

East Europe Hub for sustainable wood mobilisation (ROSEWOOD project H2020)

dr. sc. Ivan Ambroš

Competence Centre Ltd. for research and development

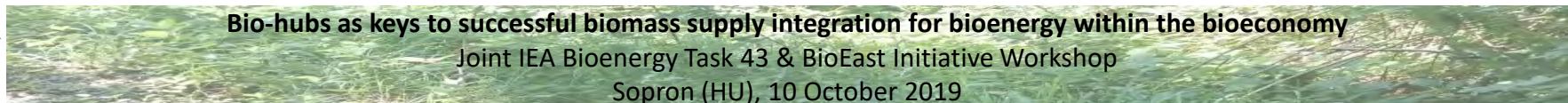
Vinkovci, Croatia

Bio-hubs as keys to successful biomass supply integration for bioenergy within the bioeconomy

Joint IEA Bioenergy Task 43 & BioEast Initiative Workshop

Sopron (HU), 10 October 2019

- Spačva basin – most valuable forest resource of Croatia (quercus robur, slavonian oak)
- Wood Cluster SLAVONIAN OAK established in 2010.
- Competence Centre Ltd. for research and development established in 2016.
- Innovation infrastructure
- Local wood for local use – strengthening local value chains from the tree in the forest to the final product
- ROSEWOOD Network of EU regions on sustainable wood mobilisation (Horizon 2020)



Land of the Oaks

VUKOVAR-SRIJEM COUNTY (CROATIA)



Vukovar-Srijem County

<http://www.vuk.sr.hr/>

Vukovar-Srijem County forest area makes 28,7% of its territory. Tradition in wood processing, existing resources of quality raw wood material, significant percentage of forest territory and largest oak forest in Europe make Vukovar-Srijem County green county with sustainable bio-economy, renewable energy sources, natural environment and humans health protection - desirable place to live and work in.

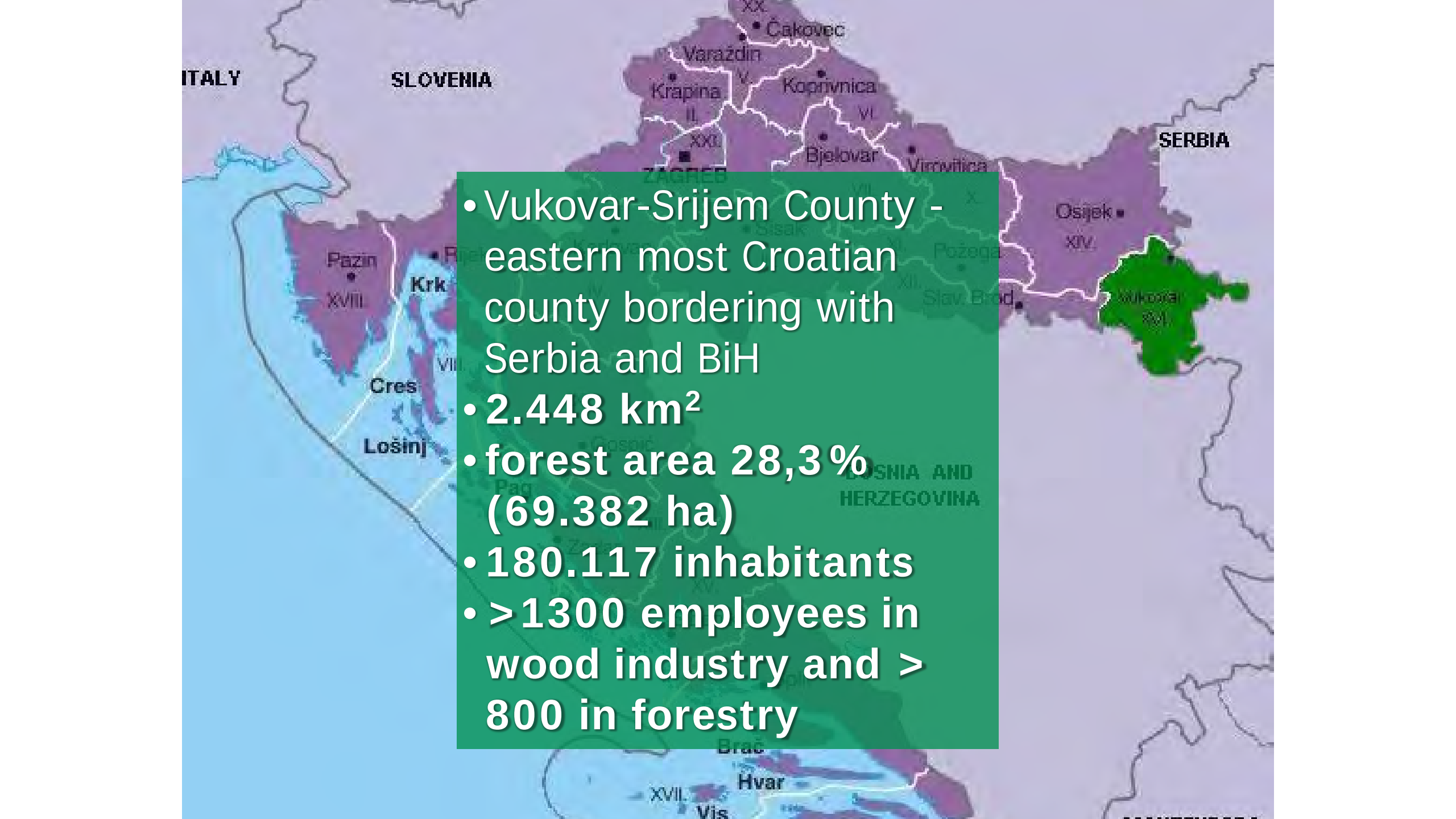
Visit Vukovar-Srijem County

<http://www.visitvukovar-srijem.com/>



Spačva basin

- 40 000 ha in Vukovar-Srijem County (wide area including Serbia 51 000 ha)
- largest coherent complex of lowland Pedunculate oak forest in Europe
- **wood types:** mostly famous slavonian oak, ash, elm and hornbeam
- **Croatian Forests, Forest Administration Vinkovci**

