HERCULES-B

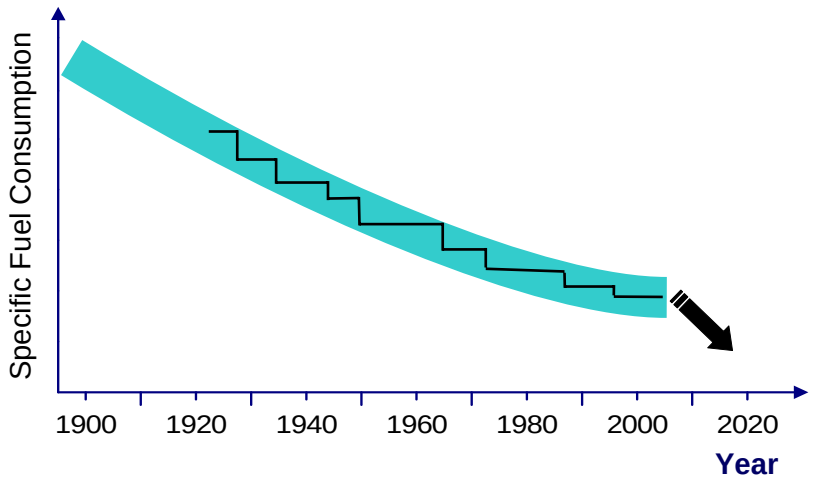
HIGHER – EFFICIENCY ENGINE WITH ULTRA-LOW EMISSIONS FOR SHIPS

A short presentation

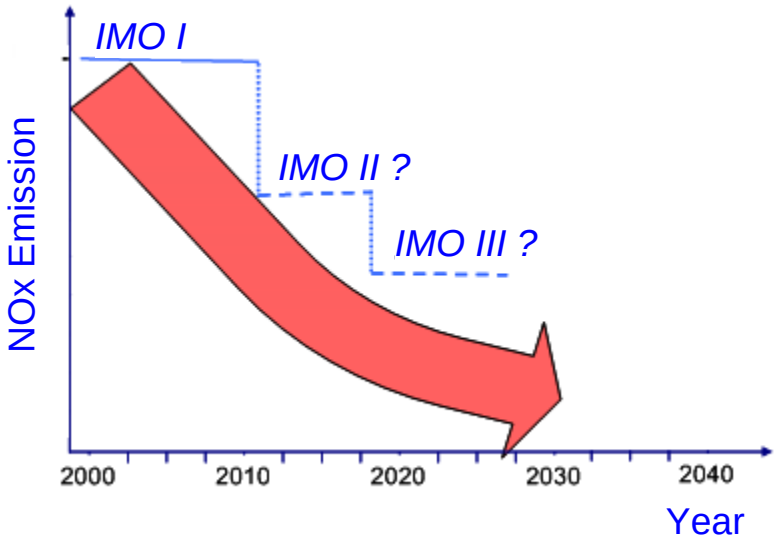
HERCULES–B (2008 – 2011)

