

Hydrogen in Automotive Application, with Burgaflex B.V.

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HAN UNIVERSITY
OF APPLIED SCIENCES

Background

Motive behind project start?

- To **learn** about hydrogen technology!

Best possible **option**?

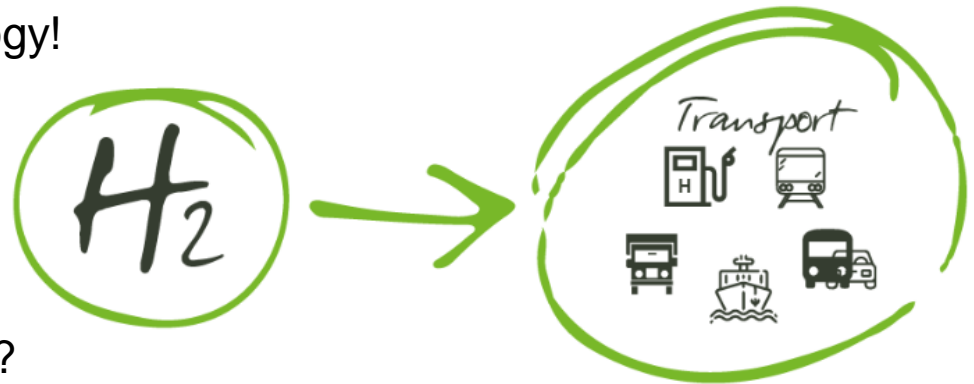
- **Student project**

Create a plausible case to be solved?

- A project with **physical implementation**

Opportunities:

- Students become **educators**.
- **Re-use** what is available.
- Company invests and HAN provides the technical support with tools.

