OCTAVE

Octave Attune EAM for engineering, procurement and construction

Maximizing operational efficiency in EPC environments

In the engineering, procurement and construction (EPC) industry, effective asset management is vital for maximizing asset performance, reducing costs and ensuring the successful delivery of projects. By implementing comprehensive asset management strategies, EPC companies can improve operational efficiency, enhance asset reliability and achieve long-term project success.

EPCs often operate in complex environments, such as high altitudes, offshore locations or unpredictable terrains. This requires specialized equipment. These include vessels for offshore operations (such as cranes and rigging gear to lift, move and secure heavy loads), earthmoving and survey equipment (for excavation activities) and tools, scaffolding and formwork to aid the structural build processes.

The maintenance and efficient operation of this equipment are vital as any downtime could undermine project success. Clear visibility of equipment health, inventory status and service capacity, alongside proactive measures for potential breakdowns, are crucial. This transparency not only ensures optimal asset availability and utilization but also guarantees the right equipment is available when and where it is needed, enhancing productivity.

Octave Attune EAM (formerly HxGN EAM), an industry-leading SaaS-based enterprise asset management solution, offers a single platform for tracking equipment inventory and digitalizing maintenance and service operations, enabling EPCs to optimize operational efficiency. Our solution facilitates robust cost tracking, supporting accurate profit and loss reporting - an essential data point when deciding whether to rent, buy or repair equipment.
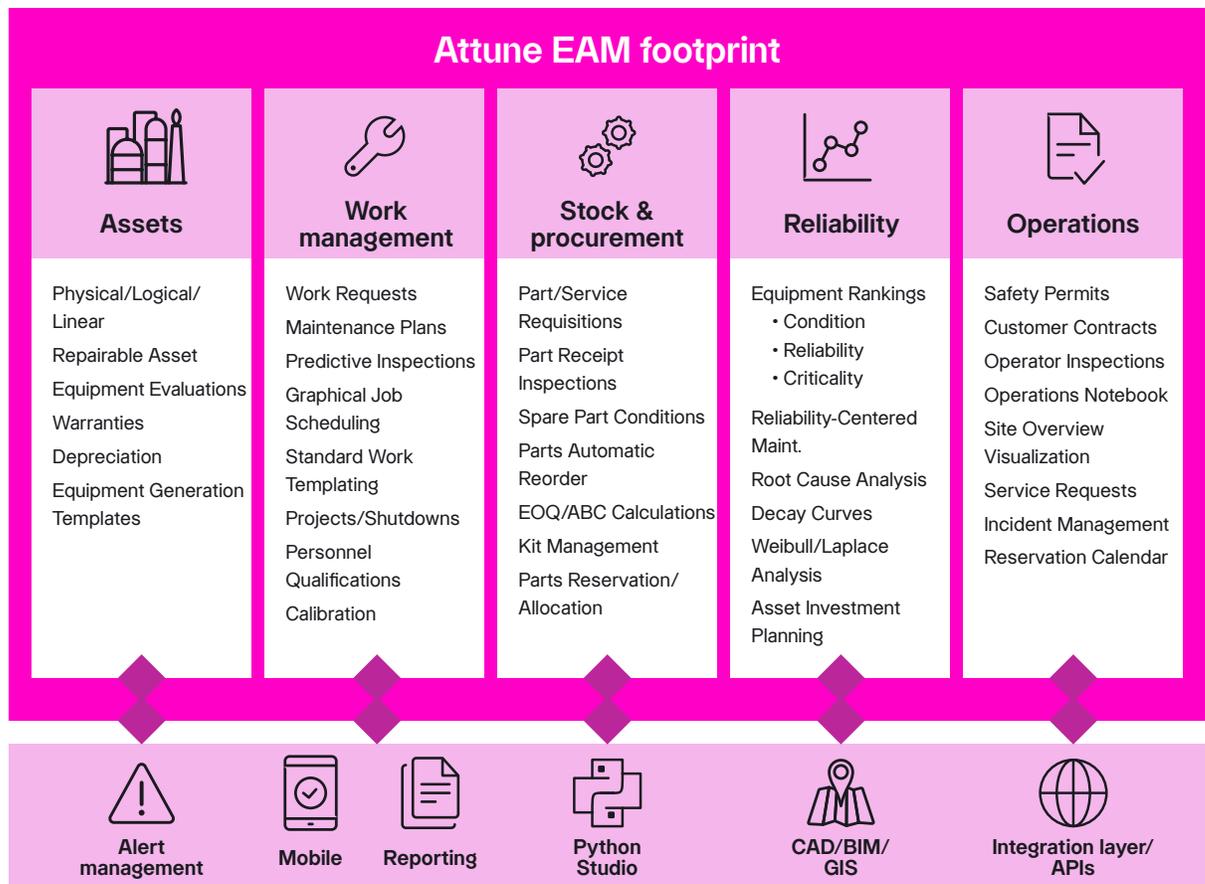
Optimizing resource allocation and financial planning with Attune EAM

