BRAIN-TRAINS: INTEGRATING THE LCA METHODOLOGY
IN AN INTERDISCIPLINARY PROJECT
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Introduction
BRAIN-TRAINS is a project that deals with the possible development of rail freight intermodality in Belgium from an interdisciplinary perspective: macroeconomic impact and market regulation, effective governance, optimal corridor and hub development and sustainability impact of intermodality. Life Cycle Assessment methodology has been used to analyse the sustainability impact of rail freight intermodality for 3 divergent Belgian scenarios by 2030.

Life Cycle Assessment of the intermodal freight system in Belgium

Rail freight transport
• For diesel traction, main emissions are produced at the vehicle operation activity.
• For electric traction, main emissions are produced during the electricity production and they have been determined using the electricity supply mix of Belgium per year.

Conclusions and perspectives
1. A detailed study of the rail freight transport in Belgium has been conducted, collecting data directly from Infrafel (the Belgian railway infrastructure manager) and B-Logistics, which is the main rail freight operator in Belgium.
2. Comparison of the environmental impacts related to rail freight transport, inland waterways transport and road transport will be performed.
3. Obtaining of a decision support tool to the development of intermodal transport in Belgium, including environmental aspects and allowing the reduction of emissions.
4. Development of a transport database specific to Belgium to allow a better modelling of the obtained environmental impacts and to improve the specificity of the results.