



NEOTEC 2020 Program

Virtual Intelligent Design Assistant (VIDA)

Webinar: "Ayudas para emprender e innovar en tiempos de COVID-19"

Francis Hueber, General Manager and co-Founder
CAPONNETTO HUEBER S.L.

NEOTEC 2020 - Virtual Intelligent Design Assistant

- Company Presentation
- R&D Project – VIDA
- NEOTEC Experience

NEOTEC 2020 - Virtual Intelligent Design Assistant

- Company Presentation
- R&D Project – VIDA
- NEOTEC Experience

Caponnetto Hueber S.L. Presentation

DESIGN

INNOVATION

COMPUTATIONAL FLUID DYNAMICS (CFD)

for YACHTS

and the MARINE INDUSTRY

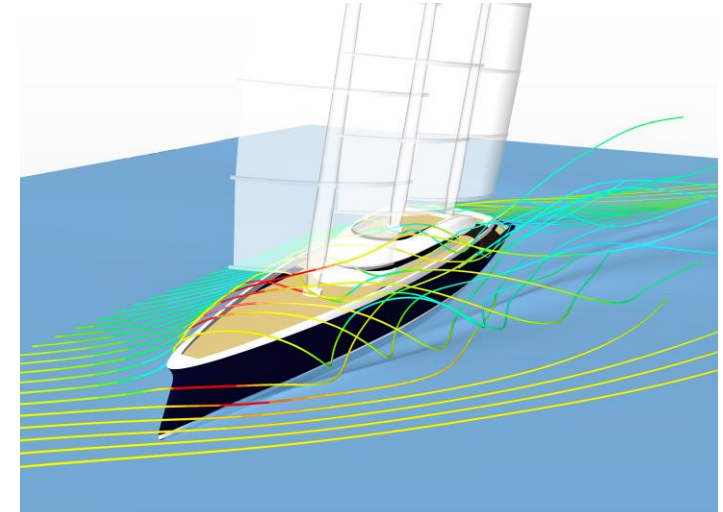
Background, Co-Founders and Team

- Mario Caponnetto (ITA) : Technical Director
- Francis Hueber (FRA) : General Manager
- 7 engineers (ESP, ITA, FRA, POR, USA):
 - Naval Engineers
 - Aeronautics Engineers
 - Developers
- Partnerships
 - SIEMENS : CFD Codes
 - CRS4 : HPC
- Located in “La Marina de Valencia”
- Founded in 2017



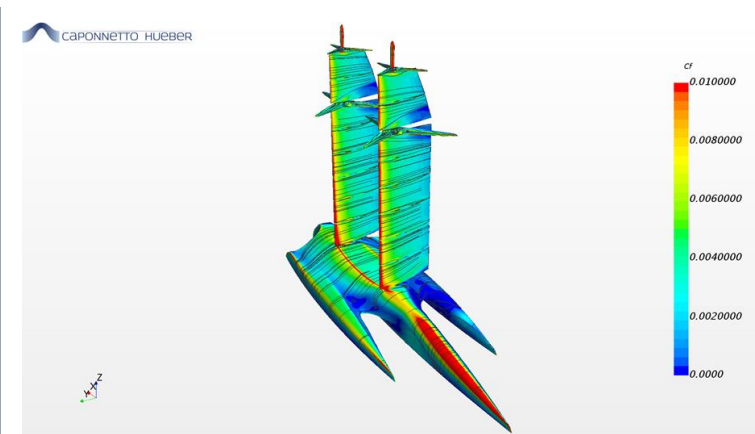
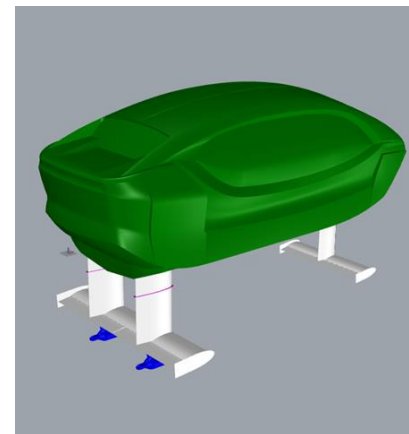
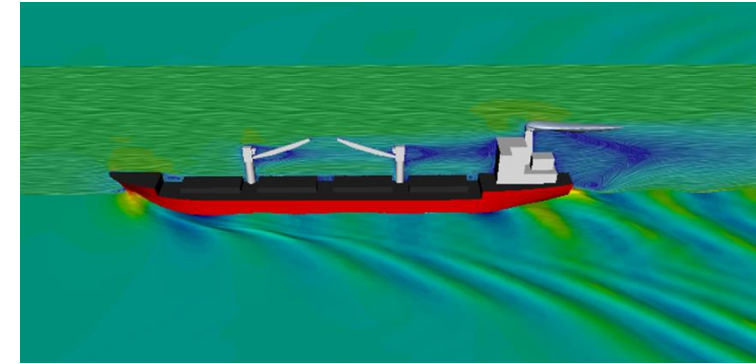
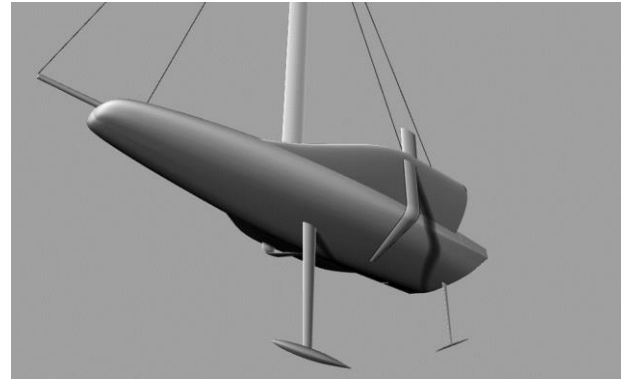
Company Expertise

