



FEAC

ENGINEERING | REALIZE YOUR DIGITAL TWIN

Solution
Partner

Digital Industries
Software

SIEMENS

Technology
Partner

Digital Industries
Software

Digital Twins solutions for the Defense Industry

Charilaos Kokkinos, Technical Manager, FEAC Engineering

www.feacomp.com

| 1. About FEAC:



FEAC: Your trusted partner in defense for Digital Twins & Simulation Solutions

Ideation

Realization

Utilization

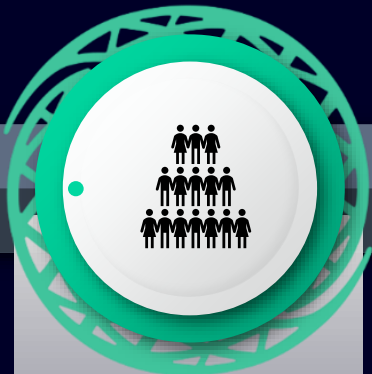


Holistic Digital Twin Approach





FEAC's Heritage



FEAC's TEAM

- Experienced Engineers, Physicists and developers with Ph.D. & M.Sc. Degrees
- Numerous scientific publications



PROJECTS

- More than 200 delivers projects so far
- Sectors: Marine, Aerospace/ Aeronautics, Health care, Renewable Energy, Oil & Gas, Defense, Construction, Science & Particle Physics



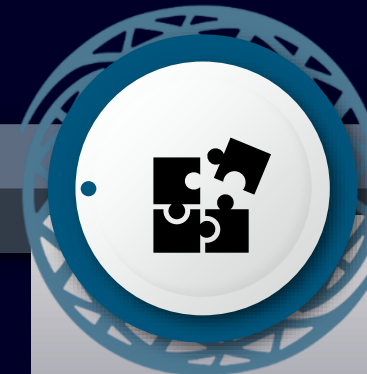
CLIENTS & PARTNERS

- Satisfied Clients & Partners from all around the world.
- FEAC is a trusted and acknowledged partner



AWARDS

- Seal Of Excellence by the European Commission
- European Defence Agency Innovation Prize
- ANSYS 2014 Hall of Fame (1st global award)



INNOVATION

- Permanent collaboration with CERN & SIEMENS
- Participation in
 - Horizon Europe
 - EDA (Defense)
 - ESA (Space)





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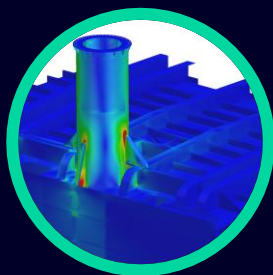
Digital Industries
Software

FEAC's Expertise



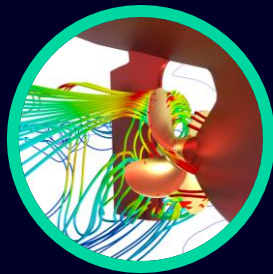
Structural

Software tool:
SIEMENS Simcenter 3D
with NX NASTRAN



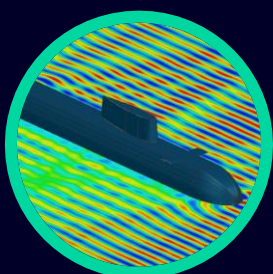
Fluids – Thermal

Software tool:
SIEMENS Star-CCM+



Acoustics

Software tool:
SIEMENS Simcenter 3D



EMI/EMC – RCS

Software tool:
SIEMENS Simcenter 3D



AI-assisted
Real time
applications

Finite Element
Analysis
(FEM)

Systems
Simulation
(1D)

Boundary
Element
Analysis
(BEM)

Computational
Fluid Dynamics
(CFD)

Anti- Corrosion

Software tool:
SIEMENS Simcenter3D
with PITHIA-CP



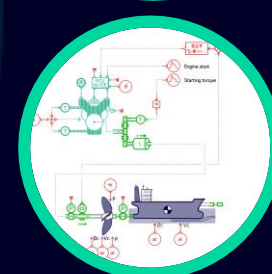
Design & Optimization

Software tool:
SIEMENS NX CAD &
SIEMENS HEEDS



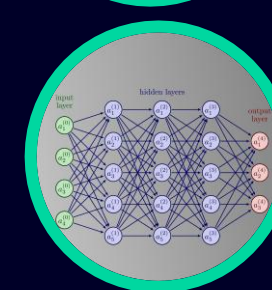
Systems

Software tool:
SIEMENS Amesim



AI- Monitoring

Software tool:
SIEMENS Amesim &
FEAC tools



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2. Involvement in European Defence



