



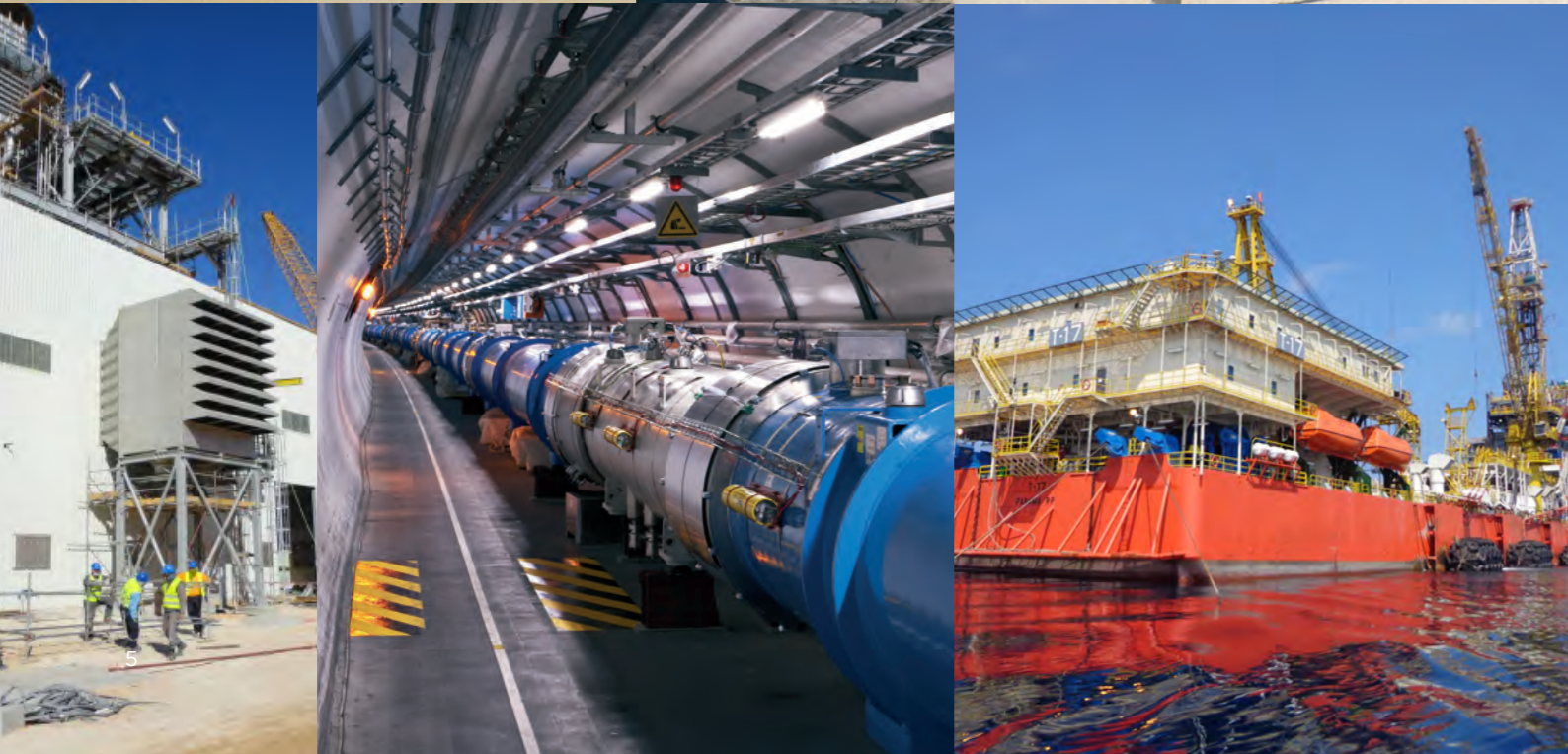
A large offshore oil platform, the Elgin PUO 22/30c, is shown in the center of the image. The platform is a complex structure of yellow and grey metal, with several large cranes extending upwards. It is supported by a dense network of yellow legs. In the foreground, a black support vessel named 'ISLAND EXPRESS' is positioned near the platform. The vessel has a white superstructure and a red buoy. The background shows a clear blue sky and a calm blue sea. A semi-transparent white box with a grey border is overlaid on the image, containing the text '...FROM EXPERIENCE TO KNOWLEDGE'.

**...FROM EXPERIENCE TO KNOWLEDGE**

## INDEX

MB Group History	6
MB Engineering philosophy	7
Institutional profile	9
Quality Health Safety Environment	12
Organization Chart	13
2023 Annual Production Capacity	15
Sector knowledge and experiences	18
Services offered by MB Engineering	19
Process Engineering	19
Civil and Structural Engineering	19
Mechanical and piping Engineering	22
Electrical Engineering	22
Instrumentation and Automation Engineering	23
Firefighting and Safety Engineering	23
Services offered by MB Ravenna	26
Services offered by MB Workshop	27
Our direct clients	29
Our final clients	30
Software	32

## COMPANY PROFILE



## MB GROUP HISTORY

In September 1987, two Project Managers working at the nuclear power plants of Trino Vercellese, Cirene Alto Lazio, PEC Brasimone, decided to put their experience to good use and establish MB.

