



Interreg



EUROPEAN UNION

Danube Transnational Programme

DanuBioValNet

Regional cluster landscape Slovenia

WP3 Value Chain Mapping

Activity 3.2 Cluster Mapping

Output 3.2 Cluster Mapping as an Analytical Tool

D3.2.1 Regional cluster landscapes and one entire cluster landscape for Danube Region

***Cross-clustering partnership for boosting eco-innovation
by developing a joint bio-based value-added network for the Danube Region***



CONTENTS

Cluster Mapping Fact Sheets.....	3
Eco-Construction.....	3
Advanced Bio-based Packaging	5
Phytopharma.....	7

CLUSTER MAPPING FACT SHEETS

In the following the cluster mapping results of selected clusters and cluster initiatives in Slovenia in the field of Eco-Construction, Bio-based Packaging and Phytopharmaceuticals are presented. Besides

the mapping as such, additional informations are given about age, size, key objectives etc.

ECO-CONSTRUCTION

Eco-construction and related industries are a part of activities done by Wood Industry Cluster, which is involved in promoting the research and development of the partners and supporting their efforts in innovation - building multi-floors buildings from eco- and bio-materials, insulation from straw, paper, cellulose and wool, advance beam design and smart eco-houses with 3D printed elements. Wood Industry Cluster is a non-profit organization founded in 1999 by 17 woodworking companies and 2 institutions, as a Wood Industry Development Centre. In 2003, the Institute was renamed the Wood Industry Cluster. Further development of the eco-construction field is also supported through national Strategic Research and Innovation Partnerships (SRIP) established in 2017.

General information about cluster/initiative

- **Wood Industry Cluster¹:** The mission of the Wood Industry Cluster is promotion of the integration of companies and research institutions, aiming at improving the knowledge transfer into the companies, facilitating their participation in international development projects and implementing projects of common interest, resulting in knowledge-based competitiveness. Cluster's main area of work is related towards R & D projects

and business development support, training, internationalization, transfer of knowledge by linking R&D and companies and strengthening the sectorial support network for the benefit of businesses. Cluster has 106 members from the industry (Forestry and wood-processing companies) and 6 members from the research and public organizations:

- **SRIP Smart buildings and home with the wood chain (SRIP PSIDL)²:**

Slovenia's Smart Specialization Strategy defined nine priority areas³. In this regard, nine partnerships were formed following a spontaneous, not policy-driven bottom-up initiative recognising the need for cooperation and integration. SRIP Smart buildings and home with wood chain focuses on smart devices and systems in buildings, wood and wood chain, advance construction material and composites, and management and support tools. It aims to develop "a comprehensive Slovenian building with an ideal indoor environment".

In Strategic development and innovation partnership for smart buildings and home's with the wood chain, more than 54 companies, Wood Industry Cluster and R&D institutions are members.

Cluster Visual Map of value chains:

Wood value chain, as one of the Slovenian's key priorities, is well covered in terms of Cluster support and other initiatives. For the Eco-Construction value chain the two entities cover all eight segments

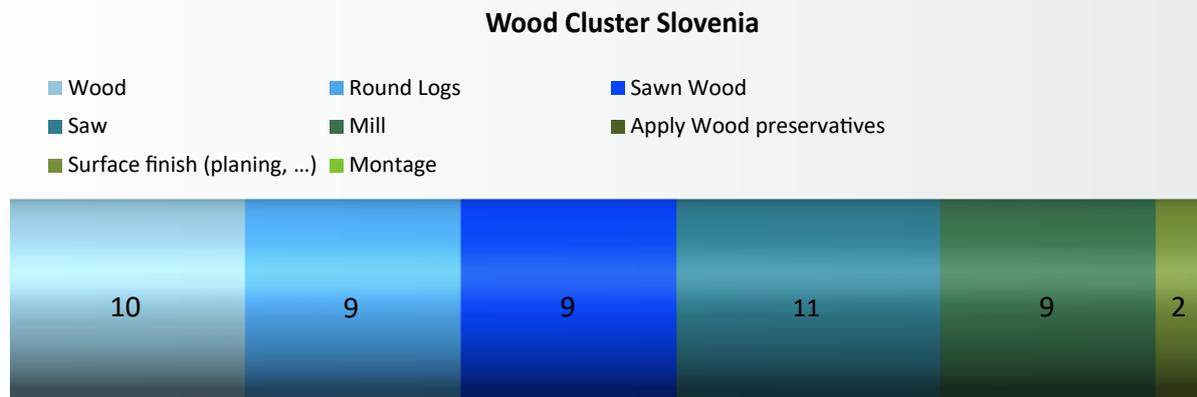
from wood harvest, round log handling to surface finishing, advance wood composite manufacturing and end-products (houses, furniture).



