

network

enterprise europe



ELEEN

WP7 Report (DL 7.1)

**Catalogue of success stories /
good practices**

**Environmental services available to
SMEs through public schemes**

Swerea IVF, Sweden

Catalogue of success stories / good practices

Basic information about the company

Sailing is a well-known eco-friendly way to transport. Najadvarvet is an SME in Orust, West Coast of Sweden, well-known for combining performance with safety and security when constructing and building superb yachts. A Najad yacht is a fully-fledged ocean-going yacht that can be handled by two people with ease. The relatively narrow beam combined with surprising hull weight ensures that a Najad can ride into waves easily, maintaining momentum where others may struggle.



Description of services provided by EEN/ESP

Through the ELEEN project, Najadvarvet came in contact with the right environmental service providers that have provided a collection of environmental services aiming to minimize environmental impact from the yacht, during its manufacture and use.

The goal of this cooperation was to “green” a sailboat for Najadvarvet Orust

Description of further use of the provided service / advice

The result of the combined work by the ESP’s is a collection of methods and technologies that can contribute to reduced environmental impact from the sailboat and its use.

As a first step, a life cycle assessment (LCA) was made, showing what the high and low environmental impact of the sailboat. Largest impact on the greenhouse effect, the diesel use and emissions from the engine, both when driving the boat, and when using diesel to generate electricity. This part of the environmental impact depends very much on how the boat is actually used, eg how much you decide to go for the engine, and how much electricity to different devices spent.

Results of provided service/ changes after implementation of ESP advices

Swerea used many different experts in materials, manufacturing, energy solutions, flow simulation and environment to find the following possible technical solutions:

- Replace diesel engine and reduce greenhouse gases by 8% CO₂ by switching to fuel cells or with 75% CO₂ by switching to solar cells.
- Replace glass fiber reinforced plastic to bio composites, reducing the greenhouse effect by 71% and ozone by 97% for each kg of material.
- Minimize the need for air conditioning with heat reflective surface modification of the cabin top
- Change the materials and manufacturing process of the keel, allowing geometries with lower flow resistance, with consequent lower fuel consumption during operation.
- Educate boat owners to use their boat in an environmentally efficient manner, eg by minimizing electricity and diesel use => SAIL MORE!