Technical knowledge and management in quality systems of the nuclear sector allowed MB to expand areas of competence: passing first to cogeneration and trigeneration plants, and then to the chemical, petrochemical and Oil & Gas sectors.

Over the last three decades, MB has expanded its knowledge and skills by operating not only in Italy and Europe but also worldwide for EPC and oil companies, thanks to a staff of technicians and managers covering all engineering disciplines.

Today, due to the skills acquired in the production of energy from alternative sources such as solar, hydrogen, as well as in regeneration and waste recycling, MB stands as a leading engineering company tackling the new frontiers of industrial and technological development.

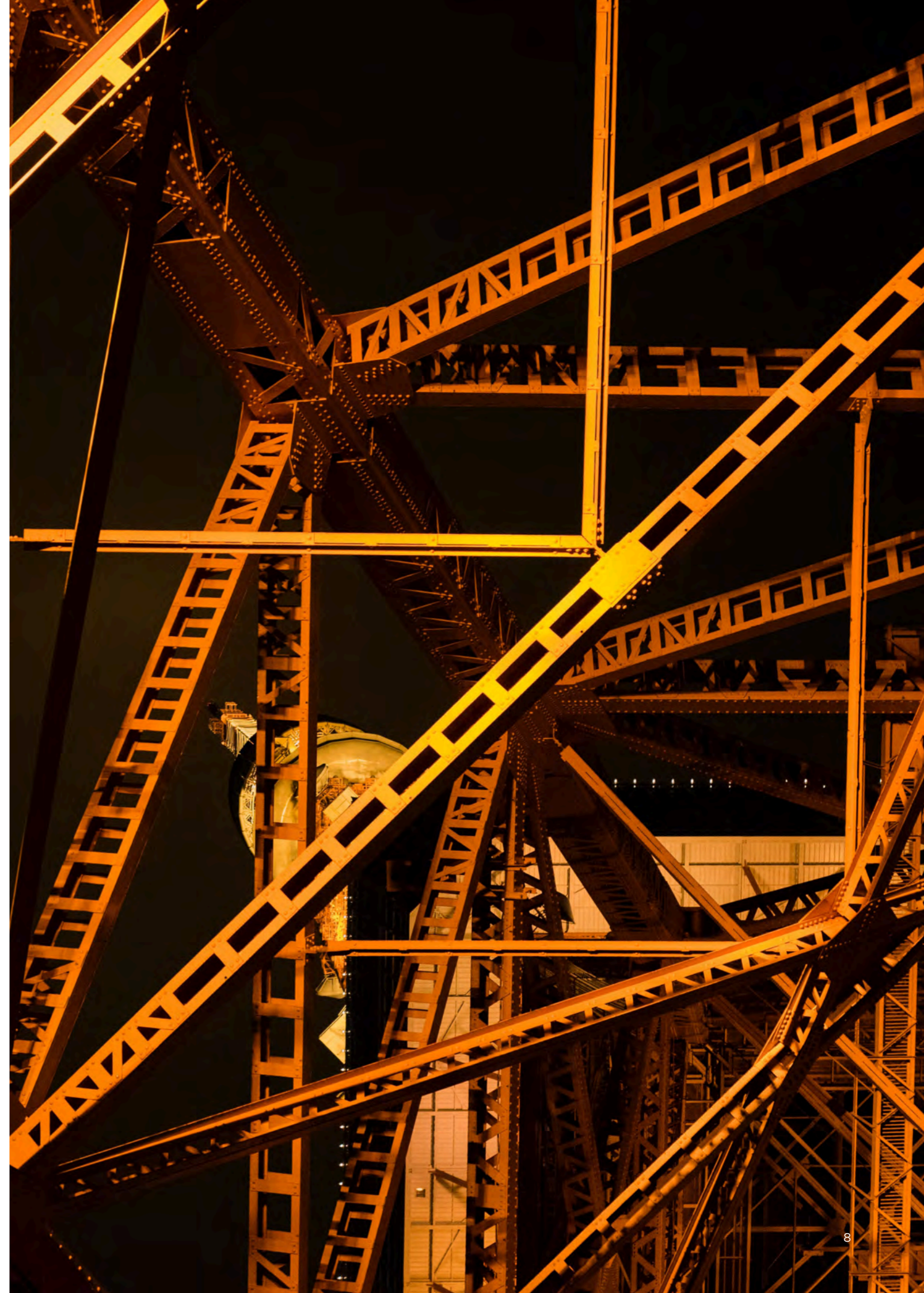
## MB ENGINEERING PHILOSOPHY

As early as the first line of **Plato's Meno**, teaching and **knowledge** are placed in contrast with practice or **experience**, emphasizing the distinction between these two operations in both meaning and purpose. In this discussion, Socrates and Meno debate the process in which **knowledge** is acquired, contemplating whether understanding is obtained through instruction, application, or natural causes, which further stresses the difference between teaching and **knowledge**, and practice or **experience**.