Centralizing your equipment inventory data with Attune EAM provides insightful visibility into resource demand for construction. Attune EAM can plan and allocate equipment to cater to both short-term and long-term rental needs. For each equipment type and project, it applies appropriate rental terms and charges, from freight to billable service costs. Once a lease is activated, Attune EAM tracks all associated expenses, generates corresponding invoices and offers valuable revenue insights. This enables a granular analysis of planned versus actual and forecasted revenues resulting from each project site's equipment usage.

Enhancing project success with integrated digital handover

Attune EAM complements Octave's industry-leading design, construction and information management tools by bridging the gap during the digital handover process. It collects all necessary documentation, including PID drawings, 3D BIM Models and laser scans, equipment manuals, maintenance schedules, compliance certifications, warranties and operational procedures, to support the efficient operation, maintenance and future upgrades of asset operations. By leveraging this information, Attune EAM transforms, uploads and integrates asset data, ensuring all data fields and structures align with project requirements.

Attune EAM's SaaS-based platform is designed to provide a comprehensive view of project performance in a single system. With user-friendly screens, dashboards and enterprise-level business rules and security, it provides an efficient solution for even the most complex projects and organizations. As a highly configurable platform, Attune EAM enables the customization of all application components, from menus to reports, without the necessity for software development.

Attune EAM footprint

Assets	Work management	Stock & procurement	Reliability	Operations
Physical/Logical/ Linear	Work Requests	Part/Service Requisitions	Equipment Rankings	Safety Permits
Repairable Asset	Maintenance Plans	Part Receipt Inspections	• Condition	Customer Contracts
Equipment Evaluations	Predictive Inspections	Spare Part Conditions	• Reliability	Operator Inspections
Warranties	Graphical Job Scheduling	Parts Automatic Reorder	• Criticality	Operations Notebook
Depreciation	Standard Work Templating	EOQ/ABC Calculations	Reliability-Centered Maint.	Site Overview Visualization
Equipment Generation Templates	Projects/Shutdowns	Kit Management	Root Cause Analysis	Service Requests
	Personnel Qualifications	Parts Reservation/ Allocation	Decay Curves	Incident Management
	Calibration		Weibull/Laplace Analysis	Reservation Calendar
			Asset Investment Planning	

Alert management   Mobile   Reporting   Python Studio   CAD/BIM/ GIS   Integration layer/ APIs

Access powerful tools with Attune EAM for engineering, procurement and construction

Attune EAM is designed to support the specialized requirements of your organization. Additionally, it is built on the Amazon Web Services ("AWS") cloud platform. This means you get extremely reliable uptime and the flexibility to handle elastic demand; additional computing power is there, whenever it's needed. The platform's built-in scalability also means that the solution is designed to easily grow with your organization. Attune EAM's core capabilities include:

Alert management - Automatically monitor the Attune EAM database for specific data and send emails or create work orders based on the analysis of that data. Alerts run at a predefined frequency, so they're ideal for anything that requires a holistic assessment or doesn't need immediate action.

