



## **CONDITION ASSESSMENT SERVICES**

OUR PROGRAMS  
TAILORED TO  
YOUR VESSEL AND  
REQUIREMENTS



**BUREAU  
VERITAS**

**SOLUTIONS**  
Marine & Offshore



# CONDITION ASSESSMENT SERVICES

To maximise the commercial opportunities and value of their fleets, owners are often required to demonstrate that a vessel is in good condition.

To this aim, a Condition Assessment should be carried out; providing an independent technical evaluation of an asset's reliability and seaworthiness, beyond minimum class requirements and adapted to clients' objectives.

## KEY NUMBERS

> 150

CAP SURVEYORS WORLDWIDE

> 15

YEARS OF EXPERIENCE

## WHY CHOOSE OUR CONDITION ASSESSMENT SERVICES

BV Solutions M&O offers turnkey contract management programs, adapted to each client's requirements.

Under a BVS project manager, we can deploy experts worldwide in all relevant subjects, including hull structure, metallurgy, NDT, corrosion, machinery, underwater inspection, safety, and others.

- » Internationally recognised by oil majors, cargo owners, and charterers
- » Clear and transparent reporting, supported by unique digital tools.
- » Tailored programs for every type of vessel and objectives.
- » Cost effective, flexible and fast service.

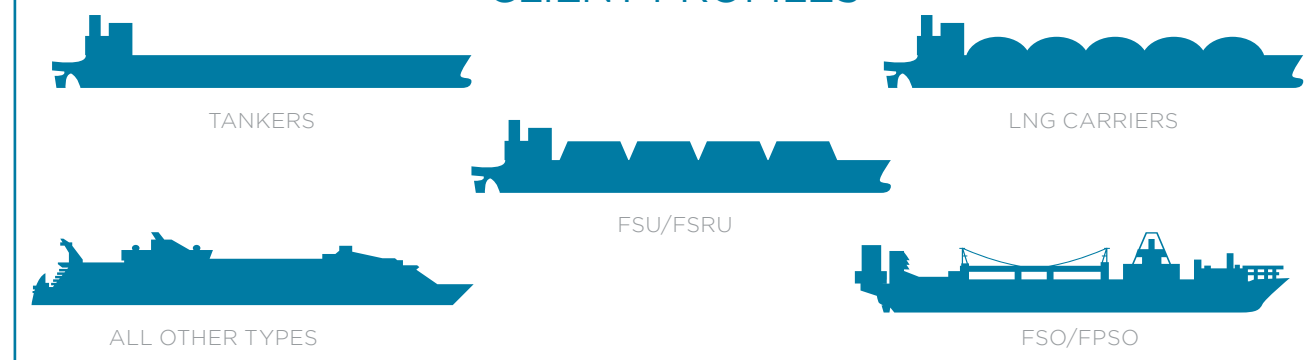


## REMOTE INSPECTION

Remote inspection techniques offer major benefits to owners and operators looking to optimize their planning constraints. BV Solutions M&O remains a leader in this area for the interest of all clients seeking more practical, efficient and safe ways to inspect marine and offshore assets.

Thanks to our remote survey centers all over the world, we can support clients wherever they are. We are helping marine and offshore asset owners and operators test new technologies using a fully dedicated process, first by verifying whether the technology meets their needs, and then carrying out a proof of concept.

## CLIENT PROFILES



“Owners and operators require an objective overview of their marine and offshore assets' condition to support their decision-making. Most of all they need to be assured of the completeness of the unit in terms of operation. That's where BV Solutions M&O comes in: we adapt our condition assessment program to meet their specifications and criteria.

Claire Peytavin  
Assurance Solutions, Global Service Line leader  
BV Solutions M&O



# SERVICES

## VESSEL TYPES

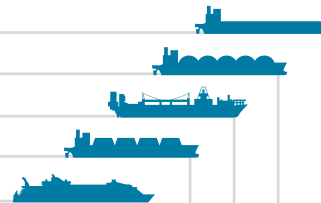
TANKERS

LNG CARRIERS

FSO/FPSO

FSU/FSRU

ALL OTHER TYPES



### » CAP CONDITION ASSESSMENT PROGRAM

Evaluate a vessel's structural condition and machinery, based on our internationally recognised program and approved by oil majors/charterers.