At first glance, **knowledge** and **experience** look very similar to one another. By definition, **knowledge** is information and skills acquired through **experience** or education. Similarly, **experience** is defined as the **knowledge** or skill acquired by a period of practical **experience** of something. Although the two words are used in each other's definitions and are seemingly very similar, a distinction can be made between **knowledge** and **experience**.

**Knowledge** emphasizes theory and the obtainment of information and ideas. **Experience**, on the other hand, stresses practice, or the application of **knowledge** over a prolonged period of time, in order to reinforce understanding of subject matter or a certain task. While further **knowledge** on a subject or task can be gained through **experience**, **experience** cannot be obtained through instruction. **Experience** comes with time, exposure, and practice. It is based off of practical application rather than supposition. **Knowledge**, on the other hand, is founded upon the accumulation of information through either **experience** or education. It can be taught unlike **experience**. Therefore, here lies the greatest difference between the two. While **knowledge** is the sum of impressions based off of sensation, **experience** is the act of exercising or challenging **knowledge** in order to obtain sensation.

MB puts its 35 years of **experience** at the service of **knowledge**, in a combination capable of facing and solving the most complex challenges



# INSTITUTIONAL PROFILE



LEGAL NAME	<b>MB Ravenna</b>
ESTABLISHMENT	2018
HEADQUARTERS	ITALY - 48124 Ravenna Viale Isaac Newton 32
V.A.T. NUMBER	02593010396
REG. NUMBER	02593010396
R.E.A. NUMBER	RA-215625



LEGAL NAME	<b>MB Engineering</b>
ESTABLISHMENT	1987
HEADQUARTERS	ITALY - 48124 Ravenna Viale Isaac Newton 32
V.A.T. NUMBER	02326490394
REG. NUMBER	02326490394
R.E.A. NUMBER	RA-191812



LEGAL NAME	<b>MB Workshop</b>
ESTABLISHMENT	2021
HEADQUARTERS	ITALY - 48124 Ravenna Viale Isaac Newton 32
V.A.T. NUMBER	02699520397
REG. NUMBER	02699520397
R.E.A. NUMBER	RA-224447



## QUALITY HEALTH SAFETY ENVIRONMENT

ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 share the same high level structure which simplifies the overall approach to consolidating their requirements to create a robust set of integrated management system manuals

The manual and integrated procedures adopted by MB combine the requirements of ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 as a framework to create a single integrated management system that reduces duplication and the potential for non-compliance during activities of the group.

The integrated system adopted by MB Group is constantly updated with the aim of improving and achieving customer satisfaction, improving sustainability and meeting the needs and expectations of workers, regulatory authorities and all interested parties

**kiwa**

Reg. number: 20799-A | Valid from: 2023-09-06  
 First issue date: 2011-09-07 | Last change date: 2023-09-06  
 Valid until: 2026-09-10 | IAF Sector: 34

**CERTIFICATE**

Quality Management System Certificate  
**ISO 9001:2015**

We certify that the Quality Management System of the Organization:  
**STUDIO TECNICO MB S.r.l.**  
 is in compliance with the standard UNI EN ISO 9001:2015 for the following products/services:  
 Multidisciplinary engineering design services; process - mechanical/piping - automation civil and structural- electrical- instrumental. Surveys, measurements and check related to design and maintenance engineering.

President:  
 Giuseppe Baccetti

The registration of the certification is subject to annual surveillance and dependent on the observance of General rules contractual requirements.  
 The date of issuance of this certificate is the date of first issue by another accredited body.  
 This certificate is composed of 1 page.

**STUDIO TECNICO MB S.r.l.**  
 Registered Headquarters:  
 Via Isaac Newton 32-48122 Ravenna Italy

**Certified sites:**  
 Via Isaac Newton 32-48122 Ravenna Italy

**kiwa**  
 Via Isaac Newton 32-48122 Ravenna Italy  
 Tel: +39 0545 443.111  
 Fax: +39 0545 760.882  
 Email: info@studio-tmb.it

**CERMET** | **IAF** | **ACCREDIA**

**kiwa**

Reg. number: 20799-E | Valid from: 2023-09-22  
 First issue date: 2022-11-21 | Last change date: 2023-10-03  
 Valid until: 2025-11-20 | IAF Sector: 34

**CERTIFICATE**

Environmental Management System Certificate  
**ISO 14001:2015**

We certify that the Environmental System of the Organization:  
**STUDIO TECNICO MB S.r.l.**  
 is in compliance with the Standard UNI EN ISO 14001:2015 for the following products/services:  
 Design of multidisciplinary engineering services; process - mechanical/piping - automation civil and structural- electrical- instrumental. Surveys, measurements and check related to design and maintenance engineering.

President:  
 Giuseppe Baccetti

The registration of the certification is subject to annual surveillance and dependent on the observance of General rules contractual requirements.  
 The date of issuance of this certificate is the date of first issue by another accredited body.  
 This certificate is composed of 1 page.

