

COLLABORATIVE DECARBONIZATION OF SUPPLY CHAIN VALUE NETWORKS IN LATAM

Environmental sustainability is an imperative need for contemporary logistics operations. Consequently, monitoring and measuring Greenhouse Gas (GHG) emissions are a key step in designing collaborative strategies for reducing the carbon footprint of value networks.

In this project, a methodology conducted in three (3) phases was employed to estimate and formulate strategies for reducing emissions from transportation and distribution processes.

These phases included:

1. Establishing a baseline through the call for and collection of logistics operations information from 2022 for six companies operating in LATAM for food, pharma and construction
2. Calculating the carbon footprint based on fuel consumption using the GHG Protocol methodology
3. Formulating technically and financially feasible decarbonization strategies with high impact.

A descriptive analysis of the received data was performed, exploring the relationship between travel distance, vehicle typology, and cargo type with CO₂ emissions. Additionally, the project examined the effect of alternative fuels and zero-emission vehicles on emissions reduction.

Finally, a roadmap for sector decarbonization is presented, setting emission reduction goals and identifying traceability tools to monitor the strategies. The project aims to establish the groundwork for comparing and defining effective carbon footprint reduction strategies.

Average results:



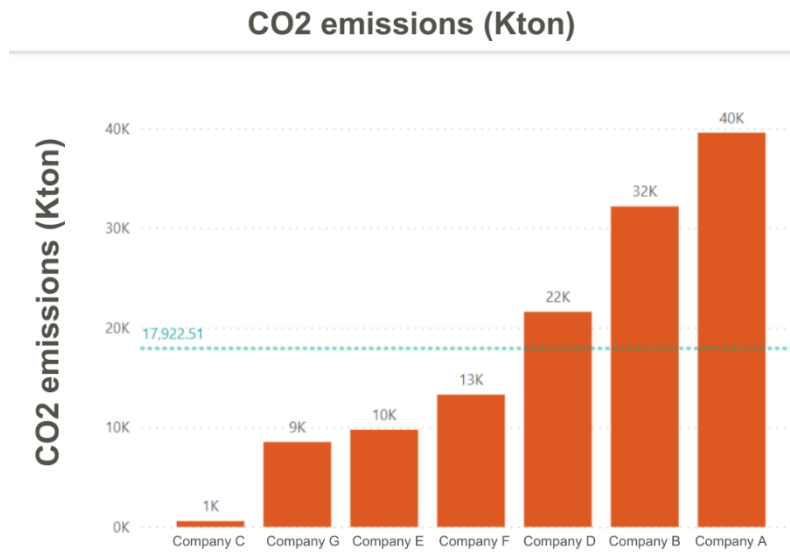
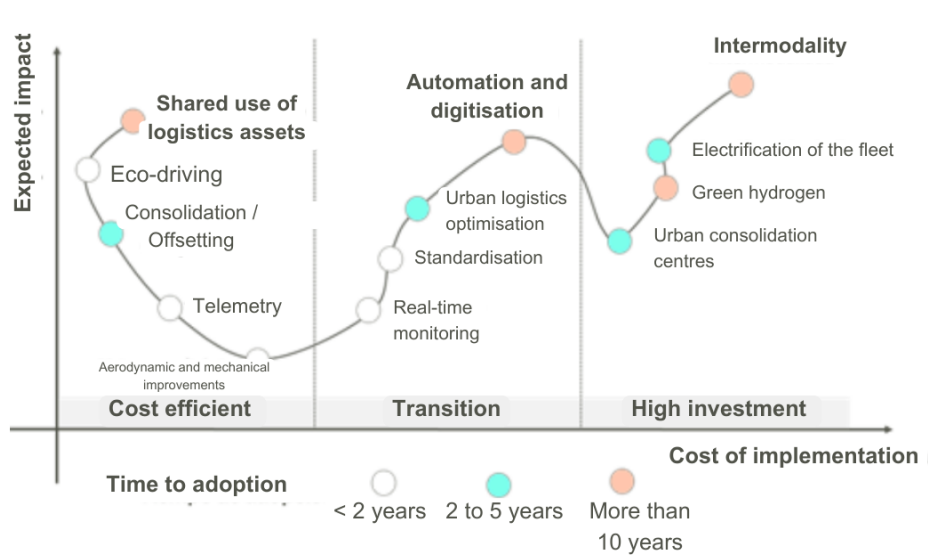


Figure X. Total emissions per company and study average

Routemap:



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