EDF Heritage:

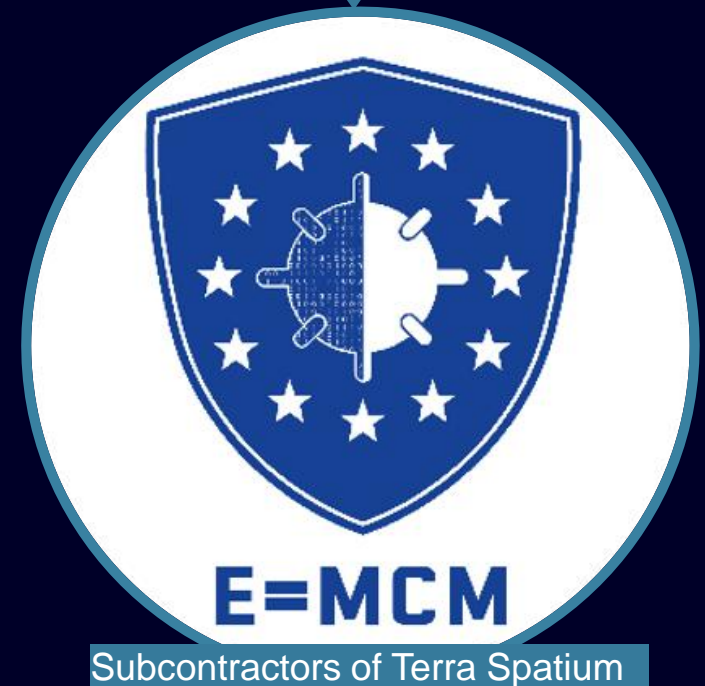
European Patrol Corvette



SEACURE



E=MCM



Subcontractors of Terra Spatium



| EDA CatB. Heritage:

INTELLISEA

IntelliSea



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EDA Innovation Prize:



EDA Defence Innovation Prize 2024

Topic 1: “Innovative concepts, technologies and solutions for critical maritime infrastructure protection”

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PITHIA

An awarded, advanced
Digital Twin technology
to enhance the protection of critical
maritime infrastructure

EDA Innovation Prize

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Data from Digital twins &
advanced simulations
(corrosion, EM, acoustics, etc.)



Data from Sonars & Sensors



Integrating various data sources
- Unified System



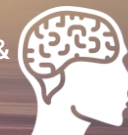
Real-time results based on
simulations and data



Continuous monitoring &
predictive maintenance



Operational Intelligence &
operational readiness



Situational
Awareness



Resilience of
EU assets



PITHIA

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Digital Twin technology
to enhance the protection of critical
maritime infrastructure

EDA Innovation Prize

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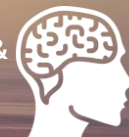
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Continuous monitoring &
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Operational Intelligence &
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Situational
Awareness



Resilience of
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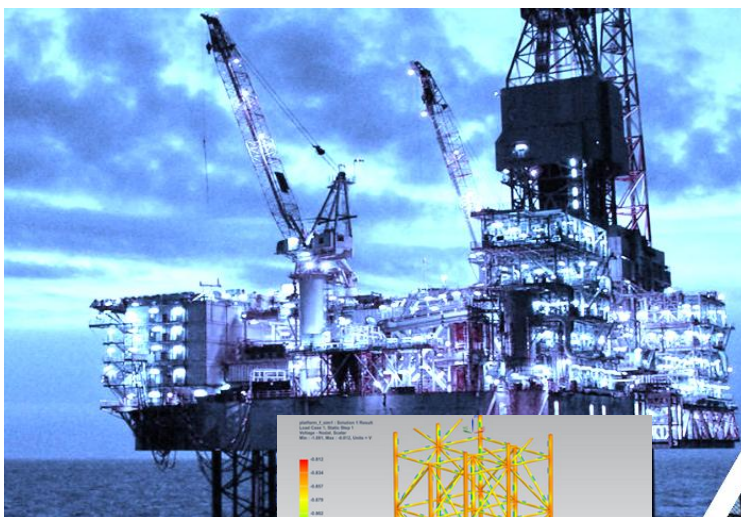
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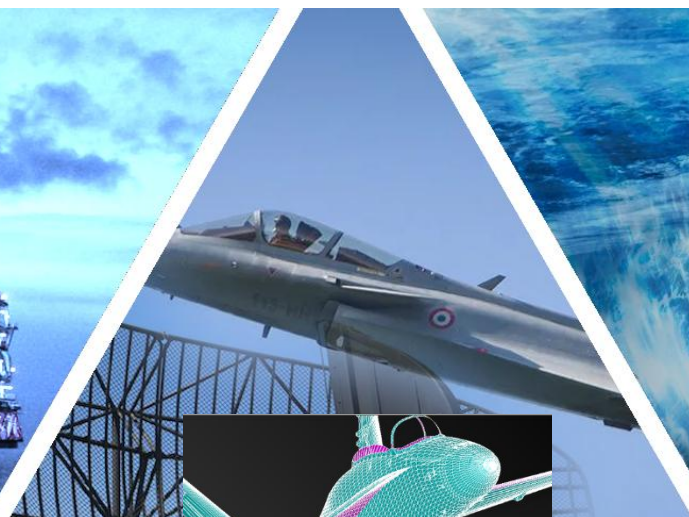
PITHIA's Digital Twins Suite

