



# TECNOCONSULT

YOUR ENGINEERING PARTNER

RENEWABLE **ENERGY**

# ABOUT US

## INTRODUCTION TO TECNOCONSULT

Tecnoconsult is an outstanding multi-disciplinary engineering and management company operating since 1986 in the energy industries covering Offshore and Onshore engineering design, consultancy and procurement assistance.

### KEY NUMBERS

- 40 YEARS OF EXPERIENCE IN ENERGY SECTOR
- 75 ENGINEERS IN STAFF AND CONSULTANTS
- TYPICAL WORK LOAD: 150,000 M/Y
- 1 HEADQUARTER SETTLED IN FANO (ITALY)
- 1 BRANCH OFFICE IN RAVENNA (ITALY)
- PROJECTS PERFORMED IN 4 CONTINENTS

### IQNET and ICIM Certifications:

QM System **ISO 9001:2015**  
HS Management System **ISO 45001:2018**  
Environmental System **ISO 14001:2015**



# SCOPE OF INTERVENTION

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Tecnoconsult offers complete project expertise from concept through to decommissioning.



### OFFSHORE

WIND FARM  
FLOATING PV  
ELECTRICAL CABLES

### ONSHORE

WIND FARM  
PV & AGRI-PV  
ENERGY STORAGE  
ELECTRICAL SUBSTATION



# WIND FARM

## CORE CAPABILITIES

### WIND RESOURCE ASSESSMENT

- HINDCASTING WRF
- WINDSIM® CFD FINITE VOLUME METHOD
- WAKES MODELLING
- WIND RESOURCE ASSESSMENT AND WIND FARM FEASIBILITY

### POWER TRANSMISSION SYSTEM

- ROUTE DEVELOPMENT STUDY
- TRANSMISSION AND CONNECTION TO GRID
- SUBMARINE CABLE
- CABLE INSTALLATION DESIGN

### ON-OFFSHORE ENGINEERING

- GEOPHYSICS, GEOHAZARD & METOCEAN
- GEOTECHNICS DESIGN
- SCOURING, TRENCHING, CROSSING
- LANDFALL DESIGN (OPEN TRENCH & HDD)

### ELECTRICAL & STRUCTURAL DESIGN

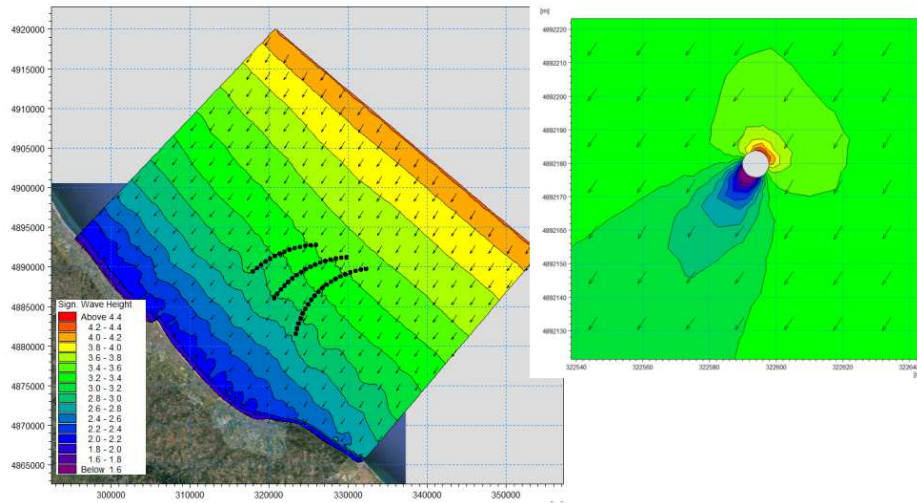
- JACKET/PILE DESIGN
- STRUCTURAL DESIGN
- FLOATING SYSTEMS DESIGN
- ELECTRICAL EQUIPMENT DESIGN



