



waylay

DATA SHEET

Waylay For Machine Builders

Introduction

It's estimated that IoT applications in operations optimization have the potential to create [value of \\$1.2 to \\$3.7 trillion per year](#)¹ in the factory setting in 2025. Manufacturers and equipment builders are in a position to jointly create this value, thanks to new IoT technology advancements.

Equipment builders now have product-oriented value offerings, in the form of physical assets made to perform specific tasks for manufacturers: compressing air or pumping water, mixing liquids or cutting solids, packaging biscuits or bottling sodas. Their equipment is part of the customer's production flow, but is bought, managed and serviced as a standalone piece.



industrial packaging equipment

Machine builders have the unique opportunity to look beyond their standalone product offering and propose value-added services that are focusing on the business goals of their customers. For example, improving service support by making use of remote monitoring to track machine health and performance. Additionally, once these services are in place, the opportunity to move to a Product-as-a-Service business model is within close reach.

To unlock new service models focused on equipment monitoring and maintenance, a successful solution stack for equipment builders is made up of the right *industrial hardware & connectivity* (for capturing data) and *integration, analytics and automation software* (for taking advantage of the captured data).

¹ McKinsey, [“Unlocking the potential of the Internet of Things”](#)

Step 1 – leveraging industrial IoT sensors and gateways to capture asset performance data

Equipment and machine builders have a lot to profit from adding connectivity to their products. Cloud-enabled machines are able to send information about how the machine performs, if it's used at its optimal set point, if it degrades ahead of time, if and when it might break, and much more.

New IIoT sensors embedded with built-in connectivity can be retrofitted to existing industrial equipment and measure a myriad of equipment performance indicators. IIoT gateways aggregate data from multiple sensors deployed across large surface sites, via low-powered networks such as Private LoRa™. They do basic edge processing before sending it to the equipment manufacturer's cloud back-end. Most of the time, new IIoT gateways enable data transmission without the need to interfere in the OT-sensitive networks of the customer.

Step 2 – positioning for operational excellence with data integration, automation and analytics

As with any IoT-enabled object, connected equipment requires some amount of data to be sent to the cloud, in order for most of the benefits to be realised. As the velocity and volume of data can be a struggle to handle and make sense of, having the right cloud software foundation to integrate, analyse and act is critical.

A flexible IIoT data processing platform such as the Waylay platform will be able to combine the expertise of the equipment builder's domain specialists with the performance data coming from the machines in order to answer questions such as:

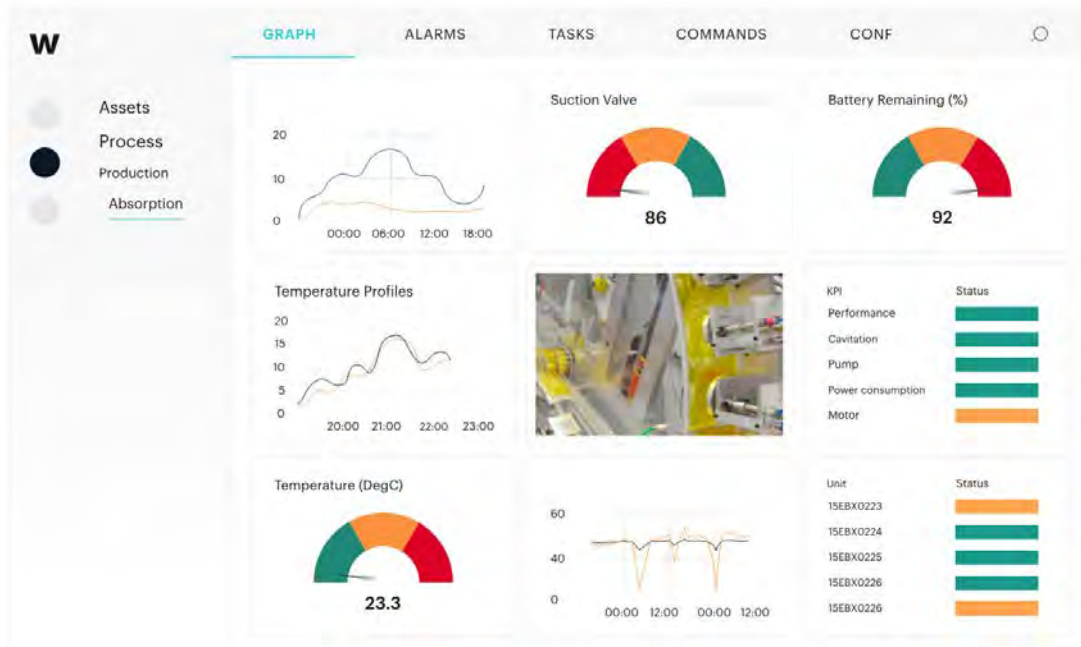
- is the equipment used at its optimal efficiency point?
- is the equipment's power consumption within the expected range?
- when will the equipment need maintenance?
- when will a specific part/component need to be replaced?