Advanced simulation software



PITHIA-CP

Anti-corrosion Design of Critical Infrastructures



PITHIA-EM

Electromagnetic Signature



PITHIA-AC

Underwater Noise Propagation & Signature

PITHIA's 3 modules

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PITHIA's Digital Twins Suite

Awards & Recognitions



European Commission
Horizon Europe

The project proposal
190152834 — pithia-cp

“Optimization and validation (scale-up) of Simulation software for
creating comprehensive anti-corrosion Digital Twins for the industry”

submitted under the Horizon Europe EIC call
HORIZON-EIC-2023-ACCELERATOROPEN-01 — EIC Accelerator Open 2023
by

FEAC ENGINEERING PRIVATE COMPANY

following evaluation by an international panel of independent experts
was recognised as a high-quality project proposal
in a highly competitive evaluation process

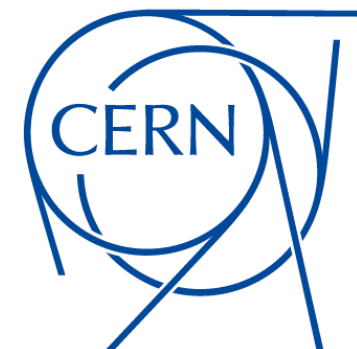


**HORIZON
EUROPE**

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Knowledge Transfer
Accelerating Innovation

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| 3. EDF 2025:










FEAC in the frame of EDF 2025

FEAC, a trusted partner in winning consortia!

**Calls of
interest:**



CATEGORIES		TOPICS	BUDGET (in million euros)
	Advanced passive and active sensors	<ul style="list-style-type: none"> • <u>Multi-band 4D Radar technologies (D)</u> • <u>Infrared detectors (D)</u> 	58.5
	Energy resilience and environmental transition	<ul style="list-style-type: none"> • <u>Propulsion system for next generation rotorcrafts (R)</u> • <u>Naval hybrid propulsion and power systems (R)</u> • <u>Aircraft propulsion and energy management systems (D)</u> 	93
	Ground combat	<ul style="list-style-type: none"> • Technologies for counter-battery capabilities (R) • <u>Future modular multifunctional land platforms and enabling technologies, including green technologies (D)</u> • Land collaborative combat including air-land (D) • Drone-based affordable mass munitions (D) 	192
	Naval combat	<ul style="list-style-type: none"> • <u>Digital Ship and Naval Combat Cloud (D)</u> 	54
	Underwater warfare	<ul style="list-style-type: none"> • Stand-off anti-submarine warfare engagement (R) • <u>Advanced underwater networks (D)</u> 	45
	Simulation and training	<ul style="list-style-type: none"> • <u>Multi-disciplinary design and analysis framework for Aerial Systems (R)</u> • Live, virtual, constructive training interoperability (R) 	43
	Disruptive technologies	<ul style="list-style-type: none"> • <u>Great-depth enabling technologies (R)</u> • Non-thematic research actions targeting disruptive technologies for defence (R) 	43



| Call to Action!

*Interested in a trusted & multi-awarded partner, with
specialization in Digital Twins?*



Contact us!

Contact:



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&
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