Bringing your EAM Solution Up to Date in IFS Cloud

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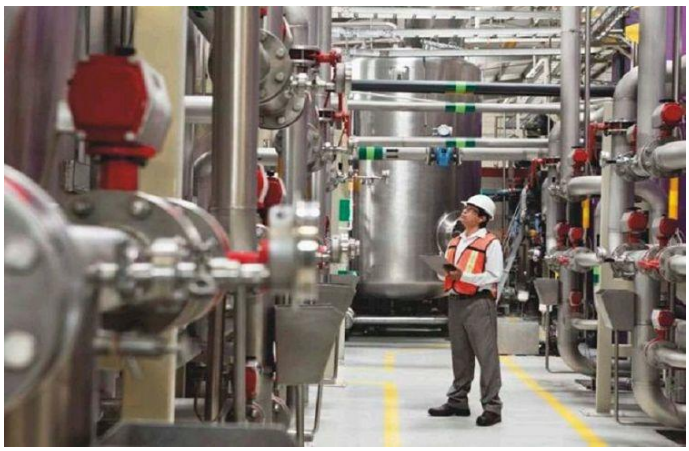


IFS may currently be a popular middle market enterprise resource planning (ERP) solution today, but the product set got its start as a computerized maintenance management (CMMS) application for a nuclear power plant. The fact IFS Applications, and now the next-generation IFS Cloud, come from these origins mean the products offer not just manufacturing operations and materials requirements planning (MRP) but deep enterprise asset management (EAM) capabilities for manufacturers and industrial companies that need to get the most value from productive assets.

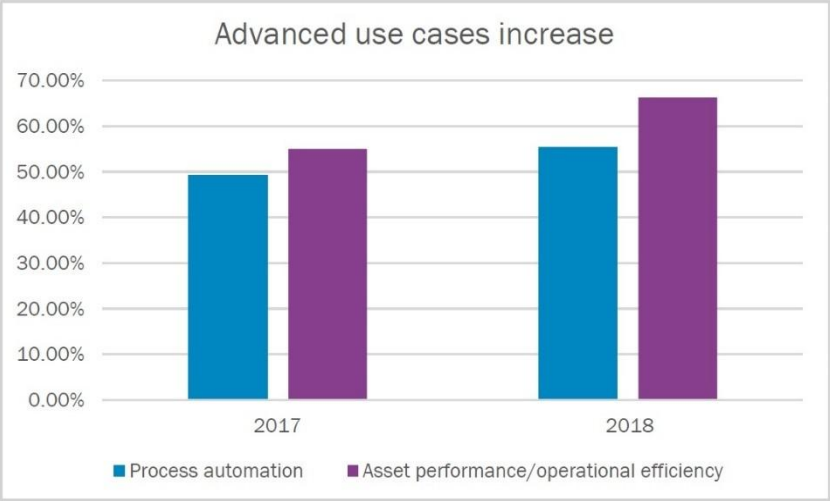
More than a product for highly rigorous maintenance management, IFS Applications tied maintenance operations, inventory, staffing and contract and project management with finance to provide senior management and other stakeholders with the tools they need to make informed decision on repair or replace, lifecycle extensions, maintenance staffing and investment levels across the design-operate-maintain lifecyle.

Companies like manufacturers, midstream oil and gas companies, power generation and transmission and distribution utilities, operations maintenance and service (OMS) contractors and others all rely on expensive, long-lived assets, and succeed or fail based on their ability to derive more value from these assets than they cost to construct, operate and maintain.

Not satisfied with resting on their early accomplishments, IFS has leveraged emerging technologies into their EAM application, including the internet of things (IoT) and artificial intelligence (AI) for years, and has chronicled the rise of this disruptive tech even as they evolved the product accordingly.

One 2018 IFS Study of IoT adoption tracked IoT usage and advanced use cases over a two-year period.

The data revealed, for instance, a 17 percent increase in companies collecting IoT data on entire work cells or production lines rather than individual machine components or individual machines.



