

IFS EAM Trend Report



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Introduction

Welcome to the IFS Enterprise Asset Management (EAM) Trend Report.

This year's report is based on one of the most comprehensive surveys of asset management and maintenance professionals worldwide. 430 asset managers participated across industries, supplemented by in-depth interviews with leading industry experts. The result is a detailed overview of EAM trends based on quantitative and qualitative market research.

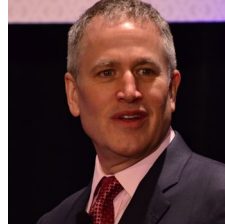
The results reflect an urgent need to increase productivity, optimize plant conditions, and minimize downtime while meeting sustainability goals. At the same time, competitive market conditions necessitate strict cost controls while adhering to health, safety, and environmental protection (HSE) regulations.

Attaining these objectives becomes even more complicated due to a lack of transparency and collaboration, poor documentation, and limited access to data and knowledge. This is where EAM technology matters most. This report offers the latest insights to inspire maintenance and asset management professionals to use their challenges to fuel positive change and digital transformation.

Enjoy reading!

Note: For the purpose of this report, the term 'asset managers' represents asset managers, maintenance managers, and facilities managers.

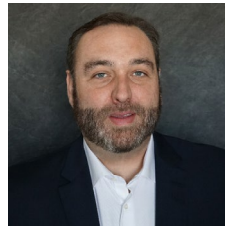
In cooperation with—



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Acknowledgements



We proudly present the EAM Trend Report as a joint effort of the IFS Cloud EAM and IFS Ultimo teams.

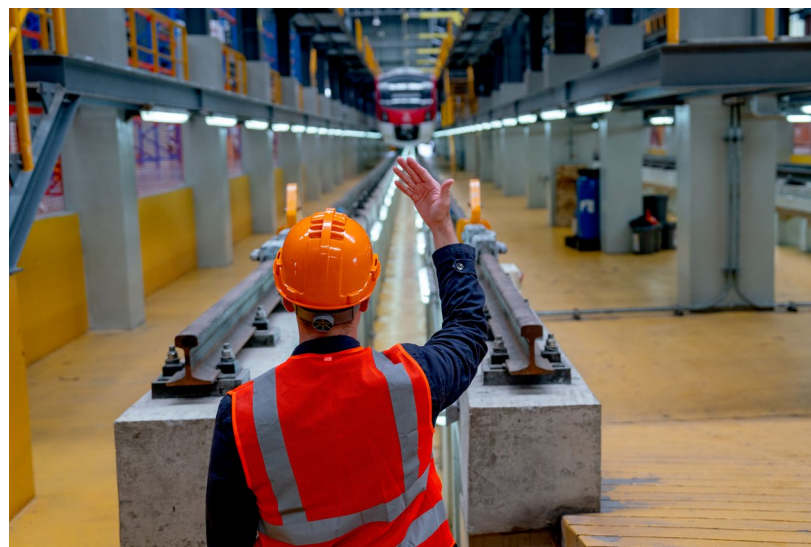
For us, this study provides valuable insights for the further development of our products. Most of all, we hope it will inspire professionals in maintenance and asset management.

To ensure that the report is easy to absorb, we have focused on presenting the data provided clearly and concisely so that readers can gain an overview of the key statistics to benchmark performance against their peers and simplify future planning.

The report is complemented by qualitative research and interviews with experts from across the asset management industry.

The outcomes of the study show that different use cases ask for different solutions. Since the acquisition of IFS Ultimo in 2022, IFS is the only vendor in the world that offers both “best-of-suite” EAM (IFS Cloud EAM) and “best-of-breed” EAM (IFS Ultimo). IFS Cloud EAM is the perfect match if you are looking for a composable solution that goes beyond EAM, including Service Management, APM and ERP capabilities. IFS Ultimo is ideal if you want a pure-play EAM SaaS solution with a fast time to value.

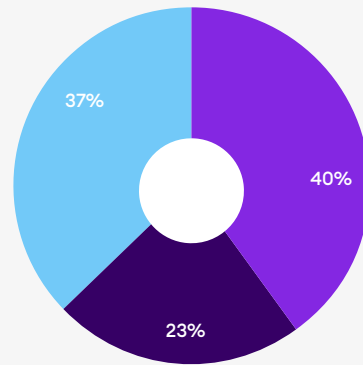
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CMO IFS Assets



EAM maturity: Where do asset managers see their own organization?

The results of the survey show that 63% of the 430 respondents are currently using an EAM solution. 40% have implemented a best-of-breed EAM/CMMS solution, compared to nearly 23% using an EAM solution as part of an integrated software suite. It's important to note that 37% of responding asset managers indicated that they are not currently using any EAM solutions. The growth potential for EAM remains high whether best-of-breed or as part of an integrated software suite. As previous EAM Trend Reports have shown, companies name uptime, efficiency and cost control as the most important Key Performance Indicators (KPIs) for asset managers across all sectors. Organizations have a competitive advantage when they implement data-based cost control and can quantify effects on productivity in order to make well-informed decisions and thus ensure maximum profitability.

Are you currently using an EAM/CMMS system?



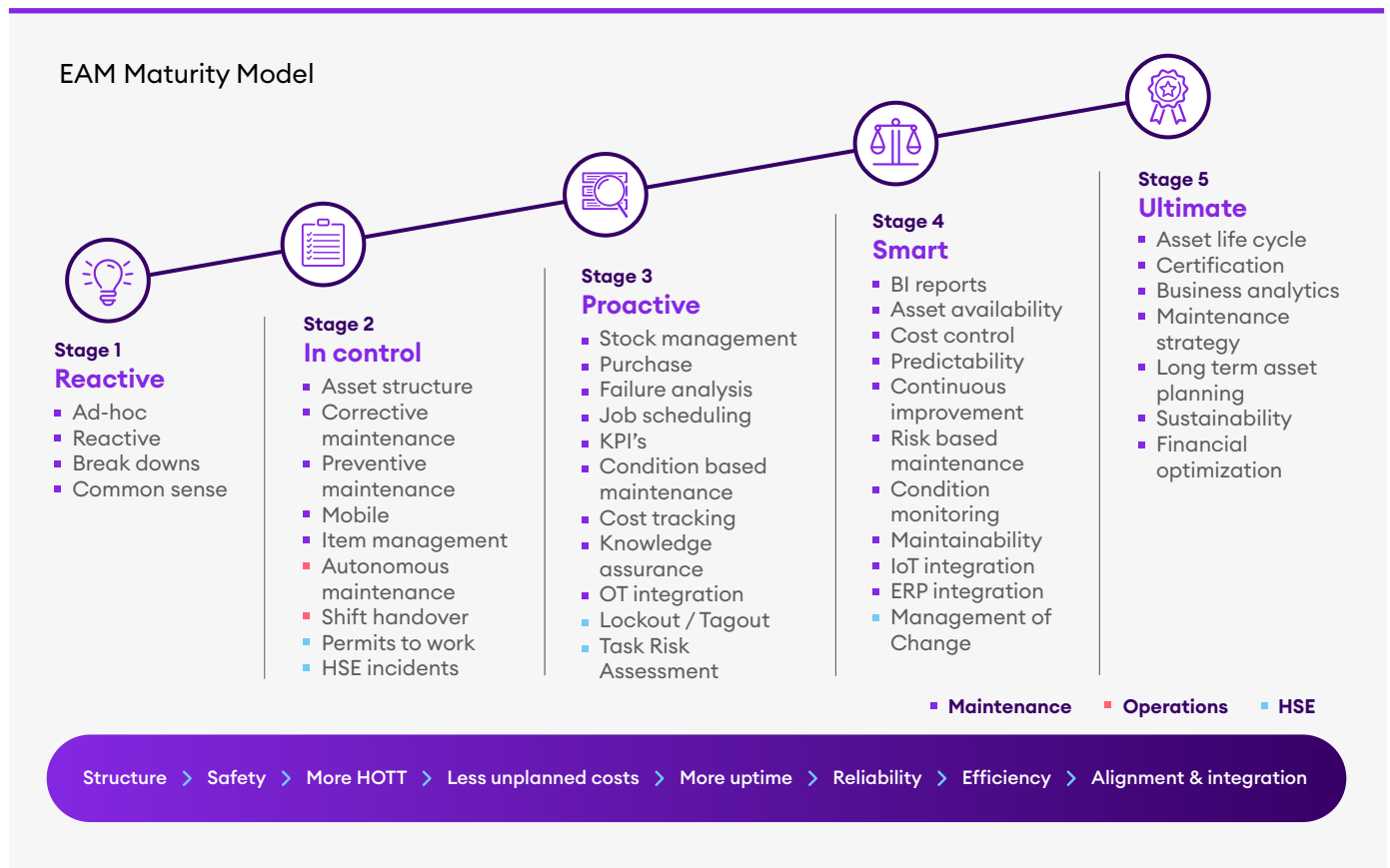
- Yes, we are using a best-of-breed EAM/CMMS solution
- Yes, we are using an EAM solution part of an integrated software suite
- No

This year's responses from asset managers show that organizations employ various maintenance approaches that suit their specific needs. The possible answers respondents could give were aligned with the "EAM Maturity Model" and its 5 different maturity stages.