Asset management services - Manage the renting, leasing and tracking of heavy machinery and tools. Optimize the management of leasing contracts, scheduling and invoicing. Track all associated costs incurred for equipment services delivered to customers, including work order costs, fuel issue transactions and costs, equipment usage and overtime charges. Automatically include these charges on periodically generated invoices with configurable billing periods.

• **Includes:** Customer contracts, reservations, contract templates, adjustments, documents, customers and customer invoices, fuel transactions, aggregated fuel costs and fuel inventory

Asset record and data management - Record, maintain, structure and standardize asset information. Capture the identity, configuration and structure of physical assets, their complete technical and commercial configurations and current position within a hierarchy (either by location, functional position or tag), as well as prior locations and maintenance history.

• **Includes:** Asset depreciation, structure and bill of materials, descriptive history and total cost of ownership information, warranties and claims, dashboards and linear assets, linear references, failure analysis and documents providing full visibility along the asset's lifecycle
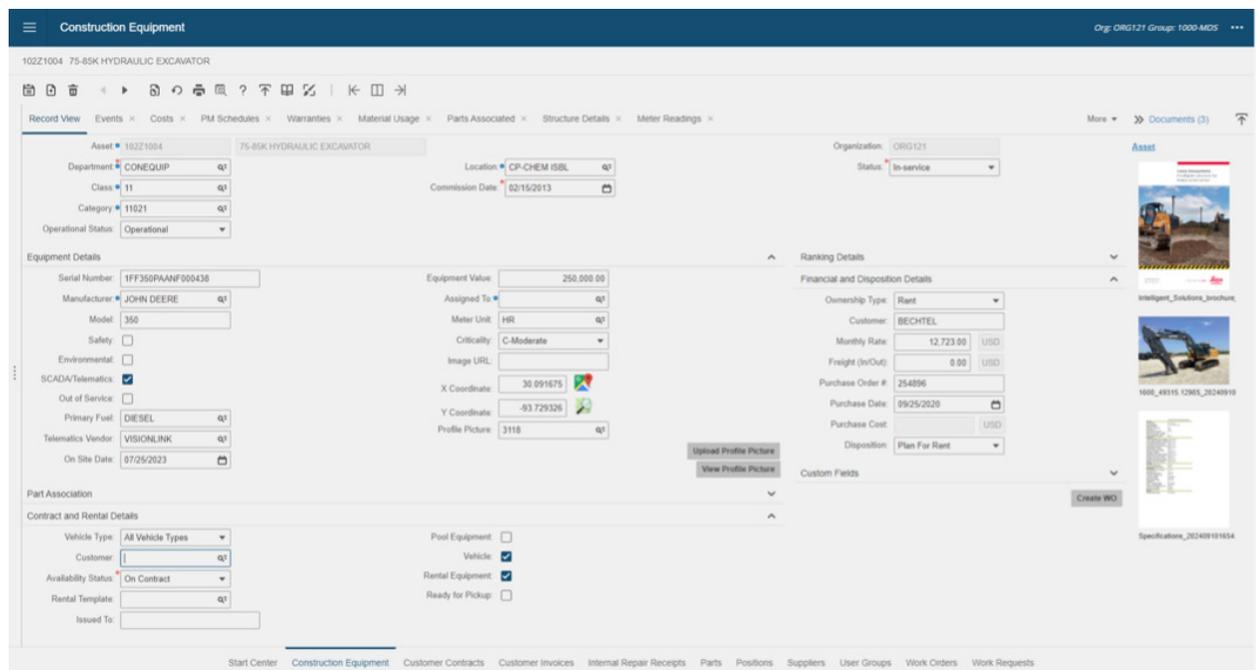
Attune EAM asset profile

Budget management - Automate the budget creation process and the subsequent capture, supervision, control and analysis of expenditures associated with maintenance work. Calculate a variety of financial and performance indicators that serve as input to critical enterprise performance measures.