**STUDIO TECNICO MB S.r.l.**  
 Registered Headquarters:  
 Via Isaac Newton 32-48122 Ravenna Italy

**Certified sites:**  
 Via Isaac Newton 32-48122 Ravenna Italy

**kiwa**  
 Via Isaac Newton 32-48122 Ravenna Italy  
 Tel: +39 0545 443.111  
 Fax: +39 0545 760.882  
 Email: info@studio-tmb.it

**CERMET** | **IAF** | **ACCREDIA**

**kiwa**

Reg. number: 20799-I | Valid from: 2023-05-19  
 First issue date: 2015-07-29 | Last change date: 2023-10-03  
 Valid until: 2024-07-29 | Sector: 34

**CERTIFICATE**

Occupational Health and Safety Management System Certificate  
**ISO 45001:2018**

We certify that the Occupational Health and Safety Management System of the Organization:  
**STUDIO TECNICO MB S.r.l.**  
 is in compliance with the standard UNI ISO 45001:2018 for the following products/services:  
 Multidisciplinary engineering design services; process - mechanical/piping - automation civil and structural- electrical- instrumental. Surveys, measurements and check related to design and maintenance engineering.

President:  
 Giuseppe Baccetti

The registration of the certification is subject to annual surveillance and dependent on the observance of General rules contractual requirements.  
 The date of issuance of this certificate is the date of first issue by another accredited body.  
 This certificate is composed of 1 page.

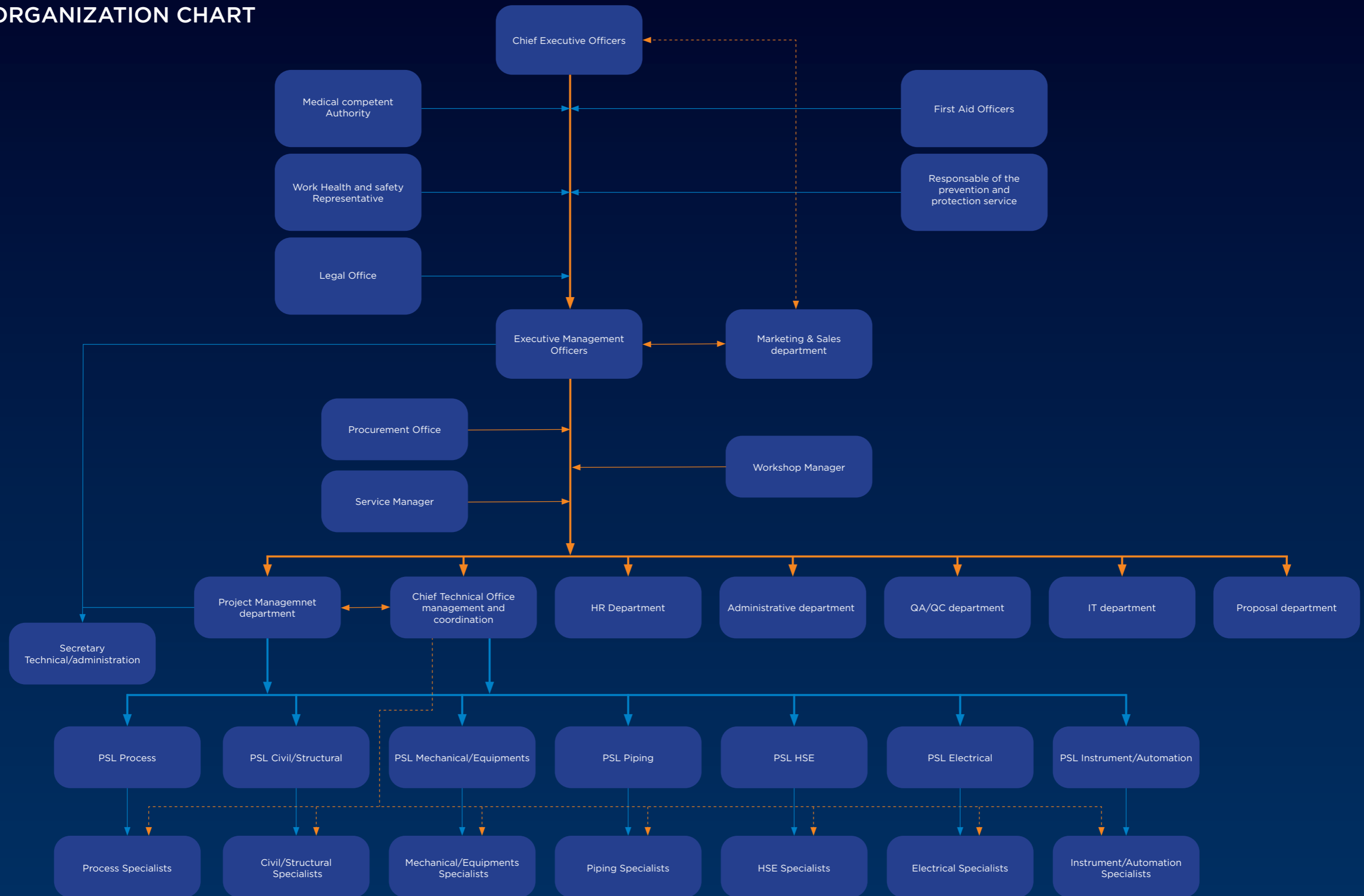
**STUDIO TECNICO MB S.r.l.**  
 Registered Headquarters:  
 Via Isaac Newton 32-48122 Ravenna Italy

