

Sustainable Networks for the Energetic Use of Lignocellulosic Biomass in South East Europe

Description of Joint Pilot application 1:

Online biomass information and trading platform

**to be implemented in
Styria, Austria and
Centru Region, Romania**

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1. Pilot factsheet

Pilot title: Online biomass information and trading portal		Acronym: BIONET
Lead Partner: HCS/Austria	Other partners: UNITBV/Romania, WVS/Austria, BOKU/Austria	Area of intervention: Styria/ Austria, Centru region / Romania
Pilot focus: service oriented, ICT	Start of implementation: 4/2014	Pilot duration: 8 months
Budget:	Target group: Biomass traders, customers, lobbying organisations	

2. Executive summary

An important issue for establishing sustainable biomass chains is communication. A web platform including web-GIS technology developed for regional stakeholders in order to increase the visibility and efficiency throughout biomass supply chains represents a very good technical and social environment. This service platform will offer various tools starting with available resource and supplier locations and end with customers.

- Promote the biomass chains
- Help users identify each other
- Help all involved parties developing win-win situations

The platform should also provide information on the regional availability of different biomass assortments for energetic use (wood chips, firewood, pellets etc.) at different traders with the corresponding contact and buying/delivery information to the customer.

Key words: biomass, online platform, information, assortments, geo portal, trading

3. Objectives

The web-based tool will focus on the increase of visibility and transparency in biomass sector.

3.1 Romania

This tool will comprise of three modules focusing on the increment of visibility and transparency in biomass sector through the following objectives:

1. Coagulating a biomass market – knowing the development of worldwide connectivity between, the web platform will help the communities to discover each other. This application will help the market to become stable.
2. Developing a geographic distribution of biomass resources – the geographic components of the platform will soon cross-check the existing data about biomass resources in Romania.
3. Promoting online biomass trading – like all online applications, if it will be used, the platform will soon become popular among users and community.

3.2 Austria

The platform will provide information on regionally available biomass fuels for customers and therefore raise the buyer awareness for solid biofuels in the region. The biomass sector for private customers is known for its relatively informal character, which means that only little information for customers is available on where to purchase woody biomass in the region, especially firewood and wood chips. In contrast, it became evident in interviews conducted in the analysis phase of the project that the Styrian pellet market is much more sophisticated in this regard, since online ordering platforms are already established and well-received by customers. Therefore, this approach will be adapted and further evolved for regionally produced biomass fuels.

The main objectives of the pilot are:

- Better information of biomass availability for customers
- Promotion of regional biomass fuels and traders
- Strengthening of regional identification of biomass customers
- Easier access for customers to biomass fuels
- Reduction of transport distances, along with corresponding costs and emissions
- Optimization of logistics and storage management
- Increase of transparency in the biomass market, better market penetration

4. Description of pilot application

4.1 Description of core application

The core software application, on which both platforms will be based on, will be programmed by the Romanian partners UNITBV who will also provide the necessary web server which can be accessed by all involved partners. The basic concept of the core application is pictured below.



