



IFS APPLICATIONS™ FOR

# MARITIME CAPABILITY MANAGEMENT



## OUR SOLUTION'S DNA

When we first set out to create IFS Applications over 25 years ago, our goal was to make the most usable business solution on the market. And to help us achieve that ambition, we put simplicity at the forefront of everything we did.

**We still do.**

We decided that we would make only one product, which can be easily configured to match the specific requirements of a broad range of industries.

**We still do.**

We decided that we would build IFS Applications on standards so our customers would not be locked into any particular technology.

**We still do.**

We decided to design IFS Applications as a component-based structure so it can be easily extended and updated.

**We still do.**

We decided that each software component must be totally compatible with every other, yet capable of running independently.

**We still do.**

We decided to build a product that could handle change and long-term evolution.

**We still do.**

And, that we would make the most user-friendly business software on the market.

**We still do that, too.**

# HELPING OUR CUSTOMERS DELIVER MORE FOR LESS

For more than 10 years, IFS has delivered value-added business solutions to customers in the **Maritime sector**. Our product development is driven to meet the rigorous demands of your changing market, delivering an agile product to keep you ahead. Our focus is to enhance your operational capability by supporting CfA —helping you manage change, reduce costs and improve customer service.

We are able to deliver a comprehensive and unique business solution covering the complete lifecycle from conceptual design, through manufacture, in-service maintenance repair and overhaul, re-fits, and into retirement and disposal. Our product enables seamless co-existence with your existing systems and environments within complex and geographically dispersed user networks. Our people offer a wealth of **Maritime** experience, and our products underpin the most challenging programs in the **Maritime sector**.

IFS offers the **Maritime sector** a unique, evolutionary and agile approach to meeting the through-life capability challenge. By offering flexibility in a single product and a step-by-step approach to implementation we enable our customers to reduce risk and achieve class-leading business solutions with lower Total Cost of Ownership.

# IN MARITIME CAPABILITY M —ONE VICTORY IS NOT ENOU

**Whatever the asset being maintained, today more than ever, reduced through-life support costs are driving solutions that have to be increasingly intelligent and predictive in nature.**

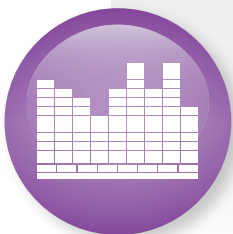
In Naval Defense and merchant fleets it is understood that each asset is required to perform effectively for extended periods of use. To achieve this high level of combat or commercial availability, both suppliers and asset maintainers need to continually improve performance by leveraging modern technology. Contracting for Availability (CfA) processes are being adopted to increase the time between maintenance intervals and to reduce downtime. To stay ahead requires continual innovation—in Maritime that requires designs that are easy to manufacture, easy to use and easy to deploy. They must also be easy to maintain, service and re-fit in a Continuous Engineering Support (CES) environment.

One of the key areas driving this agility is the ability to collect and share data and to derive information that enables key support decisions to be made. This includes data that is produced from the early design stages, through development, construction, commissioning and into the in-service

support phase. The advantage gained by adopting IFS Applications™ is an integrated solution to manage asset operational performance including: CES, control of asset configuration, dockyard Enterprise Resource Planning (ERP) and supply chain management; to ensure a cost effective answer to capability management. IFS solutions exist on board UK Royal Navy (RN) and Royal Fleet Auxiliary vessels to manage ship to shore maintenance, spares and health monitoring functions.

## **DELIVERING AVAILABILITY AND EFFICIENCY THROUGH-LIFE**

With tighter budgets and increasing demand for flexibility, enhancing Maritime capability through-life is imperative. This means updating systems and subsystems to extend platform life Effective change management across ‘as designed’, ‘as built’ and ‘as maintained’ asset configurations is essential. Meanwhile, maintenance must deliver enhanced availability, reduced turnaround times and greater efficiencies. Irrespective of whether maintenance repair and overhaul (MRO) is delivered in-house, by a 3<sup>rd</sup> party or an Original Equipment Manufacturer (OEM)—supplier(s) have to deal with increasing complexity of product, contract and supplier relationships and management.



