

OFFSHORE FULL LIFE CYCLE (FPSO)

FLOATING PRODUCTION
STORAGE AND OFFLOADING



**BUREAU
VERITAS**

SOLUTIONS
Marine & Offshore

**Analysis and assessment
to start your project right**

To offer you rigorous support and ensure that your project runs smoothly from the start, BV Solutions M&O provides thorough assessments that utilize the latest tools and technology.

Our services cover safety, hazards and risk, as well as structural, design and environmental analysis.



Noise and Vibration Predictive Calculation

Hazard & Risk Analysis

Design Assessment

Formal Safety Assessments

URN impact Assessment

CONSTRUCTION

Guidance and management for your peace of mind

BV Solutions M&O is a trusted third-party partner between owner and shipyard. As such, we leverage our expertise in project management to ensure that design specifications are met.

Our teams are on hand to help all partners adhere to the necessary standards of safety, performance and sustainability.



Preparation of new Construction Specifications

Equipment Integrity Management
Contractual Compliance,
Regulatory Compliance

Preparation/Provision of Unit's Construction Portfolio

Commissioning and Sea Trials

Factory Acceptance Tests (FAT) and 3rd Party Vendor Inspections

Integrity Management

Project Management for Construction Projects

Provision of New Construction Site Personnel

INSTALLATION

Supervision and support to guarantee safety and efficiency

Our experts make sure the installation and mooring of your asset is properly prepared and executed. Our studies and project supervision services aim to mitigate risks and ensure safety at this critical technical stage.