Higher Efficiency Engine with Ultra Low Emissions for Ships

Towards 10% reduction in SFC

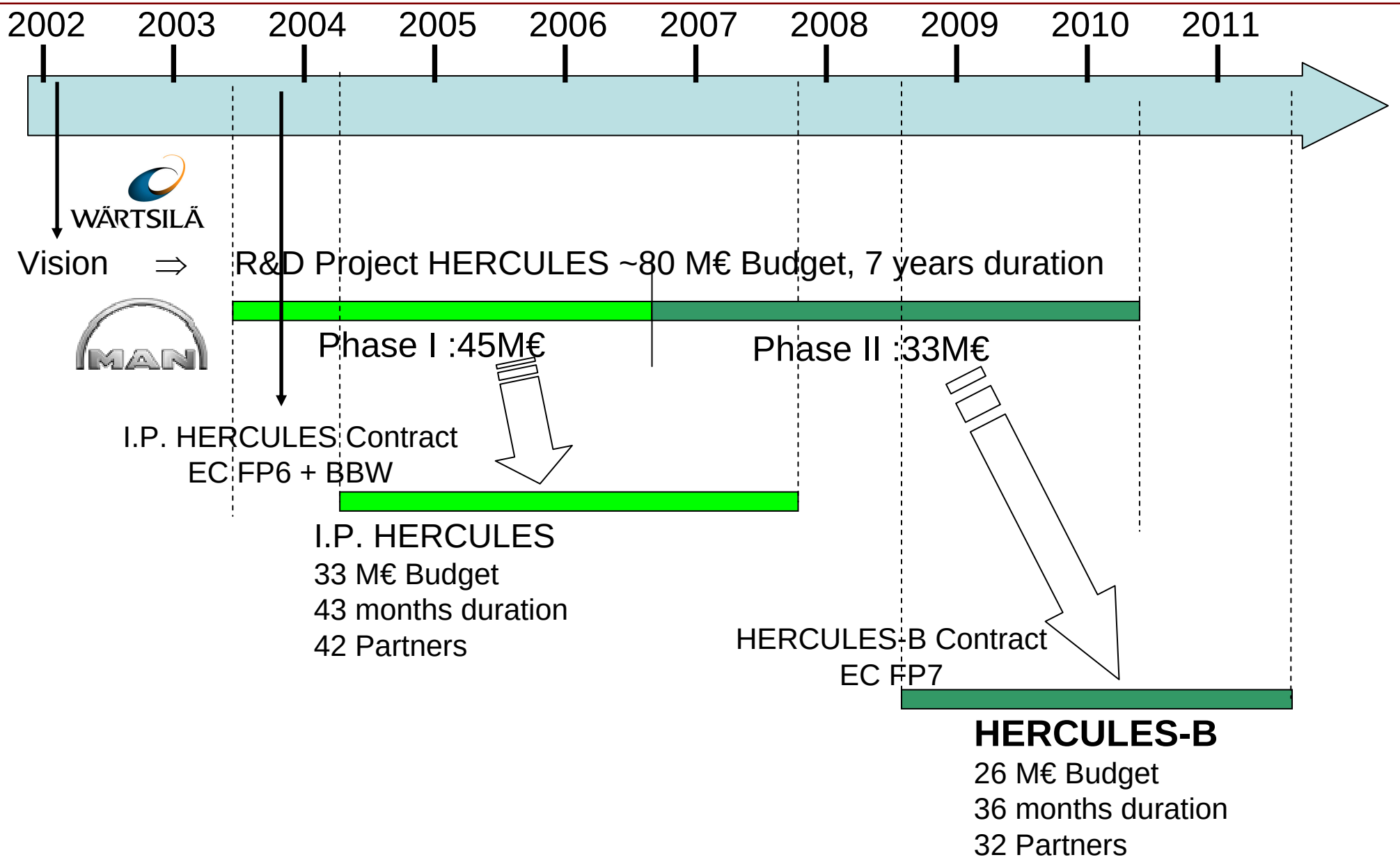


Towards ULTRA-LOW Emissions

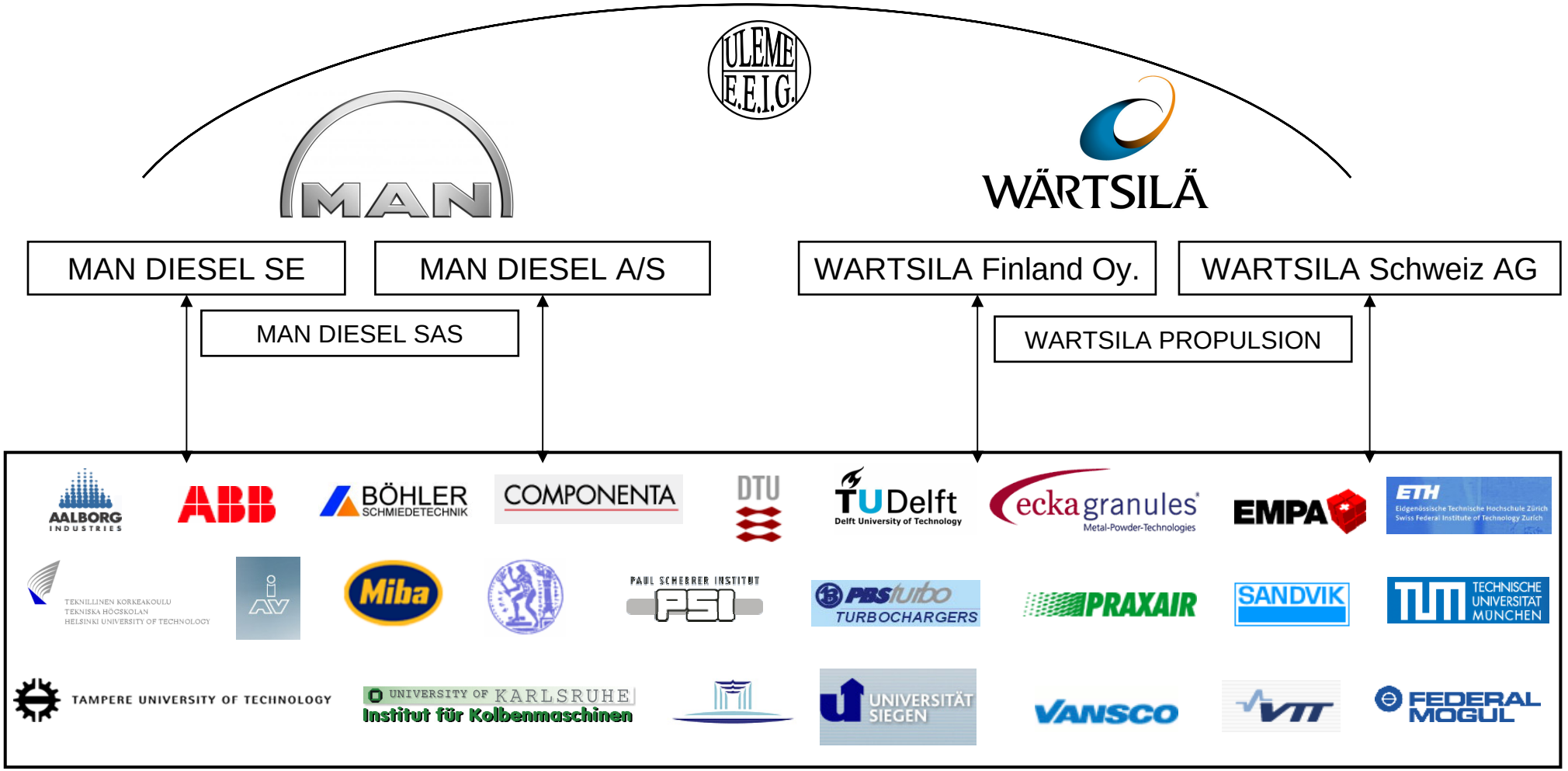


HERCULES-B VISION	Year 2020
Reduction of fuel consumption and CO_2 emissions	-10%
Reduction of NOx (Relative to IMO 2000 standard)	-70%
Reduction of other emission components (PM, HC)	-50%

Towards HERCULES-B

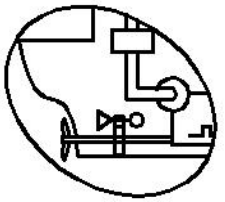


HERCULES - B – Consortium



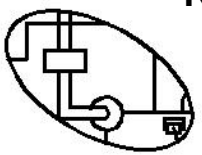
Overview of HERCULES-B Workpackages

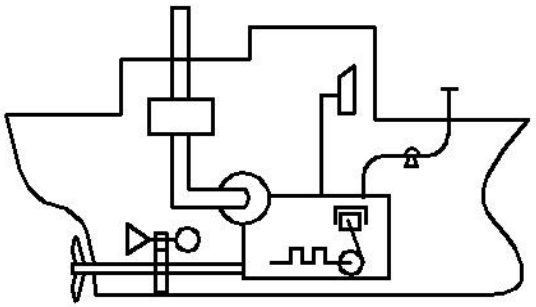
WP. 6
Overall
Ship Powertrain Optimization



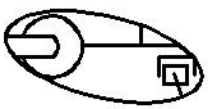
WP. 7
Advanced Materials,
Friction & Wear

