

FIELD PROCESS KNOWLEDGE SYSTEM (PKS)

AI-Powered Field Maintenance through
automated job packs and intelligent scheduling
built to help increase wrench time.



Honeywell

CHALLENGES FACED IN FIELD MAINTENANCE TASKS

Make sure your field workers always have the most valuable tool: The information they need to get the job done.

When maintenance technicians deal with equipment in the field, it is vital they are prepared with the right documents, procedures, parts, permits, and protective equipment. An excellent job pack is essential to complete maintenance work in a single trip.

Manual preparation of the job pack is time-consuming, laborious, and prone to error. Even when done well, it can consume valuable hours from planners and supervisors as they access multiple applications, retype the same information, manage various maintenance tasks and personnel safety, and locate equipment in the field for Lockout/Tagout procedures.

Often, the challenges for supervisors include job packs which may contain errors, miss vital information, or permits. It may take overstretched planners' significant amounts of time to gather

the latest instructions, historical insights, and specific asset documents for a maintenance task. Instead, they mostly rely on generic instructions.

But when planners try to save time, it can cost days elsewhere: Workers may lack vital information, parts, or PPE and as a result they may make multiple trips to complete work, prolong jobs; and need to perform more rework because instructions are not sufficiently specific.

Field PKS addresses the issues faced by maintenance technicians in the field and the supervisors and planners who oversee their work.

It is built to assist planners to create efficiency when creating job packs and tracking tasks, and to assist field worker with resources to do the job right. Also, collaborate effectively with assets, process and people at site.

HONEYWELL FIELD PROCESS KNOWLEDGE SYSTEM (PKS)

Honeywell Field Process Knowledge System (PKS) is an Integrated Field Worker system, powered with artificial intelligence to help make Field Maintenance actions easier, safer, and more accurate. It will help technicians, planners and supervisors have the right information, tools, and guidance to complete their job.



For Supervisors and Planners

Smart job pack preparation and maintenance task tracking:

- IT/OT integration for contextualised information
- AI assistance to prepare job packs
- Workflow management for faster task delegation
- Efficient, simple task tracking and monitoring
- Streamline notifications or observations using AI-enabled notes
- Reduce duplication of issues raised by multiple field workers

- Faster access to job or equipment maintenance history
- Job packs with photos, videos, or other details for better understanding of the equipment and job to be done

- Easy searching to quickly find documents
- Access to specific instructions for specific assets
- Effortless reporting of field observations by utilizing AI-enabled notes along with video or photo capabilities

For Field Technicians

A digital job pack with information they need to complete the task:

- A single app to access permits and contextual information, field related documents and videos, workpack, checklist SOPs, DCS information etc.

MANAGER'S DASHBOARD

- Task planning, scheduling & assignment
- ePermit / task status
- Workforce Competency Levels
- Field workers' location and safety status
- Report generation
- Operational Efficiency KPIs



STANDARD INTERFACES

Learning Management System (LMS)

SAP

OPC Interface

ePermit

Document Management System (DMS)



PLANT DIGITAL TWIN

PLANNER AND SCHEDULER

REMOTE VIDEO COLLABORATION

LOCATION AND SAFETY

Prepare

Execute

Troubleshoot

Update Results

OT SYSTEM INTERFACES

DCS & Safety

Historian

Honeywell Forge Asset Performance Manager (APM)

Field Device Manager(FDM)

Versatilis

Fig1. Field PKS architecture

AN INTEGRATED SOLUTION FOR FIELD ACTIVITIES

For planners and supervisors, it accelerates and enhances task delegation, work package creation, workflow management, reporting, KPI monitoring, maintenance reporting, work orders, job identification and closures, permit integrations, and training opportunity identification.

At its heart, a generative artificial intelligence (AI) model using process historian, LMS, SAP, and other data is included to provide insights that can help streamline, automate, and enhance job pack preparation.

Planners submit a request, and Field PKS can rapidly identify potential causes and required work, and gather the documents, permits, parts, PPE, location, and instructions required –

ready for the planners' review, approval, and assignment. For planners and supervisors, it accelerates and enhances task delegation, work package creation, workflow management, reporting, KPI monitoring, maintenance reporting, work orders, job identification and closures, permit integrations, and training opportunity identification.