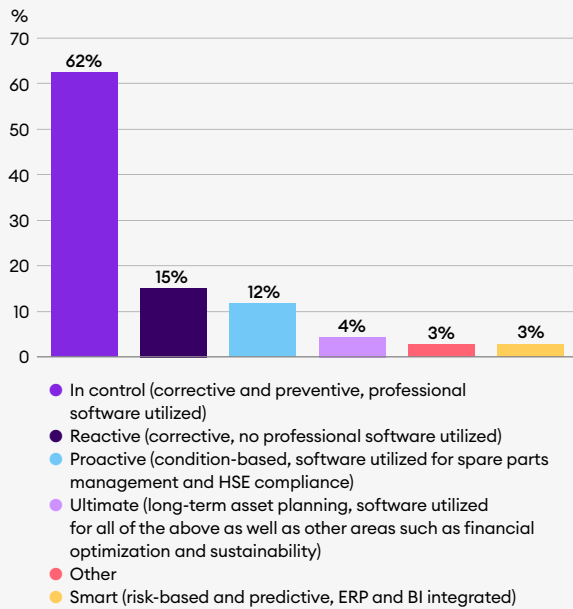


Regarding their own organization's EAM maturity, the majority of all asset managers see their organization in Stages 1, 2 and 3: When respondents were asked to identify the approach that best represents their organization's maintenance strategy, 62% indicated they follow a controlled approach (Stage 2: "In control"), which involves a combination of corrective and preventive measures along with the use of professional software. This was followed by a Stage 1 "Reactive" approach (corrective, no professional software utilized), chosen by 15% of organizations, and a Stage 3 "Proactive" approach (condition-based, software utilized for spare parts management and HSE compliance), selected by 12%.

A smaller proportion, 4%, indicated that their organization follows a Stage 5 "Ultimate" approach, which involves long-term asset planning. In this approach, the software is utilized for all the previously mentioned aspects, and it extends to areas like financial optimization and sustainability. Only 3% of asset managers say their organizations implemented a Stage 4 "Smart" approach. Here, maintenance is risk-based and predictive, with the integration of Enterprise Resource Planning (ERP) and Business Intelligence (BI) for enhanced decision-making. In summary, this means that only a combined percentage of over 7% of all asset managers think their organization has already reached the highest stages, Stages 4 or 5, of the "EAM Maturity Model".



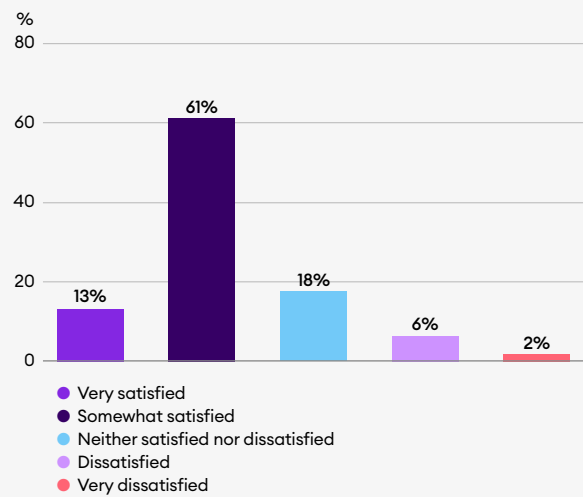
What best represents your organisation's approach to maintenance?



Additionally, it is worth noting the level of satisfaction among organizations regarding their current maintenance approach. A significant 74% of asset managers express various degrees of satisfaction with their existing maintenance strategies (13% are even very satisfied), while 18% remain neutral, neither satisfied nor dissatisfied, and 8% express dissatisfaction.

Despite the generally positive sentiment, respondents agree there is room for improvement.

How satisfied are you with your current maintenance approach?



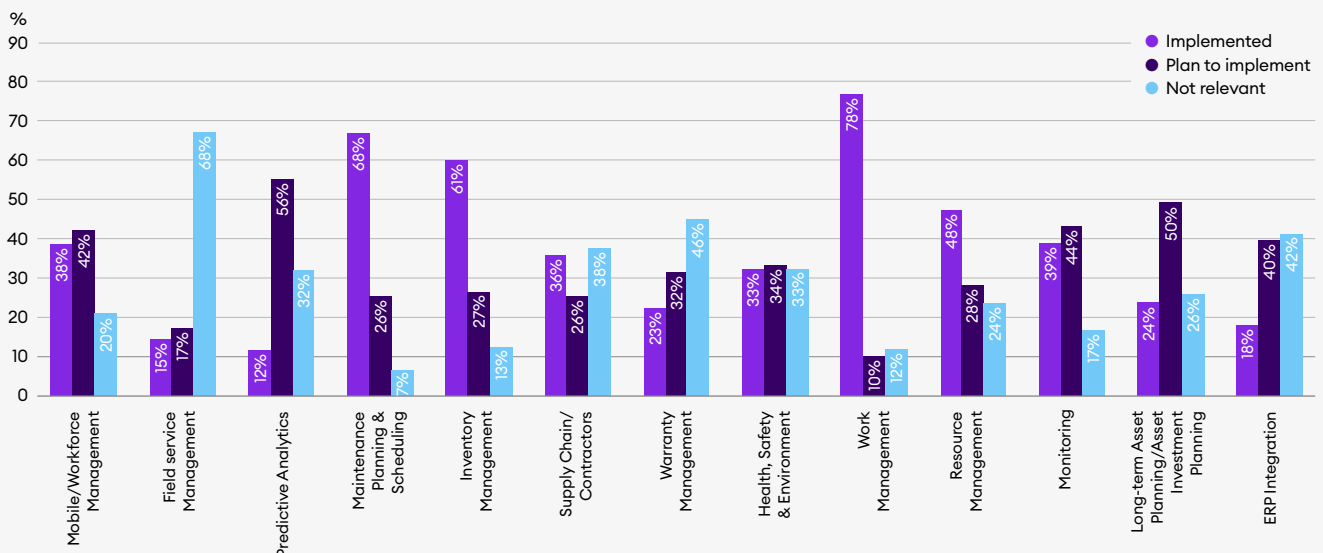
Which functional EAM capabilities will asset managers implement?

The survey reflects a trend of key functional capabilities being implemented within an existing EAM system, signifying a shift towards “Smart” and “Ultimate” maintenance approaches.

- 56% plan to incorporate predictive analytics
- 50% plan to focus on long-term asset planning/asset investment planning

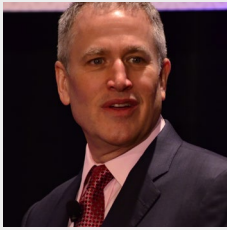
Moreover, many organizations have already integrated important capabilities. For example, Work Management is used by 78% of organizations, while Maintenance Planning & Scheduling is utilized by 68% of the respondents.

When we look at the following functional capabilities of the EAM system in use, which of these have already been implemented or are you planning to add?



Reliabilityweb.com expert interview

The Reliabilityweb.com website is focused on the delivery of informational articles, videos, audio podcasts, case studies, iPresentation tutorials, web workshops, benchmark data, tips, and how-to information for maintenance reliability leaders and asset management professionals.



Terrence O'Hanlon
Publisher of Reliabilityweb.com

Progressing towards reliability: Is your organization on the right path?

Language establishes communication within human society. Through words, we make connections and share our experiences. As Benjamin Lee Whorf once said, "Language shapes the way we think and determines what we can think about." In this light, setting clear and precise definitions is vital within the dynamic landscape of organizations. Establishing precise definitions lays the groundwork for effective communication, consistency, knowledge sharing, and professional development. The same principle applies when establishing a standardized Enterprise Asset Management (EAM) language.

Asset management, maintenance, and reliability: What are the differences?

It's important to set this language throughout the organization. This begins by distinguishing three key terms of EAM: asset management, maintenance, and reliability. Sometimes, these terms are confused or used interchangeably, but they are not synonyms in any shape or form. *Asset management* assures the value of assets. It refers to the systematic activities used to optimize the value, performance, and life cycle of physical assets within an organization.

Maintenance refers to the activities performed to keep these assets in a desired condition or restore them to a desired condition. Simply put, maintenance means inspecting, repairing, renewing, and replacing.

Reliability, on the other hand, is the assurance of an asset's function purpose. It's the assurance that an asset or system can perform its intended function without failure, under stated conditions, for a specified period of time. It involves ensuring that assets are available, dependable, and capable of meeting performance requirements. Reliability is truly functional failure-based – its focus is minimizing the likelihood and impact of functional failures. Some assets run to failure – they operate until they fail, and then are repaired or replaced. Some others call for time-directed tasks and their failure event occurs at a specific point in time or based on usage. As these types of assets are dependent on time, these failures can be predicted or anticipated based on the age of an asset. Moreover, up to 80% of assets can benefit from the use of inspections and sensors to detect failure.