Examples of Applications:

- » Demonstrate compliance with vetting requirements.
- » Maximise commercial opportunities for vessels over 15 years old.
- » Baseline for a good relationship between vessel owners, charterers and cargo owners.

### » CA CONDITION ASSESSMENT BASED ON CLIENT CRITERIA

The inspection area and related criteria can be tailored to the client's specific needs,

Example of Applications:

- » Support planning and decision-making on the vessel's maintenance program.
- » Demonstrate the vessel's condition prior to being transacted.
- » Shortlist potential vessels for a conversion project.

### » LES LIFE EXTENSION SERVICES

Assess a unit's ability to operate beyond its design life, through a comprehensive survey and report.

Example of Applications:

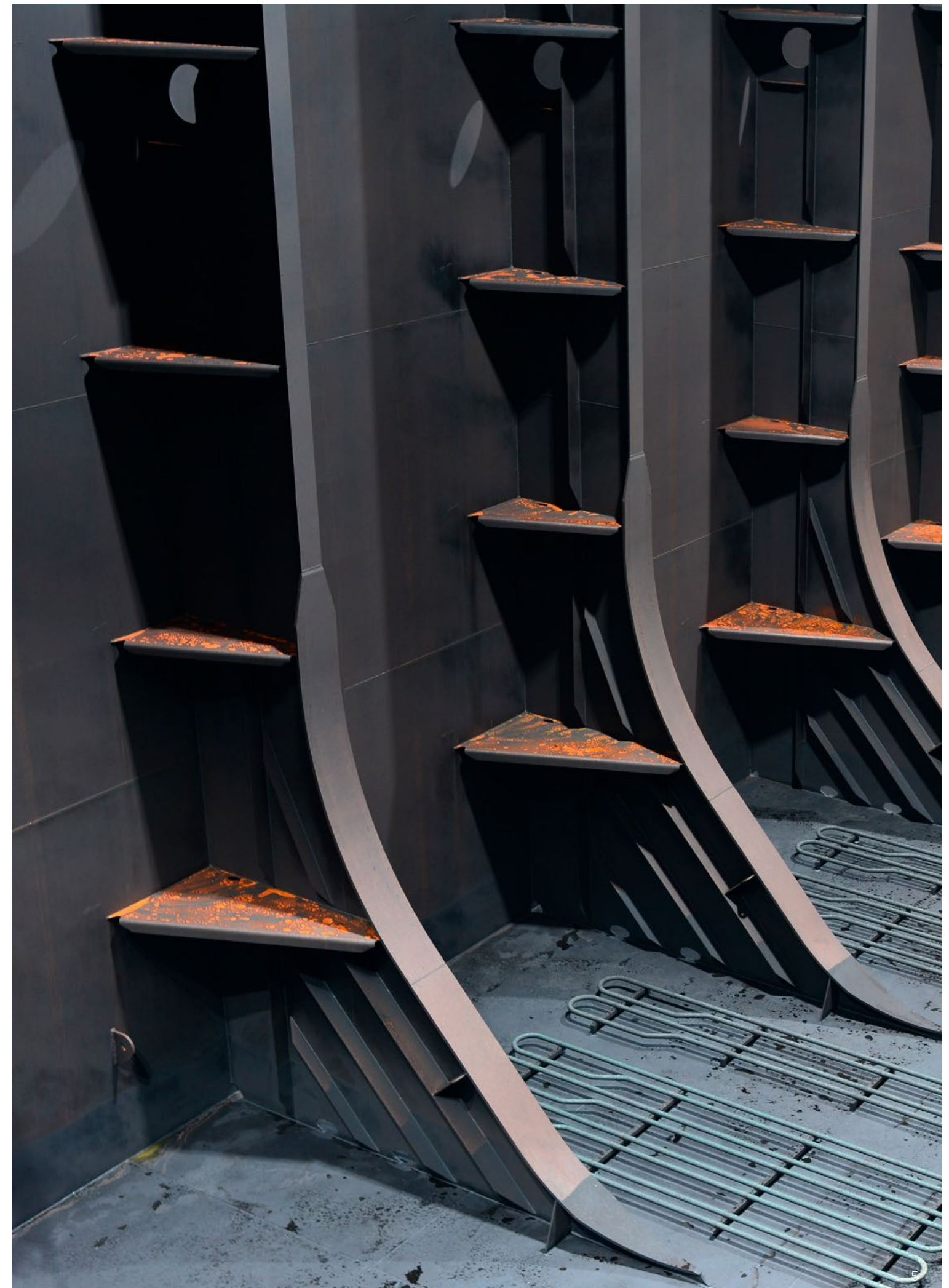
- » Extension of service life, demonstrating that compliance with the charterer's requirements is still met.
- » Redeployment of a unit to a different field.
- » Improve residual value of ageing assets and support decision to maintain or decommission an asset.

