KloudGin

KloudGin Predictive Maintenance (PdM)

Intelligence-based learning transforms field service and asset management

Businesses are transforming their field service and customer experience by leveraging data for advanced real time scheduling. It has never been easier to create work orders, perform case management, manage inventory, or optimize scheduling and dispatch. But the real transformation comes from using intelligence-based learning to predict and recommend actions in field service and asset management.

KEY CAPABILITIES

- Pre-integrated built-in Predictive Analytics and Asset maintenance – monitor, analyze, predict and act – all from within one application
- A library of specialized models for specific Asset classes – built from the ground up for that asset class
- Prediction models trained by asset category with customization for an individual asset as needed
- Quick correlation of sensors to understand how readings influence one another
- Ability to periodically retrain the model based on new data and information
- Prediction is provided as probability of failure percentage and future time range allowing for customization of alert thresholds
- User-friendly dashboard quickly guides user through the assets in the Predictive Analytics module and their current status
- Dynamic graphs and trends allows drill down into historical data points, work order history, or other assets within same category for comparison
- Tight integration with KloudGin Asset Management Suite eliminates need for multiple systems to monitor data and enter work orders
- Easily integrates with other predictive maintenance applications for data analysis and prediction

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The growth in availability of data and the technologies to harness meaningful information from that data, is leading to an evolution from preventive maintenance to predictive maintenance. At the core of predictive maintenance lies Internet of Things (IoT) sensors which are attached to pieces of equipment or assets. These sensors collect a variety of data, which when properly analyzed reveal patterns about an asset's performance. Data can include voltage fluctuations, usage data, temperature, humidity, and much more.

Prevention is better than cure. The goal of predictive maintenance involves maintaining equipment before it breaks down. Using collected data and predictive models to suggest when a piece of equipment is under stress, corrective actions can be taken before the point of asset failure. Ideally, maintenance should be scheduled at the most convenient and most cost-efficient

PREDICTIVE MAINTENANCE DELIVERS REAL RESULTS

- 30% Increase in asset uptime
- 50% Reduction in unexpected failures
- 25% Decrease in maintenance costs
- 20-35% Increase in equipment life.

KloudGin EAM and Predictive Maintenance (PdM)

Today's AI Asset predictive models are provided as standalone solutions. Customers are on their own to bridge gaps between these predictive models and asset maintenance solutions either manually or via expensive integrations, expensive to build and then maintain.

This is where KloudGin stands apart from the rest. KloudGin provides pre-integrated built-in Predictive models and Asset maintenance to monitor, analyze, predict and act, all from within one application.

KloudGin PdM incorporates Artificial Intelligence (AI) and Machine Learning (ML) technologies to help companies replace manual, reactionary processes with automatic, predictive processes to prevent downtime, improve profitability and create competitive advantage.

The Predictive Analytics feature consumes IoT data to train various asset category-based models. Collected data is then used to provide probability of failure predictions in the form of percentages and projected timeframe of the failure. The thresholds that are used for failure prediction are user definable. Follow-up work orders and notifications can be auto-generated based on specific threshold values and probability of failure percentages. KloudGin's Predictive models are not universal like most of the models available in the market today. KloudGin's models are specifically handcrafted by asset classes like pumps, transformers, et al giving unparalleled failure prediction accuracy.

The Predictive Analytics home screen provides a holistic overview of all the assets with a series of graphs and charts that are interactive. This allows the user to drill down into further detail of specific asset categories, individual assets, individual sensors, and historical work orders that have been executed on an asset. This interactive user interface provides all the data and analytical tools needed to make a data-driven decision on the next steps for an asset or group of assets.

Avoid unplanned downtime

KloudGin's Predictive Analytics is designed to consume and analyze sensor data and provide an alert to the user of a potential failure that may occur within a future time interval. With every sensor-reading update, the application is analysing and providing a probability of failure prediction. KloudGin directly integrates with the EAM system and follow-up work orders can be configured for auto generation and user notification as desired. This alert mechanism provides ample time to proactively react to the alert through an in-house repair activity or by contacting third-party reliability consultants to conduct in-depth analysis of the issue.

Extend asset lifetime

Predictive technologies are focused on assessing the asset component's current condition so that the correct maintenance can be administered at the correct time and in the appropriate manner. Monitoring the components and proactively taking action lessens the side effects of component catastrophic failure. In addition, the component can be replaced before ancillary damage occurs, ensuring that typical asset life expectancy is fulfilled and/or extended.