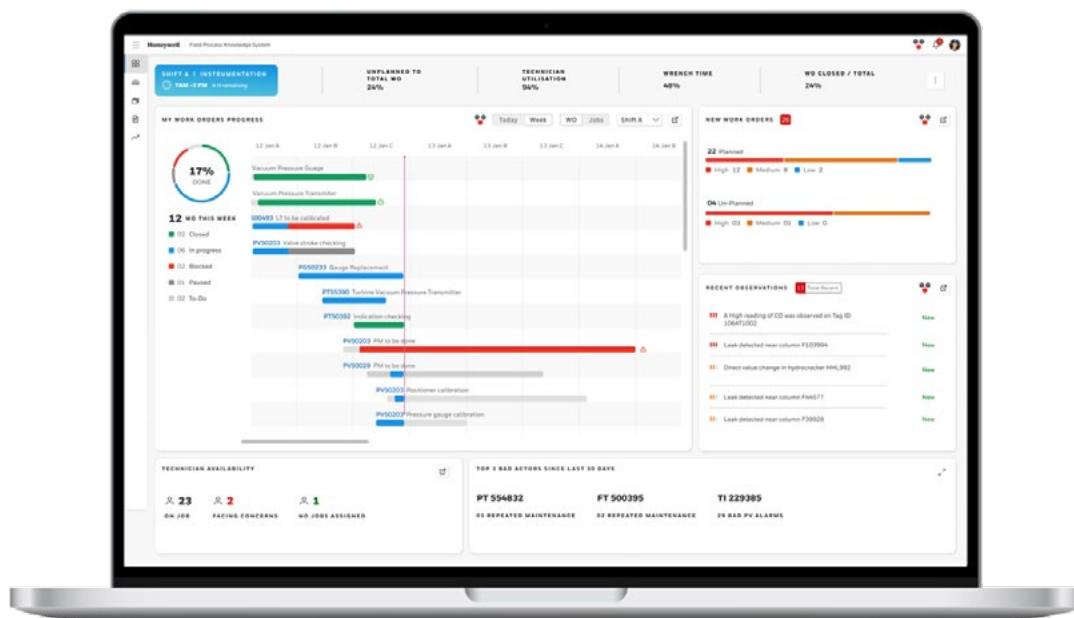


Fig 2. Field PKS dashboard showcasing the status of various field activities.

OUT IN THE FIELD, DIGITALLY CONNECTED AND READY FOR THE JOB

For maintenance technicians, Field PKS is built to allow more wrench time by reducing time wasted. With proper documentation and contextual information, field workers can confidently carry the right tools, permits, and PPE. They can access necessary documents and information on any mobile device, ensuring seamless collaboration with control room personnel and other processes and assets.

Once there, Field PKS helps them rapidly locate the right equipment and, with specific instructions for the task, use their time more efficiently. With access to images, video, relevant information from IT and OT system, maintenance technicians are aided in getting the work done right. Upon completion, it automates field reporting, notifying supervisors of job completion with photos and videos for detailed review, and provides authenticated handover to operations.

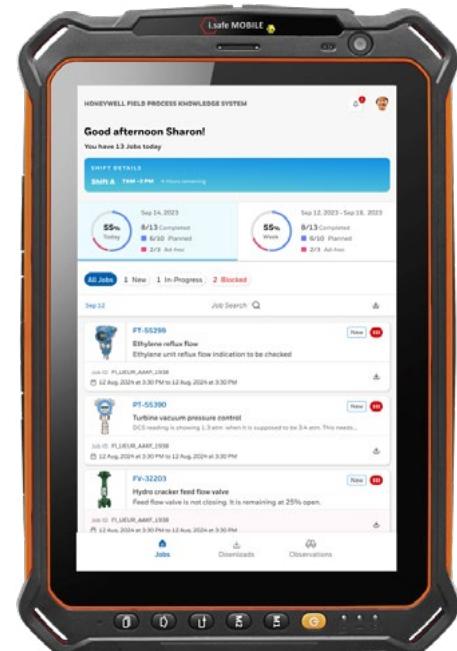


Fig 3. Field PKS App

FIELD PKS ENABLES:

- Quicker responses to breakdowns and unplanned downtime
- Simplified task tracking and status monitoring
- Fewer trips, by organizing items required to complete jobs in a single trip
- Reduced rework, with more jobs done right first time
- Easy reporting and job closure
- Improved training to accelerate proficiency

Tracking Efficiency, Identifying Training Opportunities

Field Process Knowledge System (PKS) provides KPIs to drive improved productivity and operational efficiency. With better visibility on assigned tasks and confidence that field workers have a comprehensive, correct job pack, Field PKS reveals worker effectiveness and addresses skills gaps.

Managers and supervisors can track and compare wrench time for common tasks to see where they could provide additional support. It helps rapidly identify competency issues and provides opportunities for tailored training to improve maintenance technicians' efficiency and effectiveness.