### » CAPC CONDITION ASSESSMENT PRIOR TO CONVERSION

In-depth inspection and review of the condition of a vessel's structure, machinery, systems, fixtures and fittings, prior to conversion.

Examples of Applications:

- » Transaction of a vessel intended for conversion to FPSO / FSO / FLNG / FSRU.
- » Gap analysis and definition of scope of conversion project
- » Modifications and upgrades of an offshore unit prior to redeployment to a new site.



## CAP CASE STUDY

### THE CHALLENGE

A globally established company, operating since 1990, with main activities in the management and operation of oil/chemical tankers and gas carriers was challenged to perform an inspection, compliant with BP and other Oil Major requirements, of a 2003 Very Large Crude Carrier (VLCC).

## CONDITION ASSESSMENT PROGRAM CASE STUDY



### OUR APPROACH

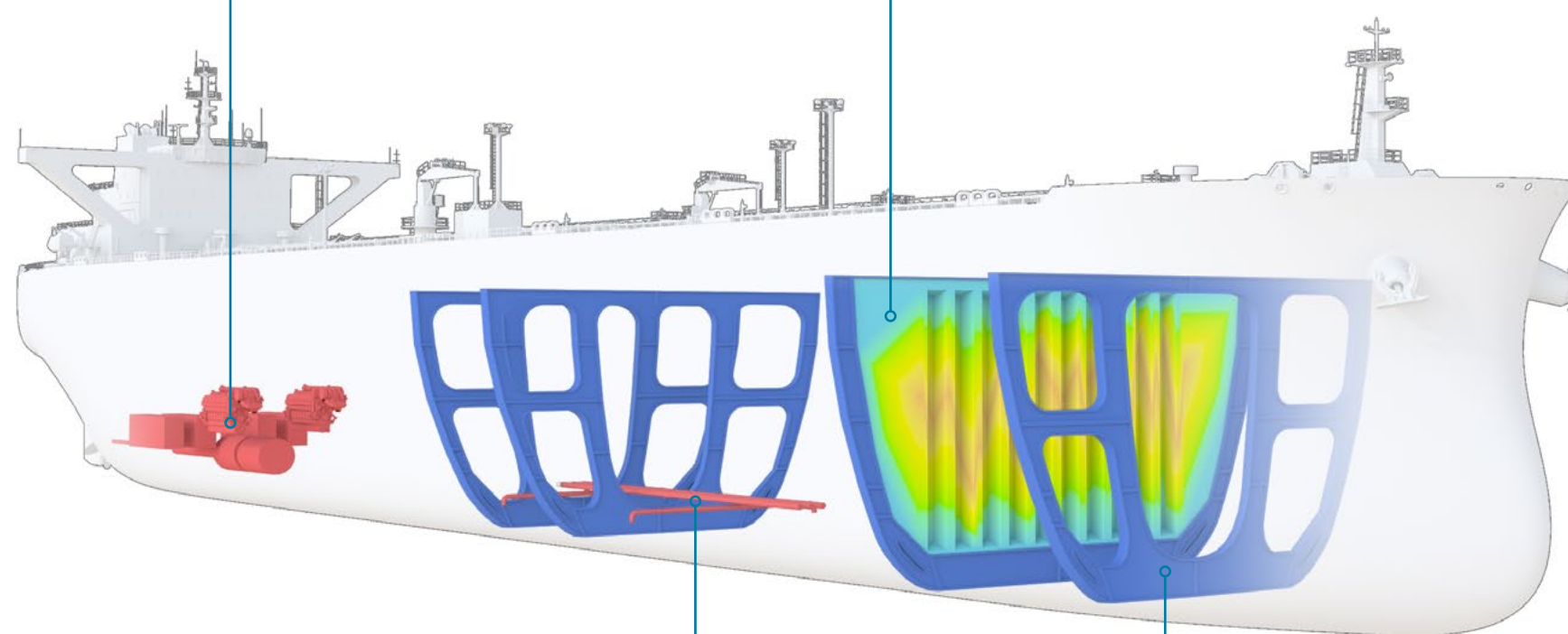
After a meeting with the client to establish objectives, BV Solutions M&O proposed and committed to a solution that would comply with BP and Exxon's CAP requirements, the most rigorous criteria to date.