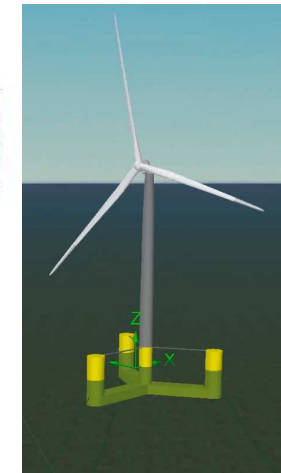
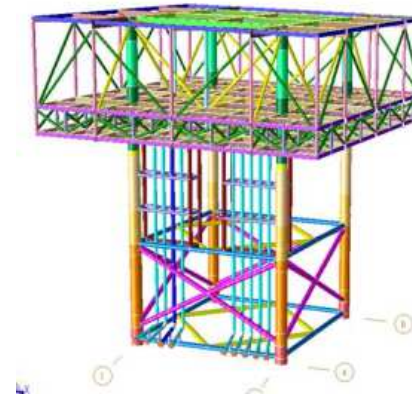
# SPECIALISTIC ANALYSIS

## WIND FARM

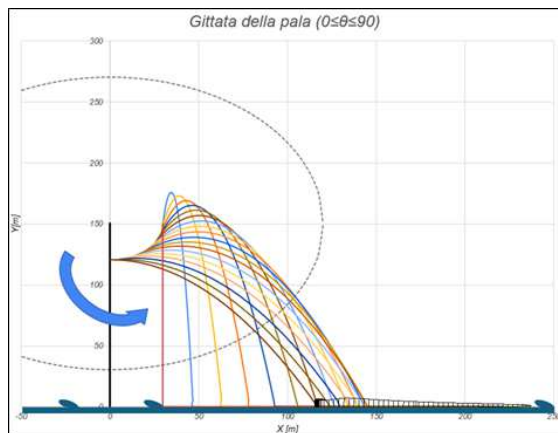
### Hydrodynamic Analysis



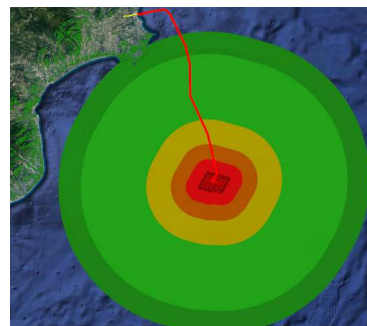
### Structural analysis (Software: ORCAFLEX®)



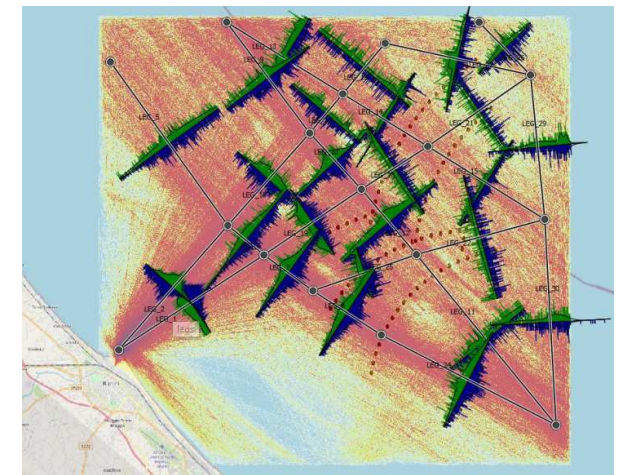
### Blade throw calculation



### Visibility analysis and photomontage



### Navigation risk assessment



# PHOTOVOLTAIC

## CORE CAPABILITIES

### SOLAR RESOURCE ASSESSMENT

- TECHNOLOGIES EVALUATION
- LAYOUT OPTIMIZATION
- PVSYST ® AND WINDSIM ® MODELLING
- SOLAR FARM FEASIBILITY

### POWER TRANSMISSION SYSTEM

- ROUTE DEVELOPMENT STUDY
- TRANSMISSION AND CONNECTION TO GRID
- CABLE DEFINITION AND INSTALLATION DESIGN
- ELECTRICAL SUBSTATION DESIGN

