

# Weir's intelligent path to optimised mining

Building on over 150 years of engineering expertise, Weir is driving greater customer value through its three NEXT Intelligent Solutions packages: Insight, Uptime and Production. These packages reflect Weir's customer-focused approach, enabling operations to harness real-time data, advanced automation, and improved efficiency.

**D**elivering highly engineered solutions for over 150 years, Weir is unlocking even more potential with three focused value packages in its NEXT Intelligent Solutions packages.

"We maintain a close connection with our customers to ensure our solutions evolve with their changing needs and deliver real value to their operations," says Marina Eskola, Director of Digital Solutions Management at Weir. "This customer-centric approach also guides how we digitally enhance our equipment and systems and is clearly reflected in the value-driven packages within our NEXT Intelligent Solutions."

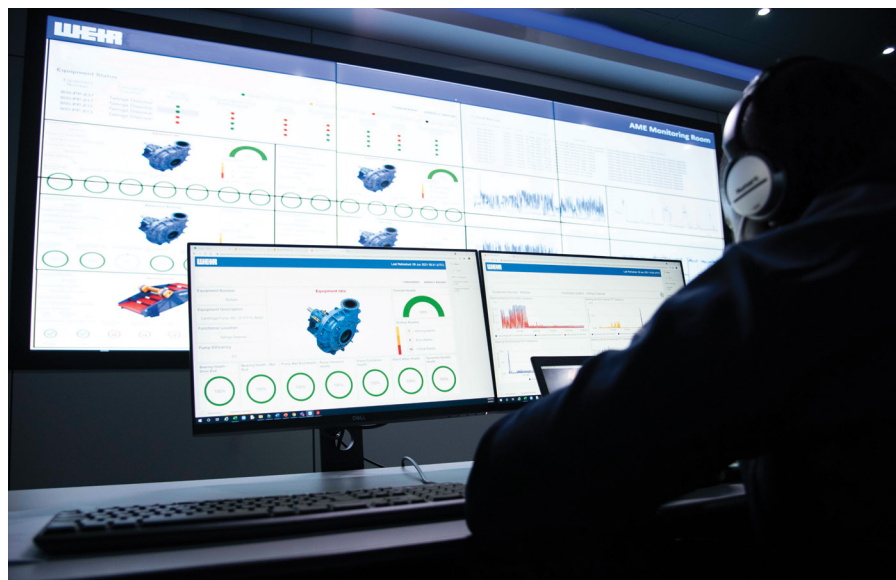
The NEXT packages – Insight, Uptime and Production – align with the journey that customers can take in partnership with Weir to leverage real-time data in making informed decisions, applying cutting-edge sensing technologies and boosting operational efficiency.

"The three packages highlight the focus at each key step of this journey, allowing the customer to steadily gain more value from this intelligent technology as they progress through the stages of implementation," she says. "At the foundation is our Insight package, which, through a web interface, gives the customer access to a dashboard of vital information about the performance and condition of their equipment in real time."

With Weir's in-depth technical understanding of all its equipment, supported by extensive data on historical trends and parameters, NEXT Insight also includes key performance indicators and algorithms as part of this application to assist in the decision-making process.

"An important differentiator between NEXT and other condition monitoring systems is that we go beyond just alerting the user to any potential issue," she adds. "We are also able to recommend a course of action for the customer to follow to address the issue being flagged."

This leads her to the following package in the customer journey: Uptime. While the goal of the Insight package is to provide visibility across the operation, she explains, the Uptime package aims to extend the operational lifetime of the



Weir uses various AI tools to predict the useful lifetime of equipment and the probability of mechanical failure.



Weir's detailed technical knowledge and historical data can be applied to necessary adjustments on physical equipment.

equipment itself. "This is where we add predictive capabilities so that we can forecast the remaining useful lifetime of the critical components," she says. "This in turn allows the customer to run the components for longer – until their actual condition demands replacement."

This is a significant improvement on using a time-based replacement schedule, which is often the norm when there is no visibility of the components' wear. By extending the life of components, customers can also reduce the equipment's total cost of ownership while mitigating the risk of

downtime.

"Another solution in the Uptime package is automated adjustment, allowing certain parameters on our equipment to be adjusted quickly and without the manual intervention of any operators," she says. "On a slurry pump, for example, the gap between the throatbush and the impeller can be adjusted automatically, reducing wear on critical components while improving hydraulic efficiency."

This extends the life of this component, with the added benefit of improving on-site safety by removing personnel from



Left: The NEXT system can recommend a course of action for the customer to address an issue that has been flagged. Right: Weir has detailed knowledge of how their equipment operates and performs over decades, allowing them to build predictive models.



the proximity of the pump.

The third element in NEXT Intelligent Solutions is the Production package, according to Mauricio Vega, Head of Process Optimisation Technology at Weir. This allows customers to maximise their process efficiency with AI-powered optimisation.

"The NEXT Production package includes an intelligent assistant that we are rolling out this year," says Vega. "This takes all the data gathered through the Insight

and Uptime packages, and gives recommendations to metallurgists, process engineers and operators based on their operational priorities."

Every mine has its particular targets and imperatives, he notes, so this package helps to guide decisions to achieve those goals, such as a production target or a desired product size for the classification circuit. The intelligent assistant does this by combining Weir's depth of historical

data from equipment operating globally with the site data from the customer's control room.

"We also recognise the customer's constraints, such as energy usage limits, which the intelligent system can take into account," he says. "This helps pave the way to smart and efficient mining, which is very much the focus of the mining industry today," Vega concludes.

[www.global.weir](http://www.global.weir)



Weir's NEXT Intelligent solutions leverage an in-depth understanding to inform predictive maintenance.

## Pump solutions for minerals processing & materials handling

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