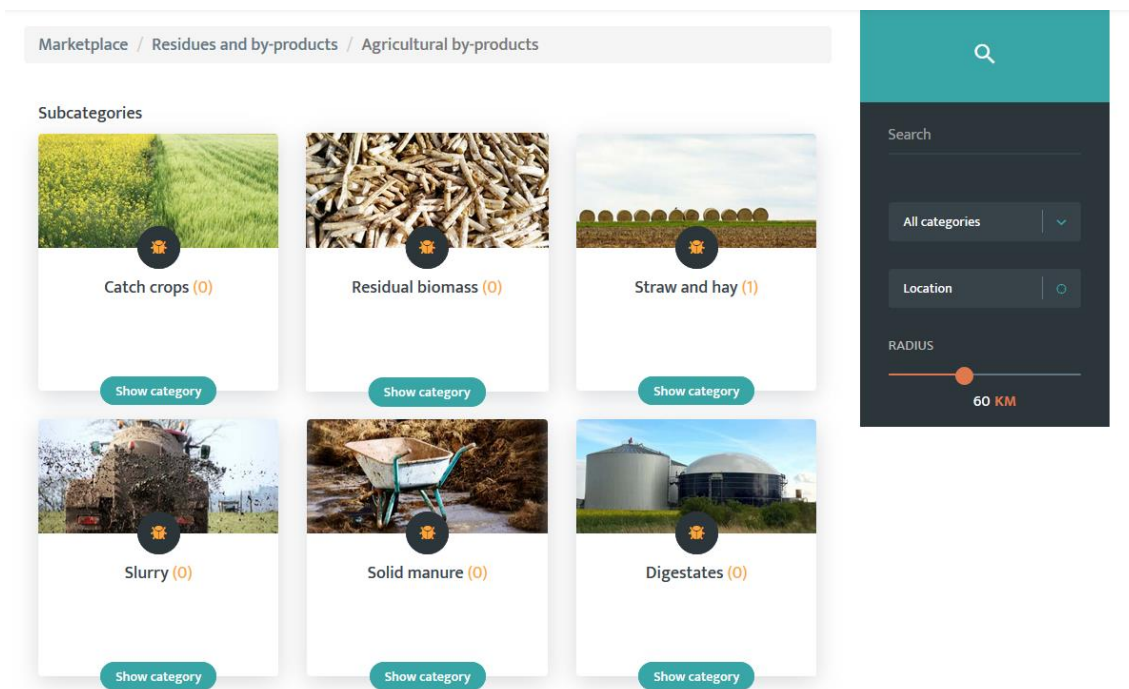


Figure 10: Second subcategory of agricultural by-products.

By clicking on the desired category, the user can choose out of a wide range of feedstock, products and services. If the given categories do not match the needs of the user, a number of alternative inputs (e.g. “Other biomass”, “Other straw”) exist. A comprehensive list of all categories that are intended for trading on the BiomassTrade Platform, are shown in the Annex, tables 1-3. The actual categories may change due to adaptations to users’ needs that might be detected within an extended test phase of the BiomassTrade Platform.

## 4.2 Output of search

The output of a search can be displayed as list and map output. List output will be the following:

- User name
- Offer/request
- Product
- Quantity
- Location
- Availability (DATE to DATE)
- Price