## **TAPPING INTO THE POWER OF TECHNOLOGY**

The IFS view on technology is that the winners in business are those who manage change best. IFS Applications is built for change using service-oriented architecture, a commitment to standards and proprietary and open source infrastructure. With over 100 integrated business components providing extended ERP functionality, IFS delivers business agility and lower long-term costs. It is no surprise that IFS is known for advanced technology ‘made easy’.

# MANAGEMENT

## UGH

IFS' project-centric enterprise approach means the integration of MRO functionality is an easy evolution. Across the lifecycle, all aspects of change can be planned, managed and accounted for within the same solution.

### IFS HAVE A STRONG PEDIGREE IN THE MARITIME ARENA

Our solution is based on the maintenance management system we developed for the UK Royal Navy, which has been supporting their Surface Fleet since 2003, and is now being rolled out across the Submarine Fleet.

The solution is based on the concepts of Reliability Centred Maintenance (RCM)—a concept that was developed originally by the civil aviation industry to determine the maintenance tasks that are needed for each aircraft platform, replacing routine regular service schedules with condition-based maintenance (CBM) outputs that trigger remedial maintenance actions.

Over the past 20 years RCM has become the method of choice for developing maintenance schedules for high cost assets that have significant downtime costs or where failures could lead to serious safety or environmental problems. The solution used by the UK RN, UMMS (Unit Maintenance Management System), provides connectivity for all surface and submarine vessels with shore based personnel. This enables engineering problems at sea to be communicated automatically to the Class Manager, so that special, and often engineered to order, spare parts can be acquired to coincide with planned shore based maintenance periods.



**HMS VICTORY IS THE OLDEST NAVAL SHIP STILL IN COMMISSION,  
AND IS MAINTAINED USING AN IFS SOLUTION.**

The UMMS infrastructure is web-based and it is designed for ship and boat based users across the Fleet, at multiple locations. UMMS is compliant with UK MoD security requirements.

The primary features of UMMS are as follows:

- An integrated environment with analysis tools, task management and work scheduling.
- Handles complex workflow on deployed platforms and ashore.
- Robust replication between deployed platforms and shore support systems.

A feature of UMMS is its ability to handle user feedback on equipment configuration, maintenance tasks, defects and spare parts. And so it provides the ability to deliver on a strategy of continuous improvement. The application enables maintenance, defect corrective action and feedback information from platforms in remote locations to be replicated to a central system. This facilitates the planning and scheduling of work orders by the Class Manager in dockyard ERPs (typically IFS solutions in the UK).

### MANAGING SPARE PARTS

Reliability Centred Spares (RCS) is a technology derived from RCM. While RCM matches your maintenance tasks to the operational requirements of the physical assets, RCS is used to ensure that stocks of spare parts—especially those of high value or parts that are considered to be ‘production-critical’ (and only available on very long delivery lead times) are able to support your maintenance and production goals, this includes:

- **Just-in-Time:** a method of ordering parts only when they are needed.
- **Local stock:** buying and holding a number of parts in your organizations store.
- **3<sup>rd</sup> party stock:** a contract with the equipment vendor or a 3<sup>rd</sup> party to hold inventory on your behalf.

### IFS MARITIME SOLUTION

Working with a cross section of customers from commercial shipyards, specialist contractors in the defense sector and end-users, IFS has built a solution that covers all aspects of the lifecycle of maritime assets. IFS Applications sits comfortably in a ship/boat build design organization, all stages of construction, sea trials and in-service maintenance and repair. IFS solutions support ship and boat building, contracting for availability and class output management.

