Waukesha

CONNECTING WITH YOUR FLEET JUST GOT EASIER

HARNESS THE POWER OF DIGITAL AND TURN YOUR ASSETS INTO INSIGHTS

myPlant
Your package's throughput has declined, and we've detected the following issues …

User
Show current status…

myPlant APM
Digital Engine Technologies
Working Smarter For You

INNIO

BUILT TO WORK SMARTER.
YOUR POWER. YOUR DATA.
IN YOUR HANDS.

INNIO* Waukesha's* myPlant* Asset Performance Management (APM) solution provides preventative analytics for engines, compressors, and oilfield equipment. This cloud-based technology lets you manage your assets wherever you are in a secure and live setting.

Predictive monitoring of your package's health with this smart suite of analytics allows you to optimize performance and onsite checks. With myPlant APM you can improve uptime, efficiency and reduce lifecycle costs.

Take control of the operating performance and profitability of your compressor stations anytime and anywhere.

The power to keep your engine fleet running longer is in your hands. myPlant APM digital engine technology works smarter for you!

Scan **QR-code** or
visit **www.myplant.io**

> " *With our fleet spanning over a 100-mile remote footprint, we were in need of a solution to troubleshoot and avoid package downtime. The Waukesha myPlant system allows my crews to efficiently monitor and solve issues remotely using the iPhone app. With myPlant we're able to monitor engine operations and identify issues before they become shutdowns. This provides us optimized maintenance, increased revenue, and higher operating hours.* "
>
> *-Michael Jury, Sr. Maintenance Foreman*
> *HighPoint Resources - Powder River Basin*

Harness the Power of Digital and Turn your Assets into Insights

Real-time

Capitalize on our latest remote monitoring technology with myPlant APM. Rest assured, you can rely on Waukesha Gas Engines and our legacy of gas engine manufacturing experience and fleet operability knowledge. With more than 15,000 connected assets and 4,000 average active users, myPlant is your APM solution.

30 billion minutes of connected access

1.1+ milion monitored sensors

10TB data processed per year

70+ analytics running continuously

4k+ average monthly active users

OUR EXPERTISE. YOUR ADVANTAGE.
INNIO'S myPlant ASSET PERFORMANCE MANAGEMENT

Reliability

Drive reliability improvement with early issue detection based on our analytics or your own.

Productivity

Improve productivity by requiring fewer station visits through remote issue resolution and troubleshooting.

Short Payback + Long-term ROI

Lower your operating costs and save time with real-time asset health monitoring. The myPlant APM system provides you easy, centralized access to engine, driven equipment, oil analysis, and other systems – reducing manual data logging and automating reporting.

Efficiency + Security

Improve efficiency with real-time monitoring using an easy-to-use, cloud-based system that is accessible anytime, anywhere-through a secure gateway by using a mobile app or web-based connection.

APPLICABLE UNITS:

- All Waukesha units with CEC, ESM, or ESM2 Controller
- All packages with Murphy controllers, Allen Bradley Controllers, Altronic Controllers
- All other OEM engine controllers
- Any asset (pump, driven equipment, oil skids, etc.) with Modbus, OPCUA, or other relevant communication protocols out

INSTALLATION REQUIREMENTS[1]:

Typical hardware needs (per site)
- Data collector = 6in. x 3 in. x 2 in. space
- Cell router = 4in. x 3in. x 2in. space
- Coaxial connected antenna (magnet mounted)
- 2x ethernet cables typical

[1] This setup is suitable to connect up to six packages and associated BoP equipment.