This solution required BV Solutions M&O to undertake surveys and inspections in dry dock in China.

Under the **Condition Assessment Program (CAP)**, BV Solutions M&O's multidisciplinary team developed a modular solution focused on:

Propulsion and Auxiliaries  
Machinery fittings & systems

Structural and Fatigue analysis  
2D/3D Structure



Hull and Cargo Machinery  
fittings & systems

Hull Structure surveys  
and inspections

### THE OUTCOME

Within a short timeframe and a sensible budget, the client was able to comply with the rigorous criteria established by vetting organisations and oil majors such as BP and Exxon.

The client's aim of reaching a quality rating of CAP 1 or CAP 2 was achieved, with the issue of the associated CAP Certificate.

**The modular approach of BVS for CAP survey allows a flexibility to efficiently target the necessary actions for compliance with the oil majors requirements.**



# CA CASE STUDY

## THE CHALLENGE

A Ferry Services corporation which provides frequent year-round ferry transportation services to the West Coast of Canada was challenged to perform an inspection on four ferries while keeping their operating life.

## CONDITION ASSESSMENT BASED ON CLIENT CRITERIA CASE STUDY

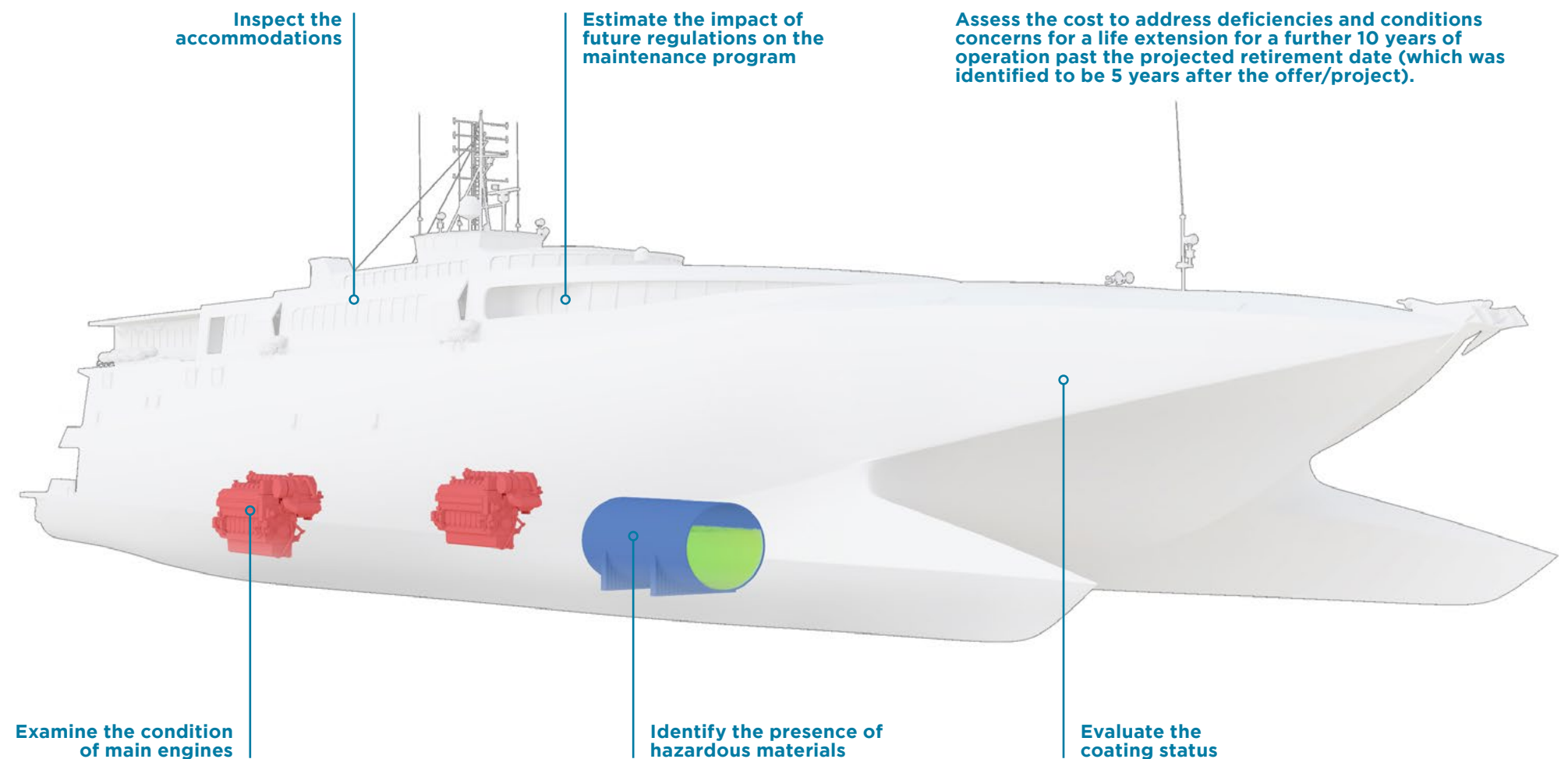


## OUR APPROACH

The Inspection program was adapted to perform a **Condition Assessment (CA)** of the four ferries per client specification and therefore their own criteria.

The assessment lasted four months, one for each vessel without interruption of their operating life, including the project preparation, inspection, reporting and cost estimate for a life extension possibility.

The inspection of the status of each vessel was carried by BVS M&O's multidisciplinary team, which collaborated to:



## THE OUTCOME

The inspection was conducted while all four vessels continue their operating lives. No interruption on the travels was requested (and no dry dock was planned).

**A Condition Assessment Report was delivered providing solid information to support the decision on whether the operating life of each vessel should be or not extended.**

### THE CHALLENGE

A client required a Life Extension Study to be carried out to assess the maintenance program of a FPSO's capability of operating for a further 5 years in order to maximise the exploitation of the field.

