Gilbos makes production of quality carpets easier

03 April 2023, 15:38

Pieter Beyl

With SmarTwist textile machine builder Gilbos aims at making a better product for its customers. The smart machine provides an improved user experience thanks to more autonomous decision making and a dedicated digital user interface for different user profiles. It monitors the process and processed product, and makes adjustments on its own, thereby guaranteeing quality at all times.

This case is one of the 15 smart product examples we have compiled for you in the Smart Product Inspirator

Discover all 15 examples

Gilbos is a manufacturer of textile machinery since 1922. Its machines are specifically designed for the winding and processing of yarns, mainly for the carpet industry. Thanks to its adapted functionality these machines can be tailored to niche markets.

Why this product

Textile machines are becoming increasingly complex, while operator expertise and available set-up times for these machines are decreasing. Therefore, Gilbos looked into how it could support its customers in making its machines as easy as possible to commission, operate and keep in operation. It was never a goal on itself to build smarter products, but rather to make better products for its customers by putting a focus on the user experience.

Value for the customer

The SmarTwist machine provides an improved user experience thanks to more autonomous decision making and a dedicated digital user interface for different user profiles. The machine monitors the process and processed product (yarn) and makes its own adjustments to the machine parameters based on this. This way, quality can be guaranteed at all times, despite possible wear and tear or limited operator knowledge.
With the digital user interface, operators, plant managers and maintenance technicians can easily control or monitor their machines from their own (mobile) device.

Technology behind smart product SmarTwist

Several custom developed sensors were added to the machine and substantial effort was put into processing and analysing the large amounts of data generated to arrive at the right decision rules for adjusting the machine. Machine learning helped to draw the right conclusions from the data originating from different sensors, machines and machine parameters. Much attention was paid to an intuitive user interface design and customisation towards different users. All data management, decision making and parameter adjustments are centralised on a control system connected to the machine PLC(s) and user interfaces. With the development of SmarTwist, Gilbos has seen the focus of its R&D activities shift from mechanical engineering to software engineering. The driving force has always been the customer's user experience and providing solutions that are as simple as possible. The search for the right technology and architecture comes second. For the implementation of the user interface, the development of specific sensors and methodologies for data analysis, Gilbos collaborated with partners.

Capturing revenue

The biggest part of the development is regarded as an integral part of the machine and is needed like every other component of the product. The flexibility of the software to connect with its machines over mobile devices made that for the first time Gilbos started selling software. Equally important is the knowledge the company has built up internally: the concepts around user interfaces and data analysis are now being deployed in other products as well, thus helping Gilbos to keep on innovating its product portfolio.

Next steps

Gilbos has grown its in-house data analytics skills and these are now often solicited to further simplify the interaction with operators and maintenance staff.

Smart Product Scenarios

To enhance your chances of success and guide your smart product innovation, Sirris offers you practical tools and guidelines. Our **Smart Product Inspirator** provides you with a framework for identifying valuable smart product ideas based on the 5 most common scenarios and 15 smart

product examples illustrating these scenarios. With these carefully analysed scenarios we help you uncover the potential for success . The key scenarios for Gilbos's SmarTwist machine are: '**Smart Autonomy**' and '**Digital user interface**'.

Authors

Pieter Beyl