

# Harnessing data to boost manufacturing margins

John Merrells of Sight Machine and Neal Meldrum of Microsoft tell us how a holistic, data-led approach unlocks new value opportunities for manufacturers

BY JACQUI GRIFFITHS

Continuous process improvement is essential to success in today's fast-changing, connected manufacturing environments. "The biggest opportunity to unlock value on the plant floor is by expanding the focus from individual assets to the entire production process," says John Merrells, chief product officer at Sight Machine. "It takes a system-wide view, enabled by cloud and machine learning capabilities, to understand the thousands of variables involved in a process that runs through a line of sensor-equipped machines."

Due largely to innovations in automation and artificial intelligence (AI), the tools are available to model these complex processes and analyse all production data in real time. "Transforming your business from sourcing to delivery is no small feat," says Neal Meldrum, business strategy leader at Microsoft. "When building digital connectivity at scale, complexity increases, and stakeholder incentives differ. This requires companies to break down internal divisions, align with common business objectives, share data across stakeholders and build new capabilities."

Descriptive, predictive and prescriptive data analytics are essential to provide insight into past and current events, predict future issues and recommend corrective action. "While core concepts are similar across industries, more advanced predictive and prescriptive analytics must be tuned to the specific machines and processes of the industry involved," says Merrells.

Sight Machine on Azure harnesses cloud computing, AI and automated analysis to help manufacturers make better, faster decisions about their operations. "Microsoft's goal is to infuse AI into every experience," says Meldrum. "We



can provide the foundational data science and abstract it into Azure cloud services."

The solution pioneered by Sight Machine delivers data-powered continuous improvement that scales to enterprise levels. "We have built the next generation of manufacturing applications to empower managers, engineers and operators to improve productivity and profitability," says Merrells. "The solution gathers data from the end-to-end production process, mapping it down onto a standard data model for all manufacturing processes. Our manufacturing applications are built on this platform providing optimal solutions for quality, availability and performance problems."

As well as outcomes like 5-10 per cent lift in overall equipment effectiveness and new levels of profitability, the platform facilitates continuous process improvements that contribute directly to other goals, such as sustainability. "Platform-based solutions like Sight Machine are emerging as the scale engines for driving digital manufacturing," says Meldrum. "The data estate is the foundation for every factory of the future. By leveraging Azure to aggregate and contextualise data across disparate systems in real time, Sight Machine brings to light new, system-wide insights, driving higher levels of operational efficiency and overall availability." ■