- 
- A map of Croatia showing its counties and neighboring countries: Italy to the west, Slovenia to the northwest, Serbia to the east, and Bosnia and Herzegovina to the southeast. The Adriatic Sea is to the southwest. Vukovar-Srijem County is highlighted in green in the eastern part of the country, bordering Serbia. Other counties labeled include Pazin, Krk, Cres, Lošinj, Zadar, Varazdin, Krapina, Koprivnica, Bjelovar, Virovitica, Osijek, Požega, Slav. Brod, Zagreb, Šibenik, Rijeka, and Dubrovnik. Roman numerals are also present next to some county names.
- Vukovar-Srijem County - eastern most Croatian county bordering with Serbia and BiH
 - 2.448 km²
 - forest area 28,3% (69.382 ha)
 - 180.117 inhabitants
 - >1300 employees in wood industry and >800 in forestry

Vukovar-Srijem County wood sector

SLAVONSKI HRAST wood cluster

- www.slavonski-hrast.com
- founded in 2010 by Vukovar-Srijem County
- 37 members
- Triple helix:
 - o university
 - o industry
 - o government



Spačva – biggest wood producing company

- www.spacva.hr
- 890 employees
- producing doors, floors, furniture, veneer, pelets etc





Drvena industrija SPAČVA Vinkovci

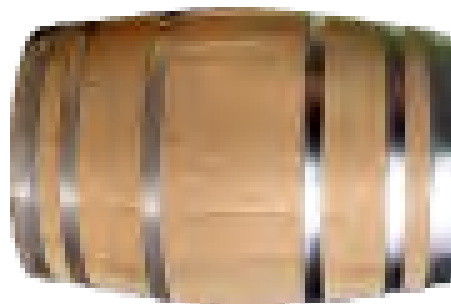




ALPI AVIATION d.o.o.

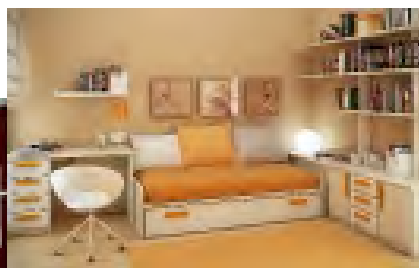


ŠIŠKA d.o.o.



ŠIŠARKA d.o.o.





efektiv

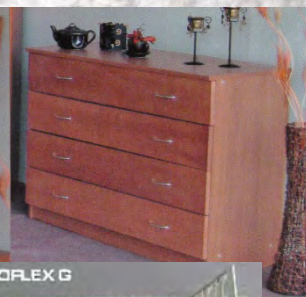
Vinkovci, Zalužje 6

tel. 032/352-052

www.efektiv.hr

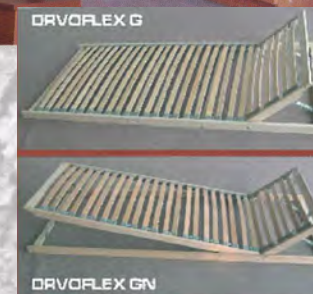
fax. 032/352-026

e-mail: efektiv@vu.t-com.hr



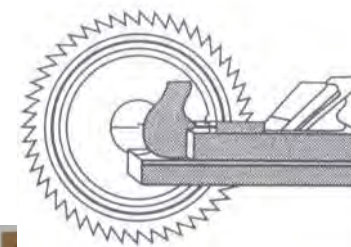
PROIZVODNJA NAMJESTAJA

CARPINUS d.o.o.





Lignum produkt d.o.o.
Vukovar, Trpinjska Cesta 146





Centar kompetencija d.o.o.
za istraživanje i razvoj

Established in 2016 by Vukovar-Srijem County for **strengthening innovation potential of local economy by connecting companies with science – technology transfer – knowledge transfer.**

According to the Law on Promotion of Entrepreneurial Infrastructure, Competence Centre Ltd. for research and development (CEKOM) is a specialized business entity which conducts research projects of developmental or productive character and develops competences in the field of bio-economy and with which other business entities can contract research and development activities.

CEKOM is focused on developmental and applied research and commercialization as well as on support and strengthening of intellectual property within a **specific thematic area of bio-economy in accordance with the Strategy of Smart Specialization of the Republic of Croatia 2016-2020.**

Mission: **Sustainable development, environment protection and increasing competitiveness** through research, development and innovation projects.