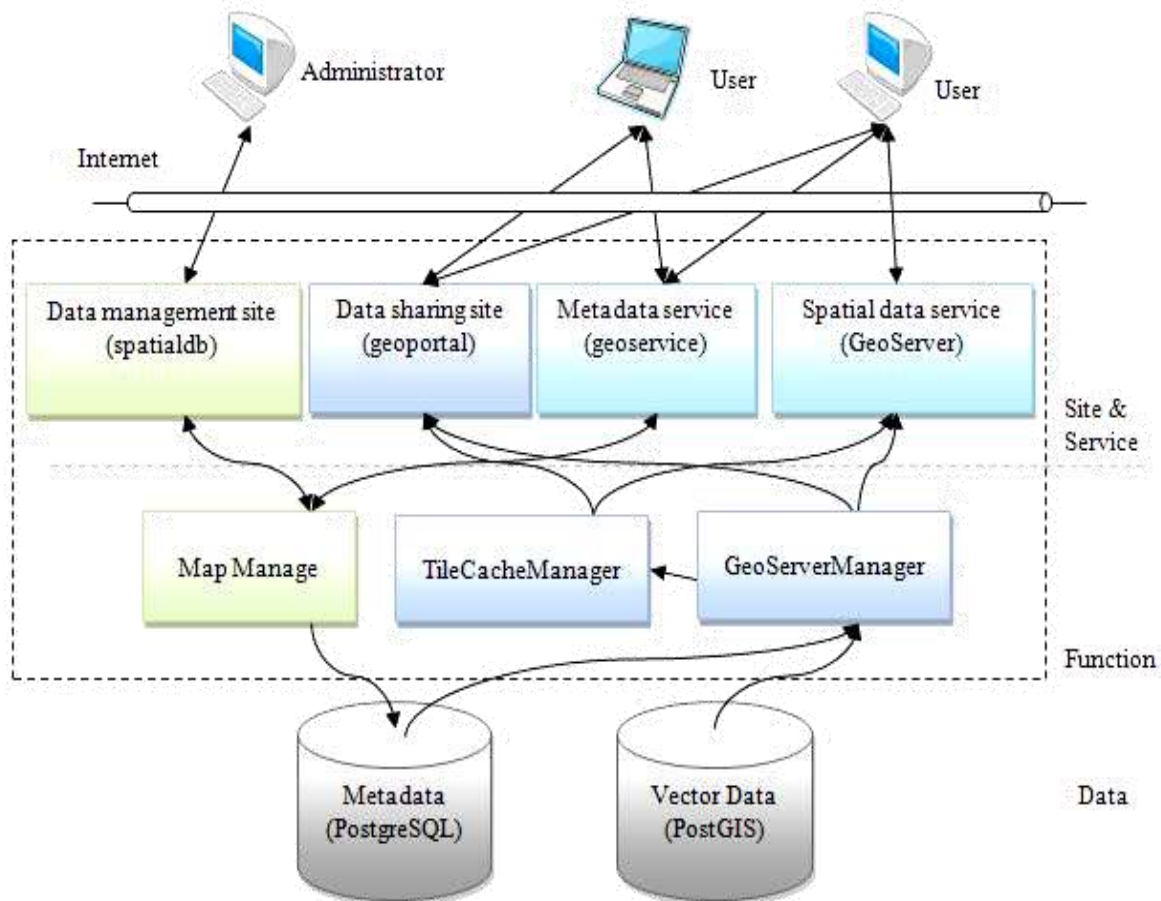


Figure 1: Basic module for the online platform

4.2 Description of Romanian extensions

The Romanian application will feature the following modules:

- Ongoing announcements – will provide information about the announcements posted by suppliers and traders;
- Finalized announcements – will group the finalized announcements either by designating the winners or by providing auction cancellation data (particular to Romania);
- Geo-resources – a web-GIS application providing geo-spatial information about biomass offered for sale and its status;
- Users – a component for user-management (sign-up/login for producers, traders, customers);

This service should offer various tools starting with available resource/suppliers location and prices, and ending with customers. The platform will:

- Promote the biomass chains;
- Help users identify each other;
- Help all involved parties to form viable clusters developing win-win situations.

The biomass trading Geo Portal may be extended in order to provide economic data related to harvest, transport etc. The schema of GeoPortal will be developed on an open-source geographic server (GeoServer) linked to a database with geographic reference (PostgreSQL + PostGIS).

4.3 Description of Austrian extensions

The Styrian online platform will be based upon the Romanian core application. It will feature information on the location of biomass traders all over the province. Users can select any biomass provider and see which assortments (e.g. firewood, wood chips, pellets etc.) are available and how high the stock is. Other basic information such as opening hours, contact data and ordering information are displayed as well. Customers can also easily find out which trader is closest to them by entering their ZIP code and also which additional services are provided (e.g. biomass delivery, trailers for rental, loading service etc.). The position of the different traders will be graphically visualised on a map of Styria.

In the beginning, the platform will feature the already existing Styrian Biomass Trade Centers but additional traders can join the platform as well. The platform will mainly focus on regional traders with background in forestry/agriculture and produce their products themselves or buy and sell them regionally. It is not intended to open the platform for large-scale biomass traders that buy their products from far away and transport them over long distances but rather to push regional producers/traders as well as biomass from regional forests. The platform will distinguish between two categories “private providers” and “commercial traders”, so customers have an overview on the background of the traders.