**Certified sites:**  
 Via Isaac Newton 32-48122 Ravenna Italy

**kiwa**  
 Via Isaac Newton 32-48122 Ravenna Italy  
 Tel: +39 0545 443.111  
 Fax: +39 0545 760.882  
 Email: info@studio-tmb.it

**CERMET** | **IAF** | **ACCREDIA**

# ORGANIZATION CHART



MB has structured the office of “Executive Management Officers” to carry out the task of implementing the strategies and policies promoted by the Board of Directors.

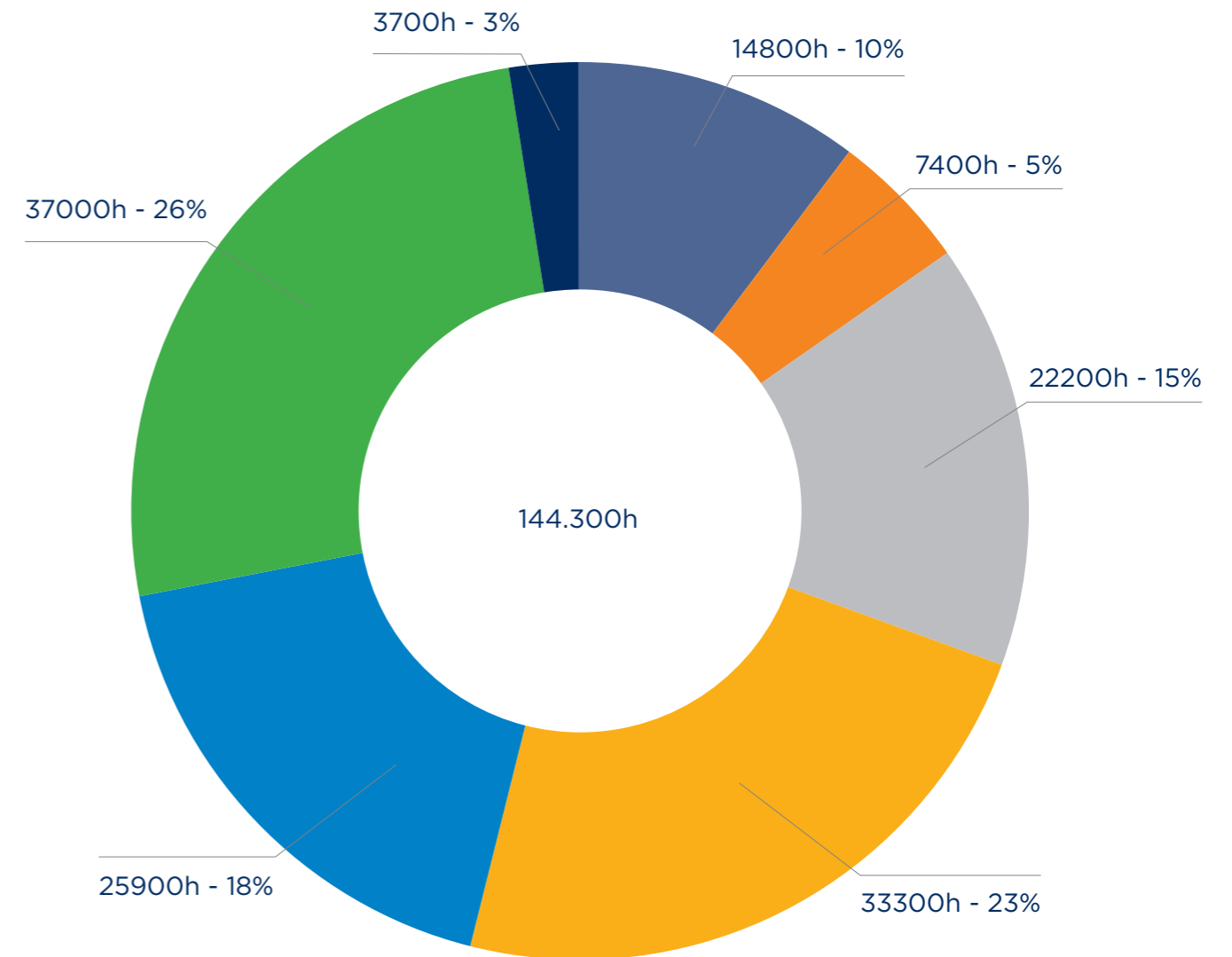
This office interfaces with the heads of the various departments, coordinating activities and sharing strategies so that they are applied homogeneously at all levels.