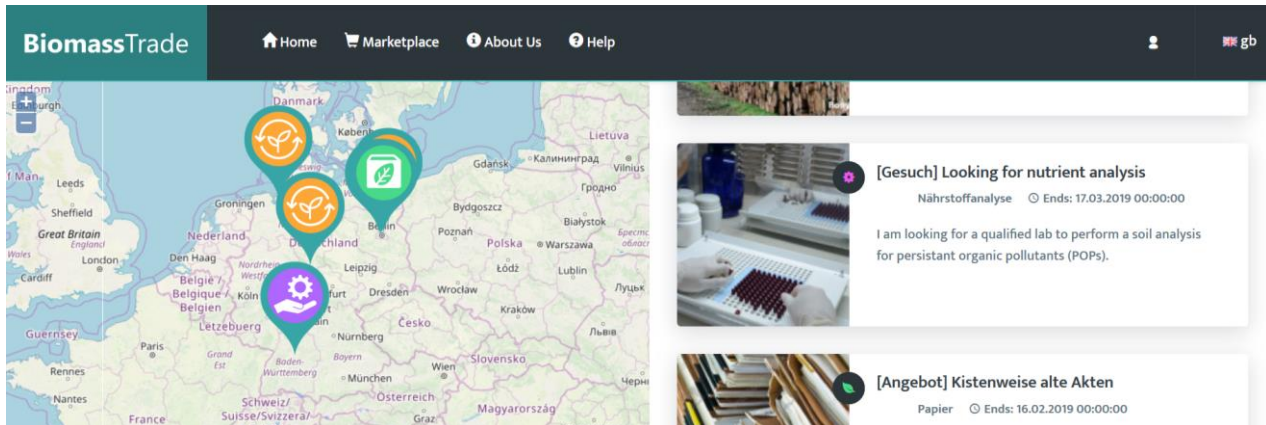


Figure 11: Output of search as map and as list.

The list of outputs can be sorted by product, location, availability and price. In the map view, the location of offers and requests are displayed on a map that is freely scalable.

## 4.3 Notification

Within the registration process, the e-mail address of the user will be stored by the platform operator. When one user contacts another via internal message, a notification will be sent to the user. If the watchlist is activated, the user will also receive a notification when a desired product is offered via the BiomassTrade Platform.

## 4.4 Interaction between seller and buyer

The BiomassTrade Platform is a customer-to-customer marketplace that directly connects buyer and seller of biomass. The role of the BiomassTrade Platform is matching offers and demands, no contracts will be made over the platform and no payment transactions will be completed. It is crucial that buyers and sellers get into direct contact, as, depending on biomass type and use, biomass requirements can strongly differ. Also, the coordination of the transport of the often-voluminous biomass needs to be individually coordinated between buyer and seller and cannot be automatically processed via the BiomassTrade Platform.

With every offer and request, the user name of the person that created the entry is displayed. When clicking on the user name, a dialogue opens to write an internal message to the user. Users will be notified via e-mail when they receive a message within the BiomassTrade Platform. The users then can decide to share their personal contact details to get into direct contact and further discuss any details about the trade.

# 5 Outlook

## 5.1 State of the art

The technical structure of the BiomassTrade Platform, including all main features, is finished. All platform contents are available in English and German. However, the development is a dynamic process that is not finished yet. Within the next months, the BiomassTrade Platform will be further developed and refined.



## 5.2 Next steps

In late 2018 and early 2019, the ENABLING consortium will extensively review all features of the BiomassTrade Platform. The platform will be further adapted to the partners' feedback. When all ENABLING members agree to the actual state, all platform entries will be translated to the missing eight languages that are present in ENABLING (Norwegian, Czech, Bulgarian, Italian, Hebrew, Dutch, French, Greek).

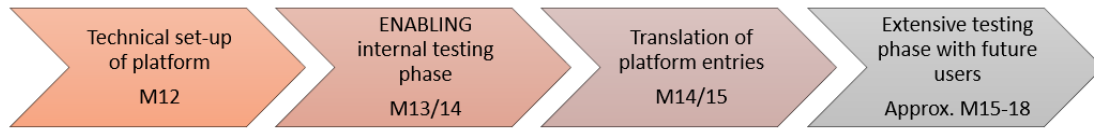


Figure 12: Next planned steps.

Yet the BiomassTrade Platform was developed after discussions with the ENABLING consortium and external biomass, bioeconomy and agriculture experts. But the actual main target groups for the BiomassTrade Platform, biomass producers and the bio-based industry, have not been involved in the platform development. For this reason, an extensive testing phase of several months is planned to further adapt the BiomassTrade Platform to its customers' needs. Selected future users will test the platform for its intuitive usability, for the feasibility of the chosen trading categories and for its performance of the search. The feedback of the test user will be integrated to further refine functionality and design of the BiomassTrade Platform. When this testing phase is finalised, the roll-out of the BiomassTrade Platform will start.