Centar kompetencija d.o.o.
za istraživanje i razvoj

Values:

- SUSTAINABILITY
- EXCELLENCE
- TRUST
- RESPONSIBILITY

INFRASTRUCTURE PROJECT IN IMPLEMENTATION

WOOD-TECHNOLOGY CENTRE „SLAVONIAN OAK”



CONCEPT d.o.o.
PROJEKTI BIRO
VINKOVCI



ZADRŽAVAMO SVA AUTORSKA PRAVA



Tihomir
Maras dipl.ing.arh.
Ovlašteni arhitekt
"Concept" d.o.o. – Vinkovci
br. 1203

General information about the project

- ▶ Strategic project of Vukovar-Srijem County
- ▶ Location: Business zone Ambarine (Gradište Municipality)
- ▶ Project beneficiary: Vukovar-Srijem County
- ▶ Project value: 24.994.781,16 HRK
- ▶ Sources of funding: Ministry of Agriculture of the Republic of Croatia, Vukovar-Srijem County
- ▶ Duration of project implementation: 60 months (21.9.2018 – 21.9.2023)
- ▶ Actual status: Construction activities will begin next week

Objectives

Strengthening competitiveness and balancing regional development through development of:

- regional infrastructure,
- horizontal and/or vertical integration of the forestry and wood industry value chain in the area of bio-economy in the Vukovar-Srijem County area.

Target groups and final beneficiaries of the project

► Target groups:

- entrepreneurs in the wood sector (small sawmills, carpentries and wood crafts),
- unemployed,
- start-ups in the wood sector,
- students, professors, scientists, researchers and innovators,
- all others who work in the forestry and wood industry value chain, from tree to final product.

► Final beneficiaries:

- wood processing companies and entrepreneurs from Vukovar-Srijem County,
- other interested users who will be able to use the infrastructure on an open, transparent and non-discriminatory basis, all in order to increase employment in the wood processing sector.

Project description

- ▶ Multi-purpose building: scientific, research, production and storage building which consists of:
 - Management and administrative building,
 - Conditioning hall,
 - Shed for natural wood drying,
 - Driers,
 - Experimental drier,
 - Boiler room,
 - Daily biomass storage and wet wood residues landfill

Project description

- ▶ Management and administrative building:
 - prototype development and CNC processing workshop,
 - 3D-technology laboratory for the development of new products and tools for factory production quality control,
 - educational and office spaces,
 - part of the office space capacities will be used as a space for start-up companies incubation in the wood sector,
 - meeting room / educational space for wood processing companies and organizing workshops and lectures.







CONCEPT d.o.o.
PROJEKTI BIRO
VINKOVCI



ZADRŽAVAMO SVA AUTORSKA PRAVA



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"Concept" d.o.o. - Vinkovci
br. 1203



European Network of Regions On Sustainable WOOD mobilization



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776754.

GENERAL DESCRIPTION OF THE PROJECT

Main aim: build a European network of Regions collaborating on knowledge transfer in the SUSTAINABLE wood mobilisation

The ROSEWOOD project involves 15 partners who have joined forces to enhance sustainable and competitive forest management in Europe.

Countries: Austria, Croatia, Finland, France, Germany, Italy, Romania, Slovenia, Spain, Switzerland

Duration of the project: 02/2018 – 01/2020

Total budget: 1.497.935 EUR

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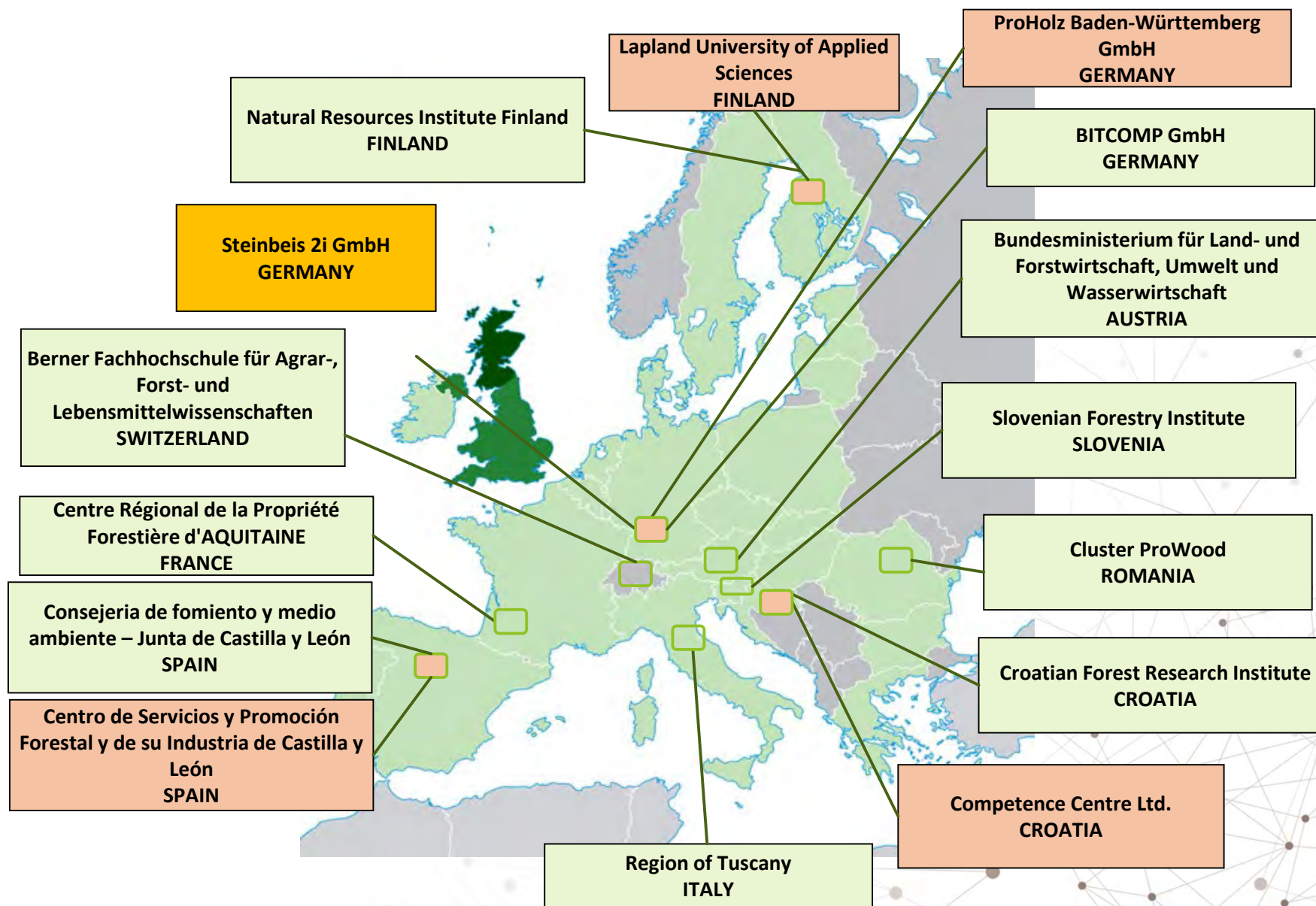
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ROSEWOOD project - General presentation