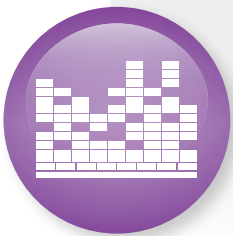
Based on a single fully integrated application product, where business components can be selected to deliver the end-to-end processes you need to

support your operations. You can choose maintenance capability for the less complex assets that are based on more traditional service schedules or opt for in-depth RCM maintenance. Built on service-oriented component architecture, this makes the solution faster and easier to implement. The inherent design of the application enables you to retain existing systems and integrate as much or as little of the IFS Application as you need—in the full knowledge that you can implement more functionality as and when you need to, as your business evolves. This reduces your ‘total cost of agility’, reduces risk and increases your return on investment (ROI).

### VISIBILITY AND COLLABORATION ACROSS SUPPLY NETWORKS

Whether military or commercial, maritime fleet operators face the same challenges—end-to-end visibility of asset status through extended supply chains; collaboration with dynamic networks of suppliers and partners; and managing complex demand-driven supply networks for maximum effectiveness and efficiency.

Speed of response is crucial in your business. Only a solution as functionally rich as IFS Applications is able to gather the data you need to monitor KPIs, support decisions and review activity. Intuitive and informative, IFS Applications is easily accessible through different channels including role-based portals, and mobile devices—providing the information you need, when you want it, wherever you are.



### YOU ONLY GET WHAT YOU NEED... ENABLING STEP BY STEP CAPABILITY EVOLUTION

IFS Applications is known for its simplicity—start with the business components you need and add or change over time as your needs, your customers’ needs or your business model changes—delivering maximum agility, minimum risk and minimum cost.

## EXAMPLE MARITIME CUSTOMERS

The UK Royal Navy, and also being installed across the Royal Fleet Auxiliary (RFA).

**Todd Pacific Shipyards**—as the Pacific Northwest's largest private sector shipyard, Todd Pacific performs a wide range of new construction, conversion, and repair projects for government and commercial customers. Located on Harbor Island in the deepwater port of Seattle, Washington, Todd has been a mainstay of the area's maritime industry since 1916.

**Babcock Marine**—is the UK's leading provider of engineering and support services to the Royal Navy currently carrying out approximately three-quarters of the annual maintenance and refit load required to support the Royal Navy's surface ships.

**Royal Norwegian Navy (RNoN)**—utilizes IFS Applications, to establish engineering and in-service support based on one data baseline feeding directly into the Integrated Logistics Support (ILS) concepts. The solution has the same features as for the Norwegian Air Force and includes Engineering, Maintenance, Fleet Management and Project Management. The RNoN operates a fleet of some 100 Navy vessels.

**STX Europe ASA**—formerly known as Aker Yards—the world's fourth largest shipbuilding group. STX Europe focuses on being the leading builder of cruise and offshore vessels and develops the world's most cutting-edge ships and maritime solutions. STX Europe comprises 15 shipyards in Finland, France, Norway, Brazil, Romania and Vietnam, and has in total 16 000 employees. The Norwegian yards: Brattvaag Verft and Søviknes Verft, shipyards were founded 50 and 64 years ago, and employ 160 and 170 employees, respectively.

**BVT Surface Fleet**—a Joint Venture between BAE Systems and VT Group, is a leader in the design, manufacture, integration and support of naval ships, delivering complex engineering, integration and through-life support across the lifecycle of a vessel. With operations in Glasgow, Portsmouth and Filton near Bristol, it employs over 7,000 people and has the facilities, skills and partnerships to set the global standard in excellence as a trusted and innovative through-life surface warship partner in both the UK and export markets. IFS supports BVT to provide ERP systems that manage key functions at Portsmouth Naval Base.

**Naval Shipyard Gdynia S.A, Poland**—is involved in the maintenance, construction, repair, conversion and modernization of Navy vessels, commercial and fishing vessels, and technical as well as special-purpose vessels.

## ABOUT IFS AND IFS APPLICATIONS

IFS is a public company (OMX STO: IFS) founded in 1983 that develops, supplies, and implements IFS Applications™, a component-based extended ERP suite built on SOA technology. IFS focuses on agile businesses where any of four core processes are strategic: service & asset management, manufacturing, supply chain and projects. The company has 2,000 customers and is present in more than 50 countries with 2,700 employees in total. Net revenue in 2009 was SKr 2.6 billion.

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