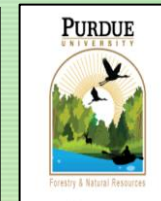
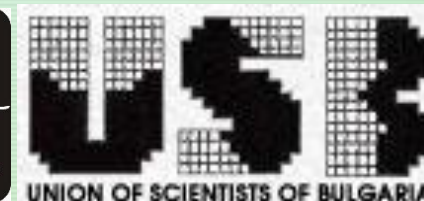


**DIGITALISATION AND CIRCULAR ECONOMY:
forestry and forestry based industry implications**

12th International Scientific Conference WoodEMA 2019

Varna, September, 11-13, 2019

▶ **CIRCULAR ECONOMY &
SHARING COLLABORATIVE
ECONOMY PRINCIPLES: A
CASE STUDY CONDUCTED IN
WOOD-BASED SECTOR**



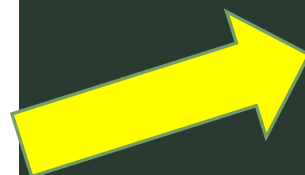
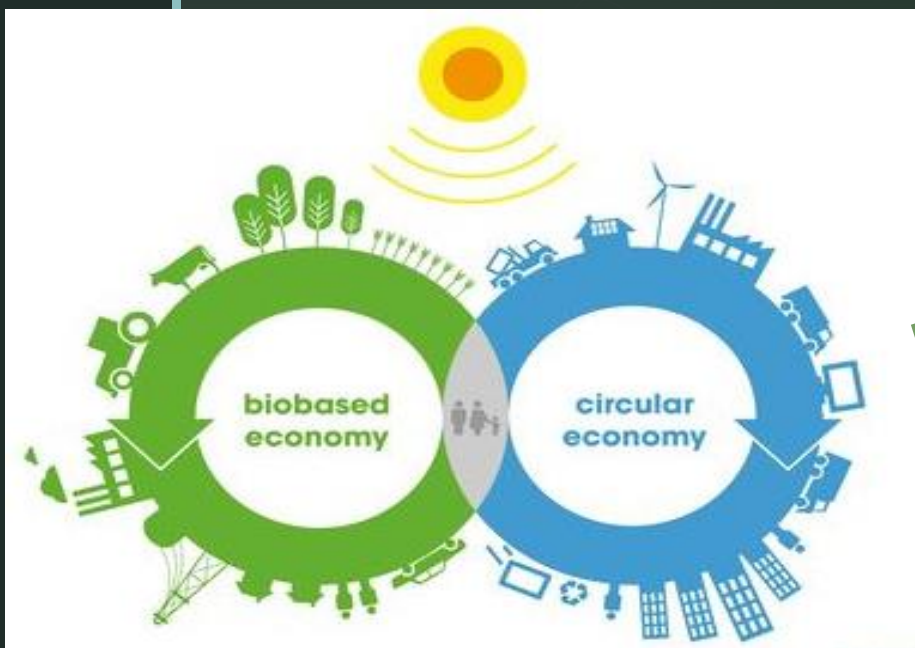
Andreja Pirc Barčič

Manja Kitek Kuzman

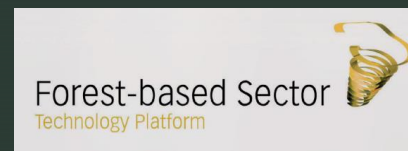
Eva Haviarova

Leon Oblak

Bioeconomy and circular economy (CE) are concept which complement each other:



have strong thematic links to **biomass and bio-based products** as areas of intervention



The European forest-based sector, a cornerstone of Europe's bioeconomy, has a long history of providing for the needs of a growing population.

Wood is good!

