

PROJECT

## TRILO-BWTS

### **Disruptive and patented microfluidic technology purification for ship ballast water, being maintenancefree, eliminating clogging of filters and providing significant life-cycle cost savings**

**Funding:** European (Horizon 2020)

**Duration:** Jun 2016 - Nov 2016

**Status:** Complete

**Total project cost:** €71,429

**EU contribution:** €50,000



**Call for proposal:** H2020-SMEINST-1-2016-2017

[CORDIS RCN : 204406](#)

#### **Objectives:**

The overall aim of TRILO-BWTS (Ballast Water Treatment System) is to bring to market a system for purification of ship ballast water based on Trilobite Microsystem AS' (TM) patented microfluidic technology for removal of small particles and microorganisms.

#### **Motivation**

The world's oceans are under threat from invasive marine species transported beyond their natural range and dispersed across the globe by ship ballast water. Ballast is essential for the safe and efficient operation of ships, providing balance and stability when empty of cargo. However, it also poses a serious ecological, economic and health threat. There are literally thousands of species that may be carried in ships' ballast - anything small enough to pass through a ship's ballast water intake pumps - including bacteria, small invertebrates and the eggs, cysts and the larvae of various species, capable of disrupting natural ecological balances across the globe.

#### **Solution**

TRILO-BWTS is based on microfluidic technology, resulting in a cheaper and more efficient system than existing solutions, avoiding clogging of filters and the need for chemicals. The system will be compact and have no moving parts, leading also to more reliable and 'maintenance free' operations, providing energy savings and lower life-time costs.

#### **Project outputs**

Commercialization in BWTS is a high risk - high reward action for TM, and as a result we are conducting a Feasibility Study, resulting in a complete Business Plan, taking into account end-user needs, market analysis, cost assessment (development and subsequent production), IP validation, pilot design and risk assessment - all feeding into our go-to-market strategy.

#### **Business opportunity**

The BWTS market is expected to grow at 21% CAGR until 2023, reaching a total market size of EUR 3 billion, driven by international regulation. We seek to capture market share in this highly attractive market with a patent protected system, providing high performance with low costs.

#### **Parent Programmes:**

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

**Institute type:** Public institution

**Institute name:** European Commission

**Funding type:** Public (EU)

**Lead Organisation:****Trilobite Microsystems As****Address:**

TORRIDALSVEIEN 21A  
4630 KRISTIANSAND S  
Norway

**EU Contribution:** €50,000**Technologies:**

Ship operations  
Microfluidic technology for ballast water purification

**Development phase:** Research/Invention**STRIA Roadmaps:** Vehicle design and manufacturing  
Water transport (sea &**Transport mode:** inland)**Transport sectors:** Passenger transport, Freight transport**Transport policies:** Environmental/Emissions aspects**Geo-spatial type:** Other