CASE IN POINT:
myPlant HELPS EFFICIENTLY OPERATE OIL FIELDS

INNIO Waukesha worked with a Fortune 500 Oil and Gas production and exploration company to improve their midstream fleet performance. myPlant APM was used to aggregate all site data (including engine, compressor, and balance of plant sensors), automate fleetwide reporting, and prevent failures with a suite of predictive analytics. This led to a 30.6% increase in package and fleet utilization
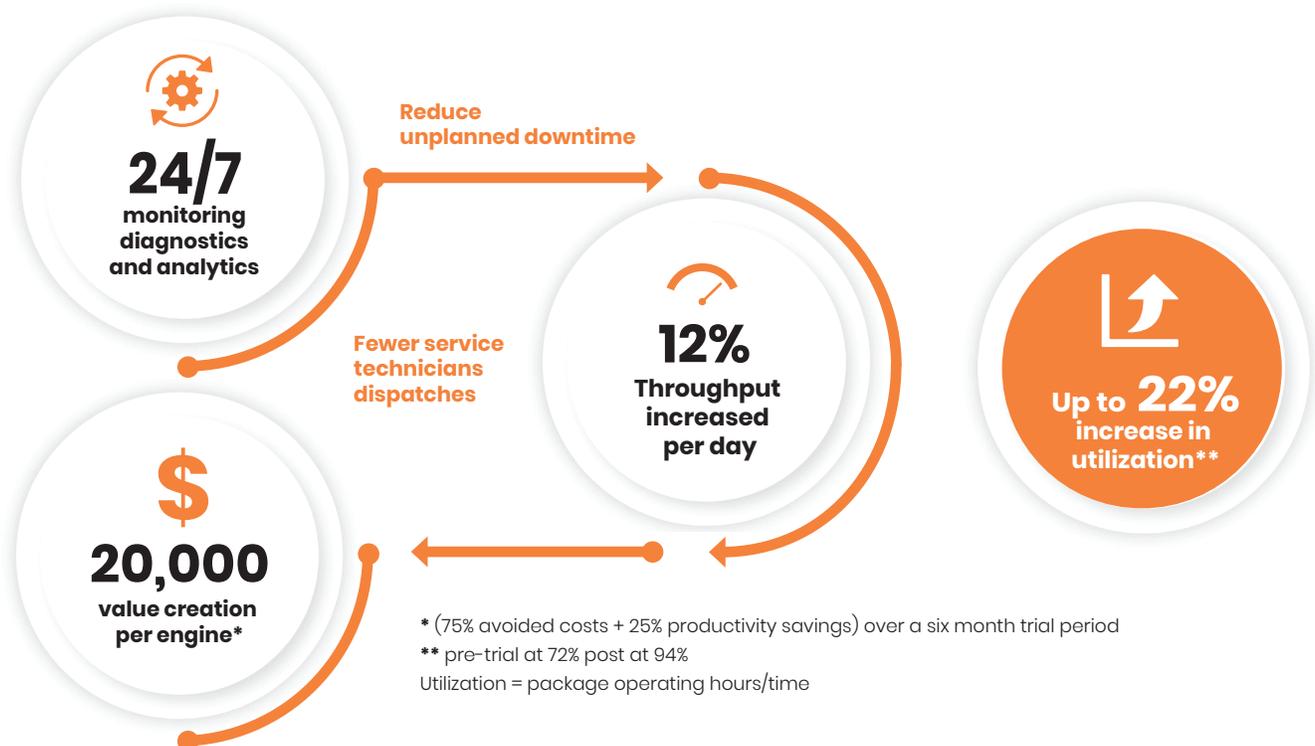
Predictive analytics

✓ **Automate detection and notification** of failed compressor valves

✓ **Automate** fleet wide **reporting** to drive deeper business **intelligence insights**

✓ **Reduce** number of **maintenance operations**

✓ **Improve knowledge transfer** and training between technicians

✓ **Improve** package **reliability, uptime, and performance**

myPlant APM features

- 24/7 remote monitoring & access to data
- Mobile app access and data exporting
- Integrated MobilServ Oil Analysis Reports (and other systems)
- ESM and ESM2 E-Help Manuals (Mobile and Desktop)
- Fleet reporting of ey performance indicators and data items
- Compression suite of analytics
- Lifetime data storage
- Waukesha manuals, bulletins, and video training guides
- Coolant health reporting merged from several data sources to one platform
- Customized alerts and user-defined analytics
- Waukesha service tools such as Lifecycle Parts Lists

HOW INNIO USES myPlant INTELLIGENCE FOR OUR CUSTOMERS

24/7 monitoring diagnostics and analytics

Reduce unplanned downtime

Fewer service technicians dispatches

12% Throughput increased per day

Up to **22%** increase in utilization**

$ 20,000 value creation per engine*

* (75% avoided costs + 25% productivity savings) over a six month trial period
** pre-trial at 72% post at 94%
Utilization = package operating hours/time

REAL-TIME
PREDICTIVE ANALYSIS

SMALL DEVIATIONS FROM AN OTHERWISE HEALTHY ENGINE CAN GO UNDETECTED. PREDICTIVE ANALYTICS ON myPLANT APM ANALYTICS ALERT YOU TO RECEIVE PREDICTIVE DATA BEFORE AN UNPLANNED EVENT.