WP. 5
Exhaust Emission
Reduction





WP. 8
Electronics
and Control



WP. 3
Turbocharging

WP. 1
Extreme Parameter
Engines

WP. 2
Combustion

STRUCTURE OF THE WORK

56 Subprojects

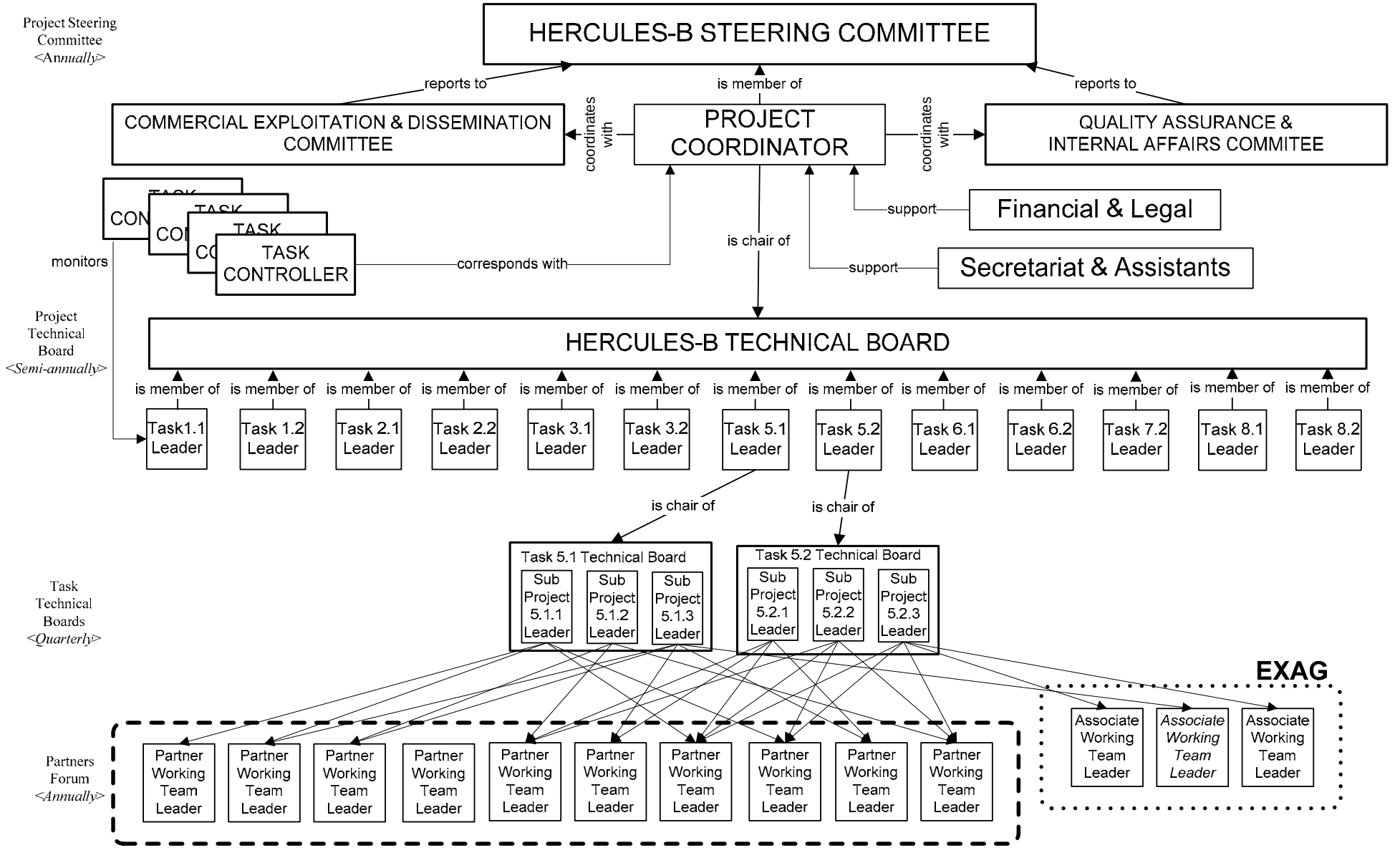
↳ **13 Tasks**

↳ **7 Workpackages**

HERCULES-B Structure of Work

No	WP TITLE	TASK TITLE	PARTNERS
1	Extreme Parameter Engines	**Task 1.1: Development of engines for extreme load conditions**	COMPONENTA, TKK, WFI
		Task 1.2: Mechanical design of engines with extreme parameters	BSTG, ECKA, IAV, MD-DK, MD-FR, MD-DE, MIBA, PST, SANDVIK
2	Combustion	**Task 2.1: Combustion process modeling and development**	ETHZ, PSI, WFI, WCH
		Task 2.2: Experimental and numerical combustion analysis	MD-DK, MD-DE, NTUA-LME, DTU, UNIKARL
3	Turbocharging	**Task 3.1: High efficiency and low emission TC concepts**	ABB, ETHZ, PSI, TUT, WFI, WCH
		Task 3.2: Advanced intelligent turbocharger	MD-DE, PBST
5	Exhaust Emission Reduction	**Task 5.1: Emission reduction methods**	EMPA, UKU, VTT, WFI, WCH
		Task 5.2: Emission reduction - Exhaust Gas Recirculation and After-treatment	AALBORG, MD-DK, MD-DE, TUM-LVK
6	Overall power train optimization	**Task 6.1: Overall ship power train optimization**	TUDELFT, NTUA-LME, WPNL
		Task 6.2: Combined cycle with boiler for high pressure side	AALBORG, MD-DK
7	Advanced Materials, Friction and Wear	**Task 7.2: Tribology-Optimization**	DTU, MD-DK, WCH, FMO
8	Electronics and Control	**Task 8.1: Advanced sensing and reliable adaptive control**	TUT, VANSCO, WFI, WCH
		Task 8.2: Intelligent Engine	MD-DE, NTUA-LME, UNISIEGEN
9	Project Management		ULEME E.E.I.G.

HERCULES-B Management



End of  presentation

For more info: www.hercules-b.com