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Software AG's Cumulocity IoT Platform Enables Field-Force Efficiencies Through Predictive Maintenance And Monitoring

Businesses have demonstrated the value of IoT for transforming operational processes and enhancing customer relationships. With access to real-time data about devices and equipment in the field, firms can more efficiently manage workloads for field services teams, eliminate unplanned maintenance visits, and detect problems before they result in costly failures. End users also benefit as firms use IoT for remote monitoring and predictive maintenance to ensure their products perform well, helping to avoid costly periods of downtime and extend the useful lifetime of equipment for customers.

Despite well-proven operational benefits, IoT implementation isn't always straightforward. Gradual IoT program rollout provides valuable insight into customer needs and process change implications, yet organizations struggle with technical complexity and high barriers to entry for technology platforms in the marketplace. Those who do get initiatives off the ground may run into performance issues at scale.

The Software AG Cumulocity IoT platform removes technical complexity from IoT deployments, enabling organizations to quickly begin connecting and monitoring equipment to improve operational processes and customer experiences.

Reduced unplanned maintenance visits for field forces by:
35%

Total benefits for a multinational building equipment manufacturer:
Up to $82 million

To better understand the benefits, costs, and risks associated with the Cumulocity IoT platform, Software AG commissioned Forrester Consulting to interview customers using the platform and construct a Total Economic Impact™ (TEI) study.

This abstract focuses on firms using the Cumulocity IoT platform to enable smart operations scenarios, which include improving the efficiency and efficacy of field-service forces and enhancing operational performance for end users of equipment connected to and monitored by the platform. Key interviewees that provided input on this use case include:

- The engineering leader for an industrial equipment manufacturer in the Latin America (LATAM) region.
- The head of IoT initiatives for a building equipment manufacturer in the EMEA region.

Prior to implementing the Software AG Cumulocity IoT platform, organizations used a range of IoT platforms, including homegrown platforms. Interviewees told Forrester that these platforms were technically complex, cost-prohibitive to scale, and exhibited performance issues, which prevented them from fully executing on smart operations scenarios.

Forrester's analysis found that a multinational company using the Software AG Cumulocity IoT platform to enable smart operations scenarios experiences up to $82 million in cost savings through field-force efficiencies. The ease of deployment enabled companies to generate business efficiencies and boost customer experience (CX) quickly.

READ THE FULL STUDY HERE

INVESTMENT DRIVERS

Interviewees shared several factors that influenced their decisions to invest in the Software AG Cumulocity IoT platform, including:

- **A need to provide better service and support to customers.** Without reliable connectivity to devices in the field, organizations lacked the data they needed to provide the highest level of service to customers. Equipment makers and customers both benefit as remote monitoring and maintenance helps prevent unplanned maintenance events, while IoT-enabled analytics help diagnose issues to enable technicians to arrive prepared even for unavoidable maintenance calls.
- **A need for reliable device management at scale.** With preexisting platforms, device updates often failed, which resulted in manual rework for engineering and operations staff. Interviewees sought a platform that enabled regular updates to large and growing volumes of devices in the field.
- **Technical complexity.** Interviewees said their organizations struggled with the technical complexity of preexisting platforms, which inhibited the success of IoT initiatives. Overcoming technical complexity was particularly challenging for smaller organizations or those earlier on in their IoT journeys, since these organizations couldn't yet justify dedicating software teams to IoT initiatives.
- **Incompatible systems.** Several interviewees said their organizations previously had multiple platforms in place, fragmenting technology stacks and hindering IoT initiative scalability.

A building equipment manufacturer reduced unplanned maintenance visits by **35%.**

CUMULOCITY IOT PLATFORM FEATURES

The Software AG Cumulocity IoT platform enables organizations to quickly and cost-effectively pursue the operational benefits of IoT while extending new services and capabilities to customers. Interviewees with experience using the Cumulocity IoT platform in smart operations scenarios lauded the following attributes of the platform, in particular:

- **Rebranding.** Equipment manufacturers use the Software AG Cumulocity IoT platform to deliver a range of services, including remote monitoring and maintenance, to their customers. Doing so via a branded interface — as opposed to one that carries a third-party brand — provides a consistent brand experience for customers.
- **Adding new devices and protocols to IoT ecosystems with ease.** Interviewees sought a platform that made it easy to add new types of hardware without a lot of effort. This capability was particularly important for organizations who frequently integrate new devices within customers' environments.
- **Multitenancy.** Interviewees sought an IoT platform that could support multiple projects and programs within their organizations. For organizations that serve thousands of individual customers, multitenancy was an especially important requirement.
- **Portability and flexibility.** Interviewees' organizations sought an IoT platform that could support a range of devices in distributed environments, depending on their customers' requirements. Because the Cumulocity IoT platform leverages a container-based architecture, it can be deployed across cloud environments, in customer data centers, and on a range of edge devices.

KEY RESULTS

Customers using the Cumulocity IoT platform to streamline field-force operations realized financial results by reducing unplanned maintenance visits, enhancing the overall value proposition for their equipment, and improving customer outcomes.