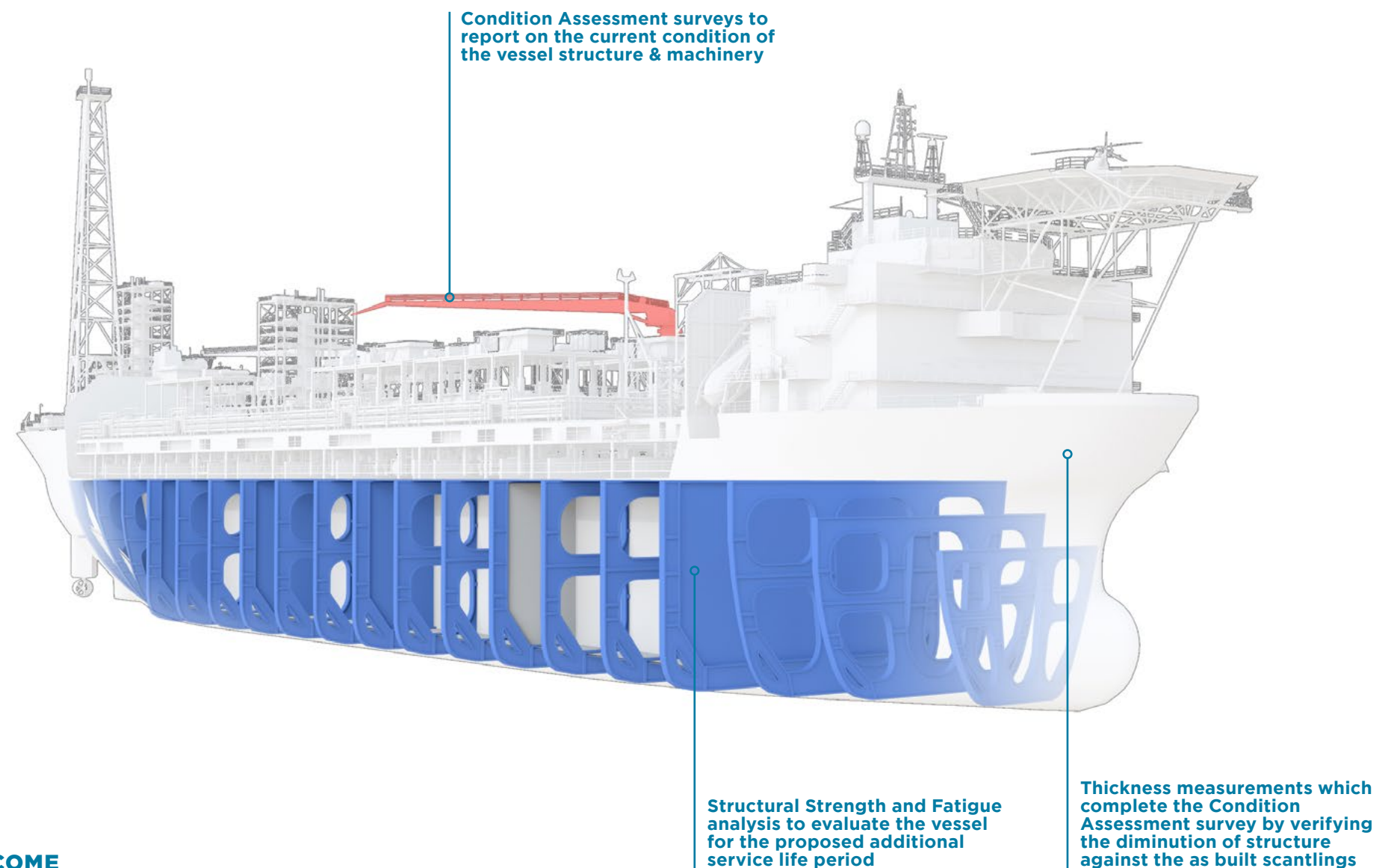
### OUR APPROACH

In cooperation with the client BV Solutions M&O proposed the development of a **Life Extension Study** that would comply with rules requirement but also client's specifications.

The study was carried by BV Solutions M&O's multidisciplinary team integrated:

**Records review, in order to assess the historical maintenance of the vessel**

**Evaluation to assess the impact of new regulations**



### THE OUTCOME

Within time and schedule a comprehensive and transparent study was delivered, including computations results and pictures.

The report re-assured that the vessel's capabilities and operational readiness could be sustained during the life extension period if the current asset condition and levels of maintenance were maintained.

**The BV Solutions M&O team flexibility allows to adapt the content of the Life Extension Study to the rules requirements, when applicable, or to the client needs, for example as a support decision.**

# CAPC

## CASE STUDY

### THE CHALLENGE

An Oil and Gas company faced the challenge of assessing the overall condition of two LNG Carriers for which the company could be confident in their purchase for conversion purposes.

## CONDITION ASSESSMENT PRIOR TO CONVERSION

### CASE STUDY



### OUR APPROACH

A **Condition Assessment Prior Conversion (CAPC)** was carried to benchmark / baseline both units' condition and satisfy not only the client requirements but also the entities that would be responsible for the conversion project at yard.