Focus on employee development and culture

In every circumstance, organizations have the potential to overcome challenges, mitigate failure, and therefore enhance reliability within their operations. To achieve this, they ought to initiate the process by focusing on their most invaluable resource: the employees. By providing competency-based training and development opportunities for employees involved in asset management and maintenance, organizations ensure that they have the necessary knowledge and skills to maintain and achieve the inherent reliability of assets effectively.

EAM software provides a central platform to store and manage asset-related information, historical data, and proven practices. Therefore it is able to capture and institutionalize this knowledge in order to break the skills gap and also serve as a valuable resource for training new employees.

Also, fostering a culture of reliability is an integral part of this endeavor. Organizations should create a culture that values and prioritizes reliability. This involves promoting open communication, encouraging collaboration, and facilitating knowledge sharing among employees. By actively encouraging the use of best practices, organizations can significantly improve reliability. Such a culture not only leads to increased asset performance but also nurtures a sense of ownership and commitment among employees, driving them to contribute to the organization's reliability goals. Culture is the key to delivering reliability and, given its cross-functional nature, the fact remains that each and every individual is essentially part of the reliability team.

The role of EAM and emerging technologies

Reliability is a primary focus for organizations today and EAM plays a crucial role in achieving it. Technology companies like IFS proactively help organizations achieve their goals by providing a comprehensive framework and a vast amount of data, and by integrating highly supportive technology like the Internet of Things (IoT), digital twins, machine learning, and artificial intelligence (AI). These emerging technologies don't create barriers among staff nor intend to replace them, instead, they reshape the organization into a more successful, safe, and sustainable entity. AI is not taking away your job. People who know how to use AI will.



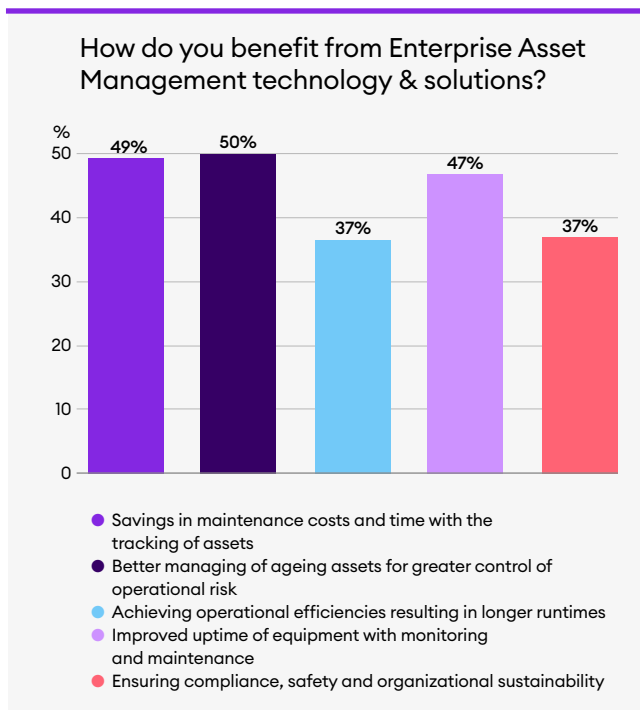
It's never too late for an organization to start investing in reliability.



Emerging technologies have the power to collect real-time data and provide valuable insights into the performance, health, or conditions of any asset through analytics tools. This allows organizations to identify potential issues before they lead to failure. Furthermore, these emerging technologies also use historical data and asset performance models to predict when an asset is likely to fail. They are of vital significance within the realm of reliability.

It's never too late for an organization to start investing in reliability. While it's optimal to implement reliability or maintenance practices from the early stages, organizations can still benefit from such investments at any point in time. Start where you are, bring knowledge to your organization, and empower your workforce.

How do asset managers rank EAM benefits?



The benefits of EAM technology vary based on the requirements of the organization.

- 50% of respondents prioritize the enhancement of aging assets to gain better control over operational risks
- 49% want to achieve savings in maintenance costs and time using asset tracking
- 47% want to improve equipment uptime through monitoring and maintenance

Efficiency-related advantages were selected by the majority of asset managers. Of interest, those respondents who prioritize efficiency-related benefits are less interested in compliance-related benefits.

Which KPIs matter most to asset managers?

In previous reports, uptime, efficiency, and cost control are often top of the list as important Key Performance Indicators (KPIs) for the business. Data-based cost control provides a competitive advantage, allowing organizations to quantify potential impact to productivity, helping to inform decision making and ensure maximum profitability.

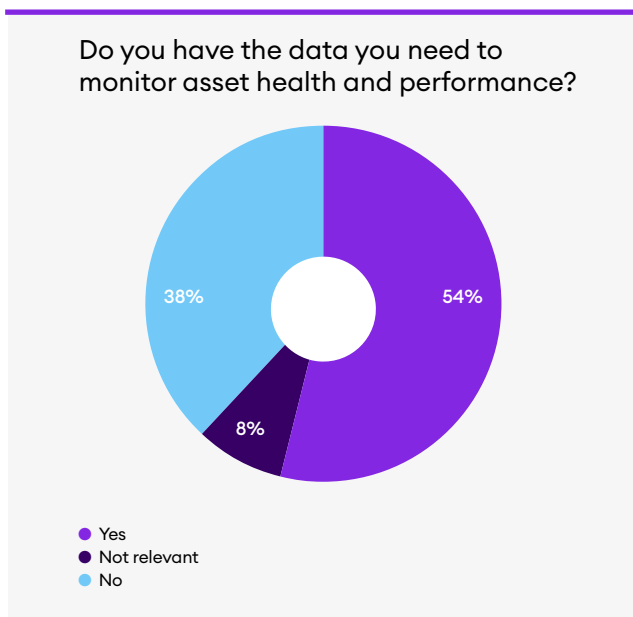
Operational efficiency was the top KPI used by the majority of respondents to measure asset management efforts. Interestingly, while increasing revenue and margin is typically considered a common KPI across industries, it ranked at the bottom of the list in the survey.

How do asset managers rank EAM benefits?

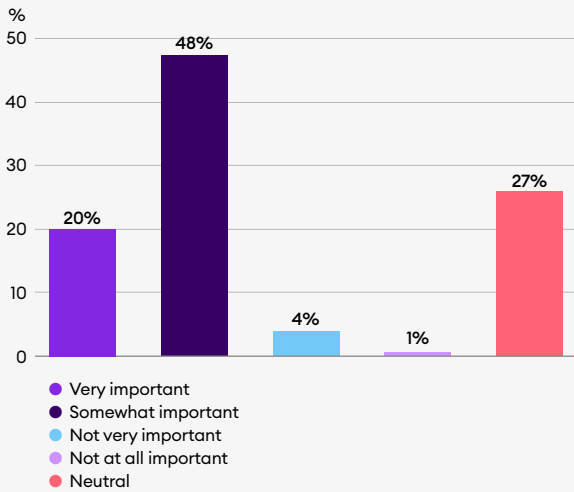
| Category | Rank |
|---------------------------------|------|
| Operational efficiency | 1 |
| Overall Equipment Effectiveness | 2 |
| Asset utilization | 3 |
| Cost control | 4 |
| HSE compliance | 5 |
| Asset longevity | 6 |
| Sustainability | 7 |
| Revenue & margin increase | 8 |

Asset Performance Management (APM) on the rise

When inquired about their ability to monitor asset health and performance, 54% of asset managers responded positively and 38% of them responded negatively, stating that they do not have access to such data. However, participants were also asked about the importance of data analytics and predictive modeling in optimizing asset management decisions, with over 50% indicating that it is either very or somewhat important. This suggests that even though some individuals lack access to the data, they believe that having it would be beneficial in optimizing asset management decisions.

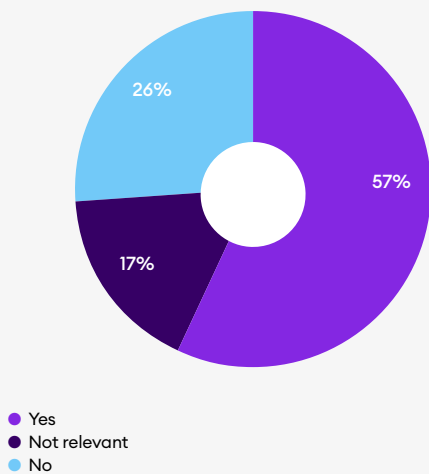


Can you indicate the importance of data analytics and predictive modelling in optimizing asset management decisions?

