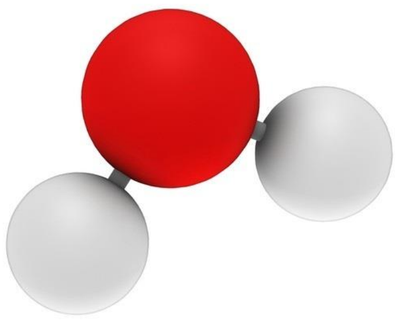
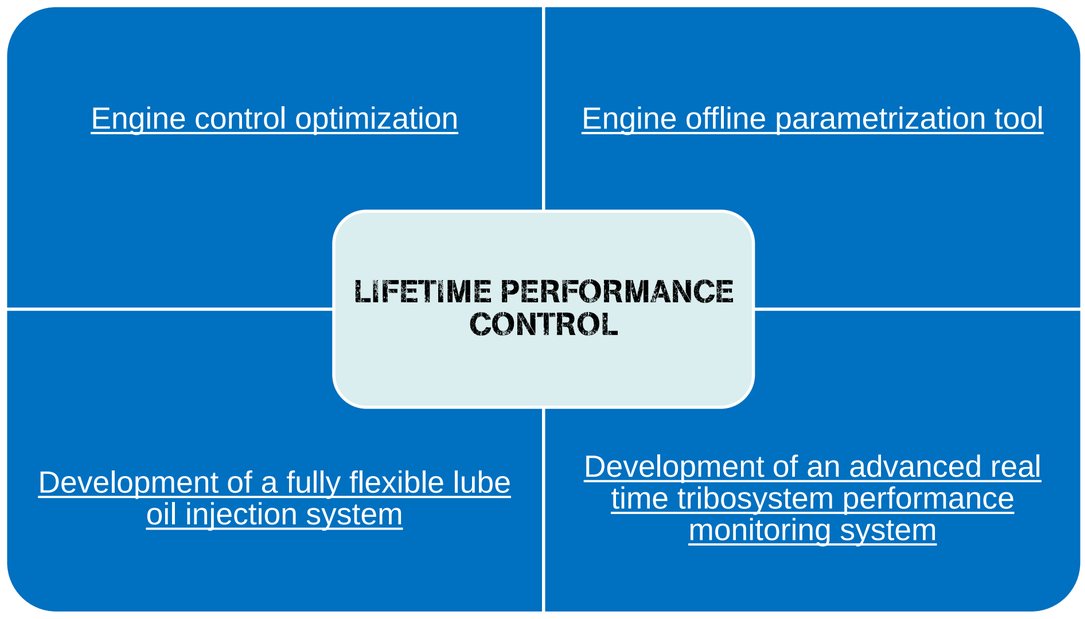


WP 5

Lifetime Performance Control

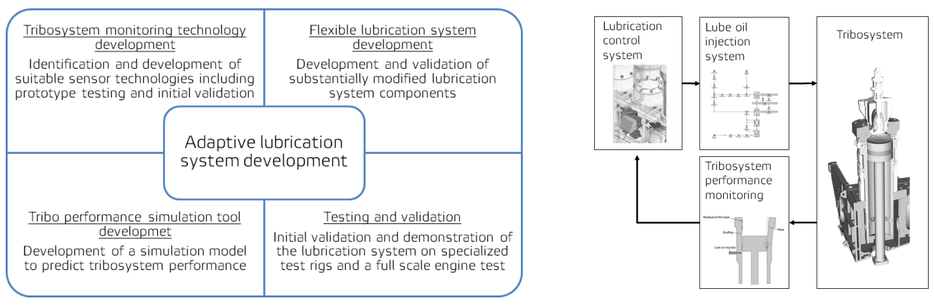
WP OBJECTIVES

Develop methods, systems and processes allowing a continuous optimized performance of the power plant throughout its lifetime