Commissioning Supervision

Supervision of Installation of Permanent Mooring Systems

Navigation and Towage/Propulsion to Site Studies and Planning / Supervision

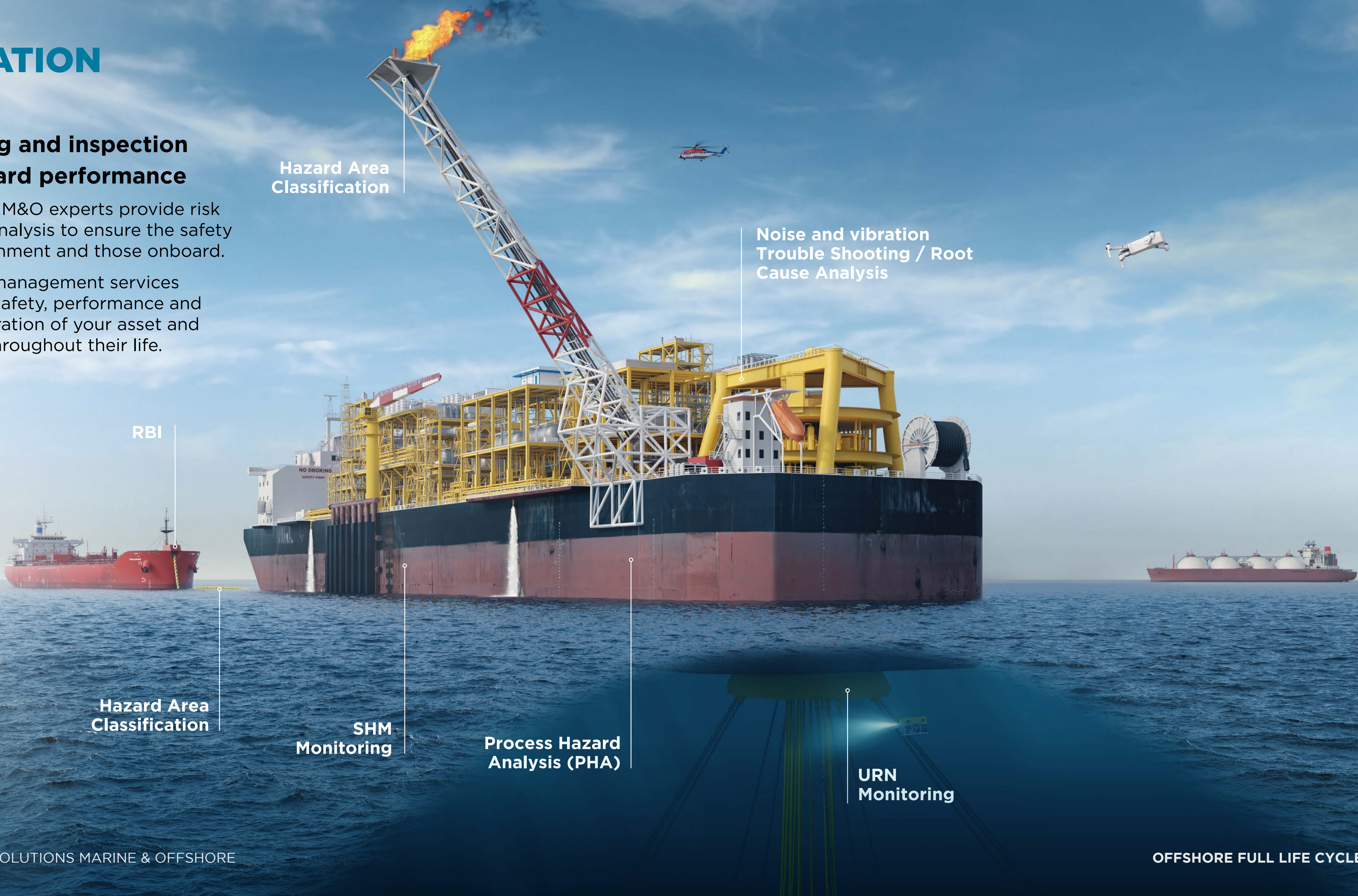
Mooring and Hook Up Supervision

OPERATION

Monitoring and inspection to safeguard performance

BV Solutions M&O experts provide risk and hazard analysis to ensure the safety of the environment and those onboard.

Our project management services support the safety, performance and efficient operation of your asset and equipment throughout their life.



Hazard Area
Classification

Noise and vibration
Trouble Shooting / Root
Cause Analysis

RBI

Hazard Area
Classification

SHM
Monitoring

Process Hazard
Analysis (PHA)