### PV SYSTEMS DESIGN

- AGRI PV
- FLOATING PV
- GROUND MOUNT PV
- PV AND BESS INTEGRATION

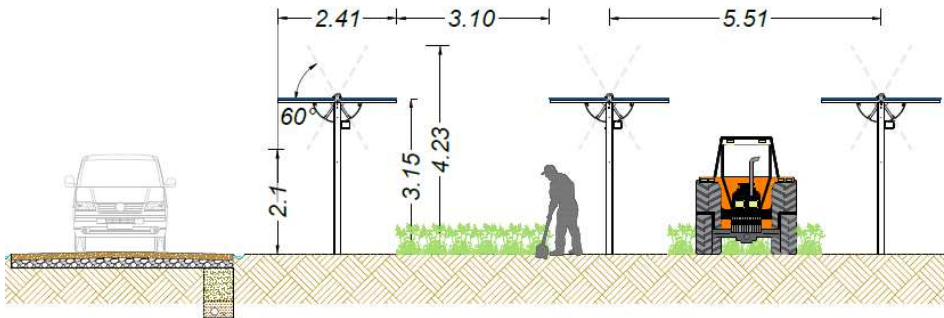
### CIVIL & STRUCTURAL DESIGN

- PV STRUCTURAL DESIGN
- POWER STATION AND ELECTRICAL ROOM DESIGN
- FLOATING SYSTEMS DESIGN
- CIVIL WORKS DESIGN

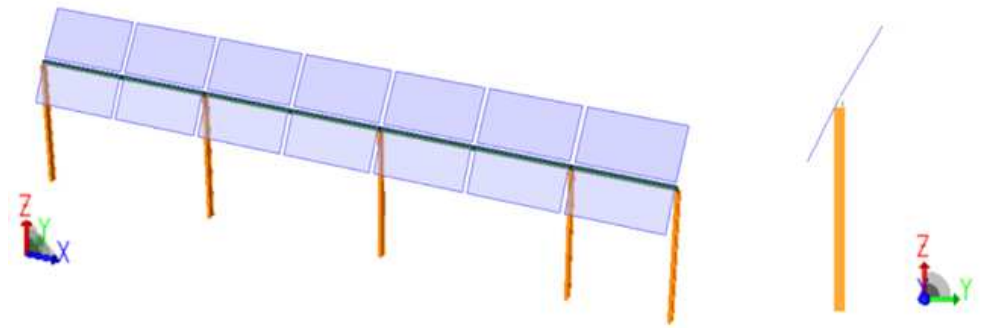
## SPECIALISTIC ANALYSIS

## PHOTOVOLTAIC

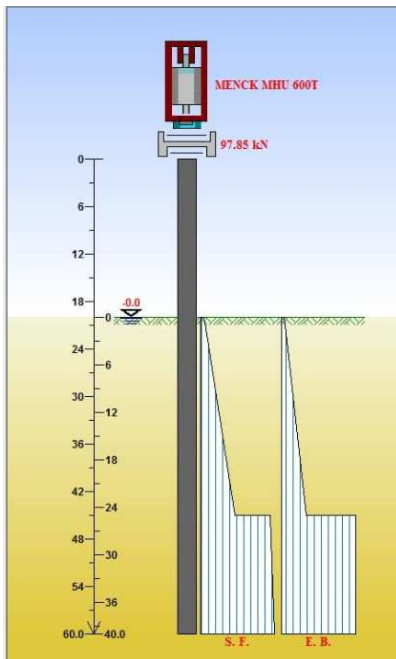
Agri-PV design



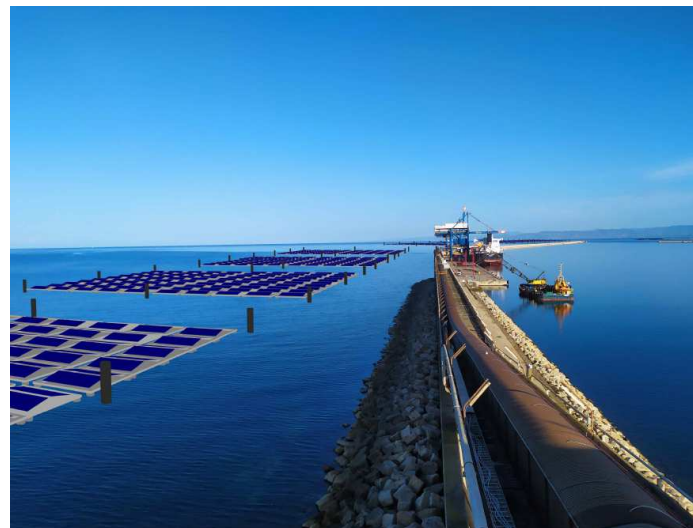
Structural analysis (Software: SACS®)



