

vigilantplant.®

The Clear Path to Asset Excellence



Preempt bottlenecks
Optimize operation and maintenance



Avoid surprises
Predict asset conditions and avoid
downtime



Reduce blind spots
Monitor plant-wide asset
conditions

Bulletin 00A01A21-24E

vigilantplant.®
The clear path to operational excellence

YOKOGAWA ◆

How can Yokogawa help you achieve long-term asset excellence?

**Long-Term
Asset Excellence**

01

Asset Reliability

Reliability for non-stop production

Reliability built into every one of our products delivers Asset Reliability that sustains daily use of plant assets for a safe and agile production.



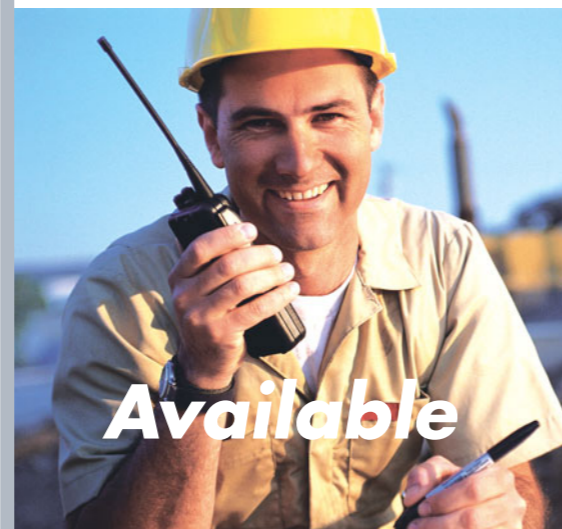
Reliable

02

Asset Availability

Maintainability in the field

A tool that focuses field maintenance ensures Asset Availability with quick engineering and efficient maintenance of field assets.



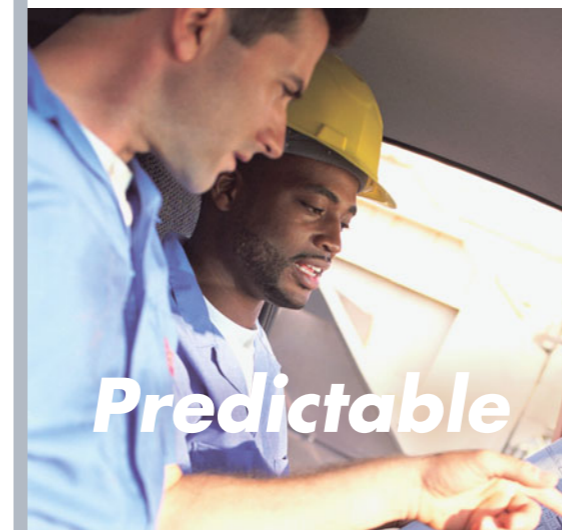
Available

03

Asset Predictability

Online monitoring and predictive diagnosis

Centralized online monitoring and predictive diagnosis adds Asset Predictability, enabling maintenance optimization for maximum plant uptime.



Predictable

04

Asset Performance

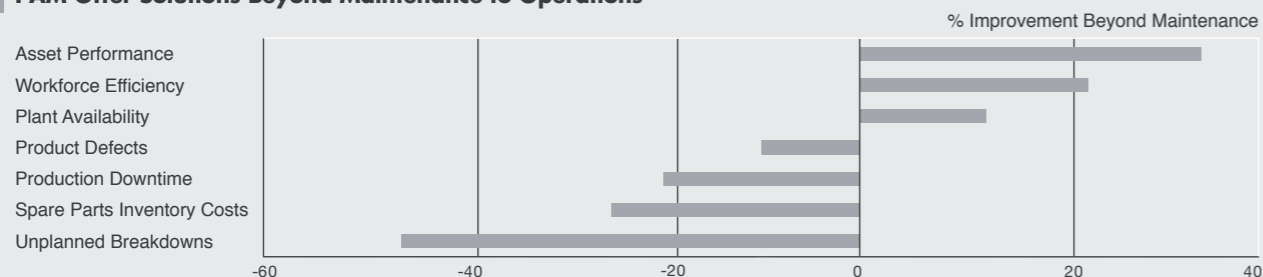
Continuous performance improvement

Pushing asset excellence ever further, advanced optimization services deliver Asset Performance throughout the life cycle of your plant.



Sustainable

PAM Offer Solutions Beyond Maintenance to Operations



Source: ARC Advisory Group

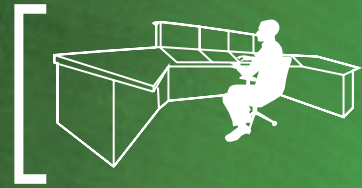
"Plant Asset Management (PAM) solutions, embedded in automation systems and enriched by new asset monitoring technologies, are evolving beyond traditional predictive maintenance into an indispensable source of information for plant operators. PAM solutions provide operators with valuable insight necessary to effectively operate today's complex production plants. With the aid of real-time PAM information, plant operators can extend the life of assets and improve productivity, efficiency, and plant availability."