- **Includes:** Budget organization, expenditure and position identification, capital planning requests and general (GL) accounts

Calibration - Track calibration data for equipment categories, assets, systems and positions. Define test point data and associate test-point sets with work orders and preventive maintenance work orders. This can be done through mobile and desktop.

Compatible units - Build a template for estimation, quotation, approval and work order generation for commercial projects. Quickly create an estimated cost of a project to apply to work orders for execution based on the estimate. Create a library of repeatable tasks, materials and services.

- **Includes:** Templates for labor, parts, tools, services, project quotation, estimation and work order generation

Electronic records and signatures - Create electronic records (snapshots) of events that occur in the database that require signatures. Through version control and audit capability, you can track insertions, updates or deletions of every attribute for almost every table in Attune EAM, as well as all comments per entity.

Energy performance - Set baselines, monitor and compare the energy performance of your assets and facilities against standards, such as Energy Star, ASHRAE 90.1, LEED and ISO 14001. Collect utility bills to monitor usage and anomalies.

Fleet management - Process warranty claims, manage tires and fuel and improve vehicle performance through preventive maintenance that increases productivity and cost-per-mile savings. With the Vehicle Maintenance Reporting System (VMRS), all code key values are included in the Attune EAM database.

Octave Aria - Octave's AI assistant boosts the efficiency of Attune EAM users. Now accessible from the Attune EAM toolbar, Octave Aria provides essential assistance and practical solutions to accelerate performance and simplify operations. With robust data security protocols and an emphasis on data accuracy, Aria provides convenient, dependable support on effectively using Attune EAM's features, advises on industry processes and regulations and simplifies code generation in various programming languages, including Python, JavaScript, Java, C++ and more.

Inspection management - Simplify the formation of inspection routes, specific measurement points on each asset, aspects to be measured and the collation of results. Link with asset management and work management modules for the listing and creation of work orders.

- **Includes:** Inspection planning and organization, inspection point scheduling, classification and results and checklists

Intelligent nonconformity tracking - Quickly identify potential issues that can be tracked and assessed automatically with your maintenance schedules over time and then assign a level of severity or risk based on a preset nonconformity index. Escalate the nonconformity into an approved response once the severity has reached a certain condition level.

- **Includes:** Incident management of an event such as an accident, creating detailed documentation (search by severity, intensity and importance)

Materials management - Determine the correct stock levels to provide an acceptable service level of parts and supplies to meet anticipated demand for maintenance. Minimize the working capital invested in stocked parts and supplies. Automatically generate requisitions and purchase orders based on low stock levels, purchase requisitioning, goods receipt and returns, parts repair and recordkeeping.

- **Includes:** Materials organization, stock replenishment, store issues and returns (recording stock-take; goods receipt and return), purchase order tracking, repairable spares, material analysis, parts condition, inspections, failures and warranties and product category management

Procurement management - Manage every aspect of the purchasing cycle, from requisition creation, approvals, supplier selection, purchase order placement and goods receipt through invoice matching. Ensure the selection of qualified suppliers and obtain the best price and delivery terms.

- **Includes:** Purchase requisition generation, requests for quotations, purchase orders, invoice vouchers, contracts and receipts

Project management - Turn construction work plans into actionable projects, ensuring alignment with the initial budget and timeline from inception to completion. Manage all phases of the project scope, from earthworks to steel erection. Track and compare the actual progress and status of work against estimates, evaluate equipment usage and reported downtime during each phase and gain insights into incurred costs.

- **Includes:** Project planning and organization; project budgeting, scheduling and execution and optional integration into Microsoft Project Interface

Reliability, planning and analysis (RPA) - Create reliability rankings with associated reliability decision trees which are used as input on user-defined formulas that yield a numerical value. Create condition-score calculations, condition-decay protocols and risk and criticality calculations. Determine the reliability ranking score associated with a reliability ranking index. Additionally, use Weibull, LaPlace and Crow-AMSAA formulas to predict potential failures.

