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Software AG's Cumulocity IoT Platform Enables Customers To Provision IoT Services On Demand, Reduce Costs, And Support Innovation Efforts

The ability to provision internet-of-things (IoT) services on demand is essential for businesses seeking to accelerate innovation and deliver enhanced customer experiences. Yet many organizations remain challenged by technical complexity and overhead costs of existing platforms. While some believe that building a platform in-house will solve their problems, those who have experimented with a do-it-yourself (DIY) approach have realized high costs and limited capabilities.

The Software AG Cumulocity IoT platform removes technical complexity from IoT service provision, providing organizations with the flexibility and agility to deliver IoT services to internal and external customers on demand. 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 to provision IoT services for internal and external customers and conduct a Total Economic Impact™ (TEI) study.[1] The interviewees included:

- The CEO of IoT at a multinational telecommunications company
- The product manager at the IoT center of excellence (CoE) of a consumer and industrial equipment manufacturer
- The head of smart city initiatives at a government agency focused on digital transformation and governance

This abstract focuses on the use of Cumulocity IoT for *IoT service provision* — i.e., using the platform to deliver scalable IoT services to internal and external customers. Before deploying the Cumulocity IoT platform, interviewees' organizations had experimented with IoT using homegrown solutions or platforms from other vendors. Several conducted detailed build-versus-buy analyses, which revealed significant costs associated with a DIY approach. Others struggled with technical complexity of solutions, which required ongoing support from teams of engineers and administrators. At smaller organizations, this type of expertise was scarce, limiting the potential for growth of IoT initiatives and offerings.

Forrester's analysis found that a multinational company using the Software AG Cumulocity IoT

Total benefits for organizations using the Cumulocity IoT to provision IoT services
Up to $7.8 million

Engineering hours avoided
Up to 72,000

Operational cost savings
75%

Licensing cost savings due to platform consolidation
30%

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platform for IoT service provision experiences the following three-year, risk-adjusted benefits:

- Avoided costs of development and maintenance for in-house IoT solutions, totaling $6.4 million through up to 72,000 hours of avoided engineering effort.
- Operational cost savings of up to 75% for a total of $863,123.
- Licensing cost savings of up to 30% due to platform consolidation across the enterprise totaling $570,733.

> **"We evaluated multiple platforms during an extensive exercise. We were primarily looking for an open architecture with a scalable license model to support all of the different government agencies. A multitenancy approach was also extremely important to us since each agency will be working on different projects while we'll own the master tenant. Software AG ticked all of these boxes."**
>
> *Head of smart city initiatives, government*

INVESTMENT DRIVERS

Interviewed decision-makers recognized the need for an IoT platform that would provide them with the flexibility and agility to provision scalable IoT services on demand. However, they faced both technical and business challenges:

- **High costs associated with developing and maintaining IoT platforms.** Several interviewees' organizations analyzed costs to develop and maintain IoT platforms in-house. They found that building a platform themselves would result in high upfront and ongoing costs and access to only a limited feature set. Others, which previously used alternative IoT platforms, invested heavily in maintaining and operationalizing those platforms.
- **Technical complexity.** Organizations struggled with the technical complexity of other platforms. This was a particularly significant challenge for 1) organizations early on in their journeys with IoT, when they were seeking to build proofs of concept for further investment in initiatives, and 2) organizations that wanted to deliver IoT services to customers without fielding dedicated software teams.
- **Inconsistent platform performance.** Organizations experienced performance issues with preexisting IoT platforms. For example, a building equipment manufacturer reported that software updates frequently failed, and that resolving these issues required a significant level of manual rework.
- **Lack of support for original equipment manufacturer (OEM) branding.** Preexisting platforms did not always allow for white labeling. Interviewees wanted to deliver consistent experiences to their customers; delivering IoT services via third-party branded interfaces created subpar customer experiences.

CUMULOCITY IOT PLATFORM FEATURES

The Software AG Cumulocity IoT platform enables organizations to quickly and cost-effectively provision and scale IoT services for internal and external customers. Interviewees with experience using Cumulocity IoT to provision IoT services for internal and external customers lauded several attributes of the platform, in particular:

- **Low technical barriers to entry.** Cumulocity IoT is technically sophisticated while still being easy to deploy. The platform enables organizations to provide flexible services, which support testing of new ideas and development of proofs of concept.

- **Rebranding.** Organizations can white label the Software AG Cumulocity IoT platform to deliver IoT platform services that carry their brand. According to interviewees, this capability is not always supported by other platforms. The CEO of IoT at a multinational telecommunications company said, "Cumulocity IoT has done a good job of integrating itself into other parts of our offering, which has made a homogenous experience for the customer."
- **Multitenancy.** For organizations provisioning IoT services to internal and external customers, multitenancy was an essential requirement.
- **Costs that scale with usage.** The costs of the Software AG Cumulocity IoT platform scale with deployments, supporting an organization's growing investment in IoT-enabled services.

KEY RESULTS

Customers using Software AG's Cumulocity IoT platform to provision IoT services realize financial benefits in three primary areas, as well forward-looking benefits such as the ability to support new business models. Financial benefits include:

Reduced costs to support IoT services. By partnering with Software AG, organizations avoid the substantial costs associated with developing and maintaining IoT capabilities in-house while maintaining a focus on winning, serving, and retaining customers.

- **An industrial automation manufacturer and service provider estimated that it would take 100 developers approximately 18 months to build an IoT platform to service its nearly 200,000 customers around the world.**
- **The consumer and industrial equipment manufacturer estimated that building an IoT platform to support PoCs and commercial deployments would require a team of eight developers and a timeline of at least 90 days to build the core capabilities.** For each PoC, decision-makers estimated it would take two to three developers at least an additional two to three weeks to build project-specific capabilities. Commercialization efforts would require significantly greater investments of developers' time.

