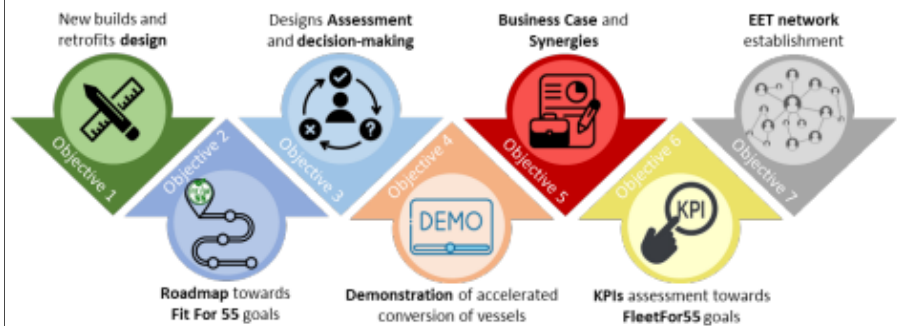


FLEETFOR55: STATE-OF-THE-ART SUSTAINABLE ENERGY EFFICIENCY TECHNOLOGIES ROADMAP FOR WATERBORNE TRANSPORT TOWARDS THE FIT-FOR-55 GUIDANCE COMPLIANCE



Country	Contract value (€)	% carried out by Epsilon	No of staff provided	Client	Origin of funding	Date (start/end)	Consortium Members
Malta	9 892 622.50	2.5% 252 500.00	5	European Commission	EC Horizon HORIZON-CL5-2024-D5-01-12	07/12/2023 18/04/2024	22 Partners

Description of the project



The FLEETfor55 project focused on enhancing the sustainability and efficiency of maritime transport. It addressed the EU's "Fit for 55" goal of reducing greenhouse gas emissions by at least 55% by 2030. The project emphasized the retrofitting of existing vessels and designing new ones with Energy Efficiency Technologies (EETs), significantly reducing emissions and improving energy

efficiency across short-sea, inland waterway, and high-seas vessels. FLEETfor55 developed a comprehensive open-source design assessment tool and a decision support system, integrating advanced energy modelling to evaluate the most effective EETs. The project delivered 10 market-ready use cases while supporting business model innovation, lifecycle analysis, and industry collaboration through a Technology Innovation Network (TIN). FLEETfor55 objectives are:

- Design six retrofit UCs (use cases) and four new vessel designs UCs with a “design-for-operation” approach.
- Create a holistic roadmap towards optimized and efficient utilization of EETs’ onboard different vessel types, aiming at meeting the “Fit for 55” goals of 2030.
- Develop a decision support system (DSS) with a design assessment tool for fast assessment and benchmarking through a digital platform.
- Demonstrate accelerated conversion of inland and maritime vessels towards better energy efficiency and reduced emission.
- Develop robust business models for the design concepts that will ensure a high probability of commercial EU deployment.
- Assess designs addressing EU ‘Fit for 55’ legislative package and IMO GHG targets.
- Establish the Technologies Innovation Network (TIN) to match various use cases to end users.

Services provided

- For WP2: Requirements identification and benchmarking of available Energy Efficiency Technologies.
- Conducted a comprehensive search and identification of alternative EETs, considering design and operation aspects.
 - Analysed the market landscape for the identified EETs.
 - Examined the financial feasibility for the different available EETs.
- For WP3: Alternative EET systems evaluation and use cases feasibility.
- Presented the state of play of the current and forthcoming regulatory framework.
 - Defined and assessed the use cases, outlining the boundaries and the data required.
 - Developed techno-, socio-, environmental and economic KPIs, the corresponding assessment metrics and a QFD-based method for the project.
- For WP4: Engineering design & EET systems integration.
- Determined the requirements, specifications and data required for the holistic energy systems modelling based on the vessels’ type.
 - Developed and perform all the necessary energy flow modelling and FASTSIM of EETs solutions for each vessel type.
- For WP5: Safety evaluation & risk assessment.
- Provided insights for safe and efficient designs at the early design stages through a Hazard Identification (HAZID) study.