

CO₂URIER: Carbon Neutral Courier Services

Making courier services more sustainable

Sector: Transport

Overall budget: 360k EUR

Countries involved: PL, DE

Funding: Polish-German Sustainability Research

- Small courier company from Lodz will be transformed into the first Polish carbon neutral company
- Testing different stimuli for voluntary carbon offsets
- Balanced science and industry partnership for greening the courier markets in Poland and Germany

Introduction

In the absence of a sufficiently strong global agreement on climate protection, voluntary actions will be required to slow down global warming. But how to stimulate such contributions to climate protection? Among others, particularly sustainable consumption is becoming a topic typically seen as a valid and promising instrument addressing several dimensions of CO₂ emissions. Despite the rising popularity of voluntary carbon offsets, there is only limited knowledge on the performance of different stimuli that can be helpful for both increasing and maintaining participation in carbon offsetting programs.

The traffic sector represents a major source of pollutant emissions and of greenhouse gases in particular. As carbon emissions from transportation services are not covered by the European Emissions Trading Scheme (EU-ETS), reducing or offsetting these emissions truly benefits the greenhouse gas balance. In **CO₂URIER** project, we focus on the growing field of courier services which represent a complex chain of transportation elements bearing the potential for reducing its environmental disamenities in many different dimensions both within business-to-business services and within delivery requests from individuals, e.g., for online-shopping.

About the project

CO₂URIER brings together German and Polish companies to introduce an innovative service for parcel services into the Polish market. The technological and processual solutions and the informational interventions will be based on state-of-the-art methods of lifecycle assessment, corporate development, and behavioural economics. The introduction of the innovations will be scientifically accompanied and evaluated in order to verify their impact.

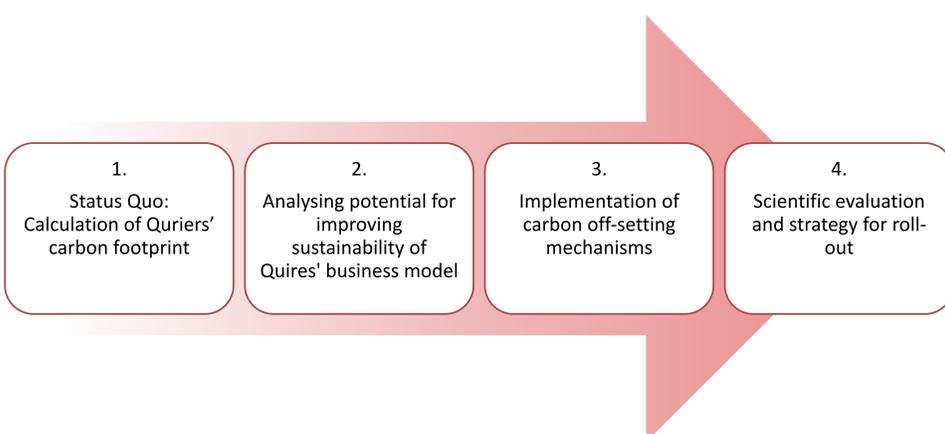
The overall objective of **CO₂URIER** project is to yield concrete sustainability improvements in the courier service industry by creating more environmentally-friendly services in collaboration between Polish and German partners and at the same time provide insights for future improvements within this growing branch.

Specific objectives of **CO₂URIER** project include:

- Decreasing environmental impact of CO₂ emissions of Quries company by 25% during the project and developing a long-term action plan for 100% decrease
- Developing a systemic approach of decreasing environmental impact of CO₂ emissions for all small and medium-sized courier companies in Poland and Germany
- Developing efficient information and advertisement campaign of reaching new clients for new services of externalities offsetting, with expected acceptance rate of 20% of targeted clients

Implementation methods

The project contains four work packages, as visualised in the figure below. In the first work package, the carbon footprint for the company Quries is calculated. In the second work package, we analyse the potential for improving the sustainability of Quries' business model. The third work package contains the implementation of carbon offsetting mechanisms in a field experiment. Finally, the utilization and knowledge transfer activities for a wider impact of the project results take place in the fourth work package.



In the first step, the corporate carbon footprint will be calculated based on international standards. This work includes data collection, data entry into a web-based performance platform, data aggregation, and the calculation of greenhouse gases. The product carbon footprint will be assessed according to DIN EN 16258 for all delivery services including own resources and sub-contractors. Data collection will be based on primary data. The calculation of GHGs per services will be based on relevant parameters such as weight and distance.

The second step of **CO₂URIER** will cover the strategic analysis of Quries' business to identify and understand the environment in which the company is operating, including the interactions within this environment. A range of analytical methods will be employed in this analysis and the results will enable to develop a strategy for a more sustainable business model, including a set of actions to implement as well as expected results of each action. Business analysis tools will be used to optimise the process with a systemic approach.

In the third step, a carbon offset option for Quries' customers will be developed. There will be a specific portfolio of different gold standard certified carbon offset projects, potentially allowing customers to pick their individual offsetting choices. The introduction of a carbon offsetting option will be evaluated through the use of a field experiment. In this project, both classic economic and modern behavioural instruments will be applied. Classic instruments typically involve monetary incentives. Important behavioural economic instruments include default-setting, feedback, social comparison and self-signalling options.

The fourth step concerns the communication between scientific researchers and practitioners. This involves workshops with the advisory board as well as scientific exchange within the consortium. Also, policy briefs will be provided for policy makers and a broader general audience, presenting project results and experiences in a comprehensible way. An important part will be also developing an exploitation plan for commercialization of the developed solutions in the Polish and German transportation market.

Expected results

The project will improve the sustainability of Quries and result in general recommendations for lowering the carbon emissions associated with courier services as well as identifying strategies for transforming conventional courier services into carbon neutral businesses. The project will result in scientific articles about the effectiveness of different incentives for voluntary carbon offsetting, based on the field experiment. These results will be of interest to researchers, private companies, and policy makers alike. Publications from the project will appear on this page as work proceeds.

Emission reduction:

- ↓ 500 000 Mg CO₂/a
- ↓ 400 Mg NO_x/a
- ↓ 13 Mg PM/a

Financial savings

- ↓ 6,000 EUR/a - company cost reduction
- ↓ 5.5M EUR/a - avoided cost of morbidity and mortality caused by air pollutants

Company development

- ↑ +15% company annual income
- ↑ 25 new corporate clients



CO₂URIER
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Acknowledgements



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Partners



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