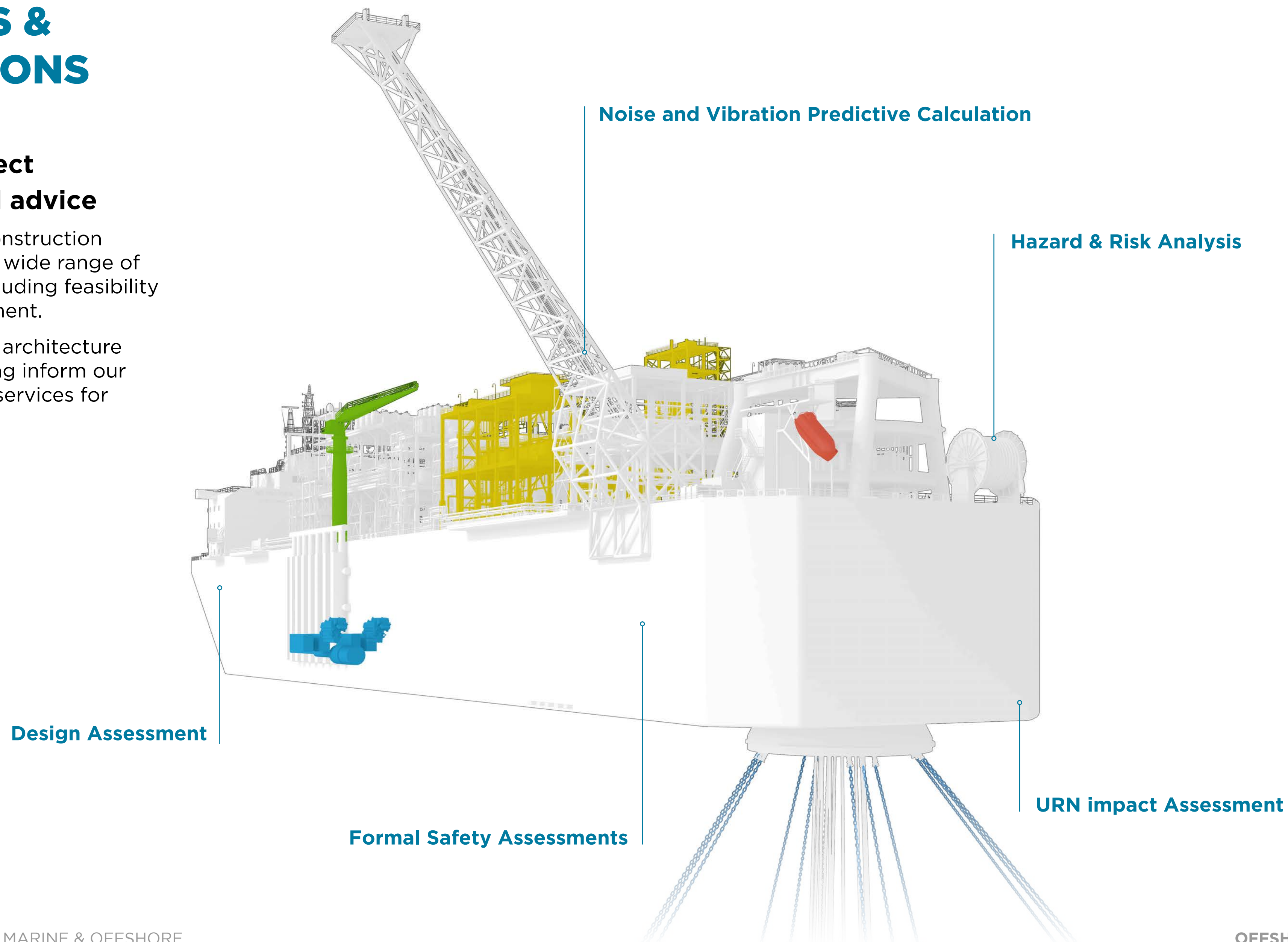
URN
Monitoring

UPGRADES & CONVERSIONS

End-to-end project assessments and advice

Beyond design and construction support, we provide a wide range of additional studies, including feasibility and condition assessment.

Our expertise in naval architecture and marine engineering inform our project management services for conversion projects.



DECOMMISSIONING

Advice and support to help you plan ahead from the beginning

BV Solutions M&O teams offer support from a project's earliest stages to help owners plan ahead for the late life, decommissioning and responsible disposal of their assets. We work alongside our clients to help them navigate these challenges efficiently and sustainably.



Environmental
Impact
Assessments

Permitting &
Licencing

Lifting and
Laydown Plans,
Studies and
Assurance

Identification and
Management of
Hazardous and
Recyclable Materials

Technical Due
Diligence

Circular Economy
(Re-use, Recycle, Repurpose,
Approved Disposal)

Asset Life
Extension Studies

Marine
Assurance

Identification and
Management of Hazardous
and Recyclable Materials

Recycling Facility
Assessment and
Certification



Comprehensive support for all your needs

We combine expert technical expertise with a deep respect of the maritime environment.

Our diversity of skills and depth of knowledge enables us to tailor our solutions to our clients' specific challenges.

With years of hands-on experience, we offer solutions to improve safety, sustainability, strategy and operations – all while lowering overall costs.

DESIGN

Noise and Vibration Predictive Calculation

URN impact Assessment

Hazard & Risk Analysis

(HAZID, HAZOP, FMECA, ALARP, Safety Integrity Level Study (SIL), Layer of Protection Analysis (LOPA), etc.)

Formal Safety Assessments

(Ship collision study, Fire & Explosion Risk Analysis (FERA), Quantitative Risk Assessment (QRA), Escape, Evacuation and Rescue Analysis (EERA), Flare radiation analysis, Vent/exhaust dispersion analysis, Environmental Impact Identification (ENVID), Simultaneous Operation Study (SIMOPS) etc.)