ROSEWOOD
Sustainable Wood for Europe

PARTNERS



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REGIONAL HUBS

The four Wood Mobilisation Regional Hubs were established in order to achieve the project goals. Wood Mobilisation Regional Hubs was established in Northern, Central, **Eastern**, Southern Europe together with institutions responsible for managing the members of the center in a particular region.

- Northern Europe: Finland (Natural Resources Institute Finland, Lapland University of Applied Sciences)
- Central Europe: Germany (ProHolz Baden-Württemberg GmbH, Steinbeis 2i GmbH, BITCOMP GmbH), Switzerland (Bernern Fachhochschule für Agrar-, Forst- und Lebensmittelwissenschaften) and Austria (Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft)



This project has received fur
research and innovation pro

The North Europe Hub @lapinAMKbio

The Central Europe Hub @prowood



ROSEWOOD
Sustainable Wood for Europe

- **Eastern Europe:** Romania (Wood Cluster), Slovenia (Slovenian Forestry Institute), Croatia (**Competence Centre Ltd. for research and development**, Croatian Forestry Institute)

- **Southern Europe:** Spain (Centro de Servicios y Promoción Forestal y de su Industria de Castilla y León, Consejería de fomento y medio ambiente – Junta de Castilla y León) Italy (Region Toscana) and France (Centre Régional de la Propriété Forestière d'AQUITAINE)



East Europe Hub @competencent



The South Europe Hub @FCesefor



Potential of wood for the European Bio-economy is not being fully exploited, considering the rising net annual increment of trees in Europe's forests.

The main criterion in ROSEWOOD is sustainability. That means there is a balance between economic and ecological aspects, putting the sustainable future of forests at the hearth of wood mobilisation actions.

The ROSEWOOD network shall close existing knowledge gaps by fostering the up-take of technological innovations and novel business models that create lasting value for the EU's bio economy.