- Creativity, Innovation and Design : IDEAS
⇒ Conceptual & Efficient Design
 - Fluid Dynamics : KNOWLEDGE
 - Numerical Simulation (CFD) : TOOLS
=> Tools & Methodologies
 - R&D : INVESTIGATION
-
- America's Cup Winners in 2010 and 2013



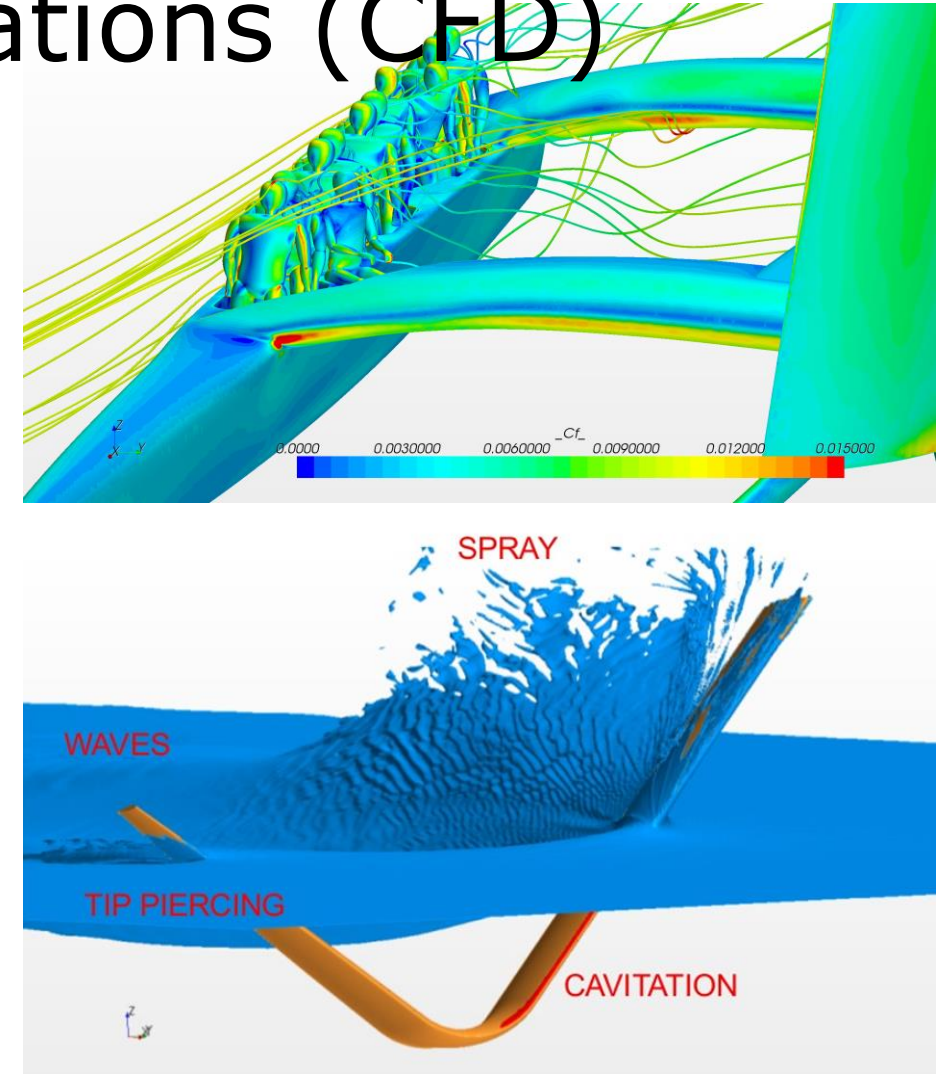
Services – Efficient Design

- Racing Yachts
- Flying Yachts
- Motor Yachts
- Efficiency for Shipping Industry
- Propulsion (Sails, propellers, etc...)



