

A LIVING LAB TO EVALUATE SIDE STREAMS



How can you tell if an industrial side stream has enough potential to create an economic and environmental value? By putting it to the test in a living lab. A recent activity shows that combining interviews with live sessions is an optimal approach when co-creating user-driven innovation in a living lab.

By Annica Åman, Paper Province/BIS partner

Earlier this year, Paper Province conducted an innovative forum for evaluating the potential of a renewable product called enriched biochar. It is a biobased fertilizer fit for modern forestry that could be produced from residual side streams in the pulp and paper industry.

The method used in the forum was a living lab approach. It worked well for identifying gaps, opportunities, and challenges in the product's value chain. The main characteristic of a living lab is an experimental approach in a real-life context with user involvement centred on collaboration and co-creation of knowledge. In this lab session, product stakeholders came together virtually in the lab to visualise and analyse materials, production methods and business opportunities from various angles.

“By looking at the biochar process from different perspectives and exploring it in open discussions the participants gained new insights. It helped in understanding the complexity of the value chain and overcoming challenges in order to accelerate a potential symbiotic business model for this particular product”, says Per Myhrén, project manager at Paper Province.

DIGITAL FORMAT PROVED SUCCESSFUL

The activity was conducted as a part of the Baltic Industrial Symbiosis project, intended to test how well living lab as a method works in co-creating innovation and business opportunities connected to side streams.

The lab was conducted digitally due to COVID-19 restrictions. The original plan was to map the material and stakeholder value chains live by making study visits. Instead, a first virtual flowchart for the material was created through desk research including interviews and videos from production sites. The customer perspective was added later, in online group sessions.

A LIVING MAP

As the insights were formed, the map was updated. When the living lab was completed, the visual map had added several layers explaining the value chain, as well as solutions for overcoming possible gaps. In this sense it worked as a tool to investigate whether it is technically and financially possible to start large-scale production of enriched biochar.

“Our key learnings are described in a digital guidebook to help other actors who want to perform a living lab for innovation, evaluation and co-creation of a potential industrial symbiosis. For instance, we learned that desk research and phone interviews in combination with live workshops is an efficient way to perform a successful living lab. Had it not been for COVID-19 we would probably not

have gained this insight, says Per Myhrén. “The next time we perform a living lab activity we will go about it in a similar way; we will initially map the material journey and adding the customer perspective live in the second stage. But then we will hopefully get to do that part in a physical workshop session.”

MORE INFORMATION

Want to learn more about the living lab that was performed by Paper Province earlier this year? Click [here](#)

Download the guidebook for Industrial Symbiosis Living Lab [here](#)



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