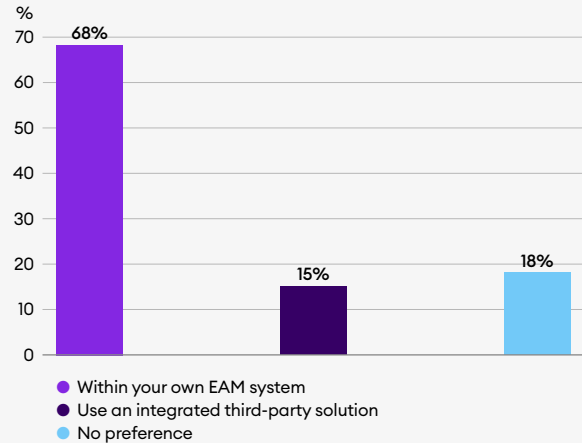


APM is designed to further enhance the health and performance of crucial assets as it enables organizations to monitor, maintain, and optimize the performance of their assets. The survey reflects the acknowledgment of this fact, with 57% of the asset managers expressing keen interest in exploring the potential of APM technologies to enhance the health and performance of their vital assets. Furthermore, a majority of 68% of respondents showed interest in implementing APM technologies within their existing EAM systems, rather than using it as an integrated third-party solution.

Are you interested in the possibilities of Asset Performance Management (APM) technologies to further improve the health and performance of your vital assets?



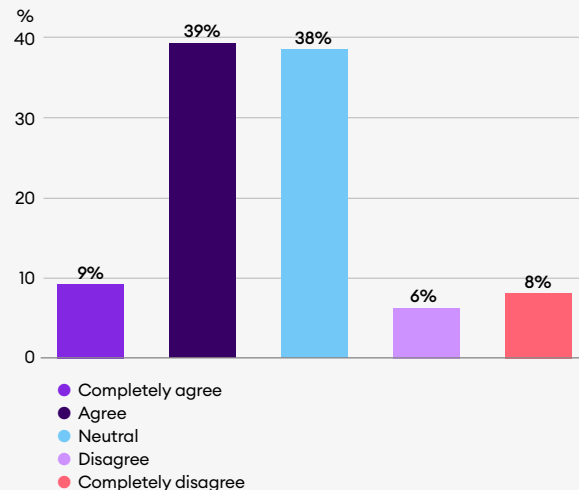
What is your preference for adopting these APM technologies?



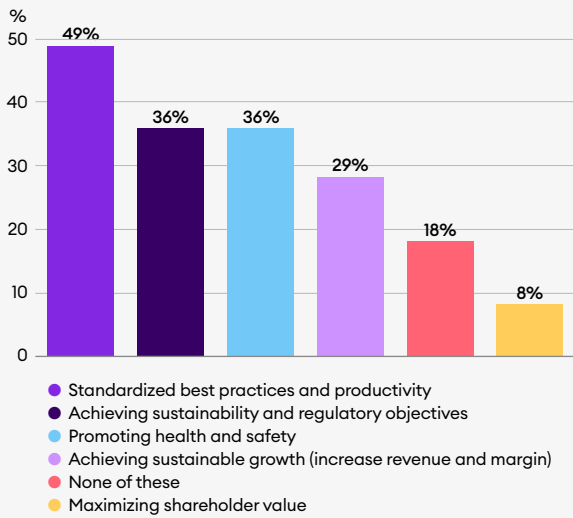
Do asset management strategies support the strategic goals of the organization?

Asset management strategy plays an important role in achieving the organization's strategic goals. Among all participating asset managers in the survey, 48% align with this statement, while 14% hold a differing view. However, a substantial 38% remain in a neutral position, indicating the indecision of their organization on the matter. This shows a significant potential to further align the asset management strategy and the organization's strategic objectives in the future.

Can you indicate the extent to which you agree with this statement? Our organization's Asset Management strategy plays an important role in achieving the organization's strategic goals.

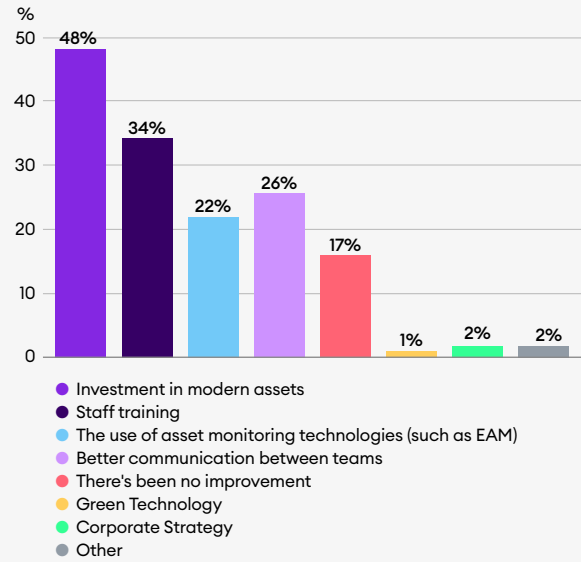


In what ways does Enterprise Asset Management contribute strategically to your organisation's long-term goals?

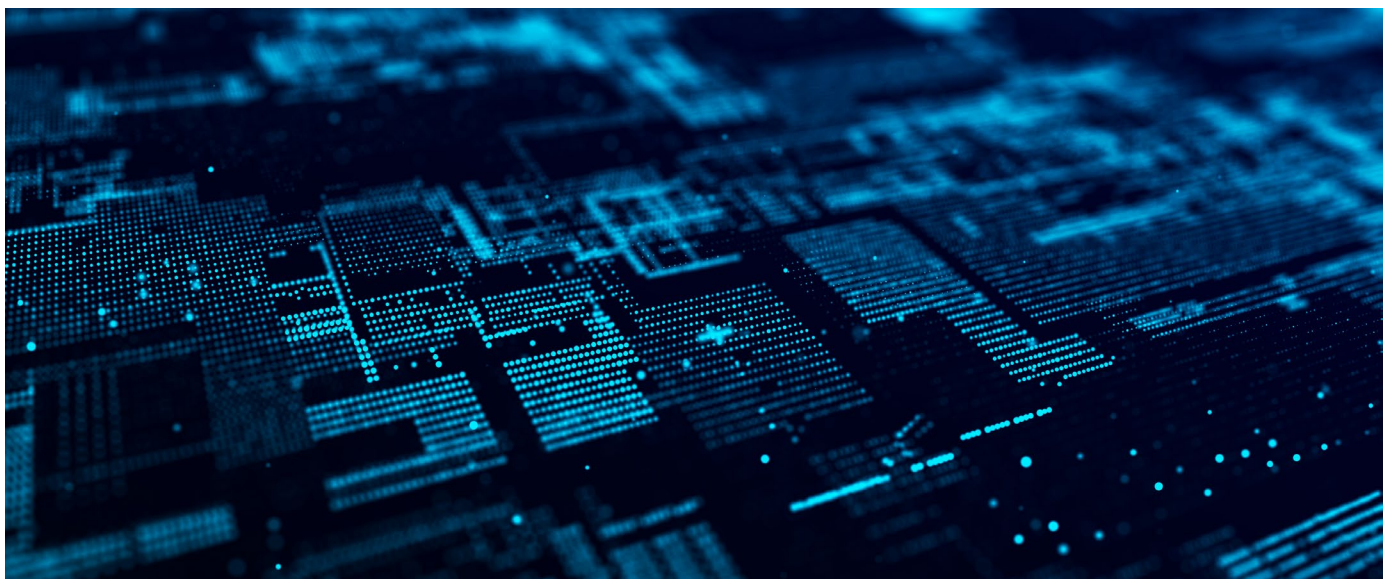


It is clearly perceived that EAM has the ability to contribute strategically to an organization's long-term goals. The largest percentage of respondents, at 49%, believe it is primarily achieved through the implementation of standardized best practices and productivity. In contrast, maximizing shareholder value is seen as having the least strategic contribution, with only 8% acknowledging its importance. Approximately 36% of asset managers consider achieving sustainability and regulatory objectives as well as promoting health and safety to be equally significant in contributing to their long-term goals.

What has played the biggest role in helping improve sustainability and energy efficiency in your department?



Each organization has distinct long-term goals, and a significant number of them prioritize enhancing sustainability and energy efficiency within departments. When asked about the factors that have played the biggest role in this regard, they identified investment in modern assets as the most pivotal, accounting for 48% of responses, closely followed by staff training at 34%. In contrast, energy costs were regarded as the least influential.



IFS Expert Interview

IFS develops and delivers cloud enterprise software for companies around the world that manufacture and distribute goods, build and maintain assets, and manage service-focused operations.



Bas Beensterboer
Global EAM Evangelist
IFS

Aligning Assets to Strategic Objectives with APM

In today's highly competitive business environment, data plays an important role in making well-informed decisions. Companies of all sizes rely on data to gain valuable insights into market trends, customer behavior, and operational efficiency through Asset Performance Management (APM). While APM is not a new concept, it's experiencing a huge jump in capability from a technology standpoint. With the latest advancements in technology, such as the Internet of Things (IoT) and predictive analytics, APM has become more effective enabling organizations to collect and analyze large amounts of data from assets in real-time, allowing for proactive maintenance and optimization strategies.