Services – Numerical Simulations (CFD)

- Computational Fluid Dynamics (CFD)
 - Tools and methodologies
 - Analysis
- Optimization
 - Shapes optimization
- Fluid Structure Interaction (FSI)
 - CFD + FEA



NEOTEC 2020 - Virtual Intelligent Design Assistant (VIDA)

- Company Presentation
- **R&D Project – VIDA**
- NEOTEC Experience

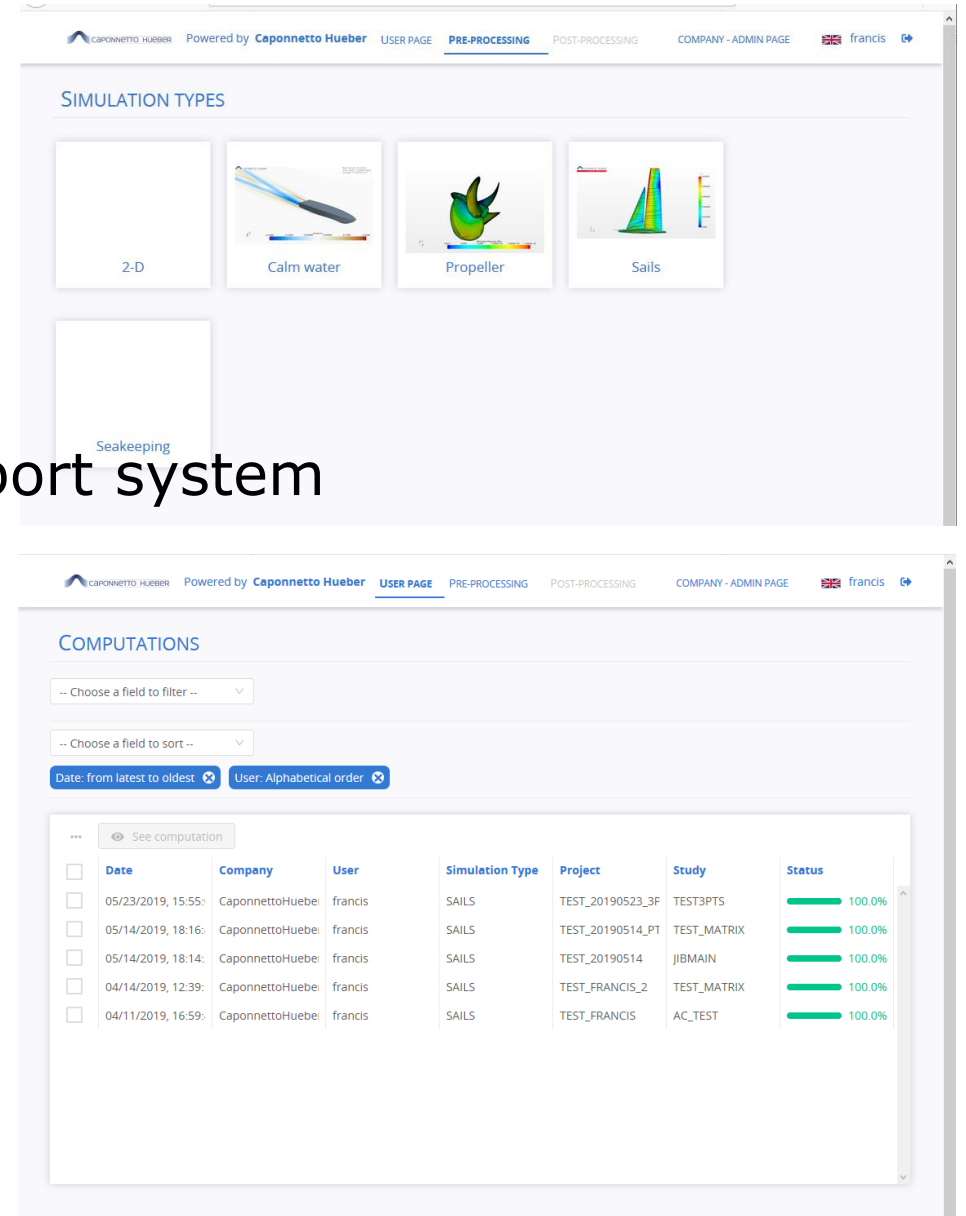
VIDA – Origin Of the Project

- We have tools and knowledge to improve design and overall efficiency of complex systems
- Maritime Transportation has a very negative impact on the environment
- Enable the community to use state of the arts tools
 - Diversification and consolidation
 - From Service to Product / Service
 - From Maritime industry to Transportation & Energy industry

VIDA – Objectives

- VIDA Platform Sum-up

- Intelligent design decisions-making support system
- Cloud based (modular and scalable)
- Test your design
- Improve your design
- Optimize your design
- Outperform your competitors
- More sustainable industry



The screenshot displays the VIDA platform interface, which is powered by Caponnetto Hueber. The interface is divided into two main sections: SIMULATION TYPES and COMPUTATIONS.

