

FEV Signature Solutions

Hydrogen storage CU software



Modular and ready-to-use software solution to control H₂ tank system in fuel cell or H₂-ICE applications

FEV offers

- State of the art hydrogen storage control unit (HSCU) software for H₂ tanks, in particular for supervising the H₂ refueling and extraction process
- Customization services for prototypes or series applications
- Additional services as modification/extension, integration, commissioning and calibration

Why FEV

- Unique and holistic state based leakage detection for hydrogen storage systems – detect leakage before H₂ sensors detect hydrogen (patent application filed)
- We provide a tested and flexible solution that will be adapted to your specific needs → benefit from previous improvements and reduce the development time
- White box option to enable you to use FEV's solution as basis for your own development



Selected reference projects

HYDROGEN STORAGE CU SOFTWARE



German OEM

Hydrogen DI engine demonstrator development

- Buildup of LCV demonstrator with H₂ -DI engine and H₂ storage system
- Completion in 2022

FEV responsibility

- Simulation and design of the LCV concept engine incl. hardware adaptations
- Identification and definition of prototype supplier: Parts procurement for adapted engine components and H₂ tanks
- SW-development for all hydrogen related control functionality including H₂ injection, H₂ storage and supply system
- Setup, commissioning and complete calibration of first prototype engine

North American OEM

Concept development for rail application

- Support in the development of a concept system for a fuel cell powered railroad application
- Completion in 2023

FEV responsibility

- Control function customization
- Legislation check and required standards analysis
- Development consulting support
- Software validation in MiL and open loop system testing
- Whitebox software delivery as Simulink models

EU-Funded project

Demonstrator vehicle development

- Support in the development of a fuel cell powered electrical regional demonstrator bus
- Completion in 2023

FEV responsibility

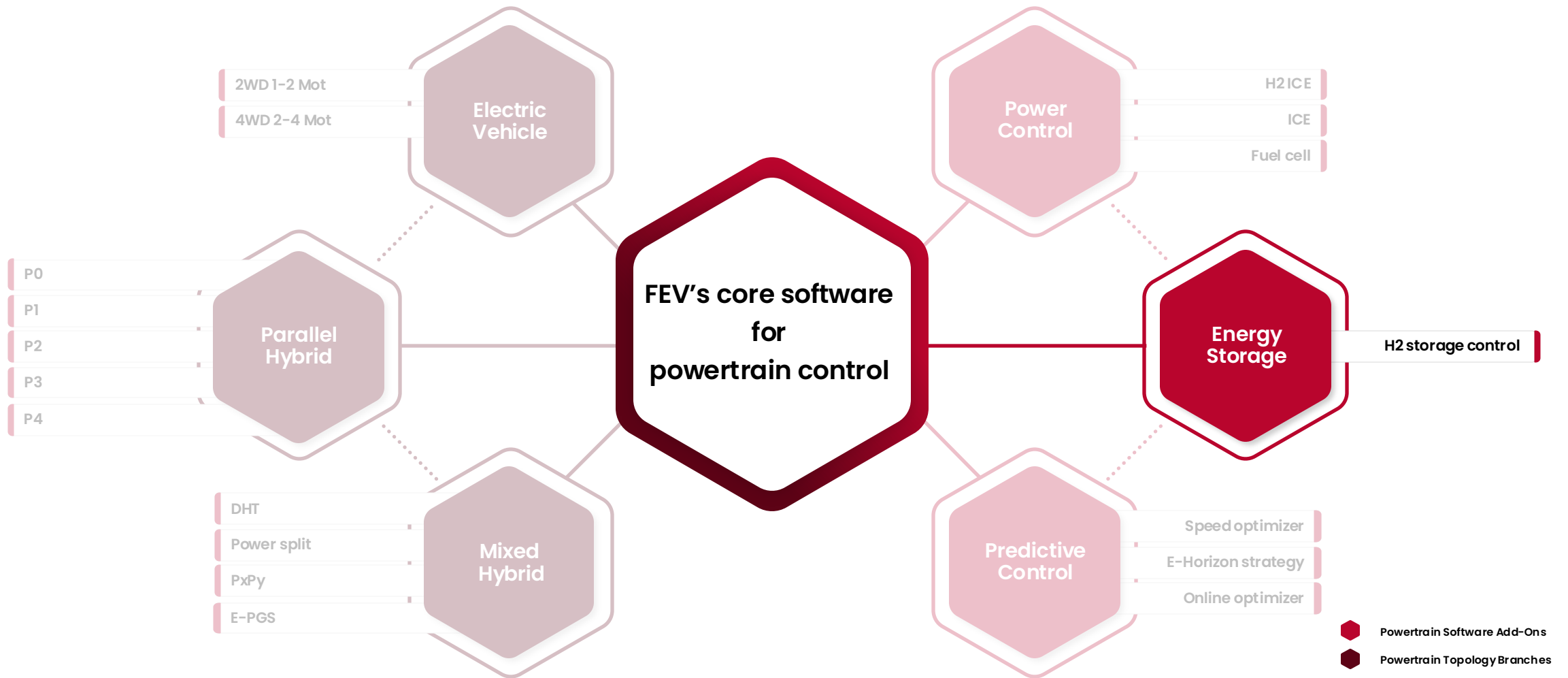
- Providing control software for the hydrogen tank system of the fuel cell bus for further development and application on the demonstrator bus
- Development consulting support

