Optimize Asset Performance through a Mobile Maintenance Workforce

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Asset Maintenance – Insights and Challenges

Every company, either big or small has to maintain their assets and infrastructure up to date in order to keep their business engine moving without any downtime. However, there are some asset intensive industries where asset management becomes a critical issue. Some industries in this sector include mining, oil & gas, energy, utilities, rail and transit. They share a typical set of challenges that need to be addressed to enhance their operational performance, productivity, reliability and profitability.

The performance of these companies is typically gauged upon how assets perform in the long run and also when such assets remain idle or hardly running. Also, asset intensive companies typically require huge capital investments and financial performance is critically dependent on how much return they get on such assets. Finally, there are assets, which are spread across a wide geographical area that are overseen by a field sales workforce and prone to physical and environmental stress.

Addressing these challenges is critical for such organizations to sustain gains in performance, reliability and profitability.

Confluence of mobile technology for effective Asset Management

Give maintenance technicians anytime, anywhere access to the information they need to do their jobs, and their safety and productivity in the plant and in the field will increase. With both online and offline access, you can ensure delivery of mission-critical support of assets without any interruptions or delays, leading to better performance and reliability across plants, fleets, networks, and the enterprise infrastructure.

Mobile apps from SAP Plant Maintenance can help asset-intensive enterprises address the unique challenges in maintaining their mission-critical assets – which are typically distributed across geographies and often located in remote areas and exposed to the elements. The people who service and operate them are distributed, mobile, and work in hazardous environments, whether at an oil-rig, in a warehouse, or atop a high-voltage line in a rural area. Anywhere, anytime access is critical, safety is paramount, and increased productivity is a major requirement.

By connecting, informing, and empowering the workforce with better asset management, executives and managers make better, more informed decisions every day.

The largest adoption of mobility solutions in the manufacturing sector is in asset management. The top global companies are implementing mobile solutions at a higher rate than competitors for a number of different uses.

- Aberdeen Group
The Business Case for a Mobile EAM Solution

Based on leading industry analysts, two of the largest challenges that companies must meet before adopting mobile apps are making a business case for the technology and selecting the most beneficial areas for its implementation.

Equipment failure results in unexpected downtime, safety and environmental risks, and unmet production quotas - all of which negatively affect revenue. EAM helps companies move from primarily a reactive state, or solving problems as they appear, to a more proactive one where they can anticipate and address issues before problems arise. A strong mobile EAM roadmap should address -

- Extension of asset life
- Risk prioritised maintenance and reduce downtime
- Increased workforce productivity and efficiency
- Reduce value chain costs
- Connect the field to your diverse data sources

A number of technologies are making this new, strategic approach possible and mobile is one of them. Integrating mobile devices and apps with existing asset management solutions can save time, reduce errors, and streamline processes, all of which reduce operational expenses and boost the bottom line. Mobile EAM also contributes to a high ROI as operational improvements reduce excessive inventory and maintenance costs.

Our experience has taught us how to efficiently extend the power of SAP Plant Maintenance using role-specific and device specific designs for the benefit of field service workers, managers, clerks, and schedulers who are connected directly to the solution. Technicians working remotely get the functions they need to access, capture, and manage information from the job site.

You’ll improve accuracy, deliver better service, and manage assets more efficiently when your field service team can record as they work rather than waiting to document work after the fact. Innovapptive’s Mobile EAM Portfolio enriches the communications link between the field and the office, so that you and your field service workers can assign, perform, and record activities and ad hoc work orders from the work site - anytime, anywhere.
Mobile EAM for SAP: Proven Success

Identifying the positive impacts of mobile solutions on the business and defining how to measure them is central to proving the business case. Mobile solutions for EAM can drive improvements in five main areas: safety, compliance, governance, productivity, and visibility.

SAP customers have seen the following improvements in their workforce when using mobile apps from SAP:*

- Safety incidents reduced to near zero
- Work capacity increased by 10 to 20%
- Labor productivity increased by up to 50%
- Rework reduced by 15 to 20%

Mobile apps have helped SAP customers realize these asset-related benefits:* 

- Downtime and production delays reduced by 20 to 30%
- Preventable failures reduced by up to 90%
- Maintenance backlog reduced by up to 60%
- Inventory carrying costs reduced by 5 to 10%

Mobilize your Field in 6 Weeks

Innovapptive focuses on achieving "Instant Mobilization" by accelerating other ENTERPRISES time to market and value. Innovapptive’s unique value proposition is our ability to instantly mobilize several key business processes through a wide array of pre-packaged configurable Mobile Solutions.

