

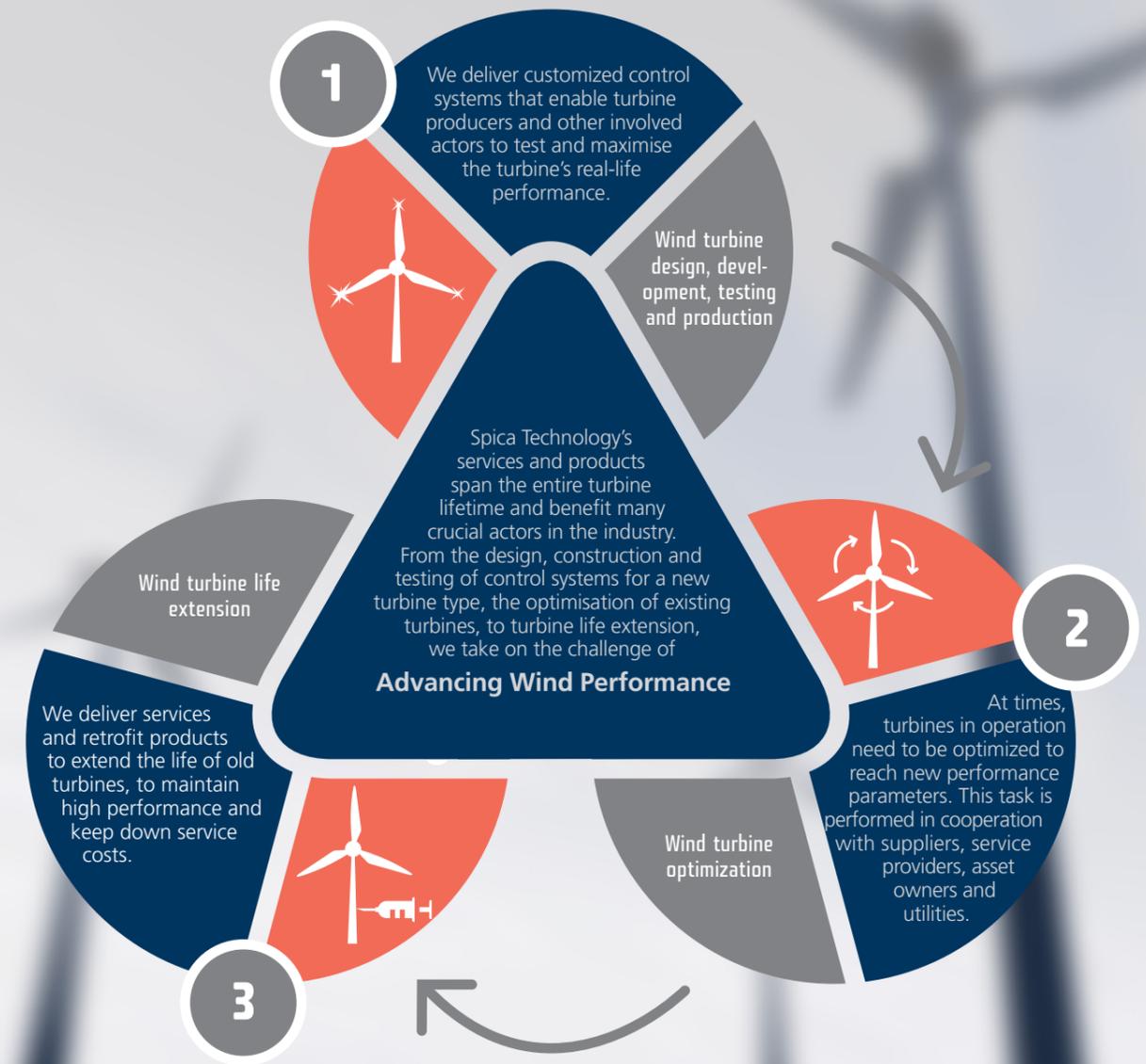
Wind power control solutions
for performance





Dedicated to advancing wind performance

As an industry, we need to remain competitive and to do that wind turbine performance must be continuously advanced. We are in business to ensure that new and current wind power control systems contribute to realising their performance goals. We honour that task by designing products which ensure the competitiveness of our customers while advancing the industry as a whole.



Troubleshooter for customers around the world

Spica Technology is an international engineering company committed to the wind power industry. We are a team of specialists who work to advance wind performance through the design, construction and testing of custom control systems for companies in and around the wind power industry. Spica Technology carries own production capabilities and test facilities, and with 17 years in the industry, we hold considerable experience and know-how.

