

AI in manufacturing: New operating models for competitive advantage

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Holim Wang

In interviews with The Elec, Holim Wang, Manager at Reddal, explains why IT-OT integration, cross-functional governance, and industrial data are becoming the foundations of competitive advantage in autonomous manufacturing.

Artificial intelligence is rapidly moving from digital workflows into physical production environments, enabling increasingly autonomous manufacturing. In two recent interviews with [The Elec](#), Holim Wang, Manager at Reddal, shared his perspective on what this shift means for manufacturing companies. While technological advances continue to attract attention, he argues that successful AI adoption depends just as much on how organizations are structured, governed, and operated.

The full featured articles in Korean can be accessed via [The Elec](#) at [\[한국 AI의 미래②\] IT·OT의 융합 AI의 역할 < IT·제조 > - 레드달 - 레드달](#) and [\[한국 AI의 미래③\] AI의 역할 < IT·제조 > - 레드달 - 레드달](#). English summary of the interviews can be found below.

AI adoption begins with organizational integration

One of the biggest obstacles to scaling AI is not technology, but the traditional separation between Information Technology (IT) and Operational Technology (OT). As AI increasingly influences production decisions and equipment behavior in real time, manufacturers can no longer afford disconnected governance, priorities, and decision-making between digital and operational functions.

Rather than treating AI as another IT initiative, companies should establish shared governance, cross-functional teams, and digital manufacturing leadership that align

technology, engineering, and business objectives. Organizations that redesign how functions collaborate will be better positioned to move beyond isolated AI pilots and achieve enterprise-wide impact.

Data is becoming manufacturing's new competitive advantage

AI is changing how manufacturing competitiveness is created. Production capacity, cost efficiency, and operational excellence remain important, but industrial data is becoming an equally strategic asset.

Manufacturers that systematically collect, standardize, and use production data can continuously improve their AI models, accelerate operational learning, and scale successful applications across sites and processes.

The differentiator is therefore no longer how much data a company generates, but how effectively it transforms operational data into better decisions and faster execution. Over time, this creates a compounding advantage in productivity, quality, and responsiveness.

The winners will transform how they operate

Physical AI is more than another technology upgrade. It changes how manufacturing organizations make decisions, develop capabilities, and create value. As Holim emphasizes, companies need to evolve their operating models alongside their technology investments by strengthening governance, building cross-functional capabilities, and investing in workforce development.

The manufacturers that lead the next wave of industrial AI are unlikely to be those with access to the most advanced algorithms alone. They will be those that successfully combine organizational integration with strong data capabilities to turn AI into measurable business performance.