Key drivers that enable this rapid deployment for mobile solutions are -

**Device and Platform agnostic SAP Certified mobile app portfolio**

You can run Innovapptive’s mobile portfolio on a wide variety of mobile devices, including the Apple™ iPad®, iPhone, iTouch devices, Android tablets, and Android phones, Windows tablets and Windows phones as well as on a SAP Fiori enabled web browser interface.

We’ve designed our mobile solutions to make the most of the unique advantages of each platform so that your workforce can stay productive. Because it runs on popular consumer devices, workers need little or no training to get up and running.

**Easily configurable with RACE™ - Zero coding skills needed**

In the past, enterprise software from major providers offered little in the way of useful customization. This forced many enterprises to adapt their processes to the software, instead of the other way around. Often, this led to personnel and management abandoning a new system shortly after

*Source: SAP Customer Reference Statistics*
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deployment to stick to what they knew worked for them.

Innovapptive’s EAM portfolio, on the other hand, comes built-in with our configuration toolkit - RACE™ (Rapid App Configurator Engine) that empowers your IT teams to customize our mobile solutions to fit a business’ processes. Every individual enterprise and industry has different, nuanced requirements for its EAM systems, and the software should be a way to augment these best practices, not an attempt to eliminate and replace them.

The Innovapptive mobile portfolio with RACE™ features capabilities to create, configure, and consolidate screens for simplified deployment and reduced support costs. Screens can be configured by hiding and arranging fields, making certain fields mandatory, and setting up default values. The mobile interface can be configured to an individual user’s needs. Unique user profiles identify what data to synchronize to a specific handheld device, which equipment to include, what and how much history to store, and numerous other import and security rules.

Leverage the power of RACE™ to benefit from a lower TCO (total cost of ownership) and realize immediate ROI (return on investment) by -

- Drastically decreasing implementation timelines and cost with accelerated deployments
- Minimizing on-going support and maintenance costs
- Eliminating the need to hire additional skill sets and use existing resources
- Receiving OS upgraded versions for iOS, Android, Windows, etc. at no additional cost

RACE™ has the ability to supercharge your mobile deployment by redefining and transforming the way customizations can be carried out, driving innovation and business efficiency to new heights.

Flexible and agile deployment - On-premise or on the cloud

The Innovapptive mobile portfolio is the only comprehensive EAM suite that offers the flexibility to be easily deployed either as an on-premise solution powered by SAP Mobile Platform (SMP) or on the cloud powered by SAP HANA Cloud Platform (HCP). Leverage key capabilities such as multiple authentication methods, secure access to on-premise and cloud-based systems, offline synchronization, remote logging control and retrieval, automatic app updates one to one and one to many push notifications and much more powered by SMP or HCP.

Additionally, lower your mobile adoption costs by taking advantage of our embedded SAP Mobile Platform runtime licenses or SAP HANA Cloud Platform embedded licenses bundled within Innovapptive’s product license. This significantly lowers your cost of running the best built EAM applications from Innovapptive on the best of SAP’s mobile platform offerings.

Empower your IT Teams to customize SAP mobile apps with simple configurations using Innovapptive’s RACE™ - Rapid App Configurator Engine
Innovapptive Mobile EAM Portfolio

Our mobile apps provide the most complete portfolio of mobile solutions for enterprise asset management available.

mWorkOrder - Mobile Work Order Solution Overview

The mWorkOrder mobile app for SAP Plant Maintenance (PM) empowers maintenance crews to work more safely, productively, and independently, whether installing new equipment or maintaining, inspecting, and repairing existing assets. Apart from that, the mWorkOrder app also mitigates the risk of injury by helping workers complete safety checks and follow safe work practices. With the mWorkOrder solution, maintenance workers are empowered with intelligence to identify and prevent failures and outages before they occur. This SAP® Certified solution leverages the SAP Plant Maintenance (PM) module at the back-end to deliver a consistent, reliable and a productive asset maintenance experience across a wide range of industries.