Wood is our most important renewable raw material because:

- It is renewable;
- It is a lightweight, nature-based, biodegradable and versatile material;
- Wood products can be reused and recycled many times and the energy stored within them can also be recovered;
- Wood has absorbed CO₂ from the atmosphere, which mitigates climate change;
- Wood products are made in an efficient, low-energy production system, with minimal emissions and well-established recycling systems;
- Wood production can be increased as long as we manage our forests sustainably;
- Wood has the potential to replace other materials of fossil origin and deliver the same or even better performance.



► ... a few numbers about CIRCULAR AND SHARING/COLLABORATIVE ECONOMY ...

World Economic Forum (2016) it is estimated that the circular economy will provide an economic opportunity of **over \$1 trillion** as well as significant social and environmental benefits.

European Commission Report (2018) on collaborative economy overall size of the collaborative economy in the **EU-28 in 2016 is estimated to be EUR 26.5 billion**.

The collaborative economy offers about **394,000 jobs** across the EU, representing about 0.15% of total EU-28 employment.

The largest markets for the collaborative economy can be found in France (25% from total collaborative EU-28 market), UK (17%), Poland (10%) and Spain (10%). These top four countries also offered the most jobs in the collaborative economy (approx. 74,600, 69,400, 65,400 and 39,700, respectively) in 2016.

In general, the seven largest collaborative economy markets in the EU (France, UK, Poland, Spain, Germany, Italy and Denmark) represent about 80% of total collaborative revenues in the EU-28 in 2016.

... a little more about the 'sharing & collaborative economy' concepts/principles ...

there is no 'shared' consensus on what activities involve the 'sharing economy'

the activities and organizations that are today commonly referred to as the 'sharing economy' have also been labelled as 'collaborative consumption'

The sharing economy represents a fundamental shift in how consumers value products



~~consumers value ownership which causes a lot of conspicuous consumption which results that many products are wasted which contributes to our high demand for natural resources.~~



Collaborative consumption can mitigate these negative effects, but poor communication and small social networks have traditionally limited it ---- **it offers a quick and (*cheap*) way of matching supply with demand for goods and service ---**

innovation in



the business model


the technological platforms and mobile apps which bring demand and supply together and group them in a way which was not possible before (quicker, cheaper and on a bigger scale), including in geographical areas or services sectors where the concentration of players is lower and where new commercial opportunities are now arising





... FURTHER ...



... the sharing economy has become a popular term to describe a range of various business models, activities and organisations in order to get a new perspective on the social, environmental, and economic value that can be created from a number of assets and skills, in innovative ways (Nesta (2014))



We argue that collaborative and sharing economy concepts and wood based sector are two promising domains which require to be thought together in order to play an important role in reaching goals of circular economy and bioeconomy strategies



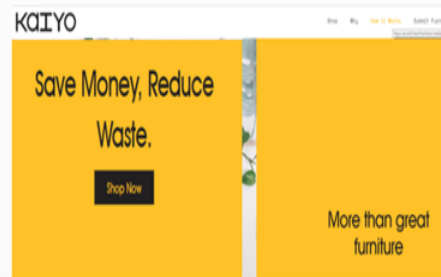
2.1.1 Furnisure – Kaiyo, New York, US

Kaiyo is an online marketplace committed to great design, exceptional customer care, and a more sustainable planet.



FURNISHARE – KAIYO,
New York, US

Kaiyo is an online marketplace committed to great design, exceptional customer care, and a more sustainable planet. We believe that buying well-made, pre-owned furniture is a better choice than buying new—because great design is sustainable design—meaning it's timeless, accessible, and built to last for a lifetime of good vibes.

