

dTHOR

Digital Ship Structural Health Monitoring

SELECTED PROJECTS EUROPEAN DEFENCE FUND (EDF) 2021

CALL TITLE:

Smart ships

TOPIC TITLE:

Ship structural health monitoring

DURATION OF THE PROJECT:

36 months

TYPE(S) OF ACTIVITIES:

Integrating knowledge; Studies; Design

ESTIMATED TOTAL COST:

€ 14,500,000.00

MAXIMUM EU CONTRIBUTION :

€ 14,500,000.00



SHORT DESCRIPTION OF THE PROJECT:

dTHOR will develop the next generation of a predictive Ship Structural Health Monitoring system.

The project “Digital Ship Structural Health Monitoring” (dTHOR) will develop a system based on innovative utilization of large amounts of load and response measurements from robust and advanced sensors, a digital framework complying with recognised open standards for data exchange, and hybrid analysis and modelling which combines physics-based and data-driven models. dTHOR will consolidate end-users’ military operational requirements based on improved battle damage and structural integrity assessment, reduced hydro-acoustic signatures, and more accurate operation of weapon systems.



**MEMBERS OF THE CONSORTIUM AND
COUNTRY OF ESTABLISHMENT:**



 NAME OF THE ENTITY	 COUNTRY
SINTEF AS (Coordinator)	Norway
CAFA Tech OU	Estonia
Centro per gli Studi di Tecnica Navale CETENA S.p.A.	Italy
Commissariat à l'Energie Atomique et aux Energies Alternatives	France
Consiglio Nazionale delle Ricerche	Italy
Damen Schelde Naval Shipbuilding B.V.	Netherlands
ECOLE NATIONALE SUPERIEURE D'ARTS ET METIERS	France
ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS	Greece
HERON ENGINEERING MECHANICAL STRUCTURAL ANALYSIS	Greece
INTEGRATED SYSTEMS DEVELOPMENT (ISD) SA	Greece
INTRACOM DEFENSE SINGLE MEMBER S.A.	Greece
Jotne EPM Technology AS	Norway
Light Structures AS	Norway
MINISTRY OF DEFENCE	Netherlands
National and Kapodistrian University of Athens	Greece



**MEMBERS OF THE CONSORTIUM AND
COUNTRY OF ESTABLISHMENT:**



 NAME OF THE ENTITY	 COUNTRY
National Institute of Aerospace Technology	Spain
National Technical University of Athens	Greece
Naval-Group SA	France
NAVANTIA, S.A.	Spain
Panepistimio Patron (University of Patras)	Greece
Politecnico di Milano	Italy
QRelation Management Team GmbH	Germany
Saab Kockums AB	Sweden
SAES S.M.E	Spain
SAFRAN DATA SYSTEMS	France
Shipyards' and Maritime Equipment Association of Europe	Belgium
SINTEF Ocean AS	Norway
SIREHNA	France
Stichting Koninklijk Nederlands Lucht- en Ruimtevaartcentrum	Netherlands
Stichting Maritiem Research Instituut Nederland	Netherlands

**MEMBERS OF THE CONSORTIUM AND
COUNTRY OF ESTABLISHMENT:**



 NAME OF THE ENTITY	 COUNTRY
Structural Vibration Solutions A/S	Denmark
Technische Universiteit Delft	Netherlands
TECNICAS Y SERVICIOS DE INGENIERÍA	Spain
TESTIA SAS	France
ThyssenKrupp Marine Systems GmbH	Germany