Forrester's analysis for a sample firm using the Cumulocity IoT platform to streamline its business operations showed field-force efficiencies of 35% and savings of up to $82 million over three years.

This analysis utilizes feedback from Software AG customers using the platform for smart operations:

- **A building equipment manufacturer saw a 30% to 40% reduction in unplanned maintenance calls for equipment connected to the Software AG Cumulocity IoT platform.** Today, approximately 40% of the company's portfolio of more than 1 million devices is connected and remotely monitored for issues. Conservatively, the company estimates it will bring half of its device portfolio online over the next 24 to 36 months.
- **An industrial equipment manufacturer saw a 66% reduction in travel to customer sites where equipment is connected.** On average, the company's customers who were using not-yet-connected equipment require six visits from technicians each year. However, customers using connected equipment, which can be remotely monitored and proactively serviced, require unplanned maintenance visits only once or twice per year.

An industrial equipment manufacturer saw an overall reduction in travel to customer sites of **10% to 15%.**

UNQUANTIFIED BENEFITS

Organizations also reported smart operations benefits that were not quantified as part of this study:

- **Improved CX and retention through services.** Interviewees found that the Cumulocity IoT platform enabled them to deliver positive customer outcomes, which drove benefits beyond cost savings from operational efficiencies.
  - An industrial equipment manufacturer uses the Cumulocity IoT platform to monitor equipment installed at customers' sites for irregularities and to recommend changes to settings for optimal performance. Proactively addressing performance issues can lead to reductions in energy consumption of 20% (which can total $25,000 per year, per machine) and increase the useful lifetime of equipment by up to 200%.
  - For a building equipment manufacturer, reliable services delivery improves satisfaction for building managers and corporate clients, improving customer relationships.
  - An industrial equipment manufacturer uses the Cumulocity IoT platform to monitor equipment for potential issues on its manufacturing customers' assembly lines to address issues before they result in costly failures — downtime at customer sites can cost between $10,000 and $250,000 per hour.
- **Expert guidance on IoT initiatives from Software AG.** Interviewees valued the collaboration they had with Software AG's IoT experts, to accelerate IoT development efforts and to better understand what's required to successfully deliver IoT-enabled products and services to customers.

FLEXIBILITY

According to interviewees, using the Cumulocity IoT platform to connect, monitor, and proactively service equipment will lead to additional opportunities in the future. The following examples of flexibility, which are defined by the strategic value that can be obtained for some future additional investment being built on top of the initial investment already made, have been cited by customers using the Software AG Cumulocity IoT platform in smart operations scenarios:

> **"Customers are asking for the technology, and having this expertise helps us remain competitive in the market. They think of us first because they know we're able to deliver IoT capabilities."**
>
> *Sales and automation manager, industrial equipment manufacturing*

- **Becoming the primary provider of services for customers.** Demonstrating the benefits of IoT to a customer, by initially addressing a few salient issues, positions equipment providers to expand their role as a service provider over time. The engineering leader for an industrial equipment manufacturer in LATAM told Forrester that once their organization's customers see the value of IoT, they want to connect everything at their industrial sites, which presents an opportunity to grow the account relationship.
- **Further improving equipment performance through data collection and the application of artificial intelligence and machine learning (AI/ML).** One organization aims to further develop its AI/ML capabilities to optimize and proactively detect issues in performance for customers' equipment in the field. While the company has already delivered substantial results to customers — cutting energy costs by 20% in some cases — it sees an opportunity to further improve equipment performance through advanced analytics over the next 24 to 36 months.
- **Delivering and monetizing new services.** Interviewees noted that, in addition to the substantial field-force efficiencies, the Cumulocity IoT platform will enable new services offering and partnerships. For example, a building manufacturer told Forrester that their organization plans to develop personalized environments and advertising programs for workers in office buildings, through cooperation with a set of partners in the smart buildings space.

TOTAL ECONOMIC IMPACT ANALYSIS

For more information, download the full study: "The Total Economic Impact™ Of The Software AG Cumulocity IoT Platform," a commissioned study conducted by Forrester Consulting on behalf of Software AG, May 2021. https://www.softwareag.com/en_corporate/platform/iot/total-economic-impact-iot-forrester-report.html

STUDY FINDINGS

Forrester interviewed organizations with experience using the Cumulocity IoT platform and combined the results into a three-year composite organization financial analysis. Quantified benefits include:

- 125% increase in incremental revenues from advanced IoT analytics solutions.
- 75% reduction in IoT operations costs compared to previously used platforms.
- 66% increase in attach rates for add-ons to customer orders.
- 50% improved win rate in competitive situations through the delivery of IoT services.
- 35% reduction in unplanned maintenance visits through predictive maintenance and monitoring.
- 30% reduction in licensing costs through platform consolidation and standardization.

Return on investment (ROI)

339%

Benefits PV

$8.1M

Payback period

<1 year


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