EAST EUROPE HUB PARTNERS

Slovenian Forestry Institute

Pro-Wood Romanian Cluster

Competence Centre Ltd.
Croatian Forest Research Institute



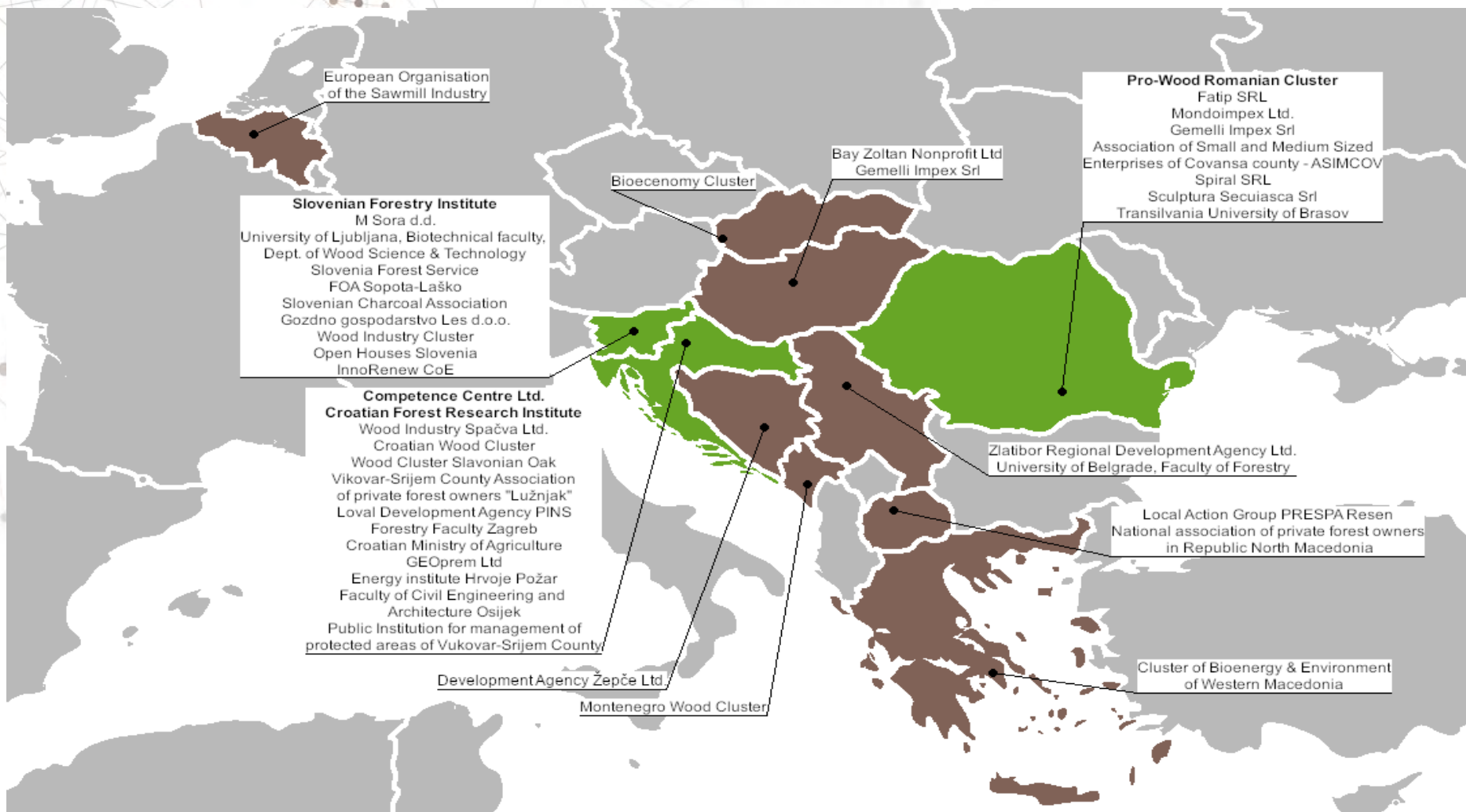
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Overview of East Europe HUB activities



ROSEWOOD
Sustainable Wood for Europe

EAST EUROPE HUB MEMBERS 42 – 35 - 11



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Overview of East Europe HUB activities



LAUNCH EVENT 08.05.2018.

OTOK, Vukovar-Srijem County, Croatia

- ROSEWOOD Project presentation
- 46 participants - representatives of Croatian Parliament, Ministry of Agriculture, Croatian Forests Ltd., Croatian Forest Research Institute, Slovenian Forestry Institute, Faculty of Forestry of the University of Zagreb, Vukovar-Srijem County, PRO WOOD Cluster from Romania, Wood Cluster Slavonian Oak, local administration and other local and foreign institutions
- Initialization of dialogue and cooperation between stakeholders in forestry, wood industry, administration and economy in the wood mobilization value chains
- **14 experts interviewed in the process of best practice and innovations collection**



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Overview of East Europe HUB activities



EXPERT PANEL 24.10.2018.

ZAGREB, Croatia

- ROSEWOOD Project presentation
- 9 experts participated - representatives of participants from forestry faculties, institutes, wood clusters and non-governmental association
- **Preparation of the East Europe SWOT analysis**
- **Prioritisation of East Europe 12 BPs and 2 Inno's according to impact on weaknesses in forest-based value chain**
- **Selection of 21 best practices and innovations from North, South and Central Hub as recommendation to be implemented in East Europe region**



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Overview of East Europe HUB activities



ROADMAP 04.12.2018.

DUBROVNIK, Croatia

- ROSEWOOD Project presentation
- 23 experts participated - representatives of CNVP Macedonia; CNVP Montenegro; University of Zagreb, Forestry Faculty, Croatia; Ministry Economy, Croatia; Croatian Forests Ltd; Wood Cluster Herzegovina, BiH; Lignum Ltd, BiH; FI.-MA. Ltd, Croatia; Vukovar-Srijem County, Croatia; Innorenew CoE, Slovenia; Wood Cluster "Furniture and Wood", BiH; SAGConsulting Ltd, Croatia; Technical Faculty Bihać, BiH; Chamber of Commerce, BiH; Bjelin Otok Ltd, Croatia; Ministry of Agriculture, Croatia; Croatian Wood Cluster;
- **Validation of the East Europe Inter-regional roadmap**



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Overview of East Europe HUB activities



WS1 BUSINESS IDEA CREATION

14.03.2019.

LJUBLJANA, Slovenia

- East Europe Hub ROSEWOOD project partners organised Business idea creation workshop
- 18 experts participated – representatives of Zagreb Forestry Faculty, Local Development Agency Skrad, Croatian Forests Ltd, Romanian Cluster Association, Business Pulse Ltd Romania, Croatian Ministry of Agriculture, Public institution for management of protected areas of VSC Croatia, Slovenian Chamber of Commerce and Industry, Biotechnical Faculty of Ljubljana University, M Sora Ltd Slovenia, Slovenian National Institute of Chemistry;
- **Workshop results: 11 business ideas created**
- **4 business ideas pre-selected for business model development**
(Wood up – spin of companies; Clean recycled wood - Develop sorting system for identification of old/used wood; Intelligent green wooden houses; From waste to the new product;



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Overview of East Europe HUB activities