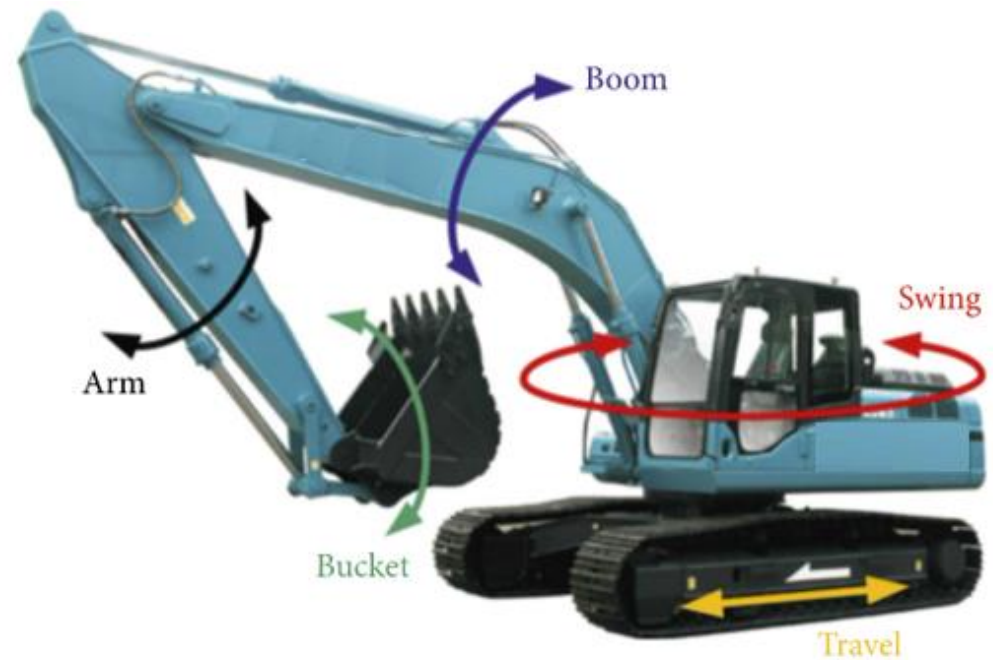


Project Objective

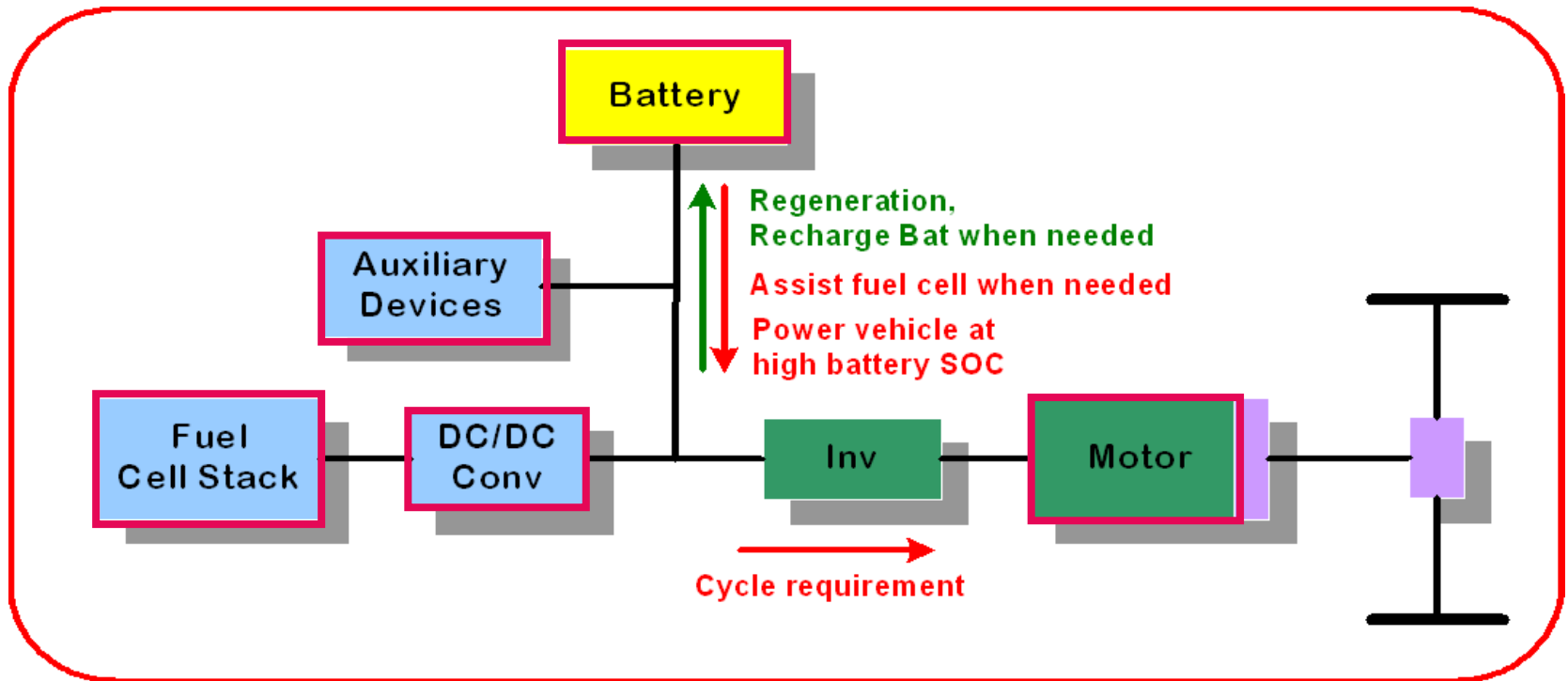
Feasibility study of converting an electric to a fuel cell hybrid driveline with EMS in a forklift application.

Challenges:

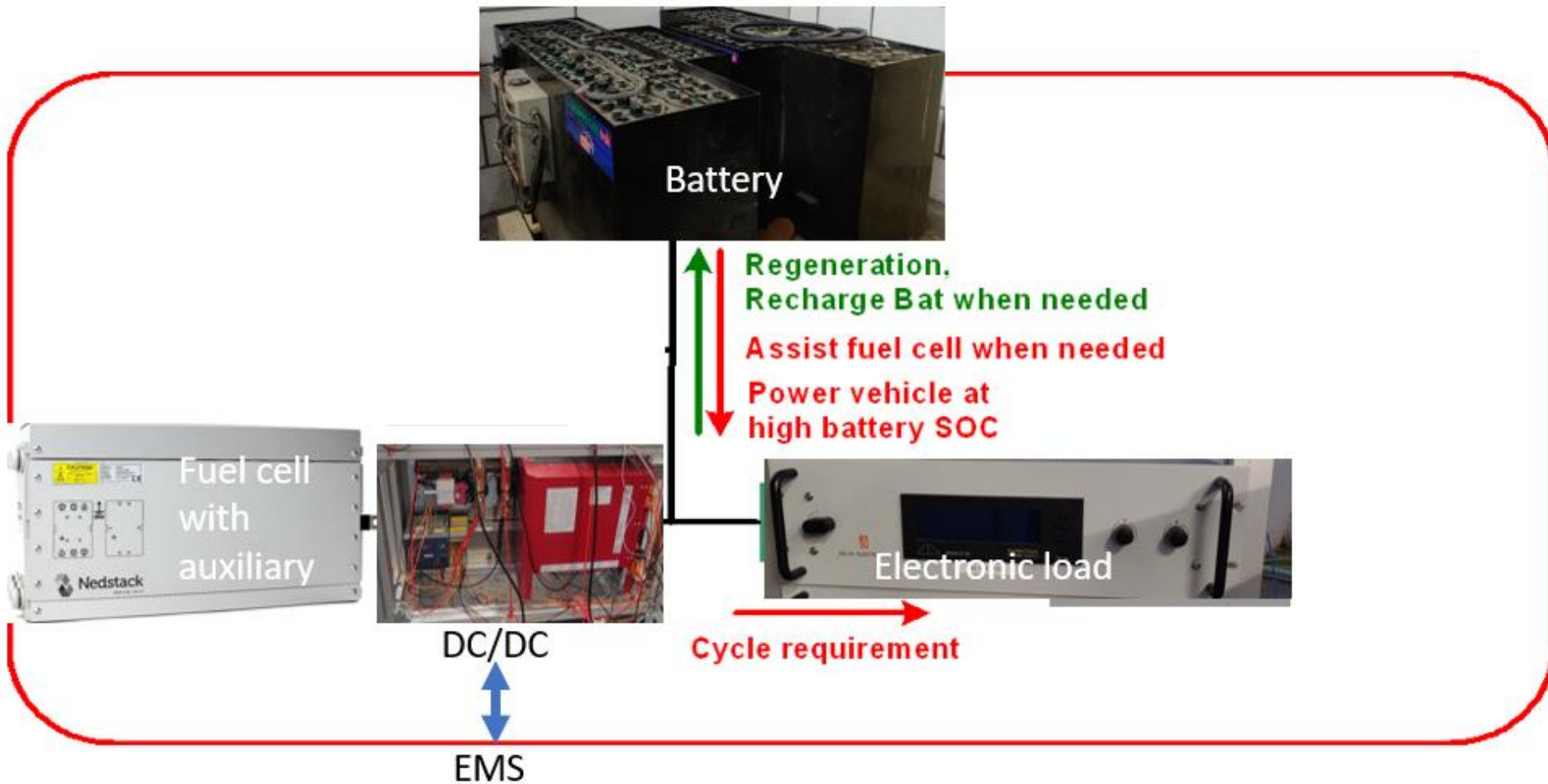
- **Static** behavior of the fuel cell
- Fuel cell **warm up**
- **Packaging** of the fuel cell
- Component **integration**
- Operational in March 2023



