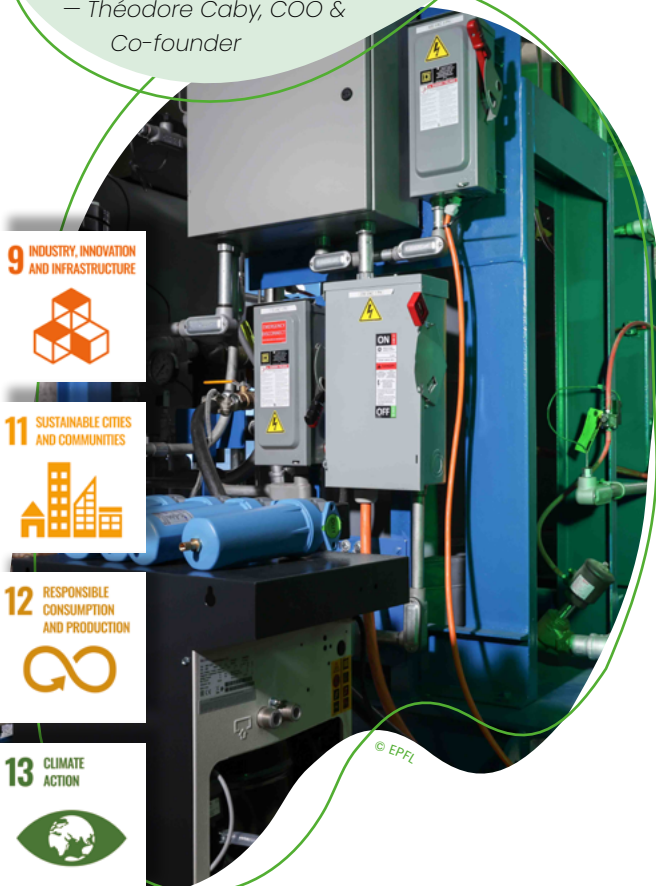


# Capturing CO<sub>2</sub> on board heavy goods vehicles

This EPLF spin-off is aiming to speed up the decarbonisation of freight transport worldwide. It is developing mobile kits that capture CO<sub>2</sub> at source on any type of heavy vehicle.

« To achieve carbon neutrality by 2050, we will also need to remove significant amounts of CO<sub>2</sub> from the atmosphere. Qaptis's mobile capture system will make it possible to eliminate up to 90% of CO<sub>2</sub> emissions from heavy goods vehicles. »

— Théodore Caby, COO & Co-founder



## CONTEXT

Global freight transport is responsible for 10% of all CO<sub>2</sub> emissions. While many climate policies are aiming for net zero by 2050, this sector is struggling to do without fossil fuels and is therefore finding it difficult to decarbonise quickly. Founded in 2021 on the Energypolis Campus in Sion, Qaptis is developing a mobile source capture system that will eliminate up to 90% of CO<sub>2</sub> emissions from heavy goods vehicles (HGVs). The CO<sub>2</sub> is stored in a liquid state on board and emptied out later, to be recycled in carbon storage and treatment facilities.

## TECHNOLOGY

Qaptis's patented technology can capture greenhouse gas emissions from a lorry on the move in a way that guarantees a high level of CO<sub>2</sub> concentration using very little external energy. This retrofit kit can be installed on HGVs already in service without the need to replace transportation and logistics companies' entire fleets. Modular and easy to deploy for other types of vehicles, it offers a fast, cost-effective solution for decarbonising combustion-engine vehicles. The company estimates that, if it sells 5000 HGV kits by 2030, the technology could save up to 250 kilotonnes of CO<sub>2</sub> a year, which would help to reduce Swiss carbon emissions by around 1%. To create a truly circular economy, the captured CO<sub>2</sub> could eventually be reused in the agri-food industry; for the production of energy or construction materials; or for the manufacture of synthetic hydrocarbons.

## MATURITY

Qaptis now has a working prototype for HGVs. Stationary CO<sub>2</sub> capture tests carried out in partnership with Swiss haulier Friderici Spécial have been a success and have demonstrated the technology's effectiveness. The company is now working on miniaturising the device so that it can be integrated into a lorry for a series of driving tests. A second financing round is under way to raise CHF 2 million, and serial production is planned for 2026, with the Swiss, German and Austrian markets, and then Japan, in the company's sights.