- **Includes:** Risk assessment, FMECA, risk analysis, classical RCM and root cause analysis

Understand an asset's projected useful life with decay curve analytics
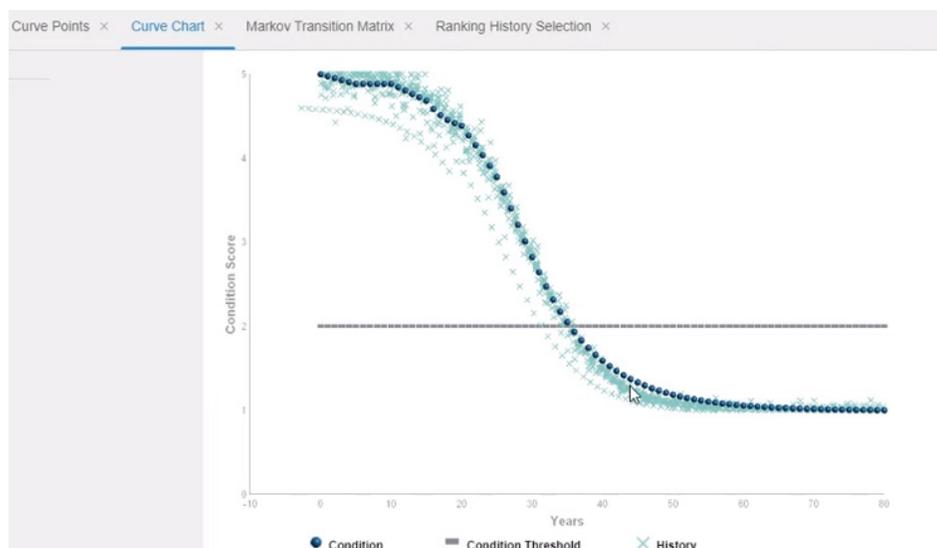
"A pillar of Eiffage's digitization, Attune EAM serves as the single point of reference for asset management within the group. Any project that needs to refer to a machine, tool, asset or material is configured using Octave's solution."

Yetsy Monteros
Head of Group Business Information Systems

Reports - Utilize over 250 pre-built reports that support every module within Attune EAM, from administration and assets to budgeting and inspections.

- **Includes:** Work order reporting, assets inventory list, equipment details, the meantime between failures, work order cost per equipment, estimated versus actual labor hours, purchasing reports and inventory reports

Safety management - Identify and control all hazardous situations, materials and activities to protect people and the environment. Comply with health, safety and environmental (HSE) regulations.

- **Includes:** Hazards, precautions, safety, isolation points, lock out/tag out, lockout boxes, permit to work setup and sign-offs

Work management - Manage, plan, monitor and approve work, as well as the necessary resources to complete this work. Create and manage work orders and schedules for various maintenance types, including standard, regular, corrective and project work, as well as periodic, non-periodic, deferred maintenance and inspection follow-ups. Define work information such as supervisors, permits, qualifications, employees, shifts, tools and dynamic checklists.

- **Includes:** Work order generation, planning and scheduling, employee resource management, employee qualifications, shift and crew management, call center and dispatch management, equipment maintenance patterns, recall campaigns, case management and root cause analysis