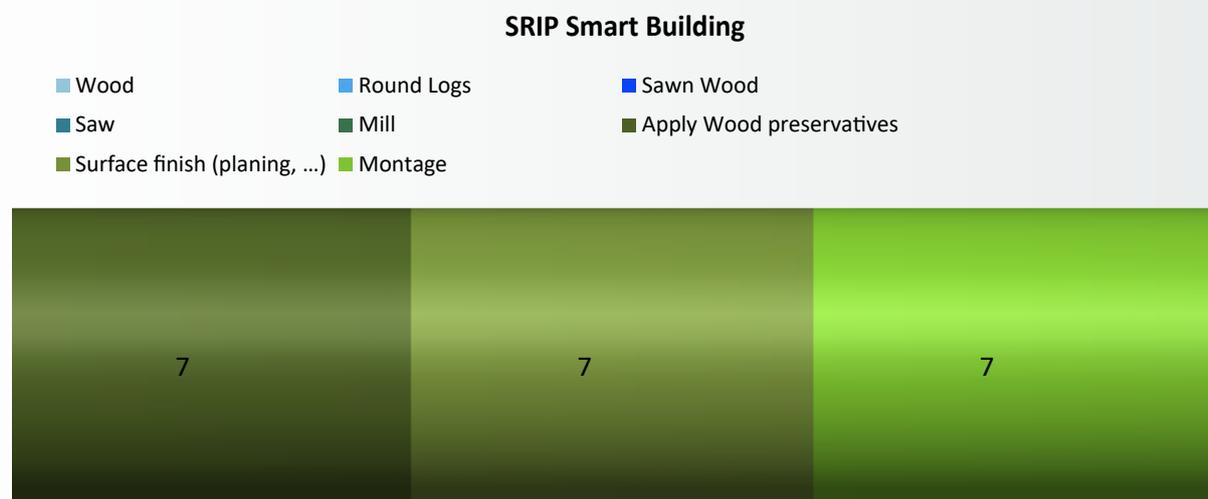
1) <http://www.lesarski-grozd.si/en/lesarski-grozd/>

2) <http://admin.teces.si/prikazi.asp?vsebina=info%2Fobvestilo.asp&id=245&jezik=1033>

3) http://www.svrk.gov.si/en/areas_of_work/slovenian_smart_specialisation_strategy_s4/strategic_research_and_innovation_partnerships_srip_in_detail/

Picture 1: Cluster Map of the Wood Industry Cluster Slovenia - Eco-Construction

Numbers indicate amount of companies in the respective value-adding step.

Picture 2: Cluster/Initiative Map for SRIP-Smart buildings and home with the wood chain Initiative

Numbers indicate amount of companies in the respective value-adding step.

Services offered by cluster organisation:

Cluster organisation offers support for research and development, training, internationalization, transfer of knowledge and strengthening the sectorial support network..

List and short description of other key actors:

Following is a short list of other key actors in bioeconomy including those with strong cooperation between SMEs and research:

• Leading clusters:

- Wood Industry Cluster is the leading cluster for the Eco-Construction value chain in Slovenia.

• **Key industrial leaders** – single companies are more or less organized into existing cluster or part of an associated initiative

• Competent research and academia:

- CCIS – Wood Processing and Furniture Industry Association,

- UNI LJ, Biotechnical faculty – Department for Wood Science and Technology,
- Slovenian Forestry Institute,
- Slovenian National Building and Civil Engineering Institute,
- Association of Wood Engineers and Technicians Ljubljana,

• Important policy and decision makers.

- Ministry of Education, Science and Sport,
- Ministry of Agriculture, Forestry and Food,
- Ministry of Economic Development and Technology, Directorate for wood industry
- Ministry of Environment and Spatial Planning.

• Other key relevant stakeholders

- Chamber of Commerce and Industry of Slovenia,
- Section of Slovenian manufacturers of wooden prefabricated buildings.