Improve customer satisfaction

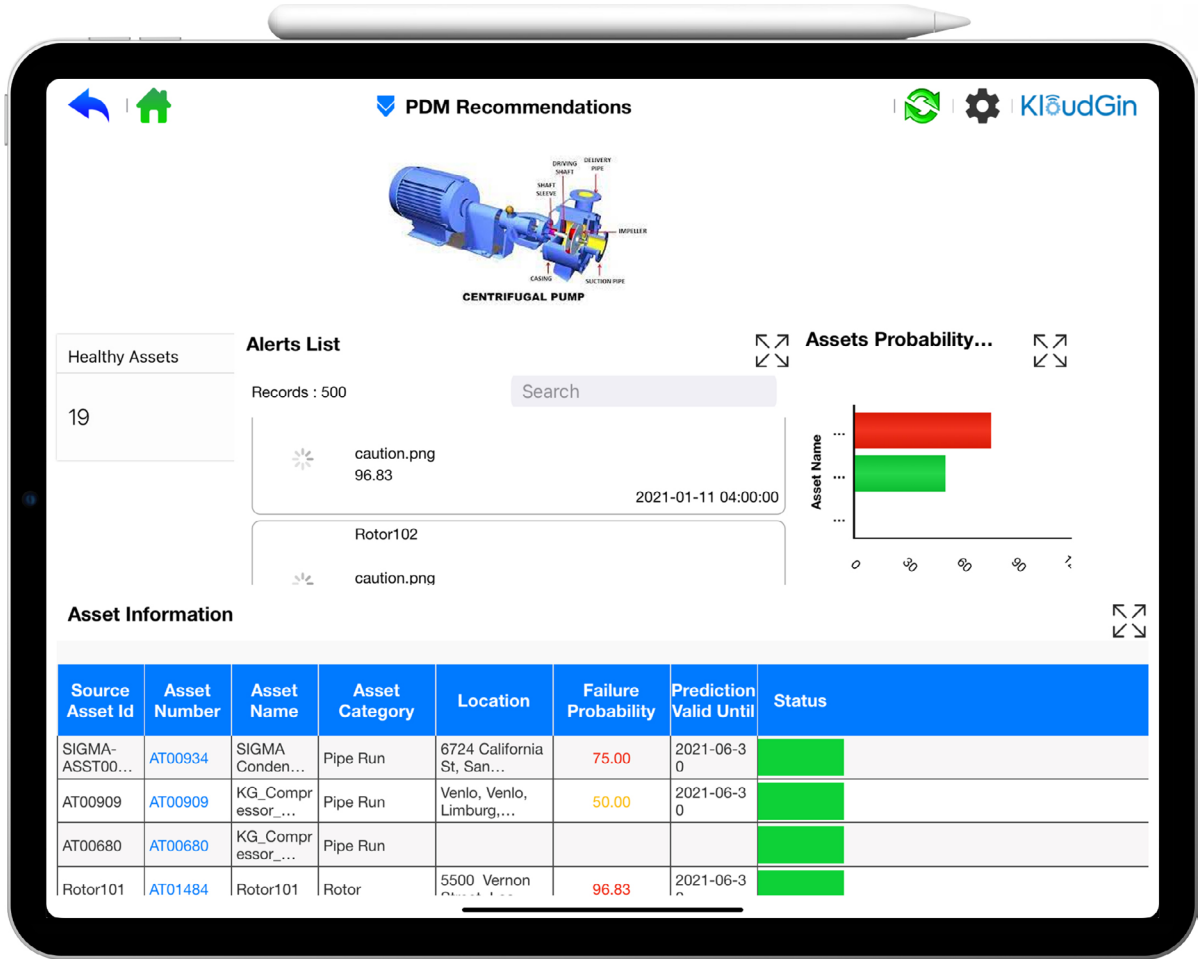
Assets that continually operate to meet or exceed their intended function are a key factor in driving overall customer satisfaction. The KloudGin Predictive Analytics feature provides the appropriate notifications that allow the maintaining organization to take proactive action. That action may be in the form of a planned repair and rehabilitation or by providing enough supporting information for a reliability consultant to analyze and make recommendations.

Reduce operating and repair costs

Aside from extending the life of assets which provides significant financial impact, organizations also experience increased labor utilization by more effectively planning and scheduling staff time on higher value activities. A proactive maintenance environment typically produces less overtime, decreases reactive maintenance costs, and delivers a reduction in safety incidents.

Improve safety

Performing the correct maintenance at the correct time means that employees may spend less time visiting the assets for visual inspections or time-based PM activities which decreases the probability of getting hurt. As an organization becomes more proactive in their maintenance journey, this organically reduces the amount of emergency repairs which are typically conducted at unforeseen times, under duress, and do not include thoughtful planning activities.



How KloudGin Excels at Deploying Predictive Maintenance

Many companies perform preventive maintenance and collect sensor data for their assets, but are unable to use that sensor data in a valuable cost-effective way. This is because their sensor data is currently stored in monolithic and siloed systems. Some of the sensor data is even locked into vendor-specific systems that are not integrated with other applications. The sensor data can also be more reactive in nature (i.e., high vibration reading), but it is not risk focused enough which results in minimal to no reduction in maintenance costs. Often, there is no ability to scale and utilize the data effectively because the current EAM system does not have a predictive AI-based analysis tool to leverage the data. KloudGin offers customers a migration path to manage their assets using the traditional method of regularly scheduled preventive maintenance as they move into predictive asset management for those most critical assets.

Preventive Analytics Engine	Asset Decision Engine		Asset Optimization Engine
GATHER DATA	ANALYSE	SCHEDULE	EXECUTE
SCADA	Asset Risks	Initiate Work Order	
Sensors	Predict Failures	Condition Management	Work Order Completion
			Mobile Workforce Integration
Generation & Water Assets	Capital Planning	Asset Optimization	Customer Communication

ABOUT KLOUDGIN

KloudGin is a trusted provider of the only combined, one-cloud, industry-focused mobile field service, work and asset management solution that connects customers, employees, and assets using AI-powered access to information, on any device.

For more information visit **www.kloudgin.com.**

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