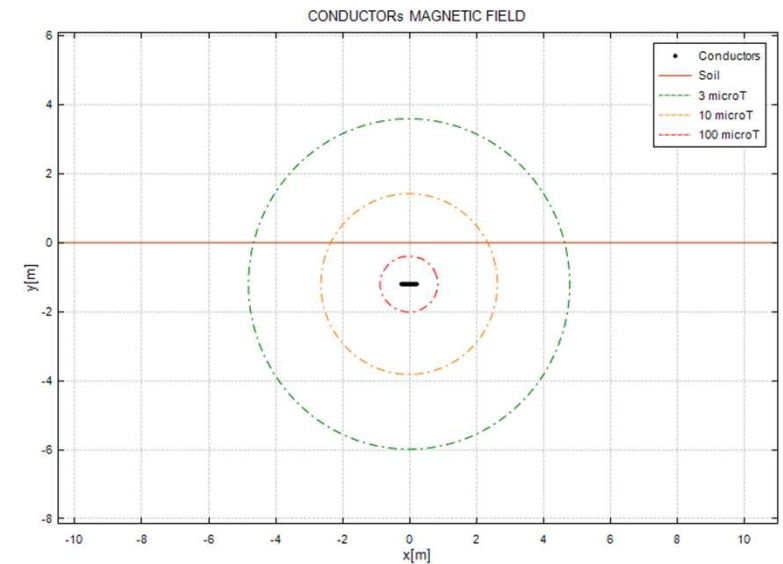
Pile driving (Software GRLWEAP®)



Floating PV design



Magnetic field calculation



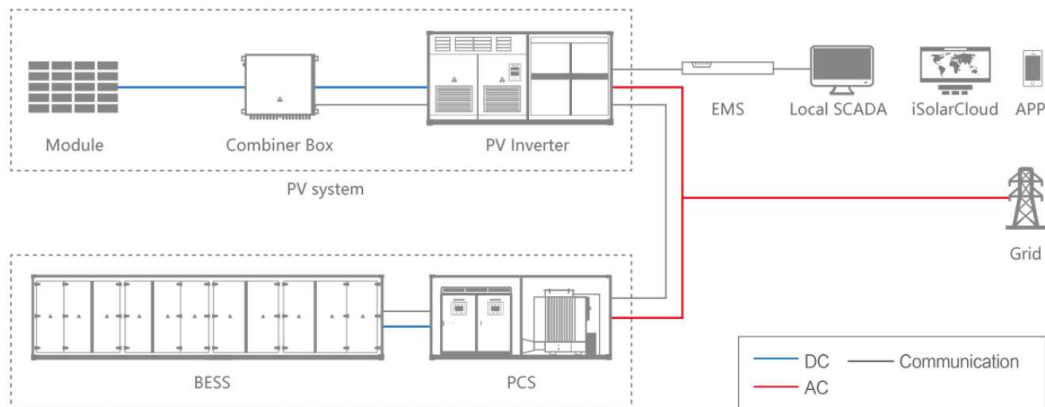
# ENERGY STORAGE

## CORE CAPABILITIES

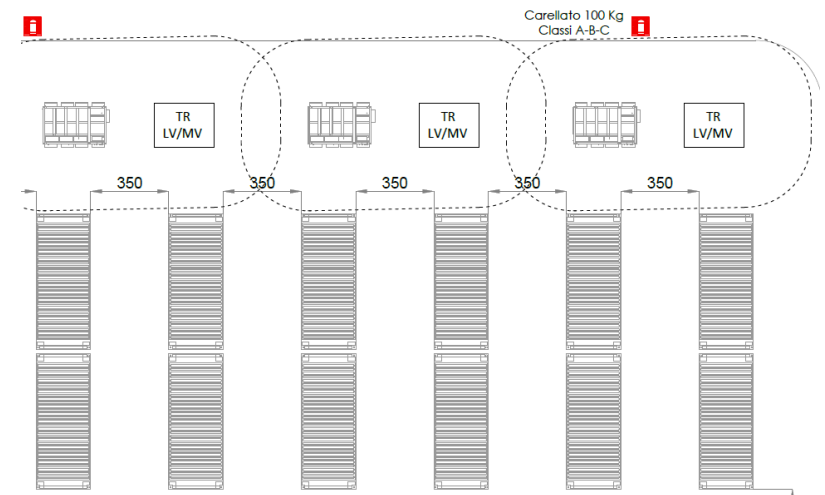
### BATTERY ENERGY STORAGE

- TECHNOLOGIES EVALUATION AND LAYOUT DEFINITION
- ELECTRICAL AND SAFETY DESIGN
- GRID CONNECTION DESIGN
- PROCUREMENT AND INSTALLATION ASSISTANCE

