How wireless technologies are reshaping industrial operations

It's hard to imagine life without wireless technologies. How is the popularity of wireless technology affecting industrial operations?

Javier Gonzalez Lombardia: Wireless technology originally "exploded" in the consumer market. Since it is so intuitive and efficient, it was subsequently adopted for industrial uses, bringing significant change. Thanks to fewer cabling constraints, wireless communications mean more flexibility for existing machines and processes, as well as mobility for operators and machine components. Different options are used for basic control (ZigBee® protocol), safety systems (specific radio protocols, such as Bluetooth®), as well as standard Internet connections (WiFi).

With the trend for wireless industrial applications, major technological players are responding to meet this urgent need. What challenges do they face?

Patrice Delage: Now it's all about designing easy-to-use products and tools, allowing worry-free maintenance and reliability. This, for the big companies providing wireless technology, means developing wireless solutions in partnership with leaders in the consumer market. At Schneider Electric, we are simplifying our existing solutions to provide more efficient architectures to our customers. Our wireless solutions help our customers extend their automation and remote control applications.

What influence do wireless solutions have on costs and efficiency?

Marc Denis: Wireless offers the freedom to install new functions, such as remote control for packaging machines. The direct impact for the customers is productivity gain. There's cost reduction too. Not only during installation but also production, thanks to the efficiency of the solutions.

Wireless communications mean more flexibility for existing machines and processes

What are customers' biggest expectations?

Patrice Delage: Customers see wireless solutions as a way to evolve machines for greater efficiency. So the challenge as well as opportunity is to design and build flexible, mobile, and intuitive machines and processes. This in turn helps boost growth by enlarging application domains.

It seems like the market requires companies to be more agile than ever before…

Javier Gonzalez Lombardia: Exactly. At Schneider Electric, we constantly strive to meet customers' evolving needs, enriching our offer and broadening the range of applications we serve. In 2011, we released wireless and battery-less pushbuttons that use the ZigBee protocol. In 2014, we brought out a new offer dedicated to hoisting – safety controls based on Bluetooth. And finally, last month we unveiled new wireless ZigBee limit switches to our multi-sensor wireless solution.

What makes these products different?

Patrice Delage: They provide a best-in-class user experience through ease of use and flexibility. Our pushbuttons and limit switches are not only wireless, but also battery-less. Mechanical movement is transformed through a dynamo system in a radio frame. Moreover, our wireless hoisting offer enhances operator comfort by increasing freedom of movement.

Where can they be used?

Marc Denis: In logistics and packaging, for example, where wrapping machines can be directly controlled by the forklift driver. In the automotive industry, they support Andon systems or team leader's calls for continuous production lines. Also for truck wheel chocks at logistics centers, dynamic conveyor control, or turning tables.

What kind of feedback are you hearing so far?

Marc Denis: It's very positive. Customers deploying material handling and Andon method in the automotive industry appreciate them for the flexibility and freedom in lean manufacturing. Airplane conveyors see more reliability and flexibility in the installations. Automatic doors for logistics centers see lower installation costs, while remote control for hoisting provides mobility and safety.

How do you see connectivity strategies evolving in industry?

Patrice Delage: In the future, we expect that all devices will be interconnected for enhanced performance and wiring simplification. When a project requires either more flexibility or mobility, wireless architectures will bring the right answers at the right time.

How can people learn more about Schneider's wireless solutions?

Javier Gonzalez Lombardia:
The best way is to visit SE website (for pushbuttons) or the Telemecanique website (for sensors).

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