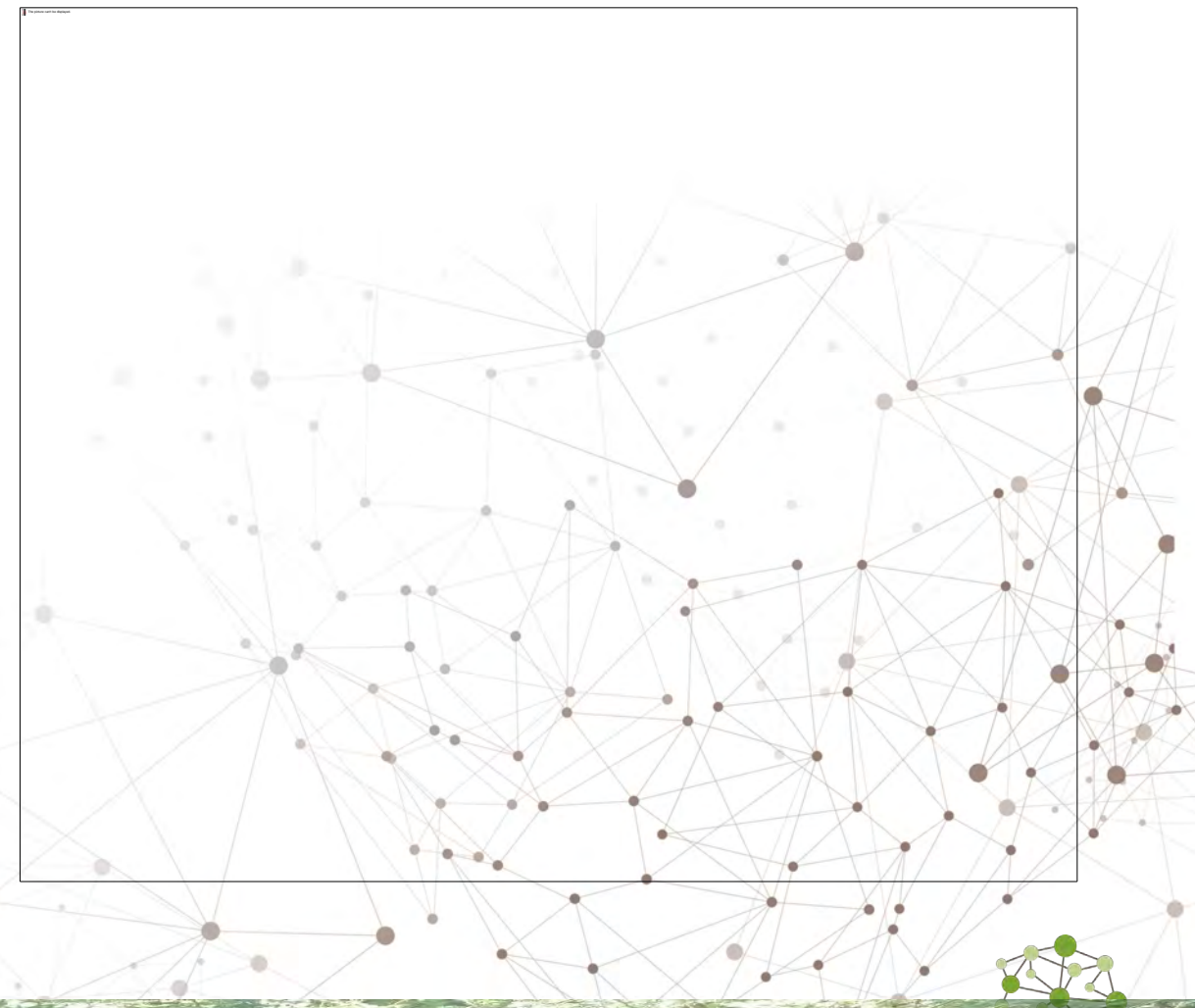


WS2 BUSINESS MODEL DEVELOPMENT

11.04.2019.

BRASOV, Romania

- East Europe Hub ROSEWOOD project partners organised Business model development workshop
- 18 experts participated – representatives of *Croatian Forests Ltd*, *Romanian Cluster Association*, *Business Pulse Ltd Romania*, *Ministry of Agriculture, Croatia*, *Public Institution for management of protected areas of VSC, Croatia*, *University of Ljubljana, Biotechnical Faculty, Department of Wood Science and Technology, Slovenia*, *Lag Prespa, Resen, Macedonia*, *Green Energy Cluster, Romania*, *Mondoimpex Ltd, Romania*, *University of Sopron/Transylvanian Furniture Cluster, Hungary*, *Transylvania University of Brasov, Romania*, *Clusterul Lemnului Bucovina, Romania*, *Bulgarian Furniture Cluster/Ligna Group Bulgaria*
- **Workshop results: 4 business models developed; From waste to the new product business idea selected for further development;**



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Overview of East Europe HUB activities



STUDY VISIT 11.04.2019.

BRASOV, Romania

- East Europe Hub ROSEWOOD project partners organised **Study visit to Best practices** in Sfantu Gheorghe (TIMFLOW, Urban wood waste)
- 13 experts participated – representatives of Croatian Forests Ltd, Romanian Cluster Association, Business Pulse Ltd Romania, Ministry of Agriculture, Croatia, Public Institution for management of protected areas of VSC, Croatia, University of Ljubljana, Biotechnical Faculty, Department of Wood Science and Technology, Slovenia, Lag Prespa, Resen, Macedonia, Green Energy Cluster, Romania, Mondoimpex Ltd, Romania, University of Sopron/Transylvanian Furniture Cluster, Hungary, Bulgarian Furniture Cluster/Ligna Group Bulgaria



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Overview of East Europe HUB activities

ROSEWOOD
Sustainable Wood for Europe

B2B EVENT 12.04.2019.