> **"We very frequently leverage Cumulocity IoT's device modeling capabilities. We can easily represent new devices on the platform, which accelerated our development efforts."**
>
> *Product manager, IoT, CoE, consumer and industrial equipment manufacturing*

Operational cost savings. Interviewees whose organizations that previously relied on alternative platforms reported lower costs for administration of the Cumulocity IoT platform.

- **A building equipment manufacturer that uses the Software AG Cumulocity IoT platform to connect and monitor installations around the world reported a 50% reduction in operational costs after switching from a legacy platform.** According to the head of IoT initiatives, the platform simplifies key workflows such as 1) firmware and software updates, 2) configuration management, and 3) device management. This company reassigned three IT administrators to other, high-need parts of the business.
- **A consumer and industrial equipment manufacturer that uses the Software AG Cumulocity IoT platform to provide IoT capabilities to business units across the enterprise reported operational cost savings of nearly 90% after switching from a legacy platform.** The company's preexisting platform required the support of two full-time IT administrators. Today, just one IT administrator dedicates 25% of their working hours to

supporting the Software AG Cumulocity IoT platform. (Not all time savings for this customer can be attributed to the simplicity of the platform, since the company switched from an on-premises to software-as-a-service deployment model, thereby shifting some operational efforts to Software AG.)

Licensing cost savings due to platform consolidation across the enterprise. Interviewees report cost savings by standardizing IoT initiatives on a single platform, Cumulocity IoT. Before deploying Cumulocity IoT, different teams and departments used different platforms, resulting in fragmentation and organizational silos.

- **The head of smart city initiatives for a government agency focused on digital transformation and governance-replaced siloed platforms across government agencies with the Software AG Cumulocity IoT platform, reducing technology costs by 30%.** To understand potential cost savings, the agency modeled licensing and integration costs for all current IoT projects as well as open requests for proposal (RFPs) with and without standardization on the Software AG Cumulocity IoT platform. "This is a huge saving, from a centralized point of view," the head of smart city initiatives said.
- **The head of IoT initiatives for a building equipment manufacturer reported licensing and managed services cost savings of 50% after switching from the company's preexisting platform vendor.** Notably, along with lower costs, the company saw improvements in service quality.

Unquantified benefits. Interviewed organizations also reported benefits that are not quantified as part of this study.

- **Development of IoT CoEs.** Several organizations developed IoT CoEs, which provide all parts of their organizations with access to robust and scalable IoT services.

> **"What's great with the Cumulocity IoT platform is that it helps in technology governance. As a government enabler for the rest of the different sectors, we are providing those sectors with the agility and the freedom of developing their own use cases, building their own applications, and utilizing the different microservices that we will start building in the future that definitely will be part of the IoT platform."**
>
> *Head of smart city initiatives, government*

- **Expert guidance from Software AG engineers and solutions specialists.** Interviewees provided positive feedback on collaboration with Software AG's IoT subject matter experts. For example, the sales and automation manager for an industrial equipment manufacturer based in North America told Forrester, "Software AG provided us with technical guidance at the start to get our equipment online, but they also helped us to understand what resources and capabilities we needed to start winning customers."
- **Improved customer experience and retention through services.** Interviewees' organizations leveraged the Software AG Cumulocity IoT platform to deliver services to their customers, creating positive business outcomes and boosting customer satisfaction and loyalty.
- **Ease of collaboration with the broader IoT ecosystem.** Interviewees told Forrester that standardizing on the Software AG platform, which is used by global telecommunications and industrial companies, opened up opportunities for collaboration with ecosystem players. Support for

a wide range of industry standards and protocols also facilitated cooperation among equipment makers, communications providers, and software companies, among others.

Flexibility. According to interviewees, the ability to reliably and cost-effectively provision IoT services will enable transformational initiatives. The following are examples of flexibility — the strategic value that can be obtained for some future additional investment building on top of the initial investment already made — cited by customers using the Software AG Cumulocity IoT platform to provision IoT services on demand for internal and external customers:

- For telcos, IoT presents an opportunity to shift from selling connectivity and bandwidth to outcome-focused services and pricing. The CEO of IoT for a multinational telecommunications company explained to Forrester, "Ultimately, what telcos need to do is to build businesses that let them charge for value created rather than the capabilities used to create that value."
- Transformation opportunities aren't limited to the private sector. The head of smart city initiatives for a government agency described a future state in which cities deliver a broad range of interconnected, digitally enabled services, from parking to emergency services. To support its goals for innovation, the agency uses the Cumulocity IoT platform to provision IoT services to departments across the government.

> **"The Software AG Cumulocity IoT platform gave us the ability to say to our system integrator partners: 'We're not only bringing you connectivity; we're bringing you the ability to build vertical solutions on top of our technology stack."**
>
> *CEO of IoT, multinational telecommunications*

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.

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

Appendix A: Endnotes

[1] Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

DISCLOSURES

The reader should be aware of the following:

- The study is commissioned by Software AG and delivered by Forrester Consulting. It is not meant to be a competitive analysis.
- Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in Cumulocity IoT.
- Software AG reviewed and provided feedback to Forrester. Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning.
- Software AG provided the customer names for the interviews but did not participate in the interviews.

ABOUT TEI

Total Economic Impact™ (TEI) is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders. The TEI methodology consists of four components to evaluate investment value: benefits, costs, risks, and flexibility.

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