Joint Corridors Off-Road, National Living Lab Approach

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Title

How can we improve the modal split? The National Living Lab approach Joint Off-Road Corridors offers a promising solution.

Research question

How can we ensure accessibility and sustainability? Achieving a greater modal shift in freight transport is essential. Joint Corridors Off-Road (JCOR) is a living lab approach, as part of which students are deployed as 'Off-RoadRunners' at companies to conduct dedicated action research towards the joint development of multimodal transport corridors. It entails the joint development of existing and new corridors to reduce road kilometers , CO_2 emissions, and seize the opportunities to scale up further.

Method and Data

As part of the multi faceted approach of JCOR, a national setup of a Living Lab was established with six Universities of Applied Sciences and executed more than 50 research initiatives. To bring the initiatives into practice three phases can be distinguished. First, regional managers (9) invite interested shippers and carriers to identify a potential match on volume for a potential or existing joint transport route. Second, the analysis focuses on whether the collaboration will be successful. The third phase is to increase the volume and frequency for the joint transport route with the parties involved. Together with the companies, students will set up an inland waterway or train connection (including initial schedules) together with carriers and terminal operators. The students (>200) and stakeholders collect data and perform analyses on lead times, reliability, costs, traffic conditions, and emission reductions, i.e. all data needed to make a go/no go decision.

Results/Findings)

Over the last years 2021-2023, the following studies (see Figure 1) are carried out in the Living Labs.

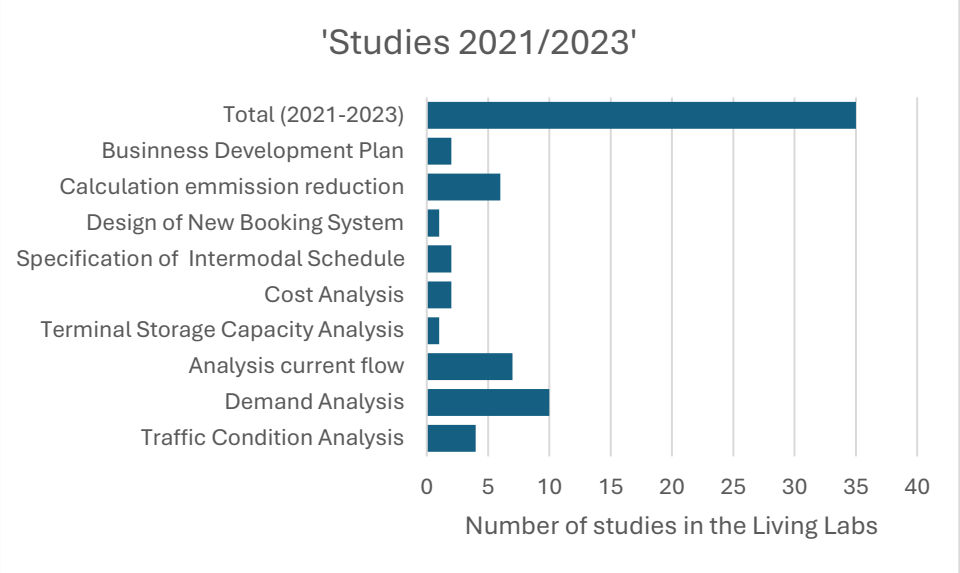

Figure 1. Studies 2021-2023.

The entire JCOR program has now received national coverage. Since their start in 2019 50 Joint Corridors have been set up saving more than 430 million road kilometers. This represents a CO_2 reduction of 940,000 tons! Certainly, not all results can be attributed to the living labs within the JCOR program, but the research applied within the Living Labs has ensured that participating parties have accelerated the implementation.

A recent example is the new barge terminal initiative in Bergambacht. Students conducted a feasibility study for more volume on the Groene Hart Corridor which has led to an actual start of the terminal with the companies Overslag Terminal Bergambacht, Zijderlaan, Koolwijk Polsbroek, GEODIS, Stubbe Logistics, Danser Group, and European Gateway Services.

Implications for Research/Policy

In terms of research, the Living Labs allow a legal framework and safe environment both for companies, education, and research. Various issues brought up by the companies can be researched over a longer period. Confidentiality agreements allow students to apply for data for decision-making. Due to intensive collaboration among the Universities of Applied Sciences (inter-) national coverage of the intermodal network is possible. Simultaneously, various masterclasses/ research projects have been developed on rail, barge, synchromodal transport, Dry port development, and platformization (ICT). Several publications were produced on the outcomes of the Living Labs.

In terms of policy making it is proven that multimodal freight transport is also possible at short distances. In the living labs, the issue of accessibility is becoming more important to switch to barge or rail transport. From a human capital perspective, the living labs make young professionals enthusiastic about multimodal transportation.