

Adding to the Digital Job Shop

Tools are expanding to stay ahead of today's unique manufacturing challenges.

Matthew Jaster, Senior Editor

We came across an interesting statistic recently in our normal product coverage for Gear Technology magazine. United Grinding had more than 2,500 remote deployments during the pandemic. Digital assistance systems—big and small—helped machine operators navigate production output in real time during this chaotic work period.

These flexible working models provide a way to stay connected with customers under any circumstance. Laptops, smartphones, tablets and even wearables can assist with condition monitoring and predictive maintenance while sensors and barcodes dispatch key product information in real-time.

United Grinding continues to expand its digital solutions and products regularly to meet the changing demands of the manufacturing sector (grinding.com/en/digitalization/digital-solutions/). Is it time for your shop to consider expanding your digital footprint as well?

Neugart recently provided digital information for analog components. The link between the physical gearbox and the digital world in this example occurs via a data matrix code (DMC), a 2D code on the gearbox nameplate—scanned via smartphone or tablet.



This identification leads immediately and around the clock to the relevant product information and other functions. The user then receives, for example, a clear list of all the versions of the gearbox in question or can download the appropriate operating and mounting instructions (neugart.com).

GE Digital's *Asset Performance Management (APM)* software allows owners to optimize asset performance and O&M efficiency across equipment types, a plant, or an entire fleet with modules in Strategy, Reliability, Health, and Integrity, and more—all under one software suite.

Power generation organizations must adapt and modernize to maintain sustainable and profitable operations within certain constraints, such as limited expertise and resources, changing energy demands and resource types, and aging equipment. APM software helps organizations identify and minimize risk and embed process efficiencies and data analytics in their workflows (ge.com).

Senseye Predictive Maintenance offers a cloud-based platform designed to support large-scale asset monitoring. By utilizing custom AI algorithms, the platform effectively identifies both existing and potential issues, empowering maintainers to prevent malfunctions and unplanned downtime.



Accessible through any web browser on any device, the platform allows inspections to be conducted at any time and from anywhere, resulting in time savings and promoting a proactive maintenance approach. Its seamless integration into real-world workflows enables users to make informed decisions and optimize their operations.

Senseye Predictive Maintenance takes an asset-agnostic approach by automatically constructing models. This streamlines the work of maintenance teams, reduces the likelihood of unexpected outages, eliminates manual inspections, minimizes the need for excess spare parts, and prevents unnecessary over-maintenance (sw.siemens.com).

These are just a few examples of how the digital job shop is changing manufacturing operations through app-based and mobile tools accessible 365 days a year—day or night.

While these upgrades require the right infrastructure, most job shops have the basics in place to make the transition work. Workforce talent, technology, data, and a fair amount of ambition can transform any MRO department with a little patience and creativity.