ADVANCED BIO-BASED PACKAGING

There is no cluster organisation/initiative dedicated directly to bio-based polymers or advanced bio-based packaging in the Slovenia. A part of the

bio-based packaging value chain can be covered through existing plastics cluster and initiative.

General information about cluster/initiative

• Plastics cluster

The Plasttechnics Cluster Slovenia⁴ unites the most important companies and accompanying institutions from the plastics industry. The cluster's members use the latest technology and are the optimal partner for new products and components, from planning through tool-making to production. Members of the cluster offer following groups of products/services:

automotive parts, EE parts, packaging, tubes, plates, foils, household equipment and other. There are currently 68 members from the industry and 10 members from the research and education field.

• Poly4EmI

The Poly4EmI initiative⁵ addressed the challenges of Slovenian innovation policy through the development of a new policy model for a systemic approach to stimulate the transformation of

General information about cluster/initiative

• Plastics cluster

The Plasttechnics Cluster Slovenia⁴ unites the most important companies and accompanying institutions from the plastics industry. The cluster's members use the latest technology and are the optimal partner for new products and components, from planning through tool-making to production. Members of the cluster offer following groups of products/services: automotive parts, EE parts, packaging, tubes, plates, foils, household equipment and other. There are currently 68 members from the industry and 10 members from the research and education field.

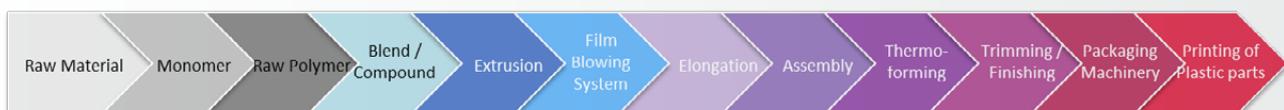
• Poly4EmI

The Poly4EmI initiative⁵ addressed the challenges of Slovenian innovation policy through the development of a new policy model for a systemic approach to stimulate the transformation of the industrial structure by exploring the potential of cross-cutting technologies. It helped develop a joint platform of regional clusters to promote entrepreneurship and the application of new business solutions. Partners of the initiative include Automotive Cluster of Slovenia (ACS), Centre of Excellence PoliMaT (CE PoliMaT), Chamber of Commerce and Industry of Slovenia (CCIS) and Polymer Competence Centre Leoben and Ministry of Education, Science and Sport, as a coordinator.

Cluster Visual Map of value chains:

There are no suppliers of raw materials at the first part of the value chain of the bioplastic / advance packaging; foreign intermediaries do all of the distribution. The rest of the value chain is

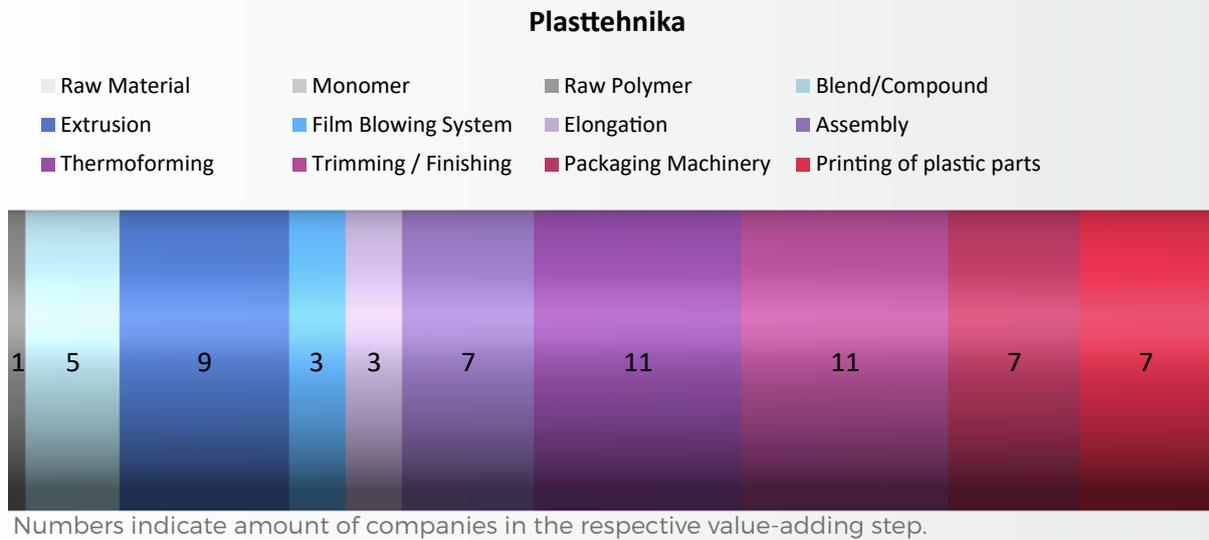
represented equally, but only a few of the companies actually produce bio-based packaging or similar products.