The connection between an organization's assets and its goals

According to ARC Advisory, APM is an approach to managing assets that prioritizes business objectives in addition to traditional asset reliability and availability goals. APM has several other definitions too, but all experts agree that it is part of a broader strategy that focuses on organizational business objectives.

For instance, consider an organization striving to minimize its ecological impact as a primary goal. Asset management can play a significant role in assisting the company in its mission to reduce its environmental footprint. This involves optimizing energy usage, reducing emissions, extending asset lifespans, and minimizing resource consumption across the organization. By aligning APM strategies with sustainability goals, companies can integrate environmentally friendly practices into their asset management processes, further reducing their ecological footprint.

In another context, the primary objective of an organization might be to enhance revenue. Through this, it becomes imperative to maximize the efficiency, productivity, and longevity of these assets in order to produce more and deliver the desired profitability for which the organization aims. Regardless of the scenario, assets represent a fundamental aspect of any business - through assets, a company generates value under normal circumstances.

Navigating the APM challenges

Very often companies acquire technology simply because it appears exciting and available. Trade shows abound with cutting-edge technology, including algorithms, artificial intelligence (AI), and machine learning, making it very easy for organizations to discover and acquire this technology. What is not so easy is the integration of these technologies into the daily operations of a business, and aligning the adoption of these technologies, including EAM and particularly APM, with an organization's objectives and strategic vision.



However, a company's board of directors has strategic objectives such as increasing revenue, increasing market share, improving the use of capital and complying with ESG. Yet, the tactical level of the organization requires investment in technology in order to solve a specific case like uptime, maintenance cost, operational efficiency, or spare part inventory. At times, it can be challenging to articulate and achieve management support for these individual use cases. By aligning asset management objectives with strategic ones, businesses can ensure that their technology investments not only resolve immediate issues but also contribute meaningfully to the achievement of their strategic goals.

Our task as an industry is to ensure that the C-level understands that it needs to apply asset performance management and fund it from the top in order to support and reach its strategic goals.

For many years, IFS has offered a powerful APM solution serving asset-intensive industries like energy, utilities, mining, oil and gas, and heavy manufacturing.



Organizations must be prepared for the next disruption and expect the unexpected

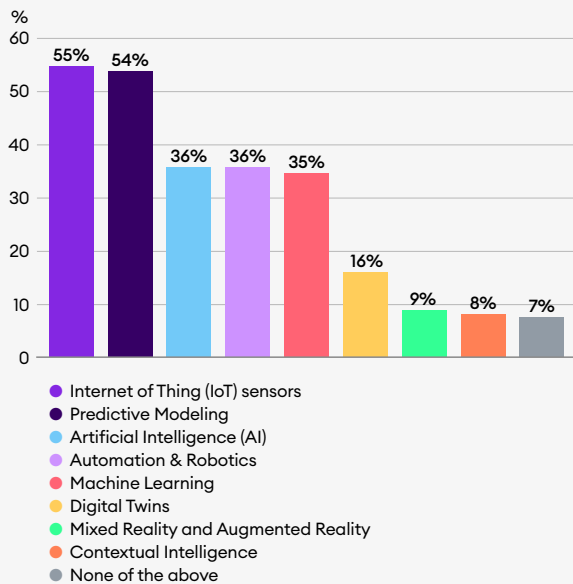
Our capabilities consist of real-time monitoring, predictive analytics and mobile applications, enhancing visibility, streamlining processes and improving collaboration between teams. Moreover, IFS continues to scan the market for potential acquisitions that will strengthen all of the above components. A nice example of this strategy is the recent acquisition of Falkonry, which adds early anomaly detection and self-learning algorithms and helps to discover insights hidden in our customers' operational data and deliver timely, actionable intelligence.

Business objectives changed - what about APM?

We highlighted that it's crucial to align APM strategy with business objectives. However, business goals might change due to new market dynamics, economic factors, or new advancements in technology - we have only seen the beginning of AI and machine learning. Also, disruptive events may affect an organization's goal. We've seen the Eurozone crisis, the credit crisis, COVID-19, the energy crisis, the war in Ukraine, and all of those things came suddenly and changed the way we look at the world. Organizations must be prepared for the next disruption and expect the unexpected. Now, the question arises: What happens to the APM objectives?

In fact, APM is a resilient and flexible mechanism for decision-making and prioritization. With its data, organizations have the power to set priorities and make decisions according to their goals. That's why when an organization undergoes changes in its objectives, it should also review and adjust the APM strategy to ensure it continues to support the organization's mission and values.

Can you select the emerging technologies that you think are going to positively impact your maintenance & business practices?



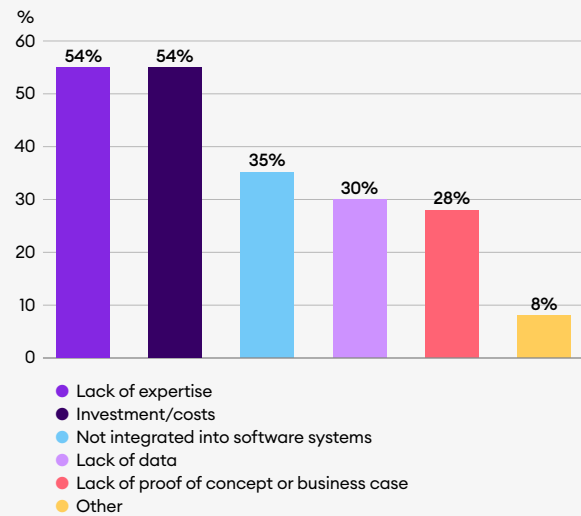
Emerging Technologies: A competitive advantage to redefine success

The Internet of Things (IoT), artificial intelligence (AI), machine learning (ML), digital twins, predictive modeling and other emerging technologies are reshaping the business landscape—presenting new opportunities and challenges.

These technologies help companies improve efficiency, make better decisions, and gain a competitive advantage.



What are the biggest obstacles in leveraging emerging technologies?



When asset managers were asked about the emerging technologies expected to have a positive impact on their maintenance and business practices, the top three responses were as follows: Internet of Things (IoT) sensors with 55%, followed closely by Predictive Modeling at 54%, and Artificial Intelligence (AI) at 36%.

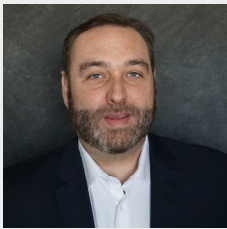
Organizations recognize the importance of adapting emerging technologies, however, some obstacles stand in the way. As per the findings of this survey, the top two obstacles to leveraging emerging technologies are lack of expertise and investment and costs impacting 54% of responders respectively, followed by lack of integration into software systems, which remains a challenge for 35% of those surveyed.

IFS.ai

IFS has taken a proactive step towards the integration of AI by offering IFS.ai. This software weaves through all IFS capabilities, making AI more accessible and flexible for organizations. IFS.ai combines simulation, optimization and anomaly detection to drive the efficiency of your people, assets, and workflows.

AVEVA Expert Interview

AVEVA is a global leader in industrial software, sparking ingenuity to drive responsible use of the world's resources. The company's secure industrial cloud platform and applications enable businesses to harness the power of their information and improve collaboration with customers, suppliers and partners.



Matt Newton
Director, Analytics
and Optimization
AVEVA



Ryan Bradley
Director, APM Product
Management
AVEVA

Leveraging Emerging Technologies to Enhance Maintenance Capabilities

With the rise of Chat GPT and other artificial intelligence (AI) solutions over the past few years, there has been an accelerated boom in companies looking to adopt AI functionalities in their services simply to show their customers that they offer the latest cutting-edge technology. However, this can cause problems for companies as this approach drives an outcome without thinking about how AI will improve their user experience and help solve problems. In this article, Matt Newton, Director, Analytics and Optimization, Portfolio Marketing at AVEVA and Ryan Bradley, Director, APM Product Management, discuss how emerging technologies can be used effectively towards digital transformation.

Purpose-Built

Companies must take a thoughtful and strategic approach when implementing AI capabilities. At AVEVA, we've been working with AI and machine learning (ML) capabilities for over 15 years with our predictive analytics software.

Our software is purpose-built; in the past, when we had a problem with maintaining asset health, we thought about how we could apply predictive analytics, predictive maintenance, AI, and ML as a solution. Through this, we created AVEVA Predictive Analytics, an AI-powered and machine learning solution to identify potential asset failure and equipment breakdown days and even weeks before it can occur.

Over the past year, we've been focusing on combining different AI-powered solutions in the broader AVEVA portfolio to create what we call Predictive Asset Optimization. Through this, we can determine whether we can run production processes before the next scheduled outage, and if so, how much useful life there is left in the equipment before it needs to be checked.

Through the combination of AI, plus the use of the AVEVA Industrial Asset Library and Asset Strategy Optimization applications, users can establish asset criticality and maintenance strategies, perform simulations, and analyze risks and mitigations to optimize asset performance and maximize their return on asset investment.

