

Alpine Space

INNOBIOVC

VCG rolled-out in PP regions and used

Output 1.2

Summary

This report shows in which regions the VCG was rolled-out and used.





OUTPUT DESCRIPTION

OUTPUT:

O 1.2 VCG rolled-out in PP regions and used

WORK PACKAGE:

WP1. Rolling-out the enhanced Innovation Express Scheme for establishing cross-regional value chains ACTIVITY 1.2:

Anteja provides methodology and trainings to use VCG

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[X] PU: Public

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@InnoBioVC, 2023



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EXECUTIVE SUMMARY

The potential for unlocking the circular bioeconomy is primarily determined by the possibility of building **value chains** that connect all players, such as primary producers, suppliers of biomass and renewable by-product conversion technologies, brand owners, regulatory and certification agencies. These value chains can only be visible through the data collection of all project regions and data.

The INNOBIOVC report, Output 1.2, provides project partners with an overview of the training workshops which were conducted, how VCG was rolled-out and used. The Value Chain Generator (VCG) provides input for discussions with project partners on strategies and findings related to fostering a circular bioeconomy in participating regions.

Training workshops were conducted with Business Upper Austria, Innovation Salzburg, Lombardy Green Chemistry Association, and WFG Heilbronn. These workshops aimed to define the scope of the Innovation Express 2024 (IE 2024) call, identify promising value chains, and pinpoint key stakeholders.

- In Salzburg, discussions focused on the critical mass of food companies and the need for processing facilities for fermentation to support the circular bioeconomy in Upper Austria.
- In Lombardy, the LGCA cluster's technological capacity was highlighted, emphasizing the need for collaboration with food and beverage companies for biomass supply.
- In Heilbronn, the workshop was focused on circular economy ecosystem which include also automotive, machinery and plastics industries.
- Chemie Cluster Bayern the discussion provides insight on use of brewery, dairy and winery residuals for the pharma, cosmetics and food industry.



1.INTRODUCTION TO THE VALUE CHAIN GENERATOR

The Value chain generator utilizes the cutting edge BioLink® algorithm to define technologically sound and commercially viable circular value chains and business models for the regions and clusters.

Value Chain Generator (VCG) A Pathway to Circularity and Profitability

VCG leverages AI and big data Biolink® model, to repurpose industrial resdiuals into valuable resources and products. VCG not only enhances the profitability of companies in the region, but also aligns with climate targets by fostering a transition towards a circular economy.

Creating High-Demand Products from Waste

By matching companies based on their resource needs and residuals, VCG facilitates the creation of indemand market products. It offers technical solutions and fosters business partnerships that reduce waste treatment costs, generate new revenue streams, and improve overall profitability. Simultaneously, it contributes to the reduction of CO2 emissions and the conservation of land and freshwater resources.

Empowering Regional Development Agencies, Clusters, and Chambers

VCG serves regional development agencies, clusters, and chambers in their effort to accelerating the adoption of circular economy practices among their members. It enables the exploration and development of viable solutions and concrete partnerships for projects and investments. Additionally, VCG promotes knowledge transfer across projects and initiatives, facilitating best practice sharing and expediting the transition to a circular economy while leveraging European-developed technologies.

The IEC24 coordination office, which was established within the project and lead by Biz-up and WFG, with collaboration of all project partners, was coordinating the final thematic scope of the call. The final thematic scope was broad to keep the call attractive:



2. TRAINING WORKSHOPS IN THE REGIONS

Anteja conducted four training workshops with InnoBIoVC partners, namely Business Upper Austria, Lombardy Green Chemistry Association, Chemie Cluster Bayern and WFG Heilbronn. The workshop with Upper Austria also included Innovation Salzburg.

These sessions were crafted to assist partners in defining the scope of the IE 2024 call, identifying the most promising value chains, and pinpointing the key stakeholders integral to the development of these value chains. The primary objective of each of these workshops was to explore potential circular value chains within the context of the IE 2024 initiative. This exploration involved identifying gaps within these chains and the key actors necessary to foster cross-regional cooperation. Such cooperation is crucial to bridge these gaps and stimulate the growth of the circular bioeconomy sector, extending from the Alpine Space and beyond.

This collaborative approach helped regional development agencies and clusters understand how to use the Value Chain Generator to define circular value chains that are technically and commercially viable for their members/regional companies. The structure of the workshops promoted active participation and open discussion. The workshop agendas covered the following range of pertinent topics:

- 1. Workshop Scope Overview
- 2. Presentation on Circular Economy Value Chain Analysis, VCG.AI
- 3. Identifying Viable Circular Value Chains for IE 2024: Discussion on Gaps and Obstacles
- 4. Defining Topics and Scope for IE 2024.

The key findings from the four workshops are presented in Deliverable 1.2.1.



3. VCG ROLL-OUT AND USAGE

The Value chain generator was not only rolled-out and used in the regions, but also rolled-out towards the IEC24 applicants via promotions and embedding the tool into the call via a separate website: IEC24 - iec24.

3.1 Roll-out in Heilbronn region

In Heilbronn the VCG was used to gain first insights into a Value chain with wine producers. Therefore a meeting with Anteja was set up, to evaluate the findings. Further contact via AB member Mr. Reichert was issued to another recycling company.

3.2 Roll-out in Upper Austria region

In Upper Austria VCG focus on a use of bakery waste for production of organic acids, use of spent grain for a production of plant- based meat and use of whey for protein ingredients. The discussion's focal point was the development and / or integration of existing advanced technologies to foster a circular bioeconomy.

3.3 Roll-out in Lombardy region

VCG provides insights on the strong technology of LGSA as a base to participate in multiple value chains among them Plastics manufacturing via lactic acid fermentation, Pharmaceuticals production using organic acids and Chemical product manufacturing through algaculture. The discussion showcase a need for collaboration with companies in the food and beverage industry.

3.4 Roll-out in Bavaria region

Roll out of VCG in Bavaria shows the highest potential of circular bioeconomy with the largest number of BioLinks due to their robust industrial structure and viable options to deploy advanced technologies. Waste by-products, including hemp fibers, whey protein, pectin, bio-oil, polyphenols, and plant-based proteins, are converted using technologies like supercritical fluid extraction, membrane separation, and pyrolysis. These processes support applications in renewable energy, nutraceuticals, cosmetics, construction, food, and pharmaceutical.