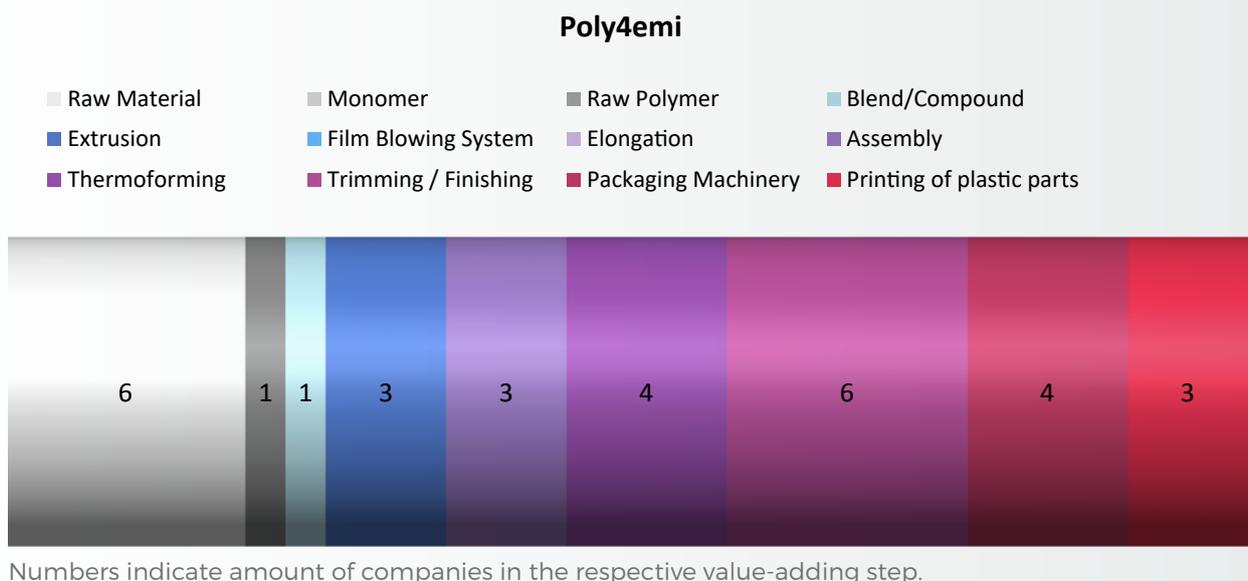
4) <http://www.giz-grozd-plasttehnika.si/English/Index.html>

5) <http://www.poly4emi.eu/>

PICTURE 3: Cluster Map of the Plasttehnika cluster



PICTURE 4: Cluster/Initiative Map of the Poly4EmI Initiative

**Services offered by cluster organisation:**

Cluster organisation offers support for the innovative, entrepreneurial and educational activities of their members.

List and short description of other key actors:

Following is a short list of other key actors in bioeconomy including those with strong cooperation between SMEs and research:

- **Leading clusters** - there is no leading cluster in the bioplastic packaging in Slovenia.
- **Key industrial leaders** - single companies are more or less organized into existing cluster or part of an associated initiative.
- **Competent research and academia:**
 - Polymer Technology College,
 - University of Ljubljana Faculty of Chemistry

- and Chemical Technology,
- University of Ljubljana Faculty of Natural Sciences and Engineering,
- University of Ljubljana Faculty of Mechanical Engineering,
- National Institute of Chemistry Slovenia,
- University of Maribor Faculty of Mechanical Engineering,
- University of Maribor Faculty of Chemistry and Chemical Engineering,
- University of Maribor Faculty of Economics and Business,
- TECOS Slovenian Tool and Die Development Centre,
- The Association of Slovenian Researchers.

- **Important policy and decision makers.**

- Ministry of Education, Science and Sport,
- Ministry of Agriculture, Forestry and Food,
- Ministry of Economic Development and Technology,
- Ministry of Environment and Spatial Planning.

