

The Flexible Production Method

In the face of fierce, low-cost competition and an army of high-quality suppliers, companies are increasingly concentrating on flexibility as a way to achieve new forms of competitive advantage. An award-winning opinion leader in this space, Maurizio Porta believes that data collection and analysis are crucial to the new era of flexible production. His book, entitled 'Industry 4.0: how machine tools are changing in the 4th industrial revolution' outlines how technology allows manufacturers to streamline their production, save costs, and maximise profit.

Maurizio Porta has been a businessman for more than twenty years. He now manages sales at Porta Solutions, the Italy-based machine tools business his father founded back in 1958. He was also instrumental in the establishment of Porta Solutions' North American subsidiary.

As a maker and seller of machine tools to an international clientele, Porta Solutions is well aware of the fact that manufacturers feel the need to become increasingly flexible: they have to keep delivery times short, even when a customer is asking them for a new product that requires the re-engineering of their machines, for example. A failure to do this could mean a loss of business. To address this issue, Porta Solutions has developed the Multicenter machine, which, in comparison to the standard twin-spindle machining centers, can be supplied in 3 and 5-spindle versions. This enables a concrete optimisation of workforce resources, automation, tooling/fixturing costs, floor space required and part re-clamping errors.

Going beyond hardware, Maurizio Porta has also developed Porta Open 4.0, a data monitoring platform based on sophisticated cloud intelligence (Microsoft Azure), which allows for the automated optimisation of production

cycles, and thus greater efficiency in terms of time and cost savings. "Porta Open 4.0 monitors various parameters to help customers predict future issues with their machine tools," Maurizio Porta explains. "If we apply intelligent sensors to collect data such as pressure, temperature, and vibration, all constantly, we can detect the slightest signals and foresee what will happen next. This allows us to plan, as soon as possible, a corrective action to avoid bigger problems later on. Consider a city, where water distribution pipes are underground and hidden. With sensors and the measuring of the pressure and volume of water, you can understand the state of your pipes and plan maintenance today to prevent incurring a big repair bill or even service shutdown tomorrow."

For his efforts in promoting flexible production, Maurizio Porta was recently recognised at the 32th edition of the IAIR Awards. He was given top honours in the Excellence of the Year, Innovation

& Leadership category. Maurizio Porta's book, 'Industry 4.0' is available on www.bookindustry4zero.com. The first 500 copies are free of charge.

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Website: www.flexibleproduction.com