Wil Chin, ARC Advisory Group



01 Asset Reliability

Reliability for non-stop production



The Operator can focus on true process concerns, trusting in the reliability of the integrated production control system.

02 Asset Availability

Maintainability in the field



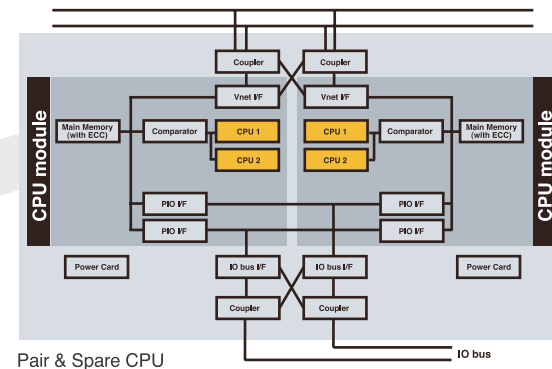
The Field Technician can count on a versatile and integrated tool to perform life-cycle engineering and maintenance in the field.

The Operator Priority

Daily use of plant assets for safe and agile production

Reliability of Key Automation Assets

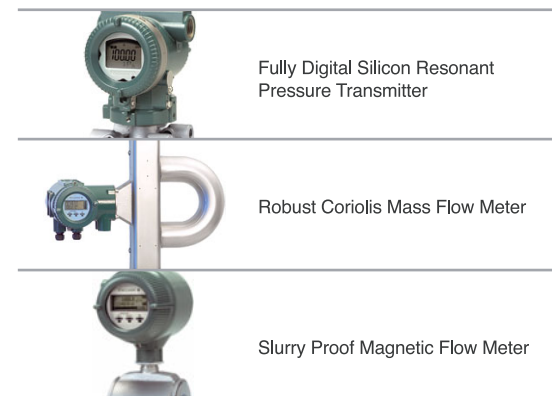
Yokogawa is unmatched for our extreme commitment to asset reliability. At the heart of the Yokogawa systems is the unique "Pair and Spare" controller architecture, consisting of a redundant set of CPU modules, while each in turn contains two micro processors. These two continuously compare the output of the other, initiating a bump-less switchover if any mismatch is detected. Through this kind of reliability, Yokogawa CENTUM CS 3000 DCS has an availability of 99.99999% (seven 9s).



Pair & Spare CPU

Stable and Accurate Process Measurement

For the mission critical control system to secure dependable production control, field instruments must consistently deliver stable and accurate process measurement. Be it the DPharp fully digital silicon resonant pressure sensor, the box-in-box design robust coriolis mass flow meter or the dual-frequency excitation technology magnetic flow meter; Yokogawa field instruments deliver stable process measurement under the severest of conditions. Simple structure and high performance are the design principles of Yokogawa instruments – built to last in the field.

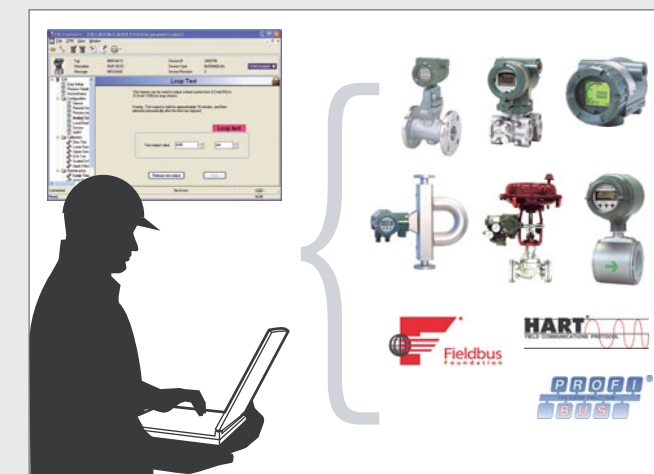


The Field Technician Priority

Quick engineering and efficient maintenance of field assets

One Tool for Field Device Engineering

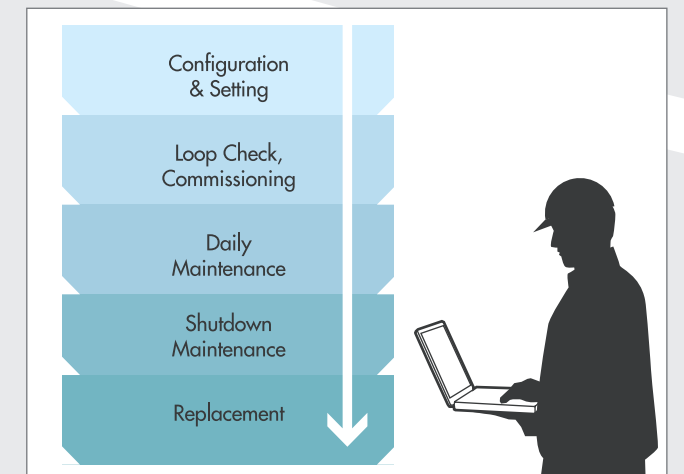
One integrated tool is now able to handle parameter setting for intelligent field devices, regardless of their make or the field communication protocol used. FieldMate enables quicker device configuration and problem solving, avoiding complex and time-consuming tasks.