Design Assessment

Conceptual and basic design studies; Design Review; Detailed structural modelling and analysis; Structural Fatigue Assessment; Structural analysis of offshore surface units through full-length finite element models;
Design and construction of crew accommodation; Assessment of offshore access systems; Assessment for Corrosion protection of steel offshore units and installation; Assessment for corrosion protection of seawater ballast tanks and hold spaces; Assessment of Condition monitoring systems; Assessment of mooring systems for permanent offshore units; Review of Structural, Stability, Pipeline and Electrical calculations;

CONSTRUCTION

Preparation/Provision of Unit's Construction Portfolio

Integrity Management

Project Management for Construction Projects

Provision of New Construction Site Personnel

Factory Acceptance Tests (FAT) and 3rd Party Vendor Inspections

Equipment Integrity Management

(rotating equipment, cranes/lifting equipment, valves, electrical and instrumental functions, safety equipment)

Contractual compliance, Regulatory Compliance

Commissioning and Sea Trials

Preparation of new Construction Specifications



Comprehensive support for all your needs

We combine expert technical expertise with a deep respect of the maritime environment.

Our diversity of skills and depth of knowledge enables us to tailor our solutions to our clients' specific challenges.

With years of hands-on experience, we offer solutions to improve safety, sustainability, strategy and operations – all while lowering overall costs.

INSTALLATION

Navigation and Towage/Propulsion to Site Studies and Planning / Supervision

Supervision of Installation of Permanent Mooring Systems

Mooring and Hook Up Supervision

Commissioning Supervision

OPERATION

URN Monitoring

Noise and Vibration Trouble Shooting / Root Cause Analysis

Noise and Vibration Exposure (HSE)

SHM Monitoring

HSE Case

Process Hazard Analysis (PHA)

Hazard Area Classification

Risk based inspection (RBI) Studies

Preparation/ Provision of Unit's Operating Manual(s)

Plans, Manuals, Systems and Safety Case Compilation Services

RBI

Pressure Systems, Primary Structure, Equipment and Pipelines, Risers and Sub-sea Integrity Management.



Comprehensive support for all your needs

We combine expert technical expertise with a deep respect of the maritime environment.

Our diversity of skills and depth of knowledge enables us to tailor our solutions to our clients' specific challenges.

With years of hands-on experience, we offer solutions to improve safety, sustainability, strategy and operations – all while lowering overall costs.

UPGRADES & CONVERSIONS

Naval Architecture

Marine Engineering

Feasibility Studies

Condition Assessment prior Conversion

Full Condition assessment and repair specification for modification and conversion

Preparation/Provision of Unit's modification and conversion portfolio

Integrity Management

Project management for conversion projects

Provision of unit conversion site personnel

Factory Acceptance Tests (FAT) and 3rd Party Vendor Inspections

Equipment Integrity Management

(rotating equipment, cranes/lifting equipment, valves, electrical and instrumental functions, safety equipment)

Contractual compliance, Regulatory Compliance

Commissioning and sea trials

DECOMMISSIONING

Circular Economy

(Re-use, Recycle, Repurpose, Approved Disposal)

Asset Life Extension Studies

Technical Due Diligence

Environmental Impact Assessments

Marine Assurance

Lifting and Laydown Plans, Studies and Assurance

Permitting & Licencing

Identification and Management of Hazardous and Recyclable Materials

Recycling Facility Assessment and Certification



HIGH-PERFORMANCE SOLUTIONS FOR FAST-CHANGING MARINE & OFFSHORE ENERGY MARKETS

Bureau Veritas Solutions Marine & Offshore is an entrepreneurial, collaborative solutions provider, building on 190 years of experience.

We provide technical advisory, asset management and assurance solutions for the Marine and Offshore energy markets. Our top-tier, added-value solutions enable clients to resolve new and complex issues, de-risk projects and optimize costs.

By listening to our clients and gaining an in-depth understanding of their challenges, our experts can deliver tangible improvements to asset and business performance, safely and responsibly. In an increasingly digital world, we partner with clients to go beyond compliance, enabling their assets to perform reliably, efficiently and with a significantly reduced level of risk and cost.

Together we build on what we know today to
change how things are done tomorrow... for good.

www.bvsolutions-m-o.com



**BUREAU
VERITAS**

SOLUTIONS
Marine & Offshore