AVEVA Asset Library

Companies must identify an optimal maintenance strategy to achieve operational excellence. The AVEVA Industrial Asset Library is used to help identify these maintenance strategies.

The Library allows users to take standardized pieces of information about an asset type and roll these out across a fleet of assets. For example, if a user were to look up a centrifugal pump, the asset library would provide information about the repairable components of that asset, typical failure modes, and recommended steps for remediation.

From this, the user can build a risk profile for the asset to understand what type of maintenance strategy the asset requires.

Digital transformation and EAM integration

Due to a standard integration, our customers can use our partner's IFS Enterprise Asset Management (EAM) software to support their digital transformation in asset management further. Customers can digitally note information such as the frequency of inspections and overhauls, and the last time a piece of equipment failed. All the information comes into the closed loop of ever-evolving maintenance to ensure our users are doing the right tasks at the right time and ensuring that the equipment is running as efficiently as possible.

To drive digital transformation and easily explore AI and predictive analytics further, customers can use AVEVA Data Hub to consolidate and contextualize industrial data from numerous sources, including IoT devices and sensors. Companies can view and share data through the platform in real-time, regardless of physical location, offering enhanced data accessibility and insights to make more informed decisions.

Recognizing Anomalies

It is imperative that a company ensures that all information is filled out about its assets for teams to work efficiently. This is a crucial point around our digital twin capabilities. Customers can take data stored in their AVEVA PI system and make it accessible to our digital twin technology. By creating a common data model across all of AVEVA's pieces of software, users can look at a digital twin and see the operation data behind it.



For example, with a compressor, AVEVA knows how that piece of equipment should operate across all operational modes. We can compare that model to the collected operations information generated by the compressor in real-time to deviations in known-good operating behaviour. Once these anomalies are identified we can alert on these issues days, weeks, or even months before the problem occurs.

The ability to predict potential problems before they can occur gives our customers an edge in their maintenance planning and maintenance inventory management, allowing them to do their jobs more efficiently and have their assets function at optimum performance levels.



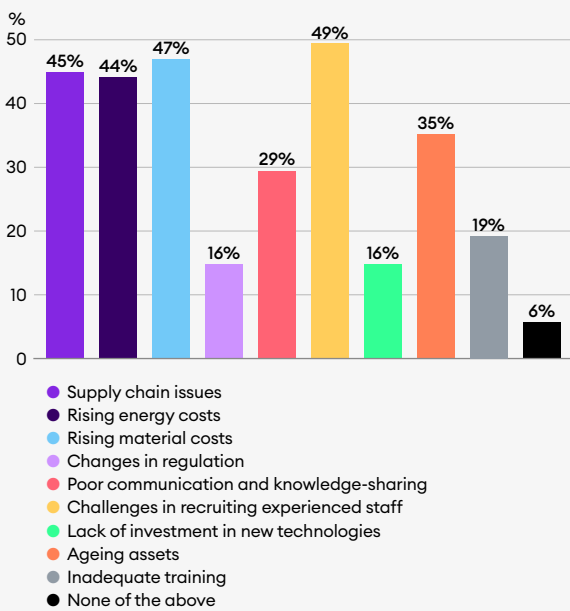
We created AVEVA Predictive Analytics, an AI-powered and machine learning solution to identify potential asset failure and equipment breakdown days and even weeks before it can occur.

Which factors disrupt the business?

Organization disruption can happen at any time. In previous years significant disruption occurred due to the COVID-19 pandemic which impacted the global supply chain. This time, the main contributors to disruption are challenges in recruiting experienced staff affecting 49% of the respondents, and rising material costs affecting 47% of them.

Compared to last year's Trend Report, the primary internal challenge of recruiting experienced staff remains consistent as a leading factor causing disruption. However, the situation differs when it comes to external factors. What stands out in contrast to last year's results is the notable increase in material costs emerging as a key disruptive factor.

Which of the following external and internal factors have caused the most disruption in your organisation last year?

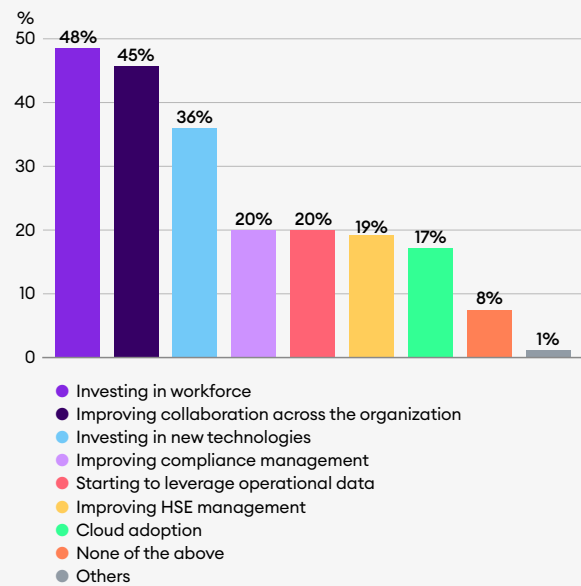


How have companies improved their response to unprecedented events?

In the past year, organizations participating in the survey have implemented various measures to address disruption and improve resilience. Among these actions, the most frequently chosen strategies include investing in the workforce, selected by 48% of asset managers, improving collaboration across the organization, favored by 45%, and making investments in new technologies, cited by 36% of participants. The trend is unchanged here: These top 3 strategies remain the same as the results from last year's Trend Report.

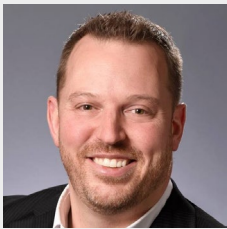
The results from both of these questions imply that workforce is a driver that reduces disruption and enhances the organization's responsiveness to potential unforeseen circumstances.

In the past year, what steps have you taken to improve your organisation's response to unprecedented events?



IFS Cloud Platform Expert Interview

One platform focused on your industry, and with the latest technology, to help you run your business in the best way.



Daniel Dutton
Senior Vice President of R&D
IFS Cloud Platform

Breaking silos: Where does your organization stand?

In today's business world, companies have become increasingly aware that the path to achieving long-term goals starts with cultivating a culture of transparency, accessibility, and collaboration within internal operations. Following these objectives, companies are seeking the best ways to break down silos and remove friction. Here Daniel Dutton, Senior Vice President of R&D at IFS Cloud Platform, shares his views on the efficient strategies that can help organizations towards their transformative goals.

Democratizing technology

In the realm of business strategy, an effective approach that is helpful in eliminating silos is the democratization of technologies. This is achieved by making advanced technologies and tools accessible to a wider audience.

As an example, in the early stages of a new technology, organizations with complex problems that represent significant opportunities for improvement can make large investments to achieve the return. Typically, this is a small group of organizations that invest at this stage of the technology lifecycle.

The same opportunities for improvements are open to a much larger group of organizations if they are made easier for them to adopt. To achieve the full promise of the technology, you need to significantly reduce friction in adoption.

The aim of democratizing technology is to eliminate unnecessary barriers that cause friction during the adoption process. This way, it allows more organizations to benefit from technological advancement. This may seem like a simple concept, but doing it is very hard.

These challenges have become more evident in fields such as Artificial Intelligence, machine learning, and predictive maintenance, where the demand is growing, but the practical implementation remains challenging. Even for these fields, simplification is key to success.

At IFS, we achieve this through our concepts of application services. This approach allows organizations to achieve the benefits from advanced technologies without needing to specifically implement those technologies. The technology is presented as part of your user experience. IFS Cloud is not focused on delivering technology, it is focused on advanced technologies in the context of a tailored customer experience for the industries that we serve, such as aerospace and defense, energy utilities and resources, engineering construction and infrastructure, manufacturing, service industries, and telecom.

A great example of this approach in the IFS Cloud is the IFS Planning and Scheduling Optimization. The advanced optimization technology can either be implemented separately or integrated to form a powerful tool that provides visibility, scheduling optimization, and planning of mobile resources.

With this service, we took out its complexity and turned it into something user-friendly. The idea is straightforward: Instead of diving into optimization as a subject, an organization only needs to focus on what's important to it from a planning perspective - which characteristics are essential for its plans, whether it's manufacturing, field service scheduling, or optimizing maintenance. We've made sure that when businesses use our tools, they are accessible and friction-free, creating a smooth experience.

Servitization: Transform your products into profitable services

Servitization is a well-established industry trend that has evolved over time. Instead of the traditional model of selling a product and then walking away from it, it involves selling the use of the product itself, effectively transforming it into a service. So, if a business wants to embark on a servitization journey, it should start by changing the way it thinks. This requires reevaluating products and their functions. As a business, ask yourself: What do my products accomplish? Then, explore how you could provide these functionalities as a service. This shift can significantly boost revenue without requiring substantial capital investments. On the other hand, it can be a catalyst for optimizing offerings throughout the entire product lifecycle and breaking down silos within an organization, as it requires collaboration, integration, and a customer-centric approach to business.



We're not trying to be everything to everyone but we want to make sure that we are the best for the industries that we serve.