Work order management - Users can download work orders directly from SAP or any backend system and then assign or re-assign those work orders to the appropriate individual. mWorkOrder mobile users can view their assigned activities and access work order history and asset information to facilitate diagnosis and repair. They can also issue and return parts, book labor hours, view documents, and add images and attachments to the work order for future reference. Users can create personalized to-do lists that include the specific details for a task. When workers have completed the task, they can close the order, include comments and closing codes, and even upload pictures. With mWorkOrder, it’s simple to book and capture labor information accurately using start, stop, and pause controls, and you can print work order reports just as easily.
Enforce Compliance - To simplify compliance with government regulations, mWorkOrder delivers record-locking and electronic signature capabilities using a mobile device. You can remotely conduct validations, change work order status, obtain electronic signatures, and run authentications.

Asset tracking - Workers can view all equipment on a map, consult the full history of the equipment, and see all relevant documents. Additionally, the mAssetTag addon also supports the fixed asset physical inventory process.

Offline or Online processing - Allow remote workers to use mobile devices to enter asset data from the location of the equipment in an offline mode. mWorkOrder can even work in places where Internet access is intermittent or nonexistent - and seamlessly switch between online and offline modes.

Geospatial Integration (GIS) - mWorkOrder supports GIS Integration bringing location awareness to your EAM processes and enabling business users to start processes, visualize, filter and search for objects on a map leveraging an integrated GIS environment.

Optimized User Experience - To speed and simplify your work, the mWorkOrder solution offers fully optimized, role-specific feature sets for each platform. That way you don’t suffer from reading tiny screens cluttered with excess details, while keeping the most important information easy to read and use on any kind of device - smartphones, tablets, rugged handhelds or desktops.

mInventory - Mobile Inventory Management

The mInventory mobile app for SAP Inventory and Warehouse Management automates traditional storeroom business processes that are associated with managing inventory. The solution eliminates the need for manual paperwork entirely, eliminating cycle count sheets, pick tickets and scratch pads for finding inventory. The real-time wireless solution is optimized when used in conjunction with bar-coding, whereby users benefit from incorporating highly efficient and accurate scanning as a replacement for error-prone manual processes. By automating these key processes, organizations will make significant progress towards increasing inventory accuracy, improving operational performance and improving customer satisfaction.

The mInventory SAP Certified mobile solution is delivered in a pre-packaged offering that enables an easy-to-install-and-configure solution targeting a SAP Inventory Management (IM) or Warehouse Management (WM) implementation. Though the out-of-the-box product does not require extended services beyond the initial installation and configuration, the underlying RACE™ technology efficiently supports unlimited flexibility and customizability, and can be used to extend the product to support unique, customer-specific business requirements across all industries.

Goods Receipts and Issue - Speed receipt and backorder reporting to and from shipping and receiving. Real-time updates to shipping and receiving operations to your SAP system can provide immediate access to accurate and timely inventory information to help avoid production downtime. Imagine a world where you can discuss orders with customers on your shop floor, attend meetings or trade shows or visit suppliers without having to worry about not having access to accurate inventory information anywhere, anytime.
**Inventory Cycle Counting** - Perform physical and cycle counts quickly and with greater accuracy. In addition to issuing and returning parts from a mobile device, storeroom employees using mInventory can collect and record inventory data without requiring manual data entry. This helps speed the physical inventory process, and maintain the right inventory levels by keeping inventory information up-to-date, accurate, and readily available for tracking, and management.

**Barcoding** - Streamline the tracking and relocating of assets, inventory, equipment, and other functions. With mInventory, the processes for taking inventory and assigning new or replacement inventory can be automated, eliminating the error-prone task of manually entering data from a work station.

**Check Stock Availability** - Check availability of materials while on the job. As material stock are updated in SAP, real-time updates are provided on your mobile device. Show the material details such as material storage location and material quantity to your field technicians.

**Wireless Printing** - Innovapptive’s mInventory mobile app allows warehouse personnel to wirelessly print bill of ladings or packing slips directly from SAP generated stock movements in a batch or one by one. This mobile app offers optional integration to USPS, FedEx, UPS and shipping labels.