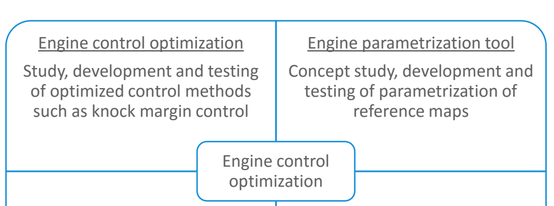


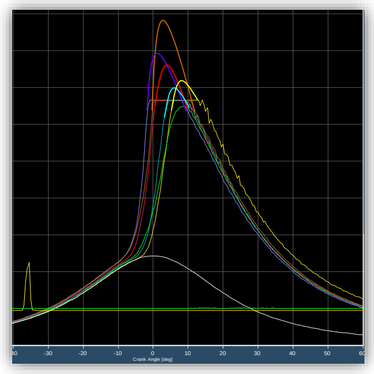
EXPECTED OUTCOME

- Advanced lubrication control system
- Optimized lube oil feed rates
- Optimized control & parametrization algorithms
- Technology demonstrators at TRL 6
- Max 5% divergence of any performance parameter from “as-new” state
- 10% lube oil consumption reduction



5.3, 5.4: Development of an adaptive lubrication system



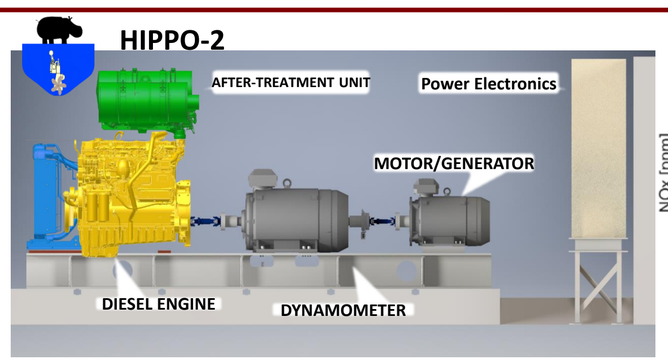


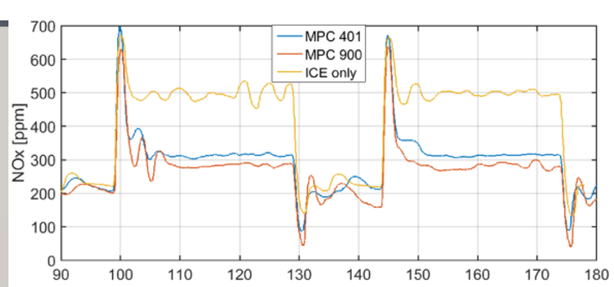
5.1, 5.2: Engine control optimization

PROGRESS AND PLANS

Sub-project 5.1:
- Knock control development & testing on engine.
- Plant modelling of hybrid system & controller design

Sub-project 5.2:
- Engine parametrization conceptualization and modelling

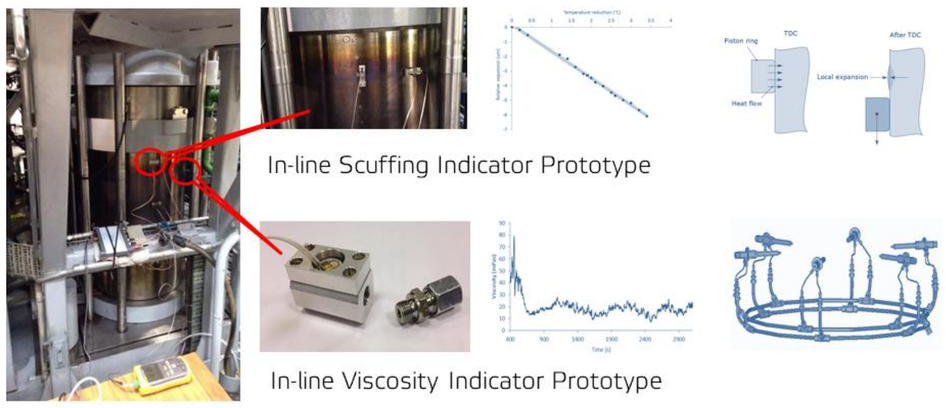




Sub-project 5.1: Engine control optimization – hybrid electric controller

Sub-project 5.3:
- Lube oil injector prototype optimization and testing
- Optimization of injection parameters

Sub-project 5.4:
- Viscosity and scuffing indicator prototype testing
- Investigation on alternative approaches to measure specific tribosystem performance parameters



Sub-project 5.4: Tribosystem monitoring prototype testing

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