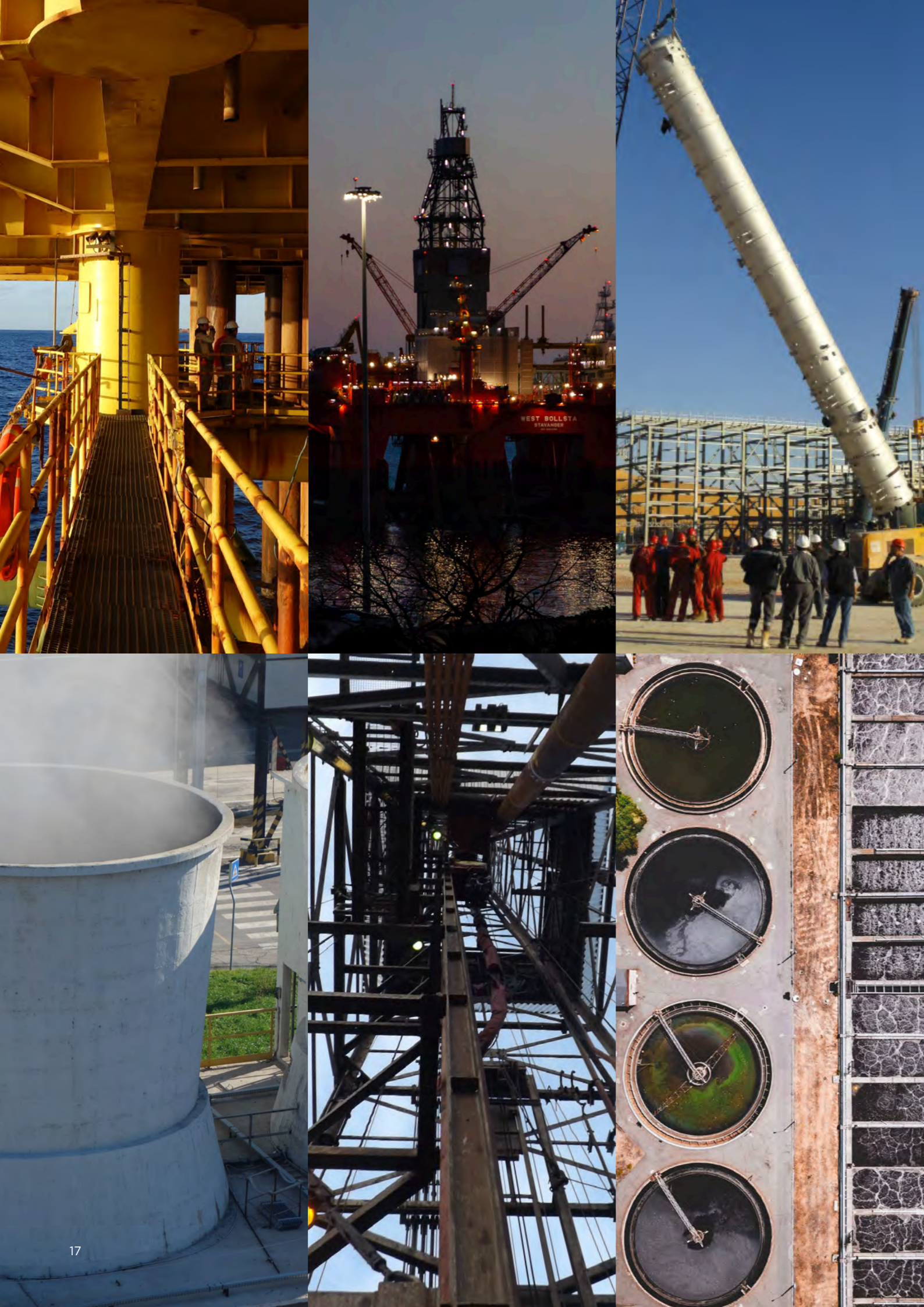


## 2023 ANNUAL PRODUCTION CAPACITY

Departmental capacity is structured to deal with multidisciplinary projects entirely internally. MB maximises skills exchange while eliminating the loss of information

- Management
- Process
- Civil & Structural
- Mechanical & Piping
- Electrical & Instrumental
- Automation Eng. & Service
- HSE/Fire & Gas/Safety





## SECTOR KNOWLEDGE AND EXPERIENCE

- OFF-SHORE, ON-SHORE, FPSO, OIL & GAS
- DRILLING, SUBSEA, DEEP-WATER
- REFINING, PETROCHEMICAL, CHEMICAL
- SIDERURGICAL PLANTS & STEEL INDUSTRY
- POWER PLANTS
- RENEWABLE & ENVIRONMENT

## SERVICES OFFERED BY MB ENGINEERING

### Process Engineering

- Consultancy and feasibility studies
- Process Design Data Books (system operational capability, technology description, process unit description, site environmental conditions, consumptions and characteristics of raw materials, utilities characteristics and relevant energy consumption, preliminary plant layout)
- Energy and material balance
- Fluids lists with specified design conditions and materials requirements
- PFD (Process Flow Diagrams)
- P&ID (Piping & Instrumentation Diagrams)
- Equipment sizing, control instrument and safety equipment
- Technical specifications for purchase and request for technical proposal,
- Evaluation and technical alignment of technical bids
- Operation management and works supervision

### Civil and Structural Engineering

- Structural calculations (reinforced concrete elements, metallic structures, etc.)
- Stress and deformation analyses of the structures
- Structural limit state analysis
- Structures instability analysis
- Foundations loads calculations
- Definition of lifting schemes/technical procedures
- Bureaucratic procedures for building permits Permitting procedures and assistance
- Operation management and works supervision
- Feed study and Basic design, Detail design, Construction design.