Finding deviation in patterns

That's where analytics come in. myPlant algorithms continuously analyze the data streamed from your engines to detect any deviations that could cause unplanned events. Based on the data from thousands of engines, these analytics algorithms distinguish patterns of healthy engine operations—and note when deviations occur.
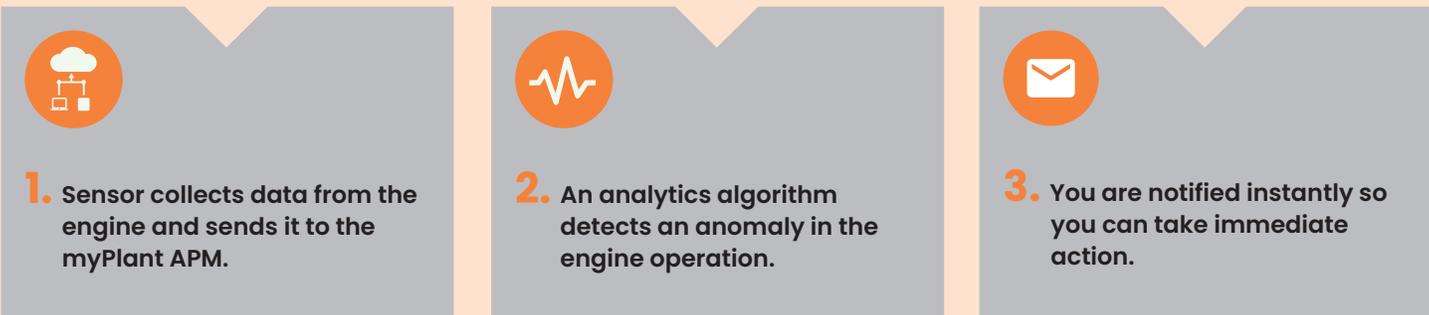
Acting before an event takes place

When relevant deviations are detected, you are notified immediately via email or SMS. You will receive instructions on what to do — before any unplanned events have occurred.

Predicting parts lifetime

Additionally, analytics algorithms are used to predict the lifetime of engine spark plugs, lubricants and filters. By getting this information beforehand, you replace your consumables only when necessary, saving you time and money.

HOW PREDICTIVE ANALYTICS WORK

1. Sensor collects data from the engine and sends it to the myPlant APM.

2. An analytics algorithm detects an anomaly in the engine operation.

3. You are notified instantly so you can take immediate action.

An example of how a predictive analytic creates value for our customers is our Engine Oil Remaining Useful Life Analytic. This analytic predicts the remaining useful life of engine oil using machine learning algorithms and real-time engine operating data. Data is pulled automatically from the preferred oil analysis lab, eliminating the need for paper or logging into a separate site. Overall this helps customers push out oil change intervals, maximize the life of their oil, and reduce operating costs. This and other analytics are the result of close collaboration with our midstream operators, oil analysis labs including MobilServ, and INNIO's industry leading digital team.

EVERYNING YOU NEED AT A GLANCE

OUR myPlant APM SOLUTION GIVES YOU THE RIGHT INFORMATION AT THE RIGHT TIME.

Engine condition

Start success rate

Number of shutdowns

Engine performance
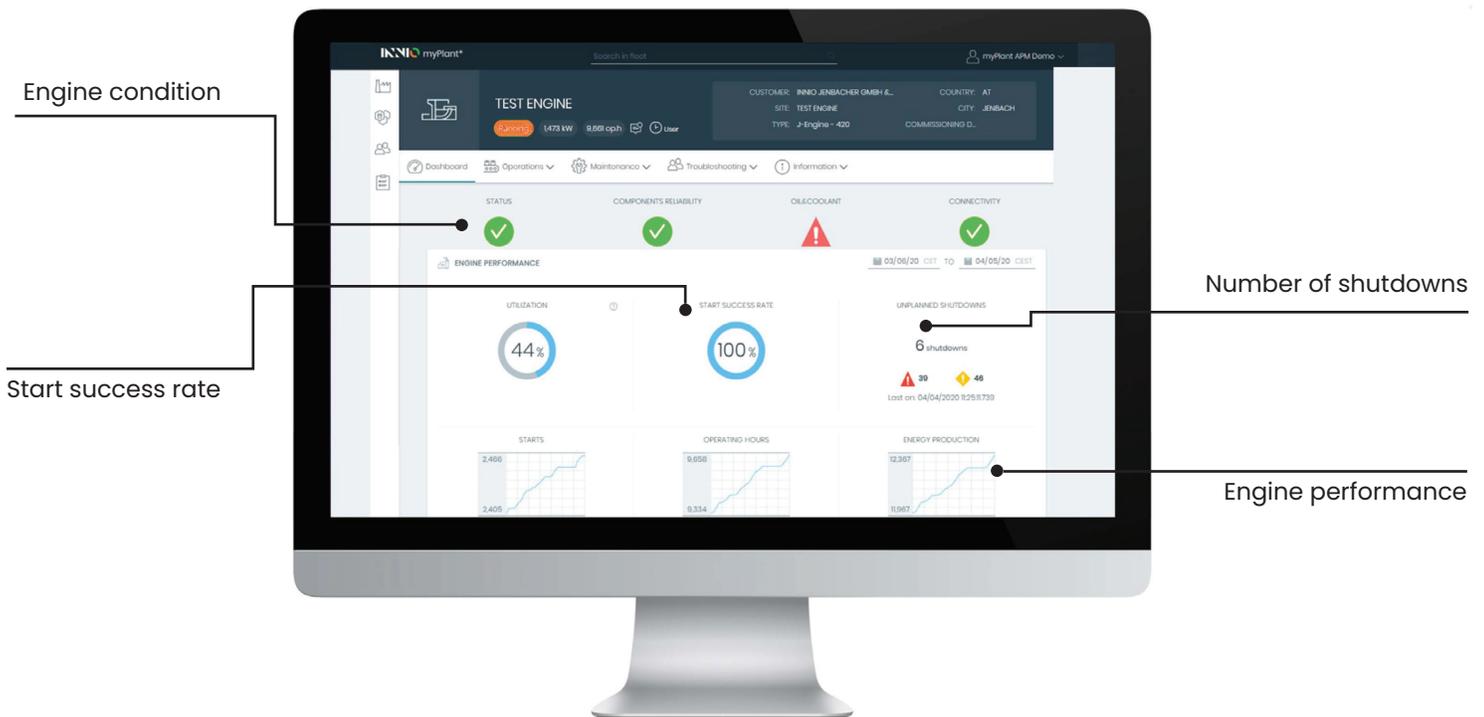
✔ **COMPREHENSIVE SITE & ASSET DASHBOARD:**
Provides important engine information at a glance with a comprehensive overview detailing operational and performance data. It shows engine information such as start success rate, operating hours, number of shutdowns and engine alarms (see dashboard image above).