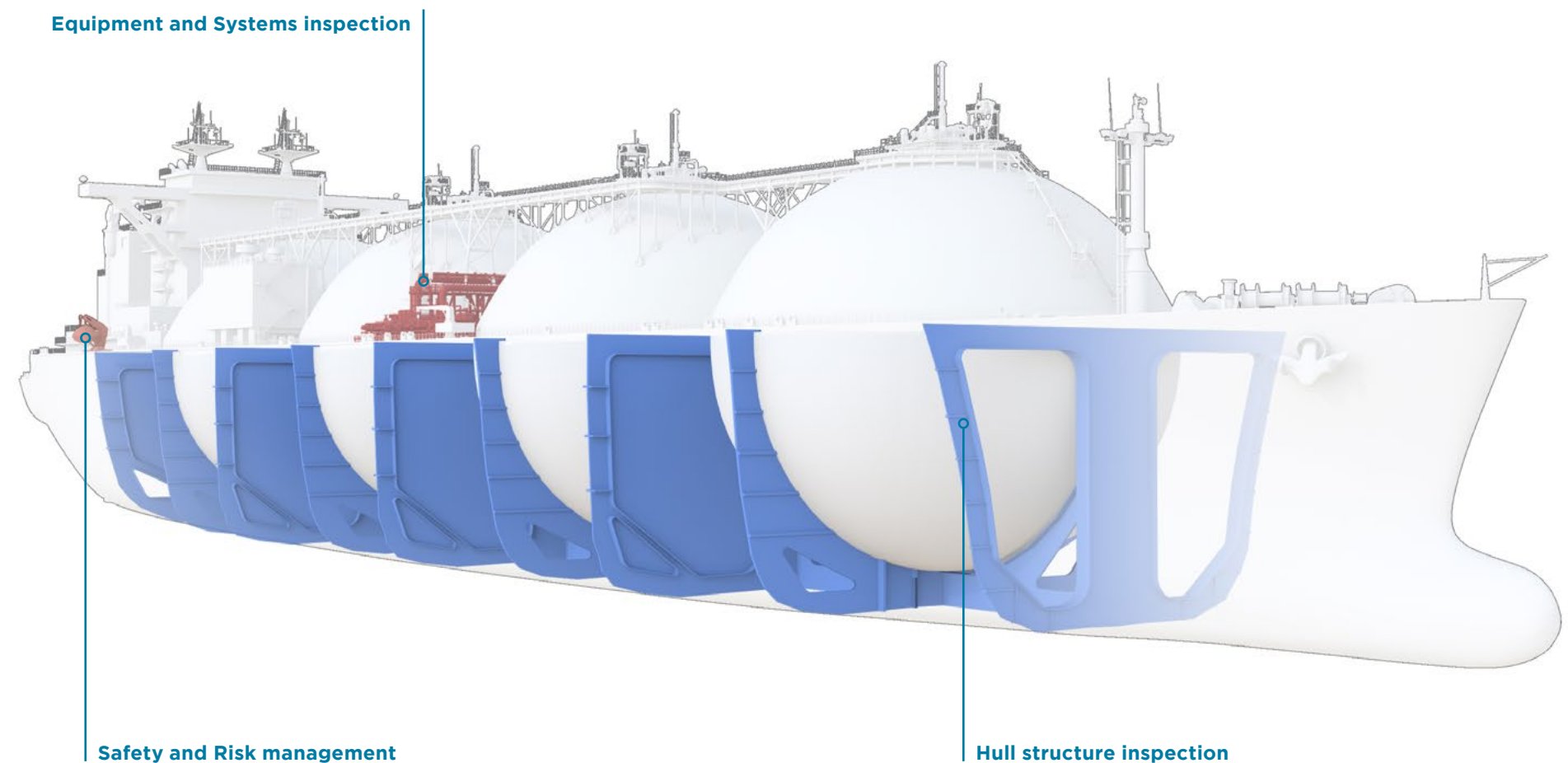
The inspection of the vessel's condition was carried by BV Solutions M&O's multidisciplinary team, the assessment included:

Project management responsibility

Provision of necessary documentation as per the client's internal documentary system

Estimation of the associated project costs

Equipment and Systems inspection



Safety and Risk management

Hull structure inspection

### THE OUTCOME

All interest parties were involved, receiving daily updates, throughout the CAPC process.

Fully detailed reports including gap analysis and potential planning were delivered to support an informed decision regarding the vessel's conversion.

**The CAPC service can cover from the selection of vessels with high adaptability up to the new operating phase, reducing the conversion works, as much as possible, to the full project management of the conversion works at yard, including subcontractors interface and lead.**





## FORWARD- **THINKING** FORWARD- **ACTING**

For our clients' assets, processes, people and data management in the shipping and offshore energy markets, BV Solutions M&O is the technical advisory, asset management and assurance solutions partner.

In an increasingly digital world, we go beyond pure compliance to enable our clients' assets to perform more reliably, more efficiently and at a significantly reduced level of risk. Our strong culture of service and quality allows us to resolve new or complex client issues and deliver well-packaged, top-tier solutions that de-risk projects and optimize cost.







# 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](http://www.bvsolutions-m-o.com)



**BUREAU  
VERITAS**

**SOLUTIONS**  
Marine & Offshore