Integration with existing IT systems such as ERPs or NOCs (the equipment manufacturer's or the customer's, depending on the use case) can unlock new solutions. For example, a detected malfunction can be immediately reported in the equipment manufacturer's CRM system, where a support case is automatically created with all relevant fault information. The provider's services team is empowered to take proactive action, reach faster problem resolution and better customer experience.

Step 3 – accelerating service and solution delivery with pre-templated operator dashboards

Having a powerful data processing platform such as Waylay enables equipment builders to extract meaningful insights from near real-time equipment data, but successfully delivering this value to customers would typically require further work: building the end-user application.

As end users, industrial facility and plant operators, maintenance and process engineers have specific KPIs that they want clearly shown in an IIoT application. They want simple and clear navigation and visualisation that enables immediate focus on specific pain or risk points. They reject overwhelming dashboards or too technical, developer-focused interfaces. Building monitoring applications for users is not therefore an easy endeavour.



The Waylay Dashboard

At Waylay, we have developed the Waylay Dashboard, a turnkey solution that was built to address these specific challenges and that integrates out of the box with Waylay's powerful Industrial IoT platform. As a solution provider, you therefore have both a full set of developer tools to enable your teams to capture and make sense of data, and a ready-to-use dashboarding application that can get you to market with user-ready apps in days instead of months or years.

Five use cases for IIoT operational excellence

Use your IIoT data to drive immediate operational improvements

01 /

Predictive maintenance (condition-based maintenance)

Analyse historical machine data to predict future failures and estimate when maintenance should be performed.

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BUSINESS BENEFIT: Condition monitoring can improve uptime. Dispatching intervention technicians at the right time instead of periodically can reduce costs.

02 /

Automation of support tickets

Create support tickets in your preferred support software in an automated way, by correlating known fault codes with machine sensor data.

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BUSINESS BENEFIT: Proactively creating a ticket before the customer calls your helpline can improve customer satisfaction and lead to better SLA compliance.

03 /

Root-cause analysis prior to the field intervention

Analyse the root cause of an issue signalled by the customer by using historical data from the affected machine, before dispatching field engineers.

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BUSINESS BENEFIT: Better root-cause analysis can reduce site visit time and improve first time fix rates.

04 /

Log processing during the field intervention

Analyse faulty machine data by processing log files uploaded by the technician while on site, from offline machines or from additional data sources.

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BUSINESS BENEFIT: Batch processing on site can help the engineer validate fault resolution before signing off the work order.

05 /

Track process adherence for outsourced field support technicians

Automatically process raw data in batch and provide next best-action recommendations to your technicians, while tracking their process adherence.

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BUSINESS BENEFIT: Providing outsourced field technicians powerful tools avoids costly mistakes.