Workflow approvals - Provides an embedded visual workflow approval capability that helps manage work orders, case management, requisitions and purchase orders. With this module, administrators can create an approval workflow setup record that systematically routes records within Attune EAM to specific users or groups for review.
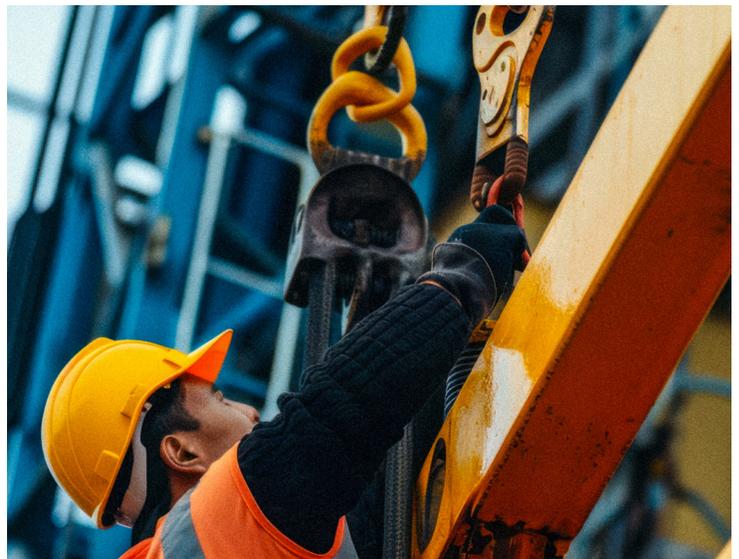
Advanced add-on modules
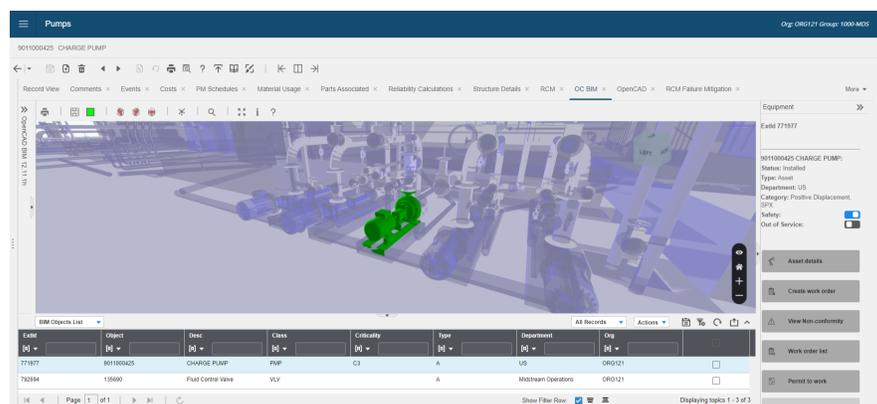
Attune EAM's advanced add-on modules include:

Advanced reporting author - Maximize the data gathered by Attune EAM into real-time reporting. Users can choose from hundreds of predefined reports or easily build their own custom versions to further analyze the data.

Octave Databridge Pro (formerly Databridge Pro) - Powered by Apache NiFi, a leading open-source data flow automation platform, Databridge Pro provides enhanced data integration capabilities for configuring data pipelines, managing endpoint connections and providing better visibility for efficient troubleshooting and debugging.
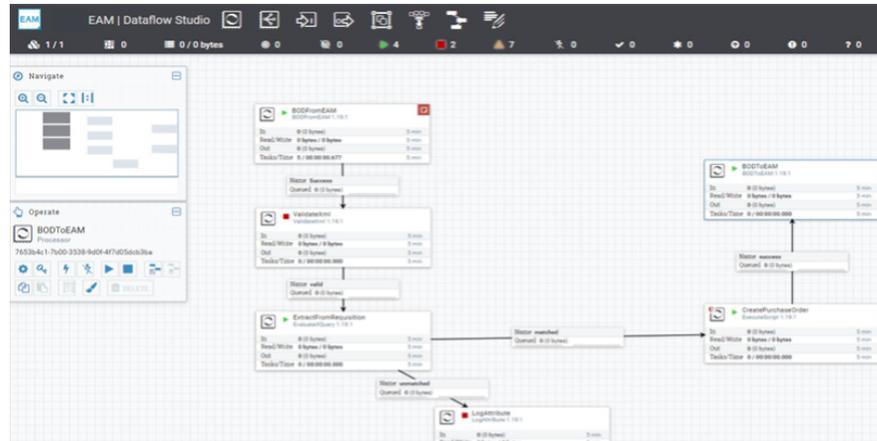
Geographic Information System (GIS) interface - Leverage Attune EAM's intuitive interface and seamless GIS integration to visualize the assets and work along a map. Search GIS attributes and Attune EAM asset attributes through one screen. Add/modify GIS data through the mobile application. You can also streamline workflows on widely dispersed equipment and create a consolidated, easy-to-access view of asset location and history.

