



Above: Piovan's Winfactory 4.0 brings Industry 4.0 capabilities to existing processing plant

Ancillary developments

Italian ancillary equipment firm **Piovan** is investing heavily in Industry 4.0, taking what can be described as a two-stage approach that recognises that processors are unlikely to be able to make an overnight conversion to fully smart production. Marketing Director Giorgio Santella says the company has many customers that want to move to smart manufacturing but have a big existing investment in plant.



Making cyber-physical systems is not easy: Giorgio Santella, Piovan

Santella says Piovan's solution for these customers is its Winfactory 4.0 production supervision system, which is designed to allow processors with existing equipment to make the move into an Industry 4.0 environment without the need to reinvest. It uses OPC UA interfacing to allow connection between Piovan and third party equipment, whether it be a moulding machine, robot or a smartphone.

Further ahead, however, Santella sees Industry 4.0 requiring development of true "cyber-physical" equipment that can not only control its local processing but has the capability to evaluate and share data. "In the new Industry 4.0 you have to achieve horizontal integration. That means equipment that can share with systems from any supplier – it will have to communicate with injection machines, extruders and equipment from my competitors," he says.

The company showed its first fully Industry 4.0 capable equipment at K2016 – a Digitemp EVO thermo-chiller, Genesys high efficiency PET dryer, and Quantum E blender. Each features integrated OPC UA interfacing and enhanced on-board process evaluation and auto-adapt capabilities. This comes at a price that is only justifiable in a true Industry 4.0 production system. "To turn any equipment into a cyber-physical system is not easy. We have to rethink it and decide what is the benefit," Santella explains. "To the user, the capability of communication alone does not add value. The value is that it truly cyber-physical – capable of auto adapting and then communicating. That is not simple."