PV and BESS integrated system



BESS layout

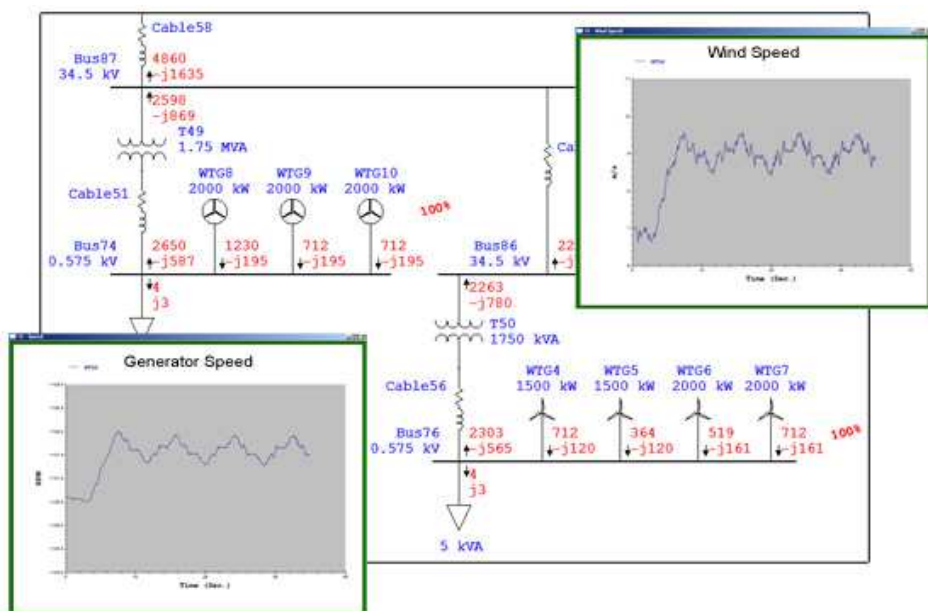


## CORE CAPABILITIES

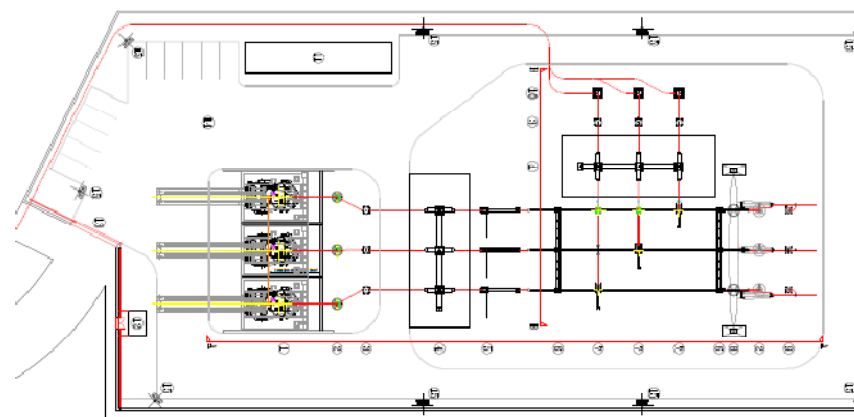
### HIGH VOLTAGE SYSTEMS

- GRID ASSESSMENT AND REACTIVE COMPENSATION DEFINITION
- CABLE DESIGN
- TRANSFORMER SUBSTATION DESIGN
- SAFETY ASSESSMENT

Grid assessment (Software: ETAP®)