BRASOV, Romania

- East Europe Hub ROSEWOOD project partners organised **Business 2 Business** with the support of the Regional Development Agency Centru – Enterprise Europe Network partner.
- Company representatives, students, representatives of the Transylvania University of Brasov, public institutions participated at this session, discussing with ROSEWOOD project partners, exchanging information, identifying possible cooperation opportunities, etc.



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Overview of East Europe HUB activities



WS INTERREGIONAL ROADMAP

04.06.2019.

OPATIJA, Croatia

- East Europe Hub ROSEWOOD project partners organised **ROSEWOOD Project Interregional Roadmap** in the framework of the 16th Wood Technology Conference
- 63 experts participated – representatives of the wood industry, ministries, educational institutions, sectoral associations, clusters and decision-makers
- presented the ROSEWOOD project, goals and the results of the SWOT analysis conducted in the Eastern European region, and examples of best practices and innovations gathered within the ROSEWOOD project



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Overview of East Europe HUB activities



PARTICIPATION IN EVENTS

Policy Dialog Event & 11th Forum for Innovation

24.-25.05.2018 Bucharest

Executive Board meeting CROBIOM and Croatian
Wood Cluster 23.08.2018.

Assembly meeting of the Wood Cluster Slavonian
Oak, 07.09.2018.

Days of EU funds in Vinkovci 13.09.2018.

International Japanese / Croatian Conference
17.09.2018.

EUSALP WG 2 SG WOOD, 17.09.2018.

Business breakfast event, 08.10.2018.

BIO-ECO-R.D.I., 09.10.2018.

Economy Forum, Žepče BiH, 11.10.2018.

LignoLink Conference, Leipzig, 17.-18.10.2018.

Lesena ikona (Wooden icon), 17.10.2018.

1st joint RO-HU Cluster Conference, 22.11.2018.

FORESDA project, workshop, 23.11.2018,.



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Overview of East Europe HUB activities



PARTICIPATION IN EVENTS

- - Energy Barge project-Dunav great potential for biomass and energy sector, 5.2.2019. Vukovar
- 9th international energy conference on biomass and RES, 25.2.2019. Zagreb
- EU Projects Fair at Orion, 10.5.2019. Vinkovci, Croatia
- 10th Sawmill congress, 26.9.2019 Slavonski Brod, Croatia



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Overview of East Europe HUB activities



Sustainable Wood for Europe

CASCADING USE OF WOOD IN SPAČVA COMPANY



SPAČVA®

Wooden raw material which has been brought to the wooden raw material depot, during the production processes, is fully utilized.

Every processing step creates one final product. Wooden residues are used for energy production and potential of ash usage as agricultural fertilizer is being researched.

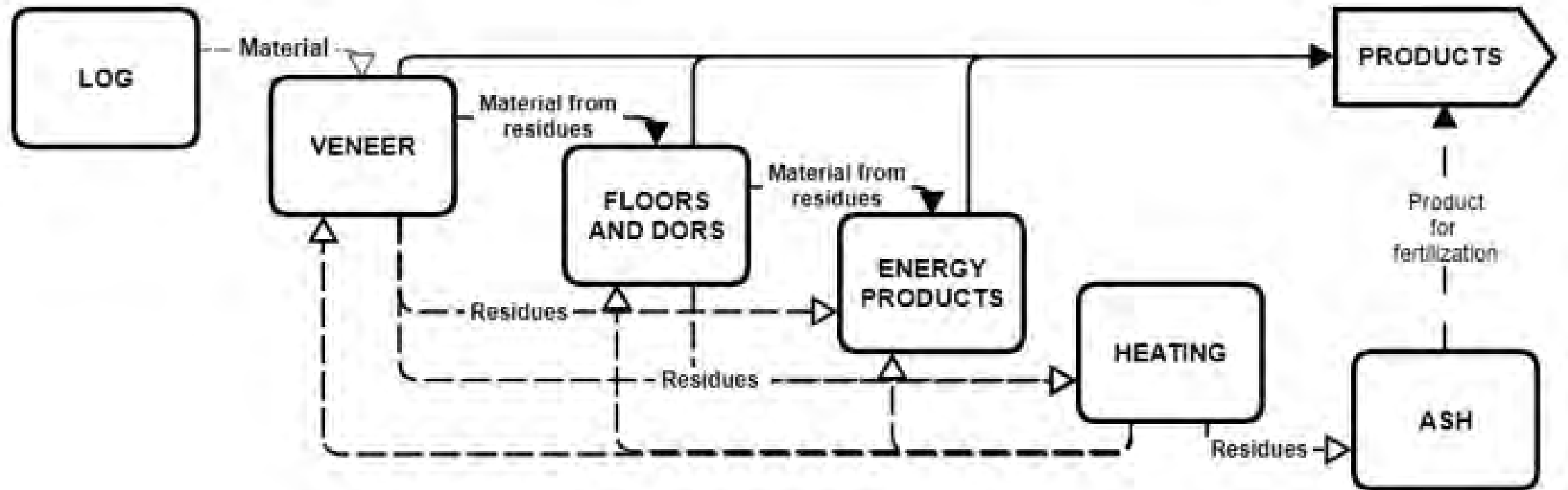
Cascading use of wood in the Spačva's practice, starts on the wooden raw material depot. First processing step is debarking. Bark is used as fuel for boiler-room. Energy produced in boiler-room is used for biomass dryers, lumber dry kiln, veneer dry kiln, steaming of logs, heating of press machine and for industrial space heating.