## 5.3 Restricted access to the BiomassTrade Platform

The BiomassTrade Platform will be available under <http://www.biomass-trade.eu/>. For the time of testing, adaption and further refinement, the platform will only be accessible via username and password that are available upon request and only for authorised persons. To request access details for the BiomassTrade Platform, please contact Christine Beusch, EPC, at [beusch@e-p-c.de](mailto:beusch@e-p-c.de).

# 6 Annex

## 6.1 Texts for the platform sites

### 6.1.1 Home

#### **BiomassTrade Platform – Adds value to currently unused residues**

The BiomassTrade Platform is an online venue where biomass producer and biomass processors meet to exchange currently unused biomass residues and by-products. The BiomassTrade Platform allows interested users to search and offer biomass residues and by-products, bio-based products as well as services in the different sectors of bioeconomy. The BiomassTrade Platform operates EU-wide but aims to connect stakeholders on a regional level to foster the exchange of goods and services on a regional level.

#### **Six reasons to use the BiomassTrade Platform:**

- Adds value to currently unused residues
- Directly brings together supplier and customer
- Creates new commercial opportunities for biomass producer
- Increases biomass availability for the bio-based industry
- Offers a simple and easy-to-use design
- Provides all services for free with no hidden costs at all

### 6.1.2 Marketplace

Here you can post your offers and requests.

### 6.1.3 About Us

The main objective of the BiomassTrade Platform is to create new opportunities for biomass producers and for biomass-processing industries. For biomass producers, the BiomassTrade Platform offers a new marketplace that adds value to currently unused biomass residues and by-products that would otherwise be disposed. For bio-based industries, the BiomassTrade Platform displays a tool that helps to acquire new sources for desired biomass feedstock and to increase the radius of possible suppliers.

#### **Six reasons to use the BiomassTrade Platform:**

##### **Adds value to currently unused residues**

Within the common agricultural production process, a significant number of by-products and residues accrue. Many of these sidestreams are currently unused but exhibit a still untapped potential for valorisation. The BiomassTrade Platform gives biomass producers the opportunity to add value to their unused sidestreams by offering them to interested buyers.

##### **Directly brings together supplier and customer**

No intermediary retailers participate in the trading via the BiomassTrade Platform, therefore no profits need to be shared with a third party. Delivery conditions, biomass quality, payment etc. can be negotiated individually, because no contracts will be concluded via the BiomassTrade Platform. This ensures direct trading according to the needs of the biomass producer and the biomass-processing industry.

##### **Creates new commercial opportunities for biomass producer**

With the BiomassTrade Platform, a new marketplace for currently unused sidestreams was created that enables biomass producers to find new commercial opportunities for biomass residues. With the help of the BiomassTrade Platform, new income can be created for farmers and other biomass producers.

##### **Increases biomass availability for the bio-based industry**

The bio-based industry needs a steady and reliable supply of high-quality biomass for the production of bio-based products. The BiomassTrade Platform helps to find new, currently unknown sources for the required biomasses. Potential seller and buyer will be matched by the BiomassTrade Platform, but as no trading contracts will be concluded via the platform, the seller and buyer can individually negotiate desired parameter of the biomass, logistics, time of delivery, payment etc.

##### **Offers a simple and easy-to-use design**

The intention of the design of the BiomassTrade Platform is to be simple, self-explanatory and easy to use to make the process of trading as easy as possible.

##### **Provides all services for free with no hidden costs at all**

The BiomassTrade Platform offers all services for free. No charges apply, neither for registration nor for trading or any other services provided by the BiomassTrade Platform.

#### **About the Enabling project**



The BiomassTrade Platform was developed within the EU-funded Horizon 2020 project ENABLING (Grant Number 774578). ENABLING is the initiative of 16 partners in 13 EU and associated countries and aims to create the right conditions for the development of efficient biomass to bio-based product value chains.