MV/HV electrical substation



# EXECUTION

- SWITCHBOARD
- BT/MT CABLE ROUTING

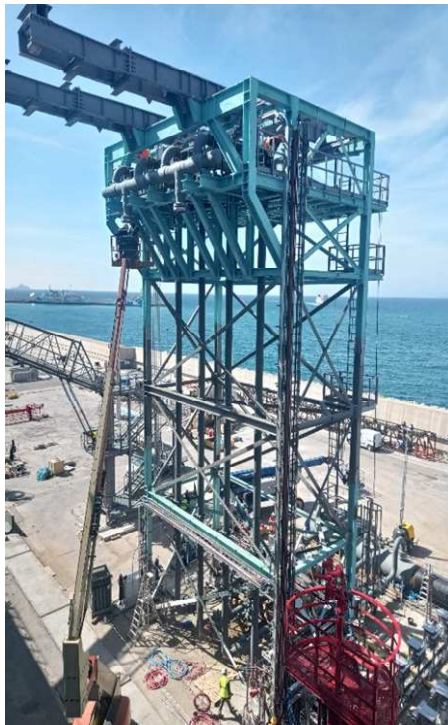
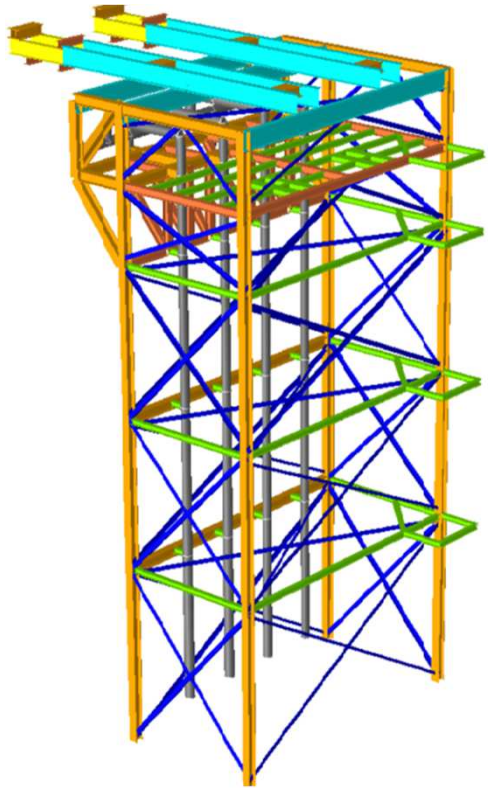
## ELECTRICAL WORK



# EXECUTION

- STEEL STRUCTURE
- CONCRETE FOUNDATION
- TRENCHING

## CIVIL & STRUCTURAL WORK



# EXECUTION

- Matrice 350 RTK
- Zenmuse L2 sensor LIDAR
- H30T thermocamera

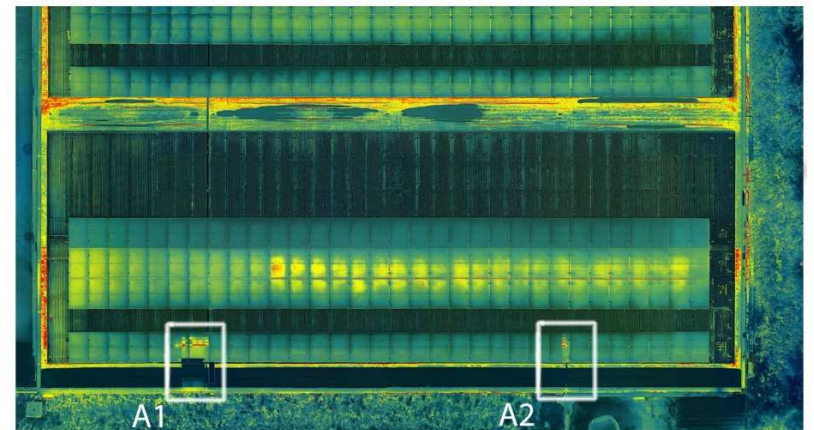
## DRONE SURVEY- high penetration on dense vegetation