Second processing step is preparation of logs for processing on veneer machine. Saw dust and wood residues left-over preparation are used for pellet production as well as low quality veneer parts. Flitch residues, after veneer slicing, are dyed in dyeing kilns and processed in saw-mill.

More quality parts are used for floors and doors production, and low-quality parts are used for pellet and briquette production as well as residue after veneer cut to size. The veneer sheets are then packaged or mainly sent to next working line for producing other final products.

Elements made in finishing saw-mill are being cut to size and used for floors and doors production. Residues are used for briquette and pellet production. Spačva, in context of cascading use of wood, presents a good example of producing six various final products from wood which has been taken from forests. Every part of log, including bark, is used in production process.





Members of East Europe Hub – CEKOM

42 experts within forestry and wood industry value chain
from 35 institutions
from 11 countries

21 best practice and innovation examples identified
for strengthening local forestry and wood industry value chains
business ideas selected
business models created

One of the main goals of the Eastern Europe Hub is to **enhance and promote the use of local wood and to establish local value-chains** from a single tree in the forest, through the harvesting process, along the production steps to the final products with high added value.

Local wood for local use is a precondition for strong local forestry value-chains ensuring a strong local bioeconomy, thereby contributing to a strong regional, national and European economy.

By strengthening the uptake of knowledge and innovative approaches, the East Europe Hub supports the ROSEWOOD objectives of **creating a sustainable and competitive economy with efficient use of local resources in a sustainable way.**



SPREADING THE NEWS OF SUSTAINABILITY

<https://rosewood-network.eu/>

www.facebook.com/NetworkROSEWOOD

<https://twitter.com/networkrosewood>

<https://linkedin.com/networkrosewood>

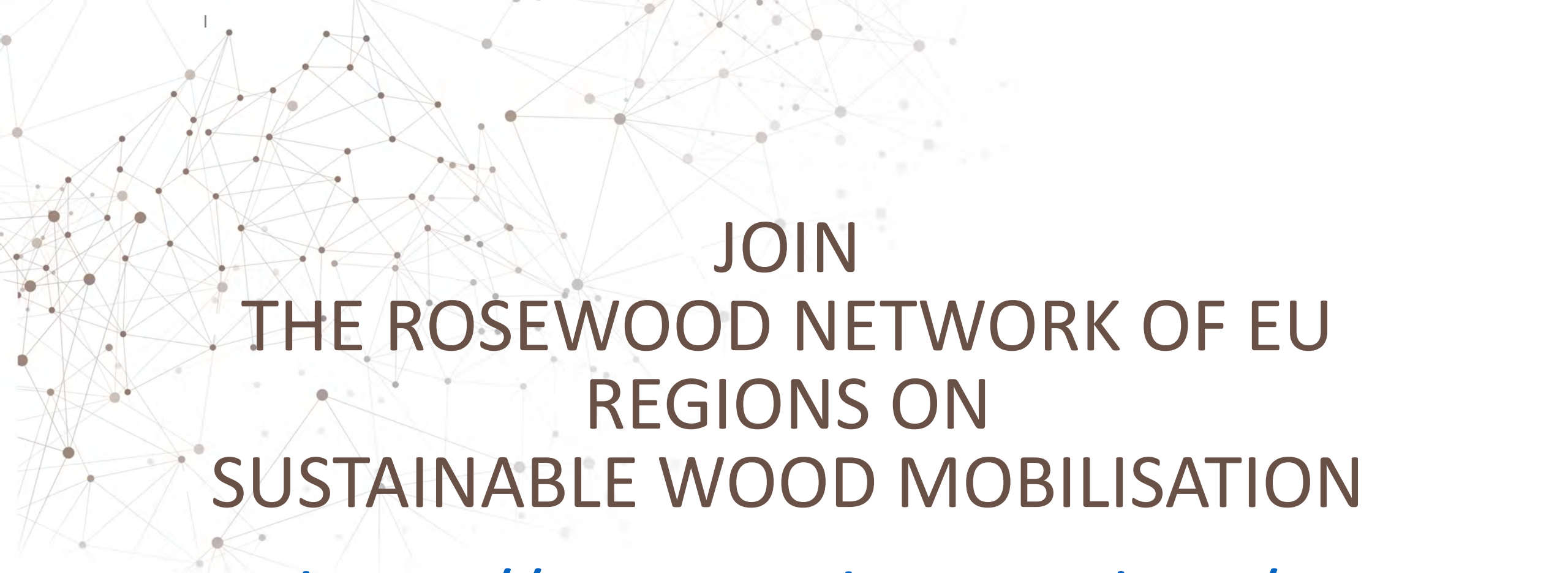


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Overview of East Europe HUB activities



ROSEWOOD
Sustainable Wood for Europe

A complex network diagram with numerous grey dots of varying sizes connected by thin grey lines, forming a web-like structure that fills the upper half of the slide.

JOIN THE ROSEWOOD NETWORK OF EU REGIONS ON SUSTAINABLE WOOD MOBILISATION

<https://rosewood-network.eu/>



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Overview of East Europe HUB activities



ROSEWOOD
Sustainable Wood for Europe

Thank You for Your attention!

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