Source: IFS

This enables more advanced use cases, which helps explain a 30 percent increase in use of IoT to support asset performance management. The data revealed a nearly 10 percent increase in respondents using IoT to monitor their customers' equipment, which could enable transformational approaches to field service management.

IFS offers more than one product for industrial maintenance—IFS Ultimo is billed as EAM, but because it is not built into an ERP product that combines operations and maintenance data with financial data, it functions more like CMMS while offering simpler implementation and integration with other ERP products. We'll focus this whitepaper on Tsunami Tsolutions' experiences with and guidance around IFS Applications and IFS Cloud for EAM as part of a broader ERP solution.

Why Focus on EAM Now?

Even as capital markets loosen and interest rates drop, financing new productive capacity will remain expensive. The overall cost of a new compressor pallet, extrusion line, rubber-tired gantry crane or robot welder has gone up in part due to inflation and in part due to the cost of cash. Some manufacturers have cut operations inventories and capital investment to compensate for increased expenses.

Even industrial companies that do invest in net new productive capacity need to keep their existing lines running optimally. EAM can help support these companies today better than CMMS because it:

- Can quantify the cost not just of the maintenance activity, but the effect that varying levels of maintenance have on product quality, total cost per unit sold, customer experience and other key performance indicators, clarifying the relationship between equipment health and production output, profit, scrap, missed due dates and nonconformances
- Provides insight not only on the importance of maintenance activities like planned maintenance events but also when planned or scheduled maintenance can safely be deferred

A properly leveraged instance of IFS EAM can have an even higher return on investment (ROI) as an investment in new capital equipment. And as a company grows and diversifies its productive asset portfolio, EAM software is the gift that

keeps on giving. At end of life as assets are wound down, EAM software can facilitate:

- Parting out and taking reusable or recyclable parts back into spares and repairs inventory
- Work management for months- or years-long plant or asset decommissioning projects
- Project financial controls and contract management for decommissioning and asset liquidation
- Reporting for regulators, auditors and financial stakeholders on the condition, value, revenue history of the asset

So, it is never a bad time to implement EAM software, but emergent changes may make now an opportune time for some, including:

- Companies ramping up net new asset portfolios in growth industries including renewable power, outside plant fiber communications, biomedical and others
- Companies managing a net new asset portfolio after mergers and acquisitions.
- Companies that must support decisions to extend the life of aging asset portfolios, or in some cases digitize their operations for the first time.

Even absent these timely considerations, EAM will be of critical interest to:

- Food and beverage, where high profile quality issues can be attributable to poor maintenance or equipment degradation
- Aviation, which is often still on paper-based systems, with asset operators under increasing regulatory and efficiency pressures to digitize
- Defense, which is facing multiple challenges including refit of military equipment returning from the Gulf, extended tours of duties for warships in an uncertain world and resent of equipment returned from overseas including the useable, disposition of serviceable, usable and repairable property and increasing needs to make more tactical use of asset data
- Maritime industries and ports, where major asset expansions or reconstruction due to rising sea levels has to be balanced against current demands for throughput
- Fossil fuel, with its need to service and operate distributed assets across a series of oilfields or mines and plant assets in refineries, offshore vessels and oil and gas rigs and compression
- Traditional power generation, transmission and distribution for new and established plant assets and linear assets like power lines and pipelines

Why make the move to IFS Cloud EAM?

Now is also an excellent time to invest in or strengthen an existing instance of IFS EAM because the software is becoming more powerful and capable. IFS customers have for years extended their software by collecting data from connected devices, but the ability to do so at scale increased in 2016 with the release of IFS IoT Business Connector.

IFS Cloud, however, streamlines and simplifies the process of connecting devices to IFS EAM, and adds or enhances other capabilities.

Why Move to IFS Cloud EAM?