H30T RGB



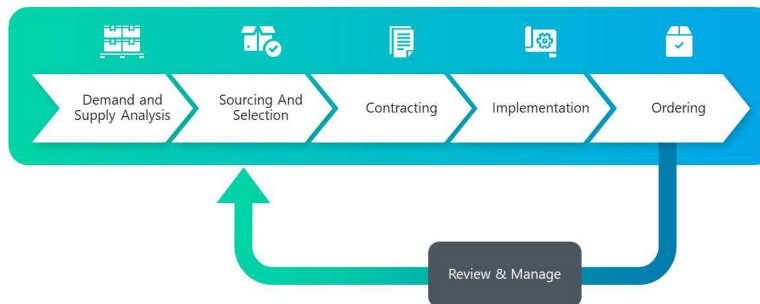
H30T THERMO



# SERVICES

## MAIN ADDITIONAL SERVICES PROVIDED BY TECNOCONSULT

### ESG & SUSTENABILITY ASSESSMENT FOR PROJECTS

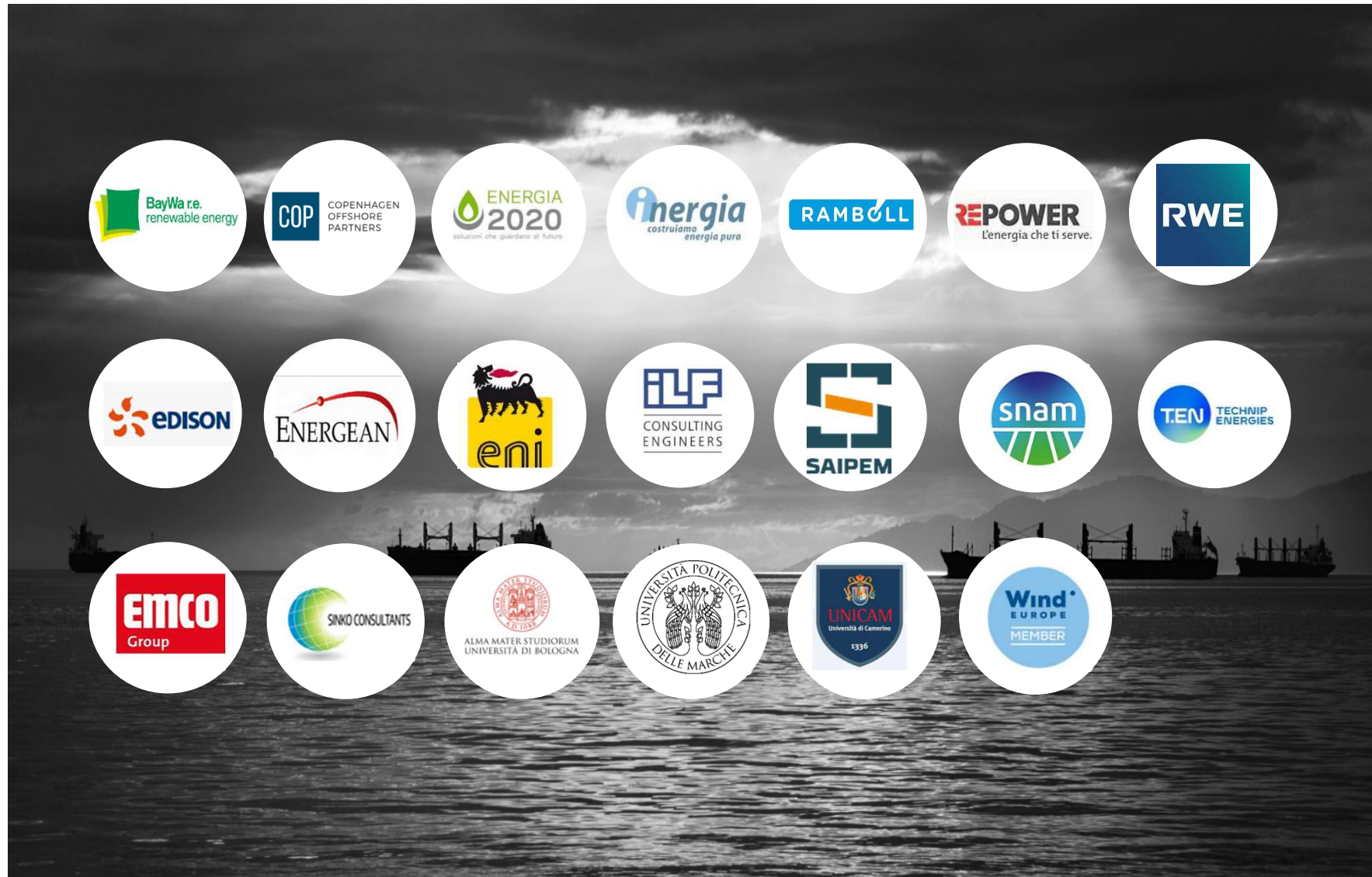


### ASSISTANCE DURING SUPPLIES PURCHASE AND DELIVERY

### PROVIDE ENGINEERING & CONSULTANCY / BODY RENTAL



# MAIN CLIENTS & PARTNERS





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