PROTECBIRD

AVES Wind® Family

Increasing energy yields – Protecting species

Modern AI-based solutions for wind energy and species protection

Installation of a AVES Wind® ACS

AVES Wind® Anti-collision System

AI-based and fully automated anti-collision system AVES Wind® – the future of wind farm technology.

Regulation-compliant continuous Operation of the Wind Farm

The state-of-the-art ACS ensures unrestricted operation of wind farms by eliminating the need for general shutdowns. This maximizes energy production and increases the efficiency of the wind farm without endangering local bird populations.

Low Installation Costs by Utilizing Existing Wind Farm Infrastructure

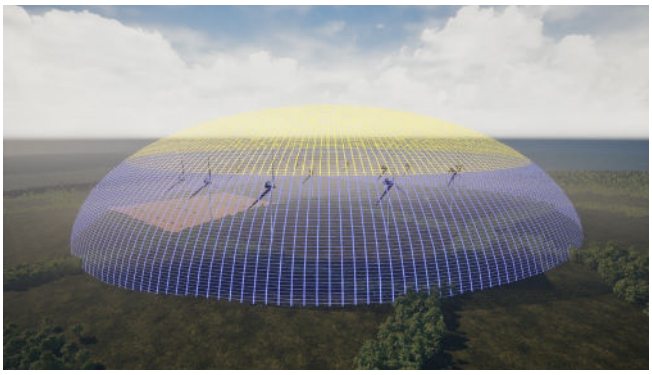
AVES Wind® can be cost-effectively integrated into the existing infrastructure of a wind farm, significantly reducing installation time and overall costs. This allows for a faster return on investment.

High Species-Specific Detection and Low False Positive Rate

The AVES Wind® ACS excels with a high species-specific detection rate, ensuring precise identification and minimal shutdown times. The low false positive rate minimizes unnecessary operational interruptions, thereby enhancing the efficiency and reliability of the wind farm.

Government-Approved and Future-Proof

The AVES Wind® ACS is recognized by the authorities in Schleswig-Holstein and many other federal states and meets all requirements for wind farm permitting. The expected recognition in additional federal states, as well as the system's successful international deployment across numerous European countries, underscores its future viability and regulatory advantage.



Illustrative protection layout for a wind farm

AVES Wind® provides an edge in wind farm technology and will soon be enhanced with real-time bat detection capabilities. It enables regulation-compliant, efficient, and cost-effective operation of the wind farm.

AVES Wind® Monitoring

The solution for comprehensive and government-approved risk models

Data Collection for Creating a Risk Model to Meet Regulatory Requirements

AVES Wind® Monitoring offers a powerful tool for collecting and analyzing ornithological data. This comprehensive data collection enables the creation of precise risk models to properly fulfill regulatory requirements. This reduces effort and maximizes data accuracy, increasing the acceptance of the wind farm project during the approval process.

With AVES Wind® Monitoring, the wind farm is future-proofed through comprehensive, autonomous data collection and precise risk models.

Installation of AVES Wind® Monitoring on an offshore wind energy plant

AI-Based, Fully Automated, Autonomous Ornithological Data Collection

Advanced AI technologies make data collection with AVES Wind® Monitoring fully automated. Ornithological data is continuously and reliably captured and analyzed without manual effort. This saves time and costs while ensuring high accuracy and reliability of the data.

AVES Analytics®

The solution for comprehensive data analysis and visualization

Efficient Support for Operators and Managers

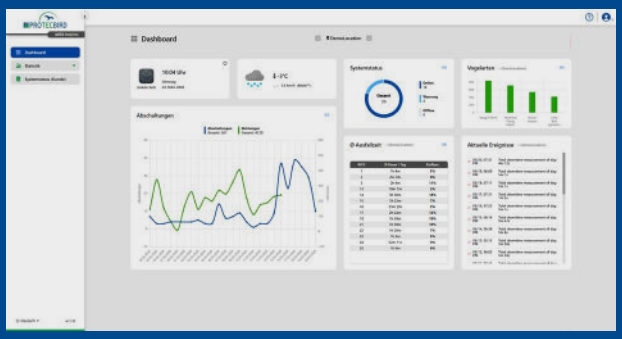
AVES Analytics® provides a powerful platform that supports operators and managers of wind farms in the efficient analysis and visualization of large data sets. By using advanced tools, the data collected from the AVES product family – including the AVES Wind® Collision Avoidance System, AVES Wind® Monitoring, and AVES Wind® High Precision Counter – can be consolidated.