FEV's control functions

Developed, defined and approved in FEV's software landscape



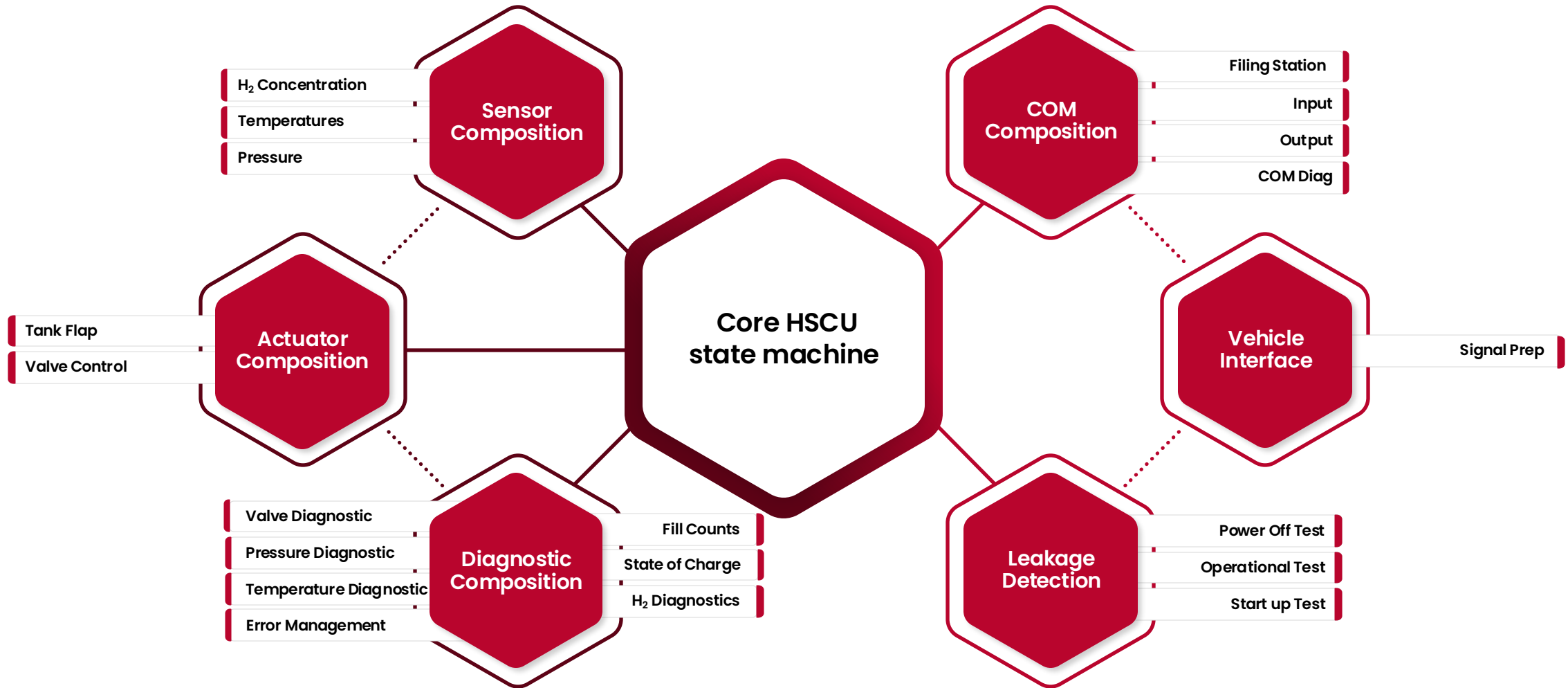
HSCU SOFTWARE AS PART OF FEV'S POWERTRAIN CONTROL SOFTWARE



FEV's control functions SW architecture for HSCU control



HSCU SOFTWARE ARCHITECTURE – FUNCTIONS OVERVIEW



Get in touch with us for further information



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