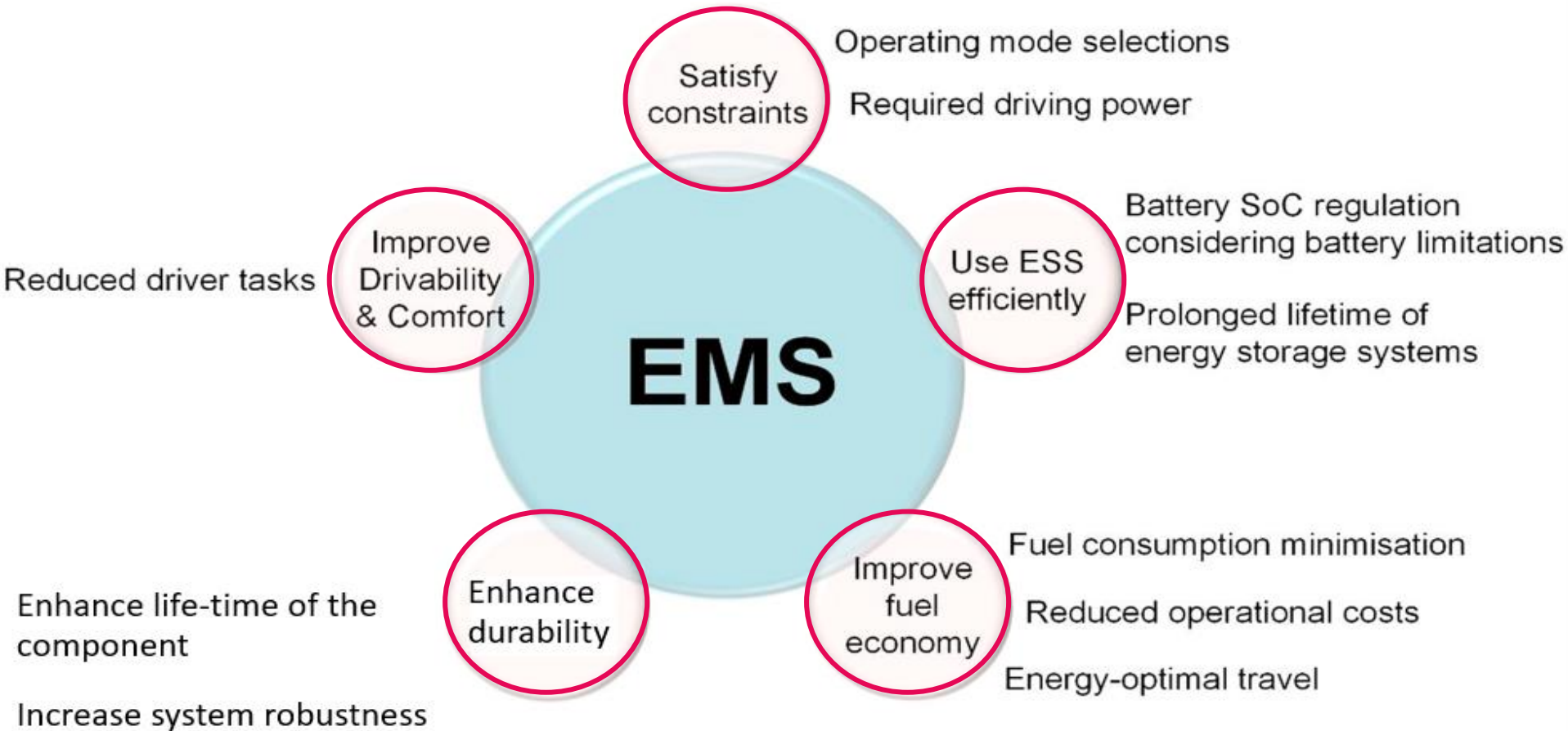
FCEV Driveline



10 [kW] FCEV Driveline



Energy Management System



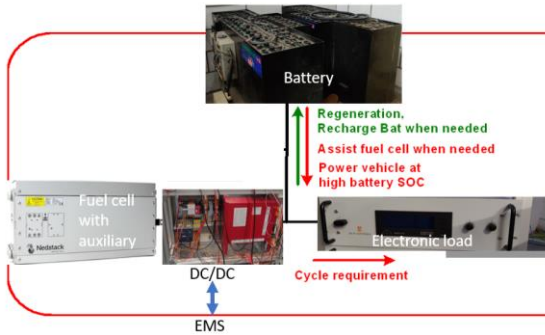
Various Fuel Cell hybrid driveline projects

Projects

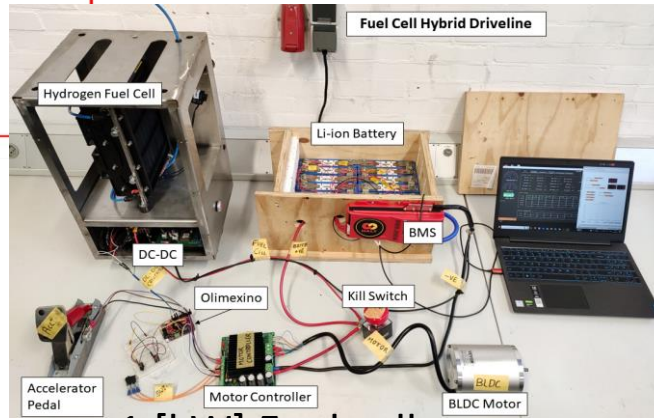
With Burgaflex

Education kit Hybrid

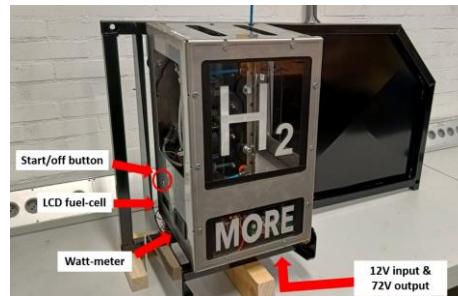
MORE Vehicle



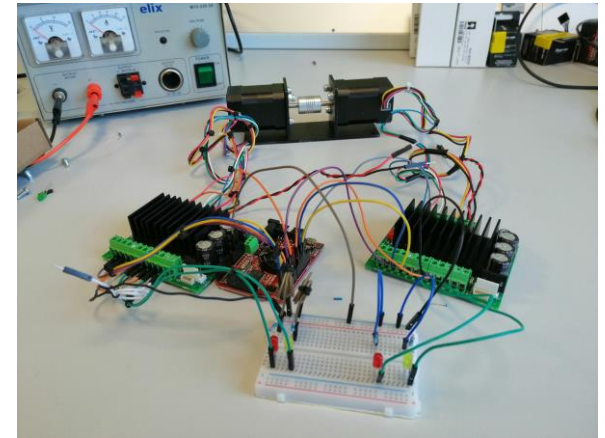
10 [kW] Fuel cell



1 [kW] Fuel cell



1 [kW] Fuel cell as 'Range extender'



30 [W] Fuel cell



Thank you!

Questions?

Contact details for future questions:



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