## Mechanical and piping Engineering

- Site survey and network optimizing analysis
- Equipment Data Sheets (tanks, vessels, columns, heat exchangers, etc.)
- Pressure Equipment Sizing conforming to PED (Pressure Equipment Directive)
- Design of machines, equipment, and systems
- Design of sub-sea and deep-water equipments
- Equipment layout study
- Stress Analysis
- Feed study and Basic design, Detail design, Construction design

## Electrical Engineering

- System verification w.r.t standards and regulations compliance
- HV Transmission lines
- HV Sub-stations
- HV/MV L.E.R. Substations
- MV/LV Electrical cabins
- Electrical studies and calculations
- Technical specifications for purchase and request for technical proposal, evaluation and technical alignment of technical bids
- MTO (Material Take Off) and BOQ (Bill of quantities)
- Operation management and works supervision
- Feed study and Basic design, Detail design, Construction design.

## Instrumentation and Automation Engineering

- Data sheets of valves, metering, control and safety instruments
- Control room architectural and ergonomic study
- Intrinsically Safe Loop verification
- Functional specifications of automation / control systems
- Cause-Effect Analysis diagrams/tables
- DCS , ESD , SCADA Engineering , selection, Technical specification definition.
- PLC (Programmable Logic Controller), DCS (Distributed Control Systems), ESD (Emergency Shutdown System), F&G (Fire & Gas), SIL (Safety Integrity Level), PCS (Process Control System)
- System Integrators activity, Precommissioning, Commissioning, Start-UP

## Firefighting and Safety Engineering

- Fire Resistance Certifications of structure
- Sworn confirming compliance with the applicable regulations in fire safety
- Renewal of the Fire Prevention Certification for existing activities
- Egress Route plans in compliance with Italian Ministerial Decree dated 10 March 1998
- Operation management and supervision
- Feed study and Basic design, Detail design, Construction design





## SERVICES OFFERED BY MB RAVENNA

### **Project Management Services**

Project Organization/Budget and Cost Control  
Time Schedule Control/Quality Assurance

### **Revamping Service**

Laser scanning technology, reverse engineering,  
process & BOP performance improvement & plant modernization.

### **Field Activities**

Field Construction Supervising / Field Engineering Supervising  
Field Coordination and Management Maintenance Planning and Management

### **Consulting Services**

Environmental Assessments Sustainability Assessments  
HSE Consulting / HAZOP and HAZID Assistance

### **Marketing and Proposal Services**

Market Research/New Technologies Investigation  
Commercial Proposals Assistance

### **Procurement Services**

Client Assistance for Equipment Supply/Services and Subcontracts Management  
Orders and Contracts Supporting / Bid Evaluations and Vendors Follow-up  
Equipment and Materials Inspections / Packing and Shipment Assistance  
Transportation, Insurance and Storage Assistance