At IFS Cloud, we help organizations that want to progress in this direction by providing them with the tools and capabilities to take more ownership of their product life cycles. We are constantly supporting businesses throughout our core industries by offering a single experience that provides comprehensive support throughout the entire asset lifecycle. We're not trying to be everything to everyone but we want to make sure that we are the best for the industries that we serve.

Boost collaboration

Collaboration and sharing real-time information between departments is crucial in breaking the silos. Enabling different teams to work together is not just a matter of convenience; it's a strategic necessity. At IFS we place a strong emphasis on this aspect. So, instead of offering many fragmented solutions, we provide a unified composable platform equipped with a rich set of collaboration tools.

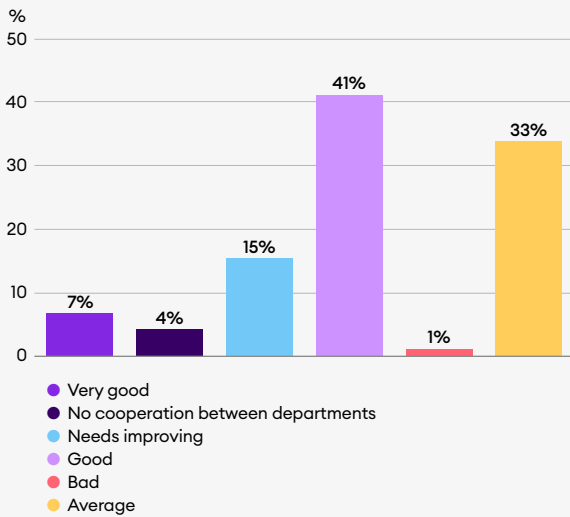
For instance, we facilitate remote assistance, providing technicians with instant access to our experts who can help them resolve problems they encounter while working on location. Our augmented reality capability enables users on location to share their visual experiences with support teams at our offices. Also, process automation allows for collaboration at various touchpoints.

The whole experience of IFS Cloud is built on real-time sharing in order to remove silos and break down traditional barriers. We strive to make our application services accessible from anywhere, ensuring that work can continue without interruptions.

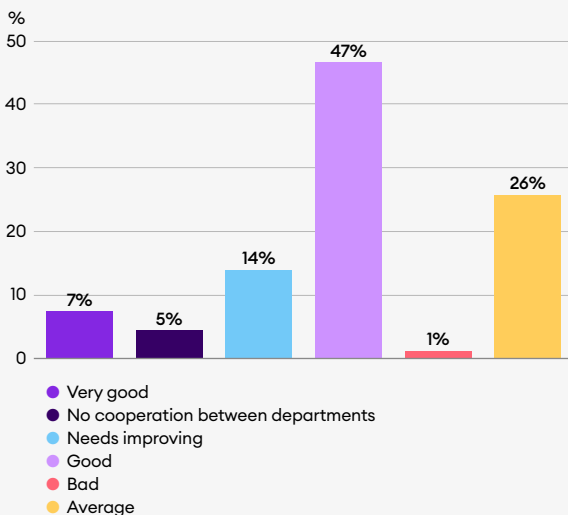
The importance of collaboration

Collaboration increases productivity, breaks silos, and encourages the sharing of knowledge and expertise so people can learn from one another. When asset managers were asked to rate the level of collaboration between the maintenance and production/operations departments, the predominant response was positive, with 48% of respondents expressing satisfaction. A similar trend was observed when evaluating the collaboration between the maintenance department and the safety department, where 54% of participants provided a positive response.

How would you rate the cooperation between the maintenance department and production/operations department?

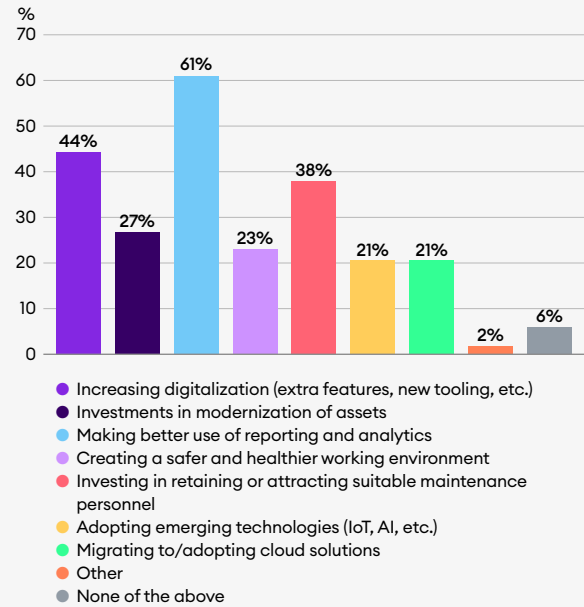


How would you rate the cooperation between the maintenance department and the safety department?



What are the future topics of focus for EAM?

Which of the following topics in the field of Enterprise Asset Management will be focus topics over the next 12 months?



- 61% ranked better use of reporting and analytics as the most important topic of focus
- 44% selected increased digitalization
- 38% ranked attracting suitable maintenance personnel
- Adopting emerging technologies and migrating to cloud solutions each ranked evenly at 21%

Additionally, when questioned about future trends, the aging workforce is rated as the foremost trend expected to have the most significant impact on the company. In contrast, the importance of IoT and digital twins is placed at the bottom of the ranking.



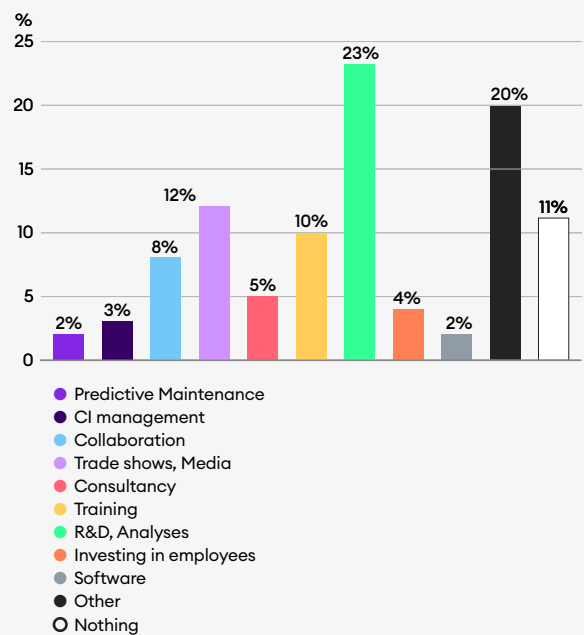


Which of the following trends is going to impact your company the most?

| Category | Rank |
|--|------|
| Aging workforce | 1 |
| ESG (Environmental, Social and Governance) | 2 |
| Globalization | 3 |
| Servitization | 4 |
| Importance of IoT and Digital Twins | 5 |

Regarding the methods used to ensure continuous improvement and innovation in asset management practices to stay ahead of evolving industry trends, the most frequently cited approach was centered around "R&D and Analysis" with 23%, emphasizing that investing in the future is the primary pathway to progress.

How do you ensure continuous improvement and innovation in your asset management practices to stay ahead of evolving industry trends?



IFS Ultimo Expert Interview

IFS Ultimo is a SaaS EAM solution from IFS, focused on maintenance, operations & safety and well known for its ease of use, flexibility and unparalleled time to value.



Chris van den Belt
Team Leader of Product Management
IFS Ultimo



Harmjan Derksen
Director of Product
IFS Ultimo

Easy to use, easy to implement and easy to integrate: How product development is setting IFS Ultimo apart

IFS Ultimo has over 30 years of experience helping customers manage assets better, realize higher uptime, control costs, and create a safe working environment. Through IFS Ultimo's SaaS Enterprise Asset Management (EAM) solution, maintenance, operations, and safety teams feel empowered to perform their jobs efficiently and confidently. A key to the success of the EAM solution, and part of the reason why over 100,000 people use and trust IFS Ultimo, is its product development. In this article, Chris van den Belt, Team Leader Product Management, and Harmjan Derksen, Director Product at IFS Ultimo, discuss the software's latest developments and share their thoughts on the roadmap towards another successful year.

Spreading our wings across the globe

Many companies have branches and offices all over the world. For them, it is essential to have an EAM solution that can be implemented and used in different regions seamlessly.

For many years, we have offered our product in different languages and catered to different time zones and currencies, and with continuous product developments over the past year, our product is ready for further global implementation.

Users should feel comfortable and assured working with EAM software – and this includes simply understanding everything clearly, concisely, and in their preferred language. Our software solution is available in a wide range of languages, ensuring that terminology and standards are consistent and localized. In the past year, we have added Swedish, Danish, Norwegian, Slovak, and Finnish to our language options. Furthermore, our European and North-American customers that have subsidiaries in China now also have the opportunity to use our software in Simplified Chinese.

Alongside language, we are also planning to further localize our Work Permits functionality: managing and issuing work permits are crucial for creating a safe working environment, however, different regions have differences when it comes to their printed work permits.