This has given us a unique position as a manufacturer of state-of-the-art control system solutions for wind power OEMs, service companies and consultant/engineering companies on a worldwide scale. Apart from the customized control systems that dominate our business, our great experience in the field has led to a range of own, quality retrofit products where the most significant is the Spica Retrofit Controller.

We know the importance of keeping your turbine running

At Spica Technology, we like to address the issue of lost wind turbine production rather than the commonly used concept of availability. From the moment a wind turbine first enters into operation till it is eventually taken down or repowered, our

control system solutions ensure that turbines keep running as much as possible. In the pursuit of this goal, we do business with key actors within the wind turbine industry whose products and solutions span most of the wind power value chain.



We specialise in making projects "windproof"

Despite our fairly small company size, few, if any, can rival us in accumulated knowledge and experience dedicated solely to wind turbine control systems.



Custom designed control systems

Customized control system projects range from short one day tasks to large-scale projects where we deliver project management, milestones, FAT test, and we build the prototype and initiate production. Due to our many years of experience in developing wind turbine controls and indepth technical know-how in the field, we are able to partner with customers during any stage of system development.

Pre-projects of mutual benefit
When a project idea is first presented to us, we often carry out a pre-project to determine its technical and financial feasibility. We consider this to be of mutual benefit, as projects often mature, die out or change considerably during this stage. We use our extensive experience and know-how in wind turbine control development to carefully determine the potential of the project, saving you precious time and costs which might otherwise have

been wasted at a later stage. Turbine control system projects determined to be worth pursuing are developed and rigorously tested at our in-house test facilities before delivery to make sure they are able to withstand the challenging environment they will have to function in.

Maintaining control
With Spica Technology the issue of ownership is always crystal clear. The project and the customized end-product we develop belong to you, including all drawings and software, and you are free to start production anywhere you may wish – no fees or royalties, only the engineering and prototype costs. During the project stages, we also make sure you are kept well-informed and involved, so that the end-product lives up to your requirements and specifications., knowing that these may change as the project progresses.



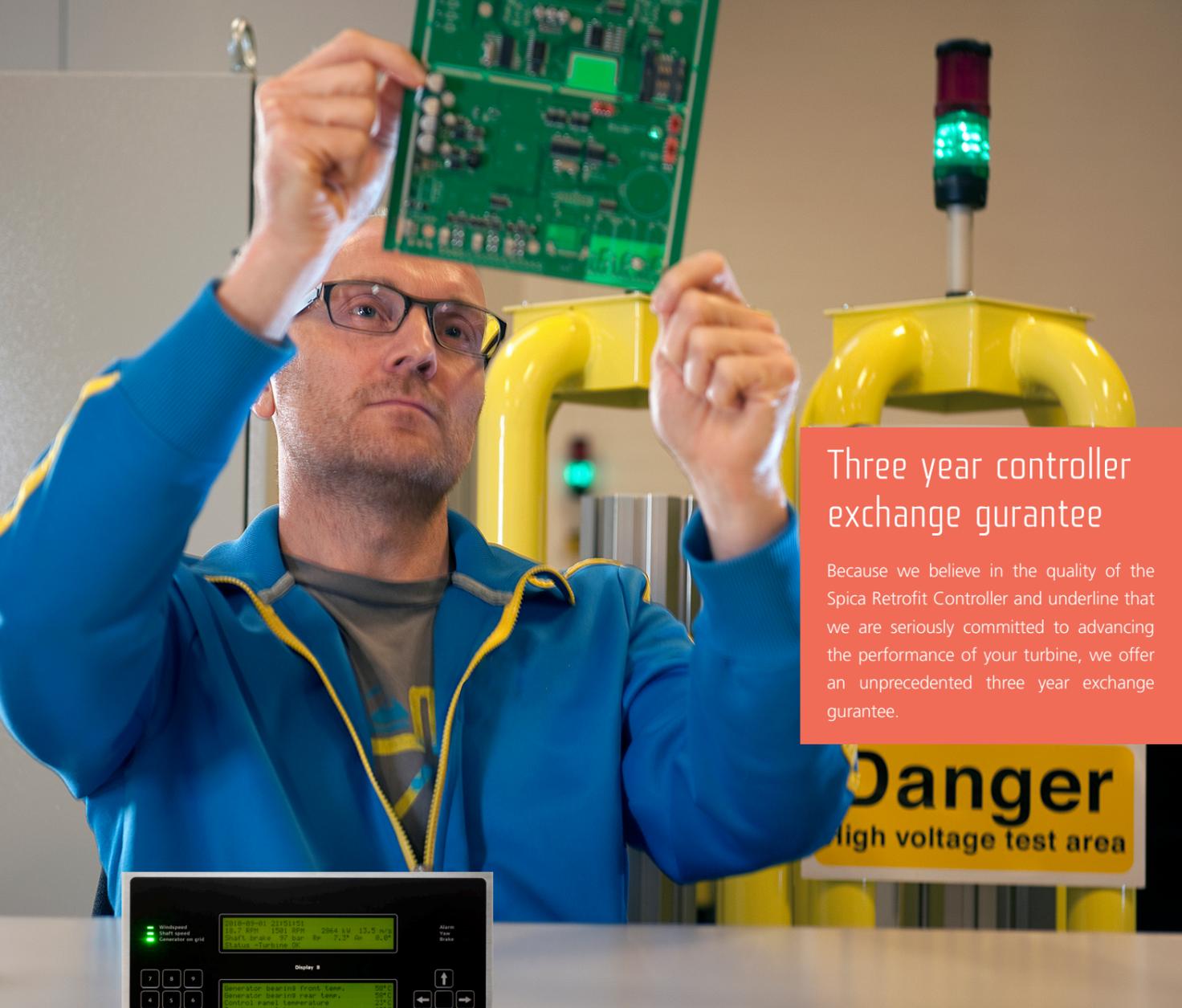
Case: Shadow Detection System, Vestas, Denmark