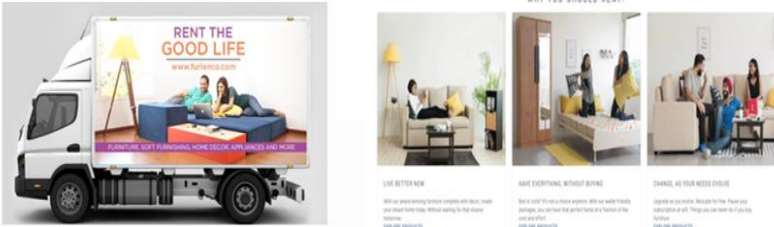


**Made with ❤️ for the
people and the
planet.**

They believe that buying well-made, pre-owned furniture is a better choice than buying new, because great design is sustainable design — meaning it's timeless, accessible, and built to last for a lifetime of good vibes. They try to connect a love of great design with a greater love for the environment by keeping furniture out of landfills and in customer (our) homes as long as possible.

2.1.2. Furlenco, Bangaluru, India

Furlenco is the largest and best furniture rental company in India. Their mission is to enable the urban Indian to live better today in their homes, swapping of furniture when needs change, relocation across cities, pausing of subscriptions and deep cleaning services as a part of the subscription.



RENT THE GOOD LIFE
www.furlenco.com

FURNITURE, SOFT FURNISHINGS, HOME DECOR, APPLIANCES AND MORE

WHY YOU SHOULD RENT!

LIVE BETTER NOW
With our great delivery service, you can get your furniture delivered to your door, ready to use. No need to worry about delivery or installation. **DEFLINE PRODUCTS**

HAVE EVERYTHING, WITHOUT BUYING
Don't want to buy a chair? Rent one. Don't want to buy a table? Rent one. Don't want to buy a sofa? Rent one. **DEFLINE PRODUCTS**

CHANGE AS YOUR NEEDS EVOLVE
Upgrade to your favorite. Upgrade to the latest. Upgrade to the best. Upgrade to the most. Upgrade to the most. Upgrade to the most. **DEFLINE PRODUCTS**

FURLENCO, Bangaluru, India

Why Rent Furniture?


An empty house is like a blank canvas. There are hundreds of thousands of things you can do to decorate your interiors. But imagine this: you've pictured your ideal home, bought the furniture, lived in for about a year. And now you're bored. What now? Would you want to go through the hassle of reselling your old furniture and buying new furniture all over again? Unlikely right? Well then, here is the smart solution: Rent furniture from Furlenco!

So when somebody wants to rent a fridge in Bengaluru or get a study table on rent, he knows where to look. Furniture rentals in Bengaluru are picking up and turning into a way of life. According to company managers, life is just easier without having to deal with heavy furniture that is difficult to get rid of, especially if you're bored of it or moving homes. Plus, people just like having the option of changing their furniture at will or returning it when they want something else.

2.1.3. M'Sora – Ljubljana, Slovenia

ReWin – A best practice in resource recycling: Wooden windows made of old, discarded wood

M' SORA d.d. Ljubljana, Slovenia



© M Sora d.d. 2018

RecAPpture

RecAPpture (2018)

The project "Development of an application for collection of waste wood" (RecAPpture) is dedicated to the development of a mobile and web application that will connect users who want to get rid of the waste wood and M SORA, which will use the wood for the production of wooden windows.

Summary	The main goal of the ReWin project is the development and commercialization of wooden windows made of old, discarded wood, with special emphasis on wooden beams.
Domain	Construction, product development, research
Source of wood	Recycled wood
Location & implementers	Žiri; M Sora d.d. company

The Slovenian company M SORA developed a prototype of a timber window ReWin made of disposed timber windows which were up to even 50 years old. Window scantlings, from which the ReWin window is made, are produced of spruce and larch wood. The ReWin window is a unique example of a product that was developed by recycling the disposed timber windows that would otherwise end up at a landfill, and represents a completely fresh idea and innovation in the field of builders' joinery. ReWin windows is one outcome of the international project CaReWood - Cascading Recovered Wood, funded by the European Commission and several national EU partners.