Mobile: working on the go

Many companies are focused on increasing digitalization in their workplace and they often achieve this by using mobile applications. We at IFS Ultimo, have developed an intuitive mobile experience that focuses on usability and user experience.

An example of this is our improved mobile inspection functionality that enables technicians and operators to perform inspections with minimal handling. During an inspection, users can input any relevant actions and follow-up tasks, allowing for accountability and smoother communication between teams.

The mobile application has been transformational for certain users in the field of maintenance, who have gone from writing findings on inspection forms and actions on paper to inputting next-step tasks digitally, which can be saved and shared with others.

Better collaboration and interaction between maintenance, warehouse, and purchasing teams

Stock and inventory management, as well as purchasing functionalities, have been integrated as part of our EAM software for years. However, recent product developments have permitted greater integration of processes, easier job planning, and higher levels of efficiency. For example, there are many tasks and jobs in maintenance processes which are dependent on materials being in stock. We have automated these status flows at IFS Ultimo through smart features that automatically update the status once materials are received. This helps towards better collaboration and interaction between maintenance, warehouse, and purchasing teams.

We also see the importance of risk mitigation, ensuring that materials are in stock when needed, and if not, that an appropriate alternative can be selected. Defining alternative options allows for shorter lead times and lower stock levels, permitting better efficiency.



Our product developments have allowed our customers to use our software more efficiently, using better visuals and modern technology. In the foreseeable future, we will add functionality supported by AI.

Technology partnerships

We are used to it, but it is not evident that you can integrate an EAM system so easily into your existing landscape. Our agnostic business integration platform plays an essential role in this. We have again expanded the generic REST API capabilities in the past period. This helps us work with technology partners like AVEVA, Augury, Fluke Biomedical and Siemens Healthineers to enable customers to fully exploit the capabilities of for example APM, track & trace or ERP solutions intertwined with IFS Ultimo. Besides that, we are incredibly proud to have achieved our SAP certification again this year. It proves that EAM and ERP solutions can co-exist perfectly well!

Looking Forward

Many of our customers use technical asset management, fleet management, and biomedical asset management industry solutions. For them, the core functionality of EAM is key. Over the next year, our customers can be sure we will continue to improve this functionality so that they can continue to boost productivity, maximize asset availability, and control costs.

Our product developments have allowed our customers to use our software more efficiently, using better visuals and modern technology. In the foreseeable future, we will add functionality supported by AI. This will lead to a more enjoyable user experience, fewer administrative actions and more optimal use of knowledge, capacity and resources.

Case studies

The Bristol Port Company

The Bristol Port Company started implementing the IFS Ultimo Enterprise Asset Management (EAM) solution in 2021 with the aim of increasing safety, reducing complexity, and enabling standardization across the port. The company needed an easy-to-use solution to replace its existing maintenance management product.

Bristol Port now uses a wide range of IFS Ultimo EAM modules including Asset Management, Stock Management, and several HSE modules. The company also integrates IFS Ultimo EAM with Microsoft Power BI.

Since the implementation of IFS Ultimo, the company's asset management approach is much simpler than before. Business processes have evolved, granting the management team complete control over the collected data to help inform business decisions based on accurate and reliable information.



Read the full case study in [Bristol Port Company - IFS Ultimo](#).

Stockholm Exergi

Stockholm Exergi started working with IFS in early 2021 to modernize its IT and data infrastructure through mission-critical enterprise resource planning (ERP) processes. The company shared its goals of becoming an energy partner to new and existing customers, expanding its portfolio with competitive and sustainable products while broadening the scope of its services. To achieve these goals, Stockholm Exergi needed a stable, cloud-based ERP.

IFS delivered an enterprise software solution with extensive industry expertise, providing Stockholm Exergi with the flexibility to power future innovation projects. The company also leverages IFS Cloud EAM to support asset design and engineering.

IFS Cloud is used by Stockholm Exergi staff and subcontractors. The technology has revolutionized the management of core processes such as finance, human capital management, maintenance, service management, asset management, and the entire supply chain.



IFS serves as an important component within the company's IT and data architecture landscape making it easier to address cost, efficiency, and automation.

Read the complete report about [Stockholm Exergi - IFS Cloud](#) to discover more.

Summary

With cloud-based EAM solutions, organizations have a transparent overview of assets, productivity and profitability, as well as cost control, knowledge sharing and documentation to meet compliance requirements.

An EAM solution brings together all information related to the planning, optimization, execution, and the documentation of asset-related activities. It also takes into account business priorities, knowledge, the expertise of employees, materials, tools, and other data.

Most organizations use an EAM solution, whether a best-of-breed or as part of an integrated software suite. The current approach is to emphasize control within their maintenance processes by concentrating on corrective and preventive measures.

While most organizations seem content with this strategy, they must evolve to higher stages of the EAM Maturity Model by incorporating predictive analytics and long-term asset planning - transitioning to more advanced stages such as “Smart” and “Ultimate”.

Asset managers benefit in different ways from EAM technology and solutions, but the most common approach is to enhance the management of aging assets to gain better control over operational risks. This strategy aligns with the most critical KPI: operational efficiency.

The majority of asset managers depend on data for tracking the health and performance of their assets. Moreover, the survey results show better use of reporting and analytics as a future trend over the next 12 months.

Disruption within an organization originates from internal and external sources, most commonly due to the recruitment of experienced personnel and rising material costs, respectively.

However, an active workforce is a prevailing trend that can minimize disruption and improve the organization's ability to respond effectively to unpredicted events. On the other hand, an aging workforce rates as the foremost trend to have the most significant impact to the organization.

Asset Management and Asset Performance strategies allow companies to achieve their strategic goals through the implementation of standardized best practices and productivity. With the flexibility to adapt to shifts in market dynamics, economic conditions, and emerging technologies, an APM strategy helps asset managers to remain aligned with the organization's mission and values.

Whatever the future may hold, emerging technologies evolve rapidly, impacting businesses across all industries. IoT sensors, predictive modeling, and AI will positively impact maintenance and business practices. Leveraging these emerging technologies will accelerate once obstacles are overcome; for example, a lack of expertise and investment.



An EAM solution brings together all information related to the planning, optimization, execution, and the documentation of asset-related activities.

Key takeaways

TOP 10 EAM Trends

1 **63%** of respondents use an EAM solution with over **40%** opting for best-of-breed EAM/CMMS solution versus **23%** that use an EAM solution as part of an integrated software suite. However, a noteworthy **37%** of surveyed asset managers reported that they presently do not use any EAM solutions, highlighting the substantial growth opportunity for EAM solutions in the market.

2 Most organizations are at Stages 1, 2 and 3 of the “EAM Maturity Model”, but there is a strong trend to move to Stages 4 (“Smart”) and 5 (“Ultimate”) by implementing Predictive Analytics (**56%**) and Long-Term Asset Planning and Asset Investment Planning (**50%**).

3 Asset Performance Management (APM) is on the rise, with **57%** of the asset managers looking forward to exploring the potential of APM technologies to enhance the health and performance of vital assets.

4 Top 3 KPIs are:

- Top 1: Operational efficiency
- Top 2: Overall Equipment Effectiveness
- Top 3: Asset utilization

Also, asset managers prioritize efficiency-related benefits of EAM compared to compliance-related benefits, aligning with their first KPI.

5 In order to achieve the organization's strategic goals, the alignment between the asset management strategy and the strategic objectives of an organization should be further improved.

6 It is clearly perceived that EAM has the ability to contribute strategically to an organization's long-term goals. **49%** of respondents believe this is primarily achieved through the implementation of standardized best practices and productivity.

7 Top 3 emerging technologies to gain competitive advantage:

- Top 1: Internet of Things (IoT) sensors
- Top 2: Predictive modeling
- Top 3: Artificial Intelligence (AI)

Key obstacles equally mentioned are a lack of experience and costs.

8 Recruiting experienced staff remains a consistent internal disrupter. However, this year, a notable shift is seen in external factors, with the increase in material costs emerging as the primary disruptive factor.

9 Top 3 future topics in EAM (in order):

- Making better use of reporting and analytics
- Increasing digitalization
- Investing in retaining or attracting suitable maintenance personnel

10 Top 3 trends having an impact on an organization (in order):

- Aging workforce
- ESG (Environmental, Social and Governance)
- Globalization

About IFS

IFS develops and delivers cloud enterprise software for companies around the world who manufacture and distribute goods, build and maintain assets, and manage service-focused operations. Within our single platform, our industry specific products are innately connected to a single data model and use embedded digital innovation so that our customers can be their best when it really matters to their customers – at the Moment of Service™.

The industry expertise of our people and of our growing ecosystem, together with a commitment to deliver value at every single step, has made IFS a recognized leader and the most recommended supplier in our sector. Our global team of over 5,500 employees every day live our values of agility, trustworthiness and collaboration in how we support thousands of customers.

Learn more about how our enterprise software solutions can help your business today at ifs.com.

#MomentOfService