The ENABLING project aims for an impact at several levels:

- **Economic impact:** ensure market growth for biomass
- **Environmental impact:** enhance the shift to a circular economy
- **Social impact:** create new jobs within the entire biomass value chain

### 6.1.4 Help

We tried to design the BiomassTrade Platform as intuitive as possible. However, should you have any questions or other concerns, contact us via the online form. We will come back to you immediately!

[CONTACT FORM]

## 6.2 Tables with the three main trading categories of the BiomassTrade Platform

It will be possible to trade goods and services within the following three main categories:



Figure 13: Three main trading categories of the BiomassTrade Platform.

### 6.2.1 Categories for residues and by-products

1st Category	2nd Category	3rd Category
Residues from wood and forestry industry	Forest wood	Residual forest wood (hardwood)
		Residual forest wood (softwood)
		Bark
	Industry wood	Sawmill by-products
		Other industry wood
	Other wood	Old wood
		Other wood
Other residues from forest industry		Black liquor
		Other residues
Agricultural by-products	Catch crops	Winter catch crops
		Summer catch crops

	Residual biomass	Residues from vegetable cultivation
		Residues from fruit cultivation
		Beet leaves
		Green clippings
		Herbaceous biomass
		Woody biomass
		Silage
		Other biomass
	Straw and hay	Hay
		Cereal straw
		Other straw
	Slurry	Cattle slurry
		Pig slurry
		Chicken slurry
		Other slurry
	Solid manure	Cattle manure
		Pig manure
		Chicken manure
		Horse manure
		Sheep and goat manure
		Other solid manure
	Digestates	Digestates based on animal manure
		Digestates based on plants
		Other digestates
Municipal waste	Organic waste	Organic waste
		Green clippings
		Other organic waste
	Food waste	Commercial food residues
		Used cooking oil
		Residues from markets
		Coffee grounds
		Other residues from food waste
	Sewage sludge	Sewage sludge from municipal waste
		Sewage sludge from companies
		Sewage sludge from wastewater treatment
		Other sewage sludge

	Compost	Compost from organic waste
		Compost from green cuttings
		Other composts
Residues from food industry	Residues from food industry	Residues from animal processing
		Residues from fish processing
		Fruit residues
		Vegetable residues
		Residues from oil production
		Nut shells
		Pressed pulp
		Molasses
		Other residues
	Residues from beverage industry	Draff
		Yeast residues from beer production
		Residues from wineries
		Residues from distilleries
		Other residues
	Other industrial residues	Residues from biotechnology industry
		Residues from feed production
		Residues from biodiesel production
		Residues from bioethanol production
		Other residues

## 6.2.2 Categories for bio-based products

1st Category	2nd Category
Processed raw materials	Starches
	Sugars
	Proteins
	Oils
	Fibers
	Lignin
	Hemicellulose
	Nutrients
	Other processed raw materials
Cellulosic material	Cellulose
	Cellulosic fibres
	Paper

	Other cellulosic material
Bio-based chemicals	Bio-based glycerol
	Bio-based acids
	Bio-based hydrocarbons
	Bio-based solvents
	Bio-based emulsifier
	Bio-based amins
	Bio-based fine chemicals
	Other bio-based chemicals
Bio-based products	Bio-based lubricants
	Bio-based plastics
	Bio-based polymers
	Bio-based composites
	Bio-based fibres
	Bio-based tensides
	Bio-based fertiliser
	Other bio-based products
Other bio-based products	Other bio-based products

### 6.2.3 Categories for services

1st Category	2nd Category
Jobs	Job offer
	Job search
Laboratory analyses	Analysis of standard parameter
	Nutrient analysis
	Contaminant analysis
	Other analyses
Agricultural services	Soil tillage
	Seeding
	Fertilisation and plant protection
	Harvesting
	Rent agricultural machines
	Other agricultural services
Transport services	Bulk transport
	Tank transport
	Rent transportation vehicles
	Other transport services
Quality management	Audit

	Certification
	Other quality management measures
Qualifications and trainings	Qualifications and trainings
Advisory services	Coaching
	Consultancy
	Other advisory services
Other services	Other services