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2.1.4. MELU – Luče ob Savinji, Slovenia



The joinery MELU follows to sustainable policy. Care for quality already starts in grow phase-high quality product has to be made of healthy tree. MELU is a family company that was established in 1933 by Rajmund Selišnik and is now led by third generation of joiners. The internal doors *Vino* are built from French oak wine barrels, which lend the product a special touch. The doors are made entirely from solid wood, brushed and oiled and therefore safe, as well as human and environmentally friendly. With their contemporary design and superior quality they are able to meet the highest expectations of modern living.

2.1.5. Saviola – Viadana, Italy



The technologies used by the Saviola Groups are able to process all the collected wood waste (packaging, manufacturing scraps, broken furniture, construction material, etc.). With the network of Eco-legno (Eco-Wood) collection centre spread all over Italy. Saviola is able each year to produce over 1.5 million tons of used wood to process.

CONCLUSION



To increase the level of wood used in residential and public construction, interior design, and outdoor design results and information conducted during this work can help in the process of implementing the collaborative economy principles to the wood based sector and to wood product consumers. In this way we shall increase the common knowledge regarding the circular economy and sharing economy which will be used in the development of the actions need for the cascade use of wood, wood products and utilization of wood following 'circular', 'sharing', and/or 'caring' principles in the Middle and Southeast Europe bio-based sector.

Thank you!

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Call for Abstracts

Hereby we invite all interested authors who wish to present their research results or experiences from the industry associated with theme of this year's conference, to submit their paper for the conference. *This year a part of the conference will be dedicated to the 70th anniversary of Drvna industrija Journal.*

All accepted abstracts will be published in the book of abstracts which will be indexed in CAB database.

Submitted full papers will be reviewed by at least two referees and, if positive evaluated, it will be published in Drvna industrija Journal that is indexed in SCI-Expanded.

Conference topics should be related, but not limited to the following

1. *Properties of wood and wood based materials*
2. *Wood modifications*
3. *Wood processing technology*
4. *Wood products, furniture and interior design*
5. *Management in wood industry*
6. *Renewable energy from wooden biomass*



About Zagreb

The city of Zagreb, capital of Croatia, on the historic and political threshold between East and West, illustrates both the continental and Mediterranean spirit of the nation it spearheads. Zagreb is the cultural, scientific, economic, political and administrative centre of the Republic of Croatia. Zagreb, with a population of nearly one million, contains almost a quarter of the entire population of Croatia.

Early in December, the famous Advent fair in Zagreb begins. During the time of Advent, Zagreb offers a special atmosphere which simply must be experienced. The city streets and squares invite you to let your hair down and partake in singing, dancing, and other kinds of entertainment with family and friends.



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30th International
Conference on Wood
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“IMPLEMENTATION OF WOOD
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SECTOR”

70th anniversary of
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December 12th - 13th 2019
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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE



INNOVAWOOD



Submission of Abstracts

Abstracts should be submitted by email to official email address apirc@sumfak.hr no later than 15th September, 2019. Abstracts must be in Microsoft Word format (.doc or .docx **ONLY**). Use the appropriate template to write the abstract.

The official language of the conference will be English.

Contact persons:

Assist. Prof. Andreja PirčBarčič, PhD
e-mail: apirc@sumfak.hr
phone: +385 1 235 2567

Important Dates

15 September, 2019 Abstract submission
20 September, 2019 Acceptance of Abstract
20 October, 2019 Full Paper submission
1 November, 2019 Early bird fee deadline

Venue

Conference will take place at the Faculty of Forestry, University of Zagreb, Svetošimunska cesta 25, 10000 Zagreb, Croatia



Conference fees

Early bird fee: until 1 November, 2019 - EUR 125
Regular fee: after 1 November, 2019 - EUR 180

The fee includes admittance to all sessions, proceedings, publishing **abstract** in the proceedings, refreshments during breaks and a conference dinner.

The fee for accompanying persons is EUR 50. It covers a cost for the conference dinner.

Data for payment will be sent in the pro forma invoice after registration for the conference.

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There are also many other hotels in Zagreb.