### **Commissioning & Start-up**

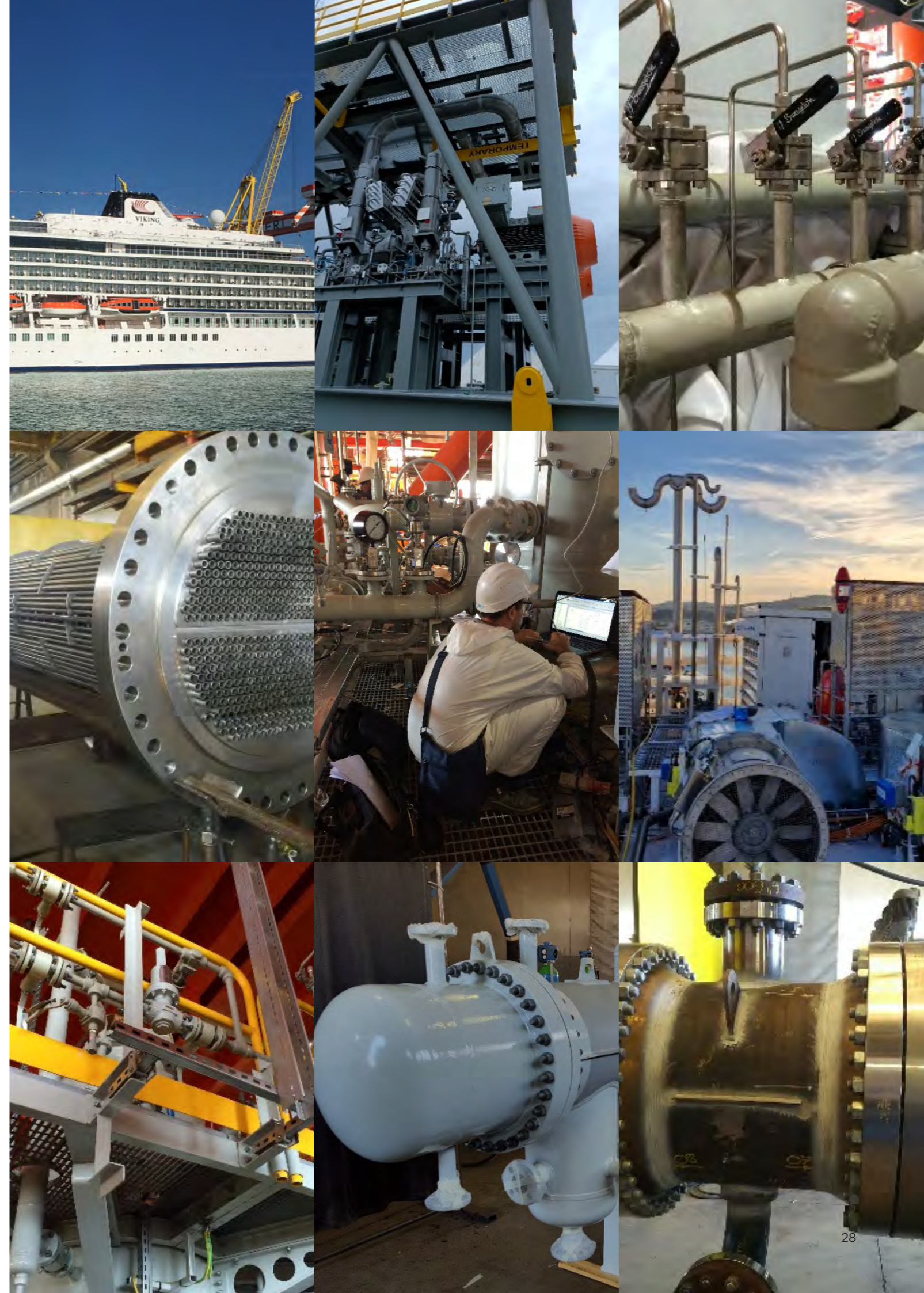
Scheduling / Pre-Commissioning Activities / Initial Operations / Test Runs  
Performance / Acceptance Tests / Operating Manuals  
Start-up Procedures

## SERVICES OFFERED BY MB WORKSHOP

MB's engineering knowledge also extends to the workshop construction phase.  
MB produces:

- high-tech Skids
- Modules
- Vessels
- Heat Exchangers
- Mechanical equipment

and supports the workshop during all the procurement and construction phases  
with the same team that followed the design.



## OUR DIRECT CLIENTS



## OUR FINAL CLIENTS





```

mirror_mod = modifier_ob.
set mirror object to mirror
mirror_mod.mirror_object

operation == "MIRROR_X":
mirror_mod.use_x = True
mirror_mod.use_y = False
mirror_mod.use_z = False
operation == "MIRROR_Y":
mirror_mod.use_x = False
mirror_mod.use_y = True
mirror_mod.use_z = False
operation == "MIRROR_Z":
mirror_mod.use_x = False
mirror_mod.use_y = False
mirror_mod.use_z = True

selection at the end -add
mirror_ob.select= 1
modifier_ob.select=1
context.scene.objects.active
("Selected" + str(modifier
mirror_ob.select = 0
= bpy.context.selected_object
data.objects[one.name].select

print("please select exactly

OPERATOR CLASSES -----

types.Operator):
X mirror to the selected
object.mirror_mirror_x"
mirror X"

context):
context.active_object is not

```

## SOFTWARE

- ASPEN - HYSYS *(Process simulators)*
- CONVAL *(Process simulators)*

---

- AVEVA *(3D plant modeling)*
- ESAIn ESAPRO 3D *(3D plant modeling)*
- Autodesk INVENTOR *(3D plant modeling)*
- ADVANCE STEEL *(3D plant modeling)*
- BENTLEY OpenPlant *(3D plant modelling)*
- Siemens ISDM *(3D plant modelling)*

---

- Hexagon - CAESAR II *(Stress analysis)*

---

- TEKLA *(3D structural BIM modelling software)*

---

- ETAP *(Electrical software)*
- AMPERE PROFESSIONAL *(Electrical software)*
- DIALUX *(Electrical software)*
- ZEUS *(Electrical software)*

---

- PROSAP *(Structural calculator & fem analysis)*
- SAP 2000 *(Structural calculator & fem analysis)*
- STAAD *(Structural calculator & fem analysis)*
- ANSYS *(Structural calculator & fem analysis)*

---

- MS Project *(Standard office software)*
- AutoCAD *(Standard office software)*
- MS OFFICE 365 *(Standard office software)*



## **ITALY HEADQUARTERS**

48124 - Ravenna  
Viale Isaac Newton 32  
Email : [info@mb-group.it](mailto:info@mb-group.it)  
Phone : +39 0544 407291

## **DUTCH REPRESENTATIVE OFFICE**

Carel van Boetzelaerstraat 1  
4797 BM Willemstad  
The Netherlands