How Waylay can help

Waylay offers a complete set of tools for in-depth real time data analysis. With Waylay you achieve faster innovation cycles, faster time to market and high operational scalability.

- **Data processing for both connected and nonconnected machines**

With only 10% of real-world machines connected to the internet, improving the business value of IoT solutions means accounting for the business's non-connected install base as well. Waylay supports both **real-time stream processing** of IIoT data from connected machines (e.g. via OPC-UA or MQTT) and **offline batch processing** of data uploaded from offline machines.

- **Business rules engine**

Machine data and the analytical insights derived from it can only generate business value if they are transformed into actions. With Waylay's patented IoT rule engine you can implement heuristics and apply advanced business logic to the machine data to drive fully automated actions on external IT, cloud systems or the machine itself.

- **Time series analytics**

Soon after your machine systems go online, vast amounts of data become available. And wherever there is big data, data science follows. Waylay's time series analytics designer helps your data scientists bring their algorithms to production faster and reduce the number of false positives.

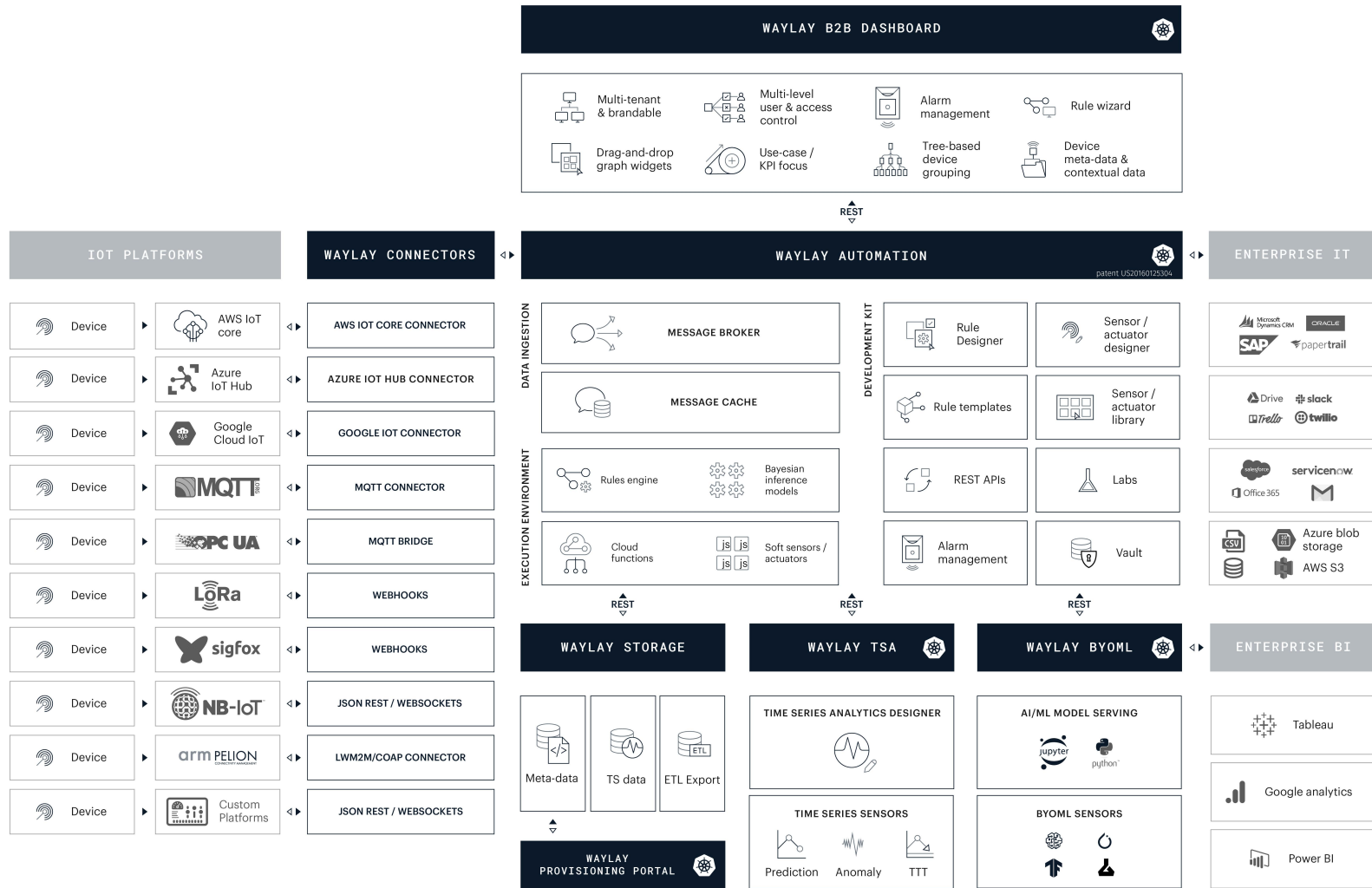
- **Integration with back-end IT systems**