Features

The online platform will feature the following:

- Map of the region with locations of biomass traders
- Form for zip code to find nearest provider/providers who deliver to location
- For each included trader the following information will be available:
 - Carried assortments
 - Current stock of each assortment
 - Contact and ordering information
 - Additional services provided (delivery service etc.)
- Rating system – customers can rate traders after purchase
- Tips on buying biomass for customers
- Login-function for traders

The basic structure of the featured assortments on the platform can be seen in Figure 2. The platform will feature the main products firewood, wood chips and briquettes with different subcategories as well as additional assortments.

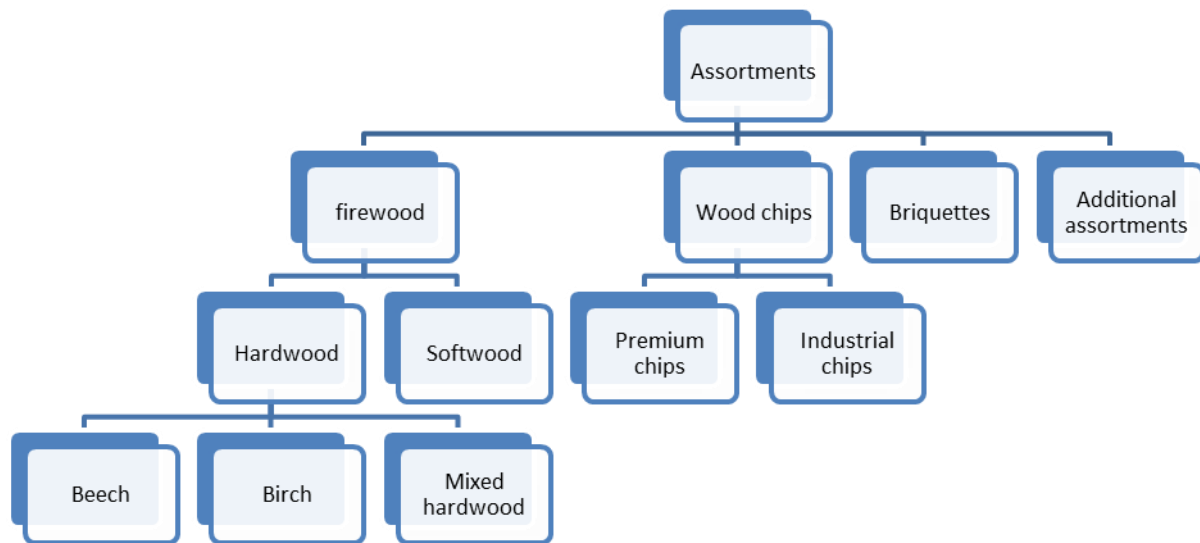


Figure 2: Basic structure of the assortments

From a customer’s point of view, the platform will work as follows: the customer enters his ZIP code and the requested assortment which results in a list of suitable providers. The customer then selects a provider and can open a request form, enter the necessary data (assortment, quantity, delivery/pick up etc.) and send it to the provider via email. After the provider receives the request, he responds with a quote which includes price, payment information, delivery/pick up date and if necessary, additional data. The search and ordering process is depicted in Figure 3.



Figure 3: Search and ordering process

Since quality control plays an important part in the trading of biomass, there will also be two different categories regarding the traded quality: “standard” and “premium” traders. Every trader that registers on the platform will automatically be a standard trader, which means that there is no quality control involved on behalf of the operator of the platform (WV Steiermark) and the risk regarding quality lies within the customer. Every trader can decide that he wants to become a premium trader, which involves various quality criteria he has to fulfill which can be controlled by WV Steiermark anytime through random samples. If a customer buys at a “premium” trader, he has the guarantee that a certain quality level regarding water content, heating value and fines is fulfilled. The different quality criteria and trader categories, alongside with the involved responsibilities will be explained on the platform. The Styrian Biomass Trade Centers, which already have an advanced QM/QC-system, will automatically be “premium” traders from the beginning.

The platform will not feature any prices or direct ordering in the beginning, but could easily be upgraded to an online ordering platform if needed. It could also be expanded to other federal states and other actors in the biomass sector, such as service providers, could be included as well in the future.