✔ **IMPACTFUL PREDICTIVE ANALYTICS:**
Helps you reduce costs through automated email/ mobile notifications that give you operational data needed for early prediction of upcoming engine events.

✔ **KEY CUSTOMIZED NOTIFICATIONS:**
Customizable engine monitoring based on your business needs. Create your own notifications based on engine failure codes and operational data for user-defined monitoring.

✔ **SECURE REMOTE VISIBILITY:**
Allows you to manage your engine or your entire fleet without requiring onsite personnel. Get direct access to your control system to change parameters.

✔ **MEANINGFUL DATA CONSOLIDATION:**
Merges relevant information for your business from several data sources to one platform, such as automatic integration of oil and coolant reports from your laboratory and the latest information on catalyst health.

✔ **DETAILED FLEET REPORTING:**
Provides valuable insights via a simple fleet overview as well as deeper data exploration through individual reports for your connected fleet including alarms, power output and other operational data.

(1) Oil and coolant reports integration is available for the following laboratories: Exxon MobilServ, Polaris, Spectro, JetCare, MIC GSM

myPlant APM
RELIABILITY MANAGEMENT PACKAGE

PRIMARY MODULES

Asset health monitoring

Anytime, anywhere visibility to asset's current operating status and key operating parameters

Asset condition management

Proactively manage asset performance with analytics and share knowledge across the enterprise

Troubleshooting toolkit

Diagnose and resolve issues quickly using the suite of troubleshooting tools, while preserving knowledge in the enterprise

Fleet & plant management

Manage the entire fleet with tools and reports that provide picture of all the connected assets

INNIO Waukesha myPlant Offering:

Module		Feature/Functionality	Included in package/offering
Asset health monitoring *		Asset operating status	✓
		Operational data trends	✓
		Controller alarms summary	✓
Mobility *		Mobile app for iOS, Android and Blackberry devices	✓
Asset condition management		Instant event push notification	✓
		Reliability analytics pack	✓
		Build your own analytics	✓
		Lube oil analysis reports integration	Add-on: Dependent on API availability from the lube oil lab
Troubleshooting Toolkit		Diagnostic workbench	✓
		Integrated troubleshooting guidelines for controller alerts & trips	For engines with ESM & ESM2 controllers
Fleet/Plant Management		Fleet map with engine status	✓
		Reliability / Availability / MTBF metrics	✓
		Fleet metrics summary and reporting	✓
		Asset and site key performance indicators	✓

* Available, on by case basis, as part of 'myPlant Asset Visbility' package

At Waukesha, we're working every day to design and build engines and programs that help power your tomorrow.

INNIO* is a leading solutions provider of gas engines, power equipment, a digital platform and related services for power generation and gas compression at or near the point of use. With our Jenbacher* and Waukesha* product brands, INNIO pushes beyond the possible and looks boldly toward tomorrow. Our diverse portfolio of reliable, economical and sustainable industrial gas engines generates 200 kW to 10 MW of power for numerous industries globally. We can provide lifecycle support to more than 52,000 delivered gas engines worldwide. And, backed by our service network in more than 100 countries, INNIO connects with you locally for rapid response to your service needs. Headquartered in Jenbach, Austria, the business also has primary operations in Welland, Ontario, Canada, and Waukesha, Wisconsin, US.

For more information, visit the myPlant website at **www.myplant.io** or the INNIO website at **www.innio.com**.