With an improved inventory process that your enterprise can reduce monthly inventory time by 50 percent. Your field workers now can handle inventory, time and attendance, and receipt of daily deliveries. The mobile solution’s functionality on the road, in the field or the back office, allows you to be efficient in all aspects of its business.

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**Value Drivers**

- Downtime and production delays reduced by **20 to 30%**
- Preventable failures reduced by up to **90%**
- Maintenance backlog reduced by up to **60%**
- Inventory carrying costs reduced by **5 to 10%**
- Work capacity increased by **10 to 20%**

Source: SAP Customer Reference Statistics
mRounds - Mobile Rounds Solution Overview

The mRounds mobile solution gives operators the best opportunity to collect the data that is needed to assess the current condition of the equipment. Innovapptive’s mRounds mobile solution allows you to record critical asset performance data points in real-time without the use of manual paper forms. Assets that are trending towards failure are identified quickly, allowing you to reduce downtime and help you maintain your equipment effectively. The mRounds solution can be used for routine condition monitoring, meter reading, and field measurements by recording more accurate data and analyzing it faster.

**Meter readings** - With the measurement readings module, users can enter meter values for any assigned piece of equipment. The solution automatically provides the appropriate unit of measure and meter name for each reading, ensuring accurate data collection and decreasing data-entry time.

**Inspections** - The mRounds Solution improves the overall efficiency and thoroughness of the inspection process by providing users with a list of inspection points. After completing the inspection, mobile users can enter the results into the inspection result-entry lines. Users can also trigger notifications if they encounter maintenance issues.

**Calibration** - The Calibration module provides a simple and portable way for users to accurately measure instruments such as gauges and meters, and then record the results into SAP. By delivering calibration capabilities through handheld devices in the field, companies can significantly increase the efficiency and accuracy of processes for meeting regulatory compliance, audits, and quality requirements.

**Preventive maintenance** - By recording data at the point of collection in real-time, Innovapptive’s mRounds mobile app mitigates the consequences of equipment failure by preventing failure before it actually occurs. In addition, the data analysis, trending and alerts module alerts operators and supervisors about equipment conditions, before it completely fails.
The Innovapptive Mobile EAM Advantage

The Innovapptive Mobile EAM suite features a state-of-the-art, cost-effective mobile portfolio that supports better decision making and productivity in the field, and delivers a quick return on investment.

Key benefits include:

- Automating work order tasks and requests for labor, saving up to 20% on associated labor cost
- Improving response time and avoiding unnecessary travel
- Reducing asset downtime and related costs
- Enriching the SAP PM, IM and WM modules by increasing the accuracy and timeliness of data
- Capturing and managing data from the field in a secure environment with speed and simplicity
For more information

To learn more about Innovapptive’s mPower™ App Suite and Atos’ end-to-end SAP HANA services, contact your Atos account executive, visit us at atos.net/hana or you can email us at dialogue@atos.net

About Atos

Atos SE (Societas Europaea) is a leader in digital transformation with circa 100,000 employees in 72 countries and pro forma annual revenue of circa € 12 billion. Serving a global client base, the Group is the European leader in Big Data, Cybersecurity, Digital Workplace and provides Cloud services, Infrastructure Data Management, Business Platform solutions, as well as transactional services through Worldline, the European leader in the payment industry. With its cutting edge technologies, digital expertise and industry knowledge, the Group supports the digital transformation of its clients across different business sectors: Defense, Financial Services, Health, Manufacturing, Media, Utilities, Public sector, Retail, Telecommunications, and Transportation. The Group is the Worldwide Information Technology Partner for the Olympic Paralympic Games and is listed on the Euronext Paris market. Atos operates under the brands Atos, Atos Consulting, Atos Worldgrid, Bull, Canopy, Unify and Worldline.

About Innovapptive

Innovapptive is among the fastest-growing enterprise mobile and user experience (UX) solution companies and is an industry leader among rapid mobile application development (RMAD) solution providers. Innovapptive’s Rapid App Configurator Engine (RACE) technology redefines traditional approaches to digitize the enterprise and is empowering organizations to rapidly deliver ready-to-run mobile apps across the enterprise. Innovapptive’s portfolio of 100+ mobile solutions that run across a wide array of devices and systems is creating a connected enterprise across employees, customers, and suppliers. Innovapptive was named a 2016 SAP Pinnacle Award winner and has won these recognition three years in a row.

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