One tool for a variety of devices and protocols

One Tool over Field Device Life Cycle

While doing maintenance work on field devices, FieldMate automatically stores the maintenance work log. FieldMate supports maintenance work from initial check-in through commissioning and operation, while reducing the unwanted paper trail.



A single database consolidates your work flow

CENTUM 3000 R3

Integrated Production Control System

As if an availability of seven 9's wasn't enough, Yokogawa CENTUM delivers additional real-time asset intelligence and integrated safety information. Operators can make better decisions to uphold the speed and quality of production while minimizing unplanned downtime and safeguarding your plant.



FieldMate™

Versatile Device Management Wizard



Yokogawa FieldMate helps field engineers configure, maintain, and replace field devices from multiple suppliers efficiently and effectively. FieldMate supports full maintenance work flow, securing traceable maintenance database for explicit sharing of maintenance know-how.



03

Asset Predictability

Online monitoring and predictive diagnosis



Maintenance Personnel can easily diagnose asset conditions, ensuring asset availability while optimizing maintenance.

04

Asset Performance

Continuous performance improvement



Plant Management can tap the wealth of diagnosis know-how and performance improvement solutions to ensure asset excellence over plant life cycle.

The Maintenance Personnel Priority

Maintenance optimization for maximum plant uptime

The Plant Management Priority

Continuous improvement of asset utilization and performance

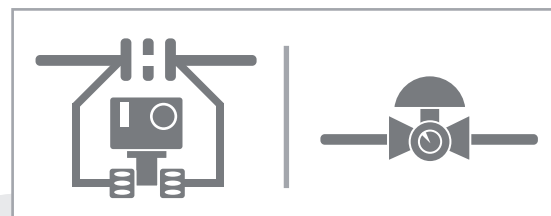
Online & Centralized Automation Asset Management

Monitoring field device health and process interface conditions online, PRM enables the maintenance engineer to minimize breakdown maintenance as well as preventive maintenance. Quick on-line diagnosis reduces unnecessary field inspection while condition-based maintenance minimizes plant downtime, both planned and unplanned.

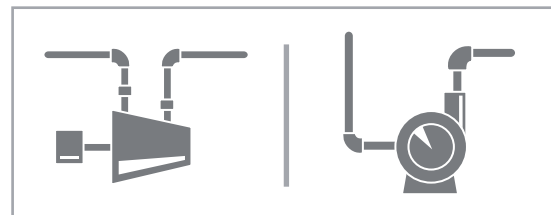


Integrated Diagnostics Information

Maintenance personnel must keep the entire plant in good shape, managing both automation assets and production assets for maximum uptime. PRM supports open technologies such as OPC, FOUNDATION fieldbus™ and FDT/DTM to better integrate innovative diagnostics solutions from best-in-class third party suppliers.



Automation Device & Process Interface Diagnostics



Machinery & Production Equipment Diagnostics

Pre-Commissioning

An asset excellence program should be initiated from the start of the plant life cycle – securing the right environment, installation, and parameter definitions for the plant assets to perform optimally once plant operation begins. Yokogawa experts help audit the installation environment, preventing deterioration of field asset performance.



Installation Environment Diagnosis

Operation & Maintenance

Once into plant operation, asset excellence is an ongoing challenge. Yokogawa helps to keep your plant assets performing at the optimum level while your business and plant grows. Diagnosis and optimization services utilize asset data, process data, and performance models to monitor and predict future performance of plant assets.



Loop and Unit Performance Diagnosis and Optimization

Upgrade & Renewal

During a long plant life cycle, eventually the instrumentation and control systems must be renewed to keep a competitive edge. Yokogawa helps you determine the longevity of your automation assets, and depending on the results of the diagnosis, delivers services for life extension, upgrade, migration, and/or replacements without interrupting ongoing production in the plant.



Providing quick on-line access to automation assets right from the project phase, Yokogawa PRM ensures fast commissioning and startup. Once operation begins, PRM helps maintenance personnel to integrate diagnostics information and execute predictive maintenance.



InsightSuite™ AE

Asset Excellence Services

Yokogawa develops and delivers a suite of services that maximize asset performance and optimize maintenance. Our InsightSuiteAE services synthesize application knowledge with modeling and diagnosis, detecting performance gaps and performance deterioration in advance.



VigilantPlant Operational Excellence Model

Excellence in production, asset, and safety sustained over the life cycle of your plant.

- **Production Excellence** for operational agility and adaptability
- **Asset Excellence** for asset availability and utilization
- **Safety Excellence** for health, safety, and environmental (HSE) protection

The VigilantPlant Operational Excellence Model aims to sustain your profitable business growth by enabling excellence in three key aspects of plant operations over the life cycle of your plant.



vigilantplant.[®]

The clear path to operational excellence

SEE

CLEARLY

KNOW

IN ADVANCE

ACT

WITH AGILITY

VigilantPlant is Yokogawa's automation concept for safe, reliable, and profitable plant operations. VigilantPlant aims to enable an ongoing state of Operational Excellence where plant personnel are watchful and attentive, well-informed, and ready to take actions that optimize plant and business performance.

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