4.4 Innovative capacity

In most SEE countries, the biomass market is characterized through its informality and the use of ICT in is typically low. Therefore, the internet is rarely used for biomass trading and if so, the available data (quality, quantity and cost) is often scarce or unreliable. Therefore, it is difficult for customers to gain information on biomass availability and who is selling which assortments and in which quality. Through this online solution, customers will be able to find out who is the nearest trader for them and also get insight in the market. Both customer and trader will benefit from this platform.

4.4.1 Romania

Similar to other SEE countries, biomass trade in Romania is made using other channels than internet. In the same time, when the internet is used in trading, the available data (quality, quantity and cost) is rather unreliable for most of producers. A basic challenge of the European Union is to mobilize the existing forest biomass in a cost-efficient and sustainable way. This pilot application aims to coagulate the biomass market. The geographic component will give the distribution of the communities interested in biomass trading. By providing a platform in which the stakeholders would have the opportunity to register based on real data, it is expected that the visibility, transparency and credibility of this sector to increase in Romania and other partner regions/countries.

4.4.2 Austria

In Styria, no comparable online platform as planned in this pilot concept exists at the moment. Due to the informal character of the biomass market, it is difficult for customers to gain information on biomass availability and who is selling which assortments and in which quality. Through this online solution, customers will be able to find out who is the nearest trader for them and also get insight in the market. Both customer and trader will benefit from this platform.

4.5 Involved parties

Holzcluster Steiermark GmbH:	Coordination, dissemination
University of Brasov:	Programming of application, providing server, dissemination
Waldverband Steiermark:	Organisation of workshops, dissemination, operation and updating of Styrian online platform
Software engineering company:	technical implementation in Styria

4.6 Time schedule

03/2014 - 04/2014	Planning and organisation, public tending for programming
04/2014 - 05/2014	Programming work
05/2014	Test run
09/2014	Instruction workshop for biomass trade center managers

4.7 Financial scheme

Factor	Cost [€]		
	UNITBV	HCS	WVS
FOROPA Personnel	7.000	10.000	10.000
External expertise	8.000	-	12.000
Equipment	5.000	-	-
Total	20.000	10.000	22.000
Grand total	52.000		

5. Expected outcomes and impact

5.1 Romania

It is expected that the developed platform will:

- Promote the efficient marketing of biomass solid fuels connecting in an understandable and simple manner the demand - and supply-sides;
- Identify intermediary logistics issues and calculate the costs for the associated operations;
- Estimate operational costs by considering the end-use applications context;
- Help in developing viable clusters between associated stakeholders.

5.2 Austria

The platform is expected to increase transparency in the regional biomass fuel market and raise awareness of customers for the origin of the biomass. It will also promote regional biomass providers and traders and provide information on regional availability of different biomass assortments for customers as well as easier accessibility to biomass for energetic use. The online platform will possibly also have a positive effect on the logistics and storage management and will help to reduce transport distances alongside with corresponding costs and emissions.

6. Communication and dissemination plan

6.1 Romania

The pilot application will be presented during a workshop which will be held in Centru Region of Romania (Braşov). With this occasion, a demonstration of use will be presented to the invited parties, and the invitees will have the chance to test the platform's functionality. Other dissemination channels will be used in order to promote the application: FOROPA's website, UNITBV's website, other websites and a product flyer.

6.2 Styria

Workshops for biomass traders

As soon as the platform works, operators of the 7 Styrian Biomass Trade Centers will be invited to a workshop where the program and its functions are demonstrated and the operators are instructed on how to use it, for example how to add biomass assortments or how to update stock information.

Additionally, an information workshop for other traders that are interested in getting involved in the information platform and use them for their own business will be held as well. This workshop will also include a demonstration of the functions along with an instruction.

Communication through online media

The existing websites of the involved companies (HCS, WV, BTC) will be extensively used to promote the new biomass online portal both to potential providers and customers. The platform will be linked on all of this Websites. In addition, the existing mailing lists of WV and BMH will be used to directly contact members and suppliers as well as customers and inform them on the information platform.

Communication through company newspapers

Both WV and HCS have periodically published newspapers that are both available in printed form and online. These media will also be used to inform biomass traders as well as potential customers on the new platform and the advantages that come with its use.

