# COMPRESSED NATURAL GAS TRANSPORT SYSTEM

The primary objective of the WP2 task of GASVESSEL Project is the optimization of the gas delivery from the identified source locations to the identified markets for different scenarios and geographical areas, providing indications such as optimal ship size, ship speed and fleet size in order to reach the lowest gas transport costs per unit volume, in function of the gas demand.
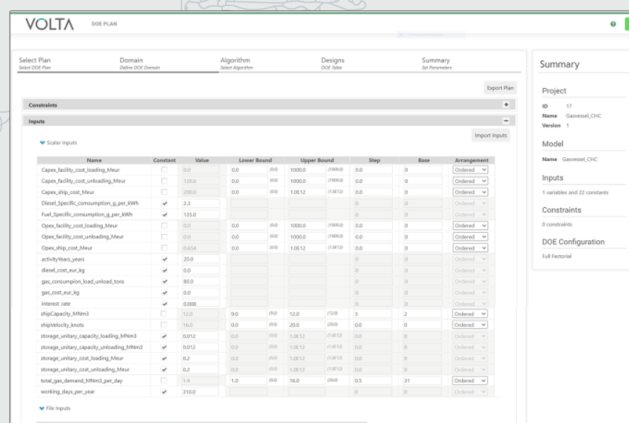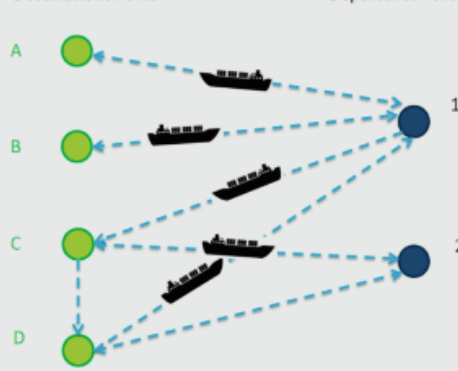
The complete optimization process is managed by the ESTECO Enterprise solution VOLTA.

VOLTA is a web-based, collaboration environment that orchestrates simulation data and multidisciplinary business processes, enabling conscious decision-making and innovative product development.

From the dedicated dashboard, any authorized user to access the project can:

(I) set up the design variables (such as range of ship capacity and velocity), the scenario parameters (such as gas requirements and ports distances) and optimization objectives (final gas tariff minimization);

(II) run the simulations over the selected computational queue;

(III) analyze the results.

In order to achieve a deeper knowledge for each scenario, several analysis tools are available in the platform, which allows to compare the values of any parameter and objective for different configurations; by filtering the values of interest, the designer can analyze how the parameters are correlated, identify the optimal configurations, and get a text report containing all the information related to the scenario design, including optimal fleet size, ship sizes and velocities, ship usages and destinations.

Project partners in charge of the CNG transportation design in each region and scenario (East Mediterranean, Barents Sea, Black Sea) have used the Decision Support Tool to minimize the global transportation costs.