1. In IFS Cloud, the mobile client used by technicians in the field or plant floor is a native part of the application rather than residing on a separate server as it was with precursor IFS Touch Apps. The most significant benefits of IFS EAM are dependent on the improved data quality that comes with providing maintenance technicians mobile devices with this interface. Management pushes work orders to technicians on a mobile device for work orders, automating work assignment, time tracking, inventory recording and capturing observations about the equipment in a system of record. Before IFS Cloud, that meant paying for and maintaining two servers, increasing cost and complexity while introducing risk of the two servers becoming disconnected. The mobile work order application in IFS Cloud also includes powerful new capabilities for stock moves.

2. IFS customers will also find in IFS Cloud greatly enhanced tools for maintenance planning and scheduling. This functionality requires forethought though because before it can be implemented, a company should be live for some time on IFS Cloud to get their software instance optimized. Yet they need to be thinking about the planning and optimization functionality in the very early phases of implementation so they can assign attributes to assets like criticality and identify bottlenecks to plan around like time spent waiting for material. This functionality makes sense for larger maintenance teams in sectors that involve major planned stoppages for repairs, refits or lifecycle extensions. These sectors include electrical distribution, offshore oil and gas, food and beverage, continuous process manufacturing and other settings with long production runs or mission-critical assets that are hard to take offline.

Outage management functionality in IFS Cloud enables a management team to address the large number of deliverables to be accomplished during a shutdown by priority to make sure high priority work is completed while balancing the need to resume production by deferring less critical work until the next outage. IFS Cloud also makes visible availability of inventory and people resources for the project, including certification of the welders, calibration technicians, electricians, pipefitters, controls technicians and other trades needed to do the job.

3. A new asset performance management (APM) module in IFS Cloud provides a dashboard of IoT data fed into the application. With this dashboard, IFS customers can track a given variable like temperature or vibration, create an event tied to a threshold out-of-spec level of the variable and automatically generate a work order and work task template that deploys the right techs for the job. This level of automation picks up and operationalizes insights operators miss.

4. Larger maintenance organizations, particularly those servicing distributed assets can benefit from artificial intelligence (AI)-drive schedule and plan optimization technology that dynamically changes the maintenance schedule based on task priority, location of a given technician, the inventory on their truck, and other data points. The performance of this AI scheduler can be configured through a business rules engine that enables users to automate execution against a configurable set of priorities.

5. IFS's recent acquisition of Copperleaf will add a layer of AI-driven insight to the large volume of data from connected assets and portfolios of assets. With Copperleaf, IFS EAM users will be able to derive even more value from their asset data and maintenance histories as the technology flags patterns and relationships between events and trends that would not otherwise be noticeable. These patterns may involve both tangible metrics like productivity and quality or harder to measure metrics that are part of an environmental, sustainability and governance (ESG) initiative.

6. Capabilities coming soon for IFS EAM include the integration of the maintenance schedule with the master production schedule (MPS) in IFS Manufacturing. This will make it easier than ever to balance the need for timely maintenance with demand for product.

How Tsunami Tsolutions Helps

Even a straightforward implementation of IFS EAM will require help from a partner not just facile with the product, but knowledgeable about how to intelligently create equipment structures and define the relationships between them—along with other domain-specific insights. Tsunami Tsolutions offers both, with former IFS research and development leaders, functional consultants and technical staff to ensure customers succeed. These key resources also bring maintenance and operations leadership experience in asset-intensive environments so they can intelligently augment your staff curing implementation to reduce disruption of your operation and compress the project.

Currently and recently, Tsunami Tsolutions is helping IFS customers with:

- IFS Applications and IFS Cloud implementations, either from discovery through to go-live, as a domain-specific expert or to assist other partners with implementations and rescues
- Implementation of IFS's AI-driven schedule optimization tool
- Connecting equipment to the application through the IoT and defining measurements to trigger creation of fault reports
- Integrating IFS Applications with supervisory control and data acquisition (SCADA) systems
- Integrating manufacturing scheduling tool with MPS—can merge the production with the MPS maintenance schedule
- Leveraging IFS's IoT capabilities to drive overall equipment effectiveness calculations so customers can identify the ideal speeds and feeds for equipment operation to maximize productivity while avoiding waste, equipment failure and product nonconformances.