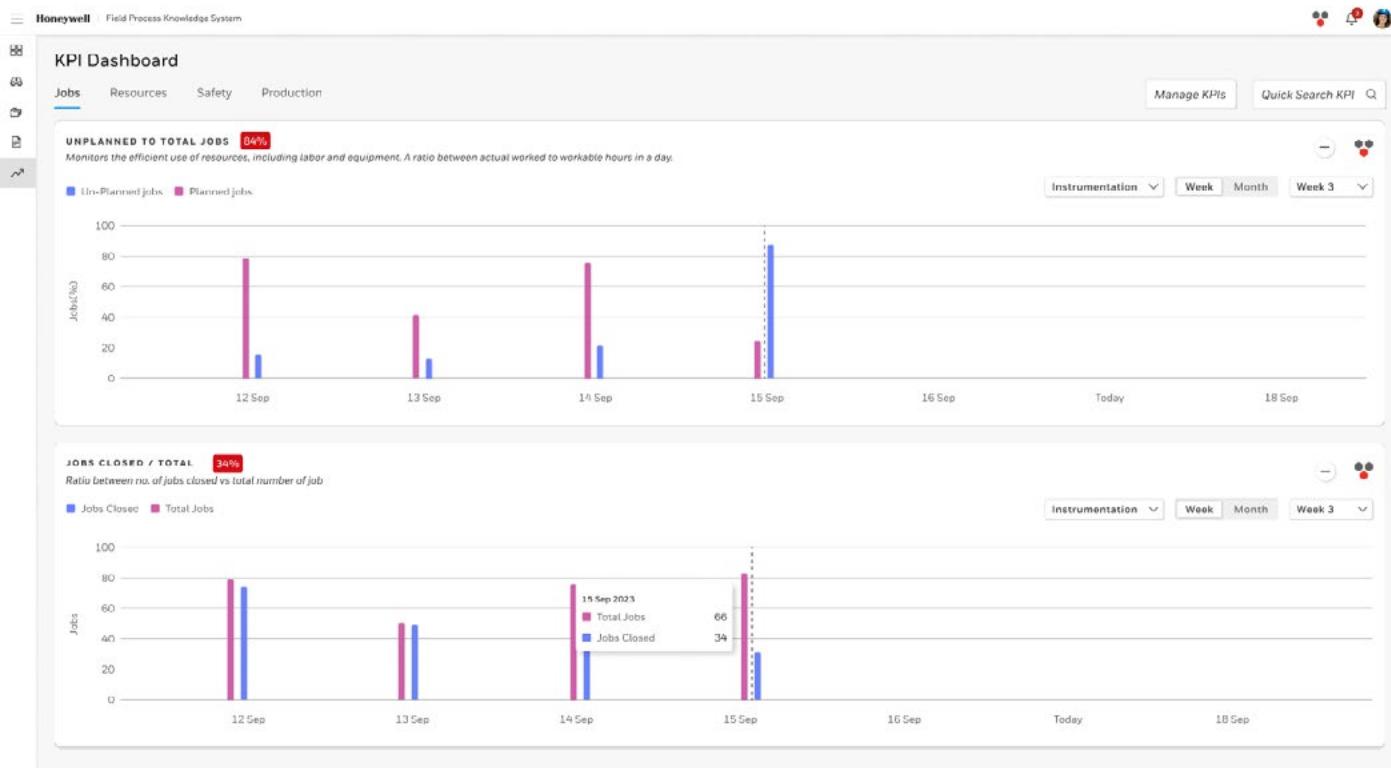


Fig 4. Field PKS KPI dashboard

WHY HONEYWELL?

Honeywell is the right partner to develop customers' AI- driven solutions, as we seek to understand the primary challenges of our customers and collaborate to develop holistic solutions while maintaining them over the lifecycle of the plant.

Honeywell brings an unparalleled Automation Technology and Process Domain expertise of over 80 years, having installed, and maintained more than 18,000 control and safety systems, and granted process licenses to more than 4,000 units.

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Statements in this presentation relating to Honeywell's future plans, expectations, beliefs, intentions, and prospects may contain "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are based on management's current expectations and assumptions and are susceptible to a number of risks and uncertainties, many of which involve factors beyond our control. Actual outcomes and results may differ materially from these expectations and assumptions.

These factors include—but are not limited to—risks associated with developing and delivering new features, the adoption and successful deployment of our products or services, slower than expected market expansion, cybersecurity incidents, interruptions or performance problems (including service outages), inability to retain key personnel, failure to integrate any new business, and worse than expected global economic conditions. Further information on potential factors that could affect our business is included in our most recent Form 10-K and Form 10-Q filings. These filings are available on the SEC's website or at Honeywell's Investor Relations website at <https://honeywell.gcs-web.com/>.

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Honeywell Process Solutions

2101 CityWest Blvd.
Houston, TX 77042

Honeywell House, Arlington Business Park
Bracknell, Berkshire, England RG12 1EB UK

Shanghai City Centre, 100 Zunyi
Road Shanghai, China 200051

process.honeywell.com