Making IoT operational is based on opening up permanent two-way communication lines between the IoT system and your line-of-business applications. With Waylay you can get IoT insights to the right stakeholders in your company through off-the-shelf integration with systems like cloud computing, ticketing, field support, CRM and more (Azure, AWS, Salesforce, ServiceNow, Atlassian, Trello etc.), and you can deploy it in your IT network!

- **Alarm management**

An essential function of IoT applications is the use of alerts and notifications. Waylay provides an alarm management module that enables you to create rich alarm handling rules, with four severity levels and operator workflow for administrators.

Waylay Platform Architecture



Customer Reference Case

How a machine builder improved customer & field service with Waylay

Our customer- a machine builder with a global presence, produces expensive equipment, made up of multiple high-precision components. Some 20% of the units deployed are *connected* (equipped with sensors & connectivity) and are already sending data to the vendor's IoT device management platform.

Their end customers (factory and plant owners) call the support desk to log complaints when the equipment malfunctions or log support tickets that are managed by the equipment vendor via their Salesforce account. The on-call support engineer needs to diagnose the issue (is it an overall defect, component failure or errors in assembling) and assign a Field Service Engineer to it. Since the machine's components are ultra-sensitive, the service engineer is usually required to replace the malfunctioning components on site.

Managers, service engineers, and the sales force of the company have difficulty tracking the status of the components, managing remote fault diagnosis and customer service. These teams were operating in isolation from one another and lost out on tremendous opportunities for process improvement. With Waylay, our customer has succeeded in putting IoT data to operational use for a number of use cases:

Automated support ticket creation based on fault code correlation

Support tickets are now automatically created within Salesforce, as soon as the live fault code is received, without any human intervention.

BUSINESS BENEFIT

Customers are happy with the faster response times and proactive support.

Condition-based maintenance intervention

Service intervention cases are now created in Salesforce based on advanced anomaly detection on actual usage data from the machines themselves.

BUSINESS BENEFIT:

Shorter resolution times and avoidance of unnecessary field interventions

Improved root-cause analysis of machine failures

The support team has real data available to them to perform better root-cause analysis using machine log files, before field interventions are scheduled.

BUSINESS BENEFIT:

Reduced time on customer premise, better insights into technician performance and improved customer satisfaction.

Conclusion

With advancements in IIoT technology, OEMs can build more capability into their machines to ultimately support their customers to reduce production risks and costs. Building extra capabilities into machines usually means capturing and taking advantage of existing and/or new data about the condition of their machines and how they are being used.

At Waylay, we offer machine builders and OEMs an IoT platform with built-in integration with IIoT gateways for easy data capture and a full set of software tools for automation, analytics and asset and process monitoring, that accelerate IoT solution development. Moreover, we provide a flexible visualisation dashboard that can be white labeled and templated to fit your customers' specific requirements.

Learn more



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