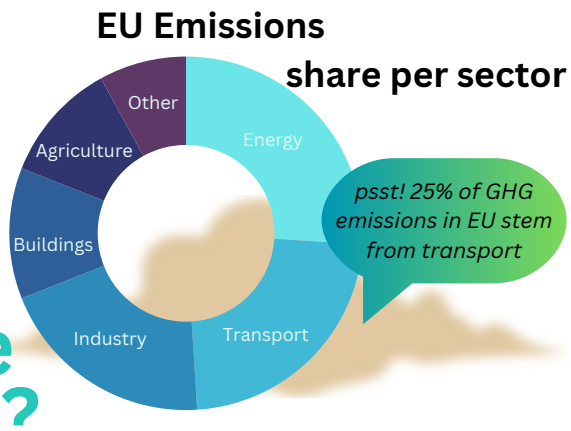
A little bit about
Swappable Battery Systems
and how they can help decarbonise our mobility sector

With the signing of the Green Deal, the EU put in place an ambitious plan to become climate neutral by 2050 and decarbonise the economy. The transport sector which is currently responsible for 25% of all GHG emission in the EU, must bring down its emissions by 90% by 2050.



How does swappable battery stations work?

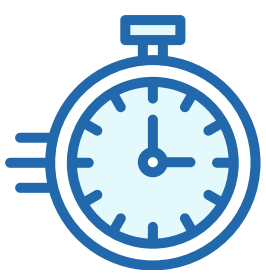
Your battery is running low, you go to the charging station...

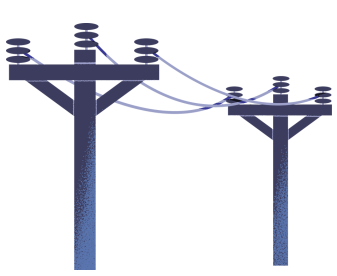
Instead of charging your vehicle, simply replace your empty battery with a full one!

Wait? no, you don't have to wait you are ready to continue!

The swapping station will have a different set-up, structure and size depending on the type of vehicles it is required to serve!

What are the advantages?





Electric vehicles in general contribute to making society more **sustainable**; as a component of urban mobility plans, they can contribute to making the **air cleaner**	As it is much faster to swap a battery than charge one, swappable battery stations **shortens the waiting time** for the users of electric vehicles related to the repowering of their vehicles	It allows for decoupling the battery from the vehicle, will make it **cheaper to buy an electric vehicle**, while the maintenance as well as the recycling will be transferred to the battery station owner	One of the barriers for using electric vehicles, is concern over not being able to reach the destination in time, with a network of stations with full batteries the **range anxiety decreases**	The swappable battery stations can better provide **flexibility to the electricity grid** compared to conventional charging stations who must deliver power when the user demands

When is it coming to a street near me?

Despite the rising popularity for electrified micromobility in Europe, which could give grounds for diffusion of swappable battery systems the technology has yet to kick off in Europe. A few keys for success:

Standardised battery types which can be used across different producers in Europe's diverse automotive market.

To convince the consumers to switch from regular charging to battery swapping there must be a network of stations which can cover their need for recharging on the go. Developing such a network will require significant **investments in infrastructure**.

A **clear business model** which can compete with established charging networks, and which does not cause constraints or instability to the **electricity distribution.**

Swappable battery systems already exist in several places outside Europe

Stan4SWAP

In this diversified and complex global context, the **Stan4SWAP** project aims to develop a robust standardization roadmap towards boosting innovation and deployment for Swappable Battery Systems for light category electric vehicles as an interoperable and user-friendly technology which can contribute to the decarbonization of the Mobility-Transport sector.

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