- **Other key relevant stakeholders**

- Chamber of Commerce and Industry of Slovenia.

PHYTOPHARMA

General information about cluster/initiative

In Slovenia there is no cluster or cluster initiative for Phytopharma. The herbalists' (individuals and farmers) are organized into regional herbalist associations and/or co-operatives. There are 253 farmers registered⁶ for growing of spices, aromatic, drug and pharmaceutical crops as farms with supplementary activities in herbal cultivation and processing (NACE A01.280). Ministry for Agriculture, Forestry and Food is the competent authority. The Guidelines for the development of local supply of herbs for the period 2016 – 2021 in Slovenia are adopted.

SRIP Health – Medicine⁷ has identified six areas of strategic importance for the transformation of the health and medicine: translational medicine,

biopharmaceutics, and resistant bacteria, cancer treatment, active and healthy aging and herbal and natural cosmetics. SRIP Health – Medicine has 52 partners from education, R&D, business and NGOs, 26 SME members: 3 larger company members: 14 research organisations/universities/technology centres and 4 other ecosystem members.

Herbal products are regulated as over the counter medicines, foods and cosmetics. The claims allowed by law vary according to the regulatory status under which a product is classified. By law, herbal medicinal products may make medical claims; however, other herbal products such as cosmetics and foods may only make cosmetic and nutritional claims, respectively. And this last two are included in this report.

Phytopharma Actors in Slovenia:



Picture 5: Actors/Associations Map of Phytopharma in Slovenia

Phytopharma Cluster Slovenia



Numbers indicate amount of companies in the respective value-adding step.

6) SURS Popis tržnega vrtnarstva 2013

7) <http://www.sis-egiz.eu/en/activities/srip/>

Services offered by cluster organisation:

Associations of Herbalists organisation provide business related support and networking for its members, entrepreneurial and educational activities, training, certification for their members. Associations prepare an appropriate inventory of the existing potential in the field of herbalism and a potential selection of new members in order to identify market opportunities for certain products (hydrolysates, essential oils, tea blends, tinctures, marmalades, syrups ...), and raise awareness by organizing courses, lectures and workshops in the field of knowledge, processing and use of herbs for its members and interested individuals.

• Associations of Herbalist are linked to R&D institutes which are providing:

- Scientific research;
- Advisory work;
- Education;
- Sales of organic seeds and seedlings of medicinal and aromatic plants;
- consulting for growing medicinal and aromatic plants;

List and short description of other key actors:

Following is a short list of other key actors in bioeconomy including those with strong cooperation between SMEs and research:

• Key industrial leaders

- Medex d.o.o.,
- Lek d.d., Sandoz group
- Krka d.d.,
- Medis d.o.o.

- Favn d.o.o., Deveopment of herbal products, production of herbal products, testing and certification of herbal products,
- Konopko Cooperative, Co-op for sustainable production & processing of hemp,

• Competent research and academia:

- University of Ljubljana Biotechnical faculty,
- University of Ljubljana Faculty of Agriculture
- University of Maribor Faculty of Agriculture and Life Sciences,
- Agricultural Institute of Slovenia,
- The Institute of Hop Research and Brewing in Žalec, Slovenia pan-Slovenian centre for the production, processing and application of medicinal and aromatic plants,
- Eurofins ERICo d.o.o. environmental protection company/institute

• Important policy and decision makers.

- Ministry of Education, Science and Sport,
- Ministry of Agriculture, Forestry and Food,
- Ministry of Economic Development and Technology,
- Ministry of Environment and Spatial Planning.

• Other key relevant stakeholders

- School for horticulture and visual arts in Celje - educational programmes on secondary and post-secondary level - Herbalist,
- National Vocational Qualification for Herbalist,
- Chamber of Agriculture and Forestry of Slovenia (CAFS)
- Pythopharmaceutical Economic Interest Association

The Cluster Mapping Report was created by:

Ministry of Education, Science and Sport

Masarykova cesta 16,

1000 Ljubljana

Slovenia

www.mizs.gov.si

gp.mizs@gov.si

Anteja ECG d.o.o.

Lambergarjeva 8,

Ljubljana, Slovenia

www.anteja-ecg.com

info@anteja-ecg.com

www.interreg-danube.eu

[eu/approved-projects/](http://approved-projects/)

danubiovalnet

