

IOT AND ENERGY EFFICIENCY SPUR AUTOMATION INVESTMENTS



Listen up manufacturing executives, time to loosen up the budget belts because your plant managers are getting ready for a spending spree. Two separate industry analyst reports indicate that operational investments are on the rise mainly due to global build out, the pressure to create energy-efficient sustainable businesses, and the proliferation of the Industrial Internet of Things (IoT).

According to ARC Advisory Group, the total global investment in manufacturing will experience a compound annual growth rate (CAGR) of 4% through the year 2050. While all investment eyes are focusing on future technology, it also requires a second look at existing plant floor platforms like manufacturing execution systems(MES).

Historically, manufacturers have used Manufacturing Execution Systems (MES) to manage the production workflow on the factory floor. Moving forward, there is a need to upgrade to an agile and enterprise-enabled manufacturing operations management (MOM) system that will ease the expense and the overall risk associated with managing new application inter-dependencies.

ARC predicts worldwide growth in industrial investments through 2050 will have a lot to do with the need for resource management solutions and big data-based “information-driven manufacturing,” which the analyst firm defines as the ability to automatically aggregate and analyze data from multiple plants. To that end, “All industries will continue to increase investment in advanced solutions for processing, including energy management, quality management, and supply chain management,” according to ARC’s report, *The Future of Manufacturing: Scenarios for Investment in Manufacturing through 2050*.

Similarly, Frost & Sullivan’s *2013 Global Automation Market Factbook* indicates there are a number of additional forces at work that are contributing to a new wave of spending, including: rising capital investments in both process and discrete industries, a workforce skills gap, global competition, and the convergence of operational technologies and IT. Collectively, these business trends will influence – and boost – the overall global automation market moving forward.

Meanwhile, at the heart of many of these investments is manufacturing operations management.

The Fourth Industrial Revolution

The next big shift in manufacturing leverages sensors and machine-to-machine (M2M) technology connected directly or via the “cloud” as part of the Internet of Things (IoT) movement. This Fourth Industrial Revolution, will shift production from a centralized factory control system managed by human operators to a decentralized intelligent ecosystem in which machines and tools communicate amongst each other and to their corresponding applications without any human intervention.

Many of today’s MOM systems are already intertwined with energy management, quality control, the supply chain and even Enterprise Resource Planning (ERP) system's. But the MOM of the future must also be able to capture the M2M conversations traversing the network in order to automatically act on the information exchanged. They must also be able to share that data across the global organization.

The bottom line is, even as the analyst groups encourage investments in sustainability solutions, big data, and IoT, they are actually saying—without saying—that MOM will be a very important technology in the future.

In fact, the ARC report notes that the number one operational technology investment for the efficiency-driven economies of Latin America and the Middle East will be manufacturing operations management. MOM ranks as the number two technology purchase in factor-driven economies (Africa and emerging Asia), and is in the top 10 technologies to invest in for the innovation driven economies (Europe, North America, developed Asia).

Ultimately, despite the trend, be it influenced by the economy, a skills shortage, or innovation-driven, having the right MOM will make most difference to manufacturers by the year 2050.

Source: <http://www.aprison.com/blog/2014/10/iot-and-energy-efficiency-spur-automation-investments-with-mom-in-the-middle/>