The Vestas Shadow Detection System or VSDS is designed and developed by Spica Technology for Vestas Wind Systems A/S. Following delivery, Vestas received all patents and IPR for this custom designed product. The Vestas Shadow Detection System is a special add-on product for new turbines around the world which means it

has to comply with a multitude of different standards and regulations. The system was produced at Spica Technology in Denmark.

Read more custom cases at www.spicatech.dk

<h3>Preproject</h3> <p>We determine the overall feasibility of your project</p>	<h3>Project</h3> <p>We manage and build the project on time and as agreed</p>	<h3>Test</h3> <p>Our in-house test facilities allow for rigorous testing before handover</p>	<h3>Delivery</h3> <p>Once completed, we hand over the project, and you own it</p>
---	---	--	---



Three year controller exchange guarantee

Because we believe in the quality of the Spica Retrofit Controller and underline that we are seriously committed to advancing the performance of your turbine, we offer an unprecedented three year exchange guarantee.



Read more about the Spica Retrofit Controller and its advantages at www.spicatech.dk



“ The Spica Retrofit Controller is running successfully in turbines under our management. ”

Jesper Thorsen, CEO, Wincon A/S

Spica products - The Spica Retrofit Controller

Throughout the years, Spica Technology has developed a range of quality retrofit products where the Spica Retrofit Controller is the most significant.

The Spica Retrofit Controller is an affordable, plug-and-play control system, available for a range of aging turbine types such as Nordex, Wind World, Nordtank, Micon & NEG Micon turbines. Our retrofit control system has been developed to enable you to professionally manage your investment and trouble-solve, as you would a new, modern turbine.

Quickly up and running – guaranteed

At Spica Technology we know and respect the costs connected to downtime. Therefore, we have developed a product aimed at reducing downtime from the moment your order is placed. We execute orders swiftly, and once onsite, the Spica Retrofit Controller is installed easily and quickly. In case of a controller breakdown or serious malfunction, your turbine will see very little downtime, as we provide you with an unprecedented three year exchange guarantee and a capable Service Hotline for technical assistance.

/W/ WINCON A/S

Case: Micon, M1500 750Kw, Wincon A/S, Denmark

“We needed a new controller for NEG Micon 750 turbines. The Spica Retrofit Controller proved to be a genuine plug-and-play system, and our turbines were up and running quickly which was important for us. In our case, the original controller can no longer be bought, and finding a second hand controller is virtually impossible and pricy. Why risk several weeks of downtime having your controller repaired or attempting to buy a second hand controller.

The main thing for us is that the controller works perfectly and keeps on working. The Spica Retrofit Controller has proved that it performs consistently and provides us with a series of valuable data to carry out predictive maintenance. With turbines well exceeding their designed lifetime, we want to provide our customers with a proven, affordable alternative to obsolete control systems. We have found that in the Spica Retrofit Controller.”, says Wincon CEO, Jesper Thorsen.



Retrofit costumers

SUZLON

SVENDBORG BRAKES



DEUTSCHE WINDTECHNIK



bachmann.



ABB

wpd

Vestas



LEINE LINDE SYSTEMS



NORDEX