SIMULATION TYPES

This section shows four simulation types with corresponding icons:

- 2-D
- Calm water
- Propeller
- Sails

COMPUTATIONS

This section provides a list of computations with filters and sorting options. The table below shows the data:

Date	Company	User	Simulation Type	Project	Study	Status
05/23/2019, 15:55:	CaponnettoHueber	francis	SAILS	TEST_20190523_3P	TEST3PTS	100.0%
05/14/2019, 18:16:	CaponnettoHueber	francis	SAILS	TEST_20190514_PT	TEST_MATRIX	100.0%
05/14/2019, 18:14:	CaponnettoHueber	francis	SAILS	TEST_20190514	JIBMAIN	100.0%
04/14/2019, 12:39:	CaponnettoHueber	francis	SAILS	TEST_FRANCIS_2	TEST_MATRIX	100.0%
04/11/2019, 16:59:	CaponnettoHueber	francis	SAILS	TEST_FRANCIS	AC_TEST	100.0%

VIDA – Virtual Intelligent Design Assistant

- Phase 1. Automatic Performance Prediction WebPortal
- Phase 2. Data Base
- Phase 3. Artificial Intelligence
- Phase 4. Real Time Performance Prediction
- Phase 5. Intelligent Design Assistant

VIDA – From Service to Product

- As pioneers in the field of CFD, we have to lead the development of future technologies, tools and methodologies...
- From service, done by expert engineers
- To product, available to non-experts

VIDA – Resources and Needs

- Fluid dynamics
- Numerical Simulations (CFD)
- Naval architecture and design
- Optimization
- Database
- Machine Learning & AI
- Web

NEOTEC 2020 - Virtual Intelligent Design Assistant

- Company Presentation
- R&D Project – VIDA
- **NEOTEC Experience**

NEOTEC – Convocatoria 2018

- 4 weeks to present the project...
- After 2 weeks, new focus >> disruptive innovation
- Almost got there...
 - Details can make a difference

NEOTEC – Convocatoria 2018

- 4 weeks to present the project...
- After 2 weeks, new focus >> disruptive innovation
- Almost got there...
 - Details can make a difference



NEOTEC – Convocatoria 2019

- Experience from NEOTEC 2018 and CREATEC 2019
- Feedback from both Program experts
- CEEI (Isidro Campo)
- Implementation of the dev. done during the year
 - Technical part refined
 - Market and Financial analysis refined

NEOTEC – Convocatoria 2019

- Experience from NEOTEC 2018 and CREATEC 2019
- Feedback from both Program experts
- CEEI (Isidro Campo)
- Implementation of the dev. done during the year
 - Technical part refined
 - Market and Financial analysis refined



NEOTEC

- The idea = “disruptive innovation”
- Define and redefine your Project
- The Call
 - Presentation of the company
 - Technological challenge
 - Disruptive
 - Company HR and structure
 - Market study
 - Financial projection
- Project Follow up

NEOTEC – Call

- Difficulties:
 - Market Survey
 - Financial Projections
 - Time consuming to prepare for the call
 - Initial Fund: need 30%
 - ~~Video~~
- Anticipate:
 - Need to have the project 70% ready before the start of the call
 - Need to have the capacity to invest
 - Need to be structured as a company

NEOTEC – Tips & Recommendations

- Be innovative
- Be disruptive
- Be a game changer
- Emphasize the competitive and commercial potential



NEOTEC – Tips & Recommendations

- Be mature as a company
- Work with R&D program experts
- Listen to feedback (CDTI experts, R&D experts, companies who entered the program, ...)
- Be involved as a business owner as no-one understand better your project
- Be ready and structured to be able to lead such a project

NEOTEC – Next Steps

- NEOTEC will be our POC (Proof Of Concept)
- Towards EU R&D Program
- Investors to Expand
- Technical Partnerships
- Commercial Emphasis



Caponnetto Hueber

DESIGN

INNOVATION

COMPUTATIONAL FLUID DYNAMICS (CFD)

VIRTUAL INTELLIGENT DESIGN ASSISTANT (VIDA)