Open BIM - Create and manage asset data with an intelligent, 3D-model-based, process building information modeling (BIM) tool. BIM gives architecture, engineering and construction professionals access to data and tools that help maintenance to understand how assets are connected, where they are located to help visualize assets and work along a 3D model.

Open BIM model depicting pump system

OpenCAD - Manage an electronic parts catalog. Visualize detailed information for parts and components, including specifications used for both manufacturers and supplier part catalogs. Access and mark-up drawings within Attune EAM. Calculate floor space using predefined industry standards. Save time by building your asset registry and creating assets in Attune EAM directly from drawings. Visualize workspaces, permits, any facility or plant, because all assets work across the space.

OpenCAD contextualizing asset on P&ID drawing

Requestor - Easily support an increase in the number of users submitting work requests, equipment reservations and purchase requests, without significantly increasing your financial investment. The contractor portal is also available for mobile and desktop use.

Tech studio

Streamline and simplify the decision-making processes of activity dispatch and asset investment planning (AIP), with Attune EAM's problem-solving engine, Constraint Optimizer. Incorporate your own python scripts into EAM workflows for process automation, incorporating ML models and contextualizing external data to drive performance improvements.

Activity dispatch - Automate the assignment of work orders and activities based on business requirements, desired outcomes and constraints. You'll be able to streamline the management of large numbers of field employees across wide geographic locations by ordering and ranking dispatch plans based on specific priorities, staff skills, crew availability and worker proximity to their assignments. Scheduling, which used to take hours, now takes only minutes.

Asset investment planning - Generate long-term investment action plans for future periods based on business funding, risks, conditions and asset interventions. Use your data to simplify the decision process by comparing multiple what-if scenarios to see the impacts and trade-offs of various planning elements. This will give your teams the confidence to create and communicate these investment plans efficiently, knowing the data backs them up.

Python framework - Powered by JupyterLab, the industry standard for writing Python scripts, Python Framework provides customers with Python Studio, a streamlined user interface, for writing, managing and executing Python scripts. Python Framework features a robust infrastructure for seamless script execution and publishing, along with 20+ out of the box templates aimed at lowering the technical barrier for users of all skill levels to leverage the power of Python.

- **Examples:** Machine learning, condition monitoring, task automation, reporting and visualizations
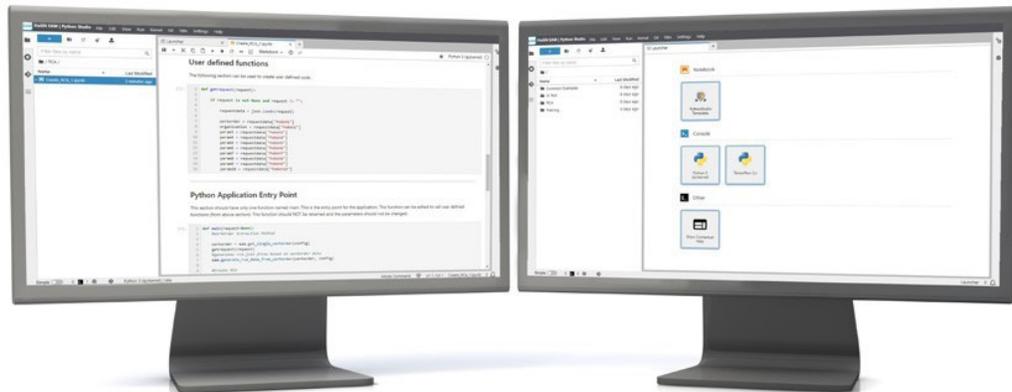
Benefits
Customers have seen these improvements with Attune EAM:

Up to a **50%** reduction in maintenance overtime, labor and contractor costs

20% reduction in production downtime

50% increase in warranty cost recovery

30% reduction in inventory levels

20% reduction in inventory carrying costs

10% reduction in materials costs

50% reduction in purchasing process costs

20% improvement in labor productivity

Attune EAM
Mobile modules

Attune EAM Mobile - Enable workers to harness Attune EAM's functionality on a powerful mobile platform. Access, capture and manage information, either online or offline, directly from the job site or service location. This results in higher productivity and more effective decision-making. Attune EAM Mobile supports shared devices within a facility or crew since each device is licensed.

- **Includes:** Work orders, work requests, meter readings, equipment, checklists, physical inventory, reports, case management, asset hierarchy and equipment inspections
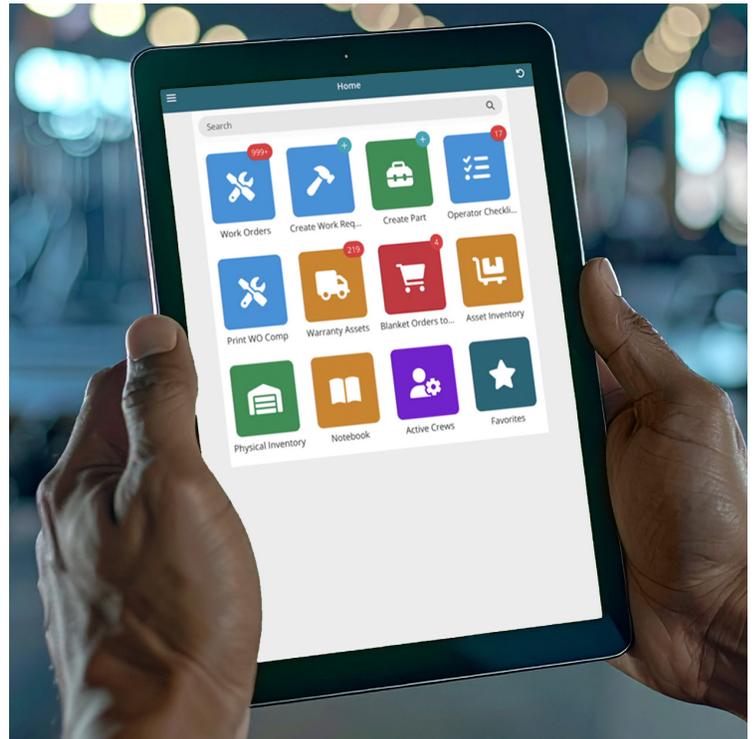
Attune EAM Mobile Requestor - The Mobile Requestor is ideal for users who need to periodically create requests or contractors who need to see work that's been assigned to them. Users can now access the Mobile Requestor functionalities from Attune EAM's Digital Work platform.

- **Includes:** Work requests, parts requisitions, reservation requests, operator checklist and the Contractor Portal

Attune EAM Advanced Mobile - Take advantage of Attune EAM's most powerful, mobile-based EAM product. Extend user capabilities to more EAM modules and functionality. Attune EAM Advanced Mobile adds to the existing capabilities of EAM Mobile and Mobile Requestor, and is available via the Attune EAM Digital Work mobile app.

- **Includes:** Capability, work orders, work requests, permit to work, equipment, physical inventory, notebook, operator checklist, parts, purchase order receipts, asset inventory and requestions

Boost asset efficiency and profits with Attune EAM

Attune EAM provides the capabilities to increase asset utilization and availability to project sites by mitigating risk to equipment failure, improving equipment lifecycle management, meeting safety and compliance requirements and increasing efficiency in resource allocation. With Attune EAM you can maximize your operating margins through a user-centric platform that reduces complexity and ensures accurate data capture from a single solution.

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property, and assets– for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency, and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.