Analysis and Visualization of Large Data Sets

The AI-driven platform of AVES Analytics® allows for the processing and analysis of large data sets in real-time. User-friendly visualization tools make it easier to recognize and clearly present complex data patterns, contributing to the optimization of operational processes and the maximization of wind farm performance.

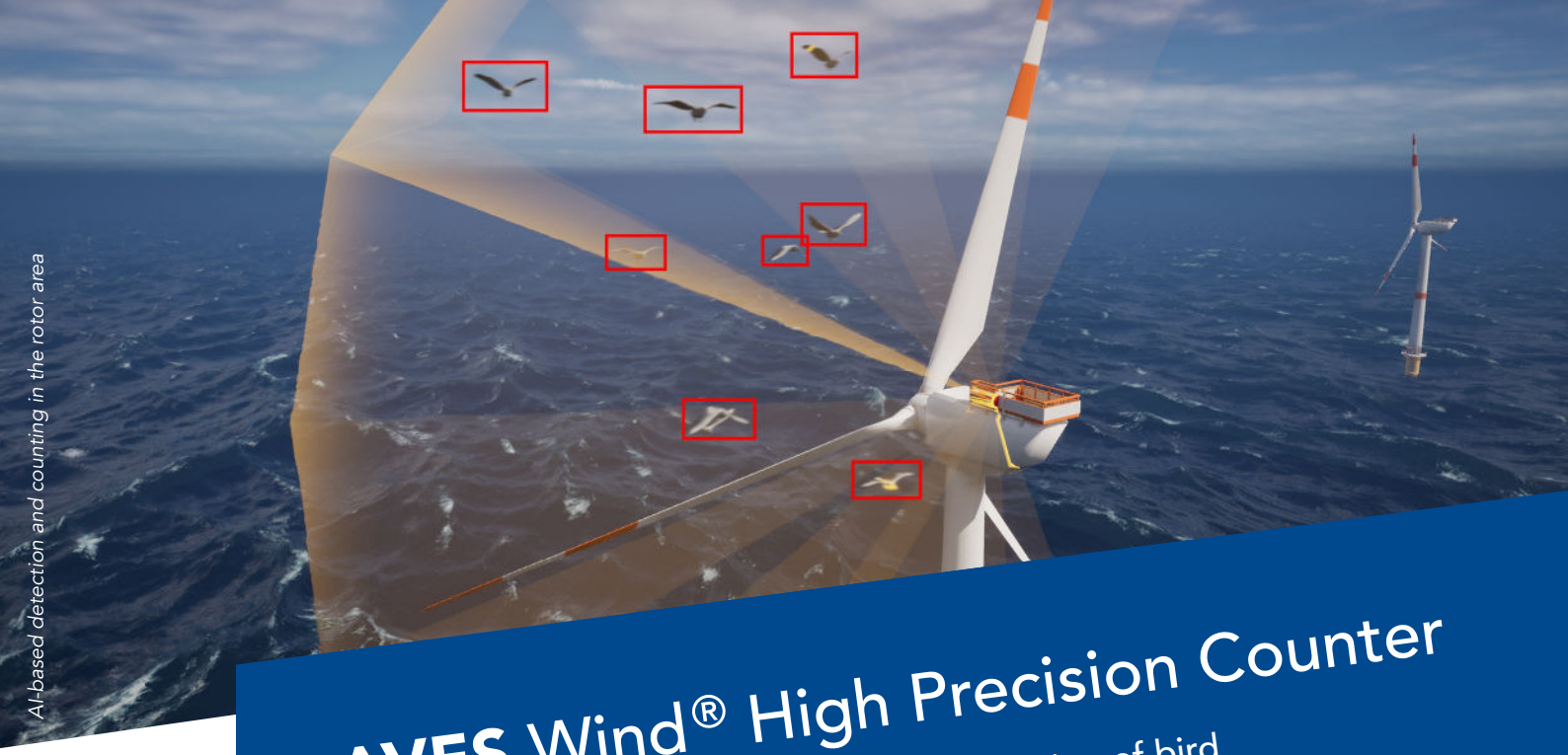
Report Generation

AVES Analytics® simplifies the creation of detailed reports that clearly present all relevant data and analyses. Automated report functions save time and ensure that up-to-date and accurate information is always available to meet regulatory requirements and fully inform operators.



Dashboard AVES Analytics®

AVES Analytics® revolutionizes data analysis and visualization. By optimizing operations and reliably meeting regulatory requirements, efficiency is increased.



AI-based detection and counting in the rotor area

AVES Wind® High Precision Counter

The solution for precise detection and counting of bird migration in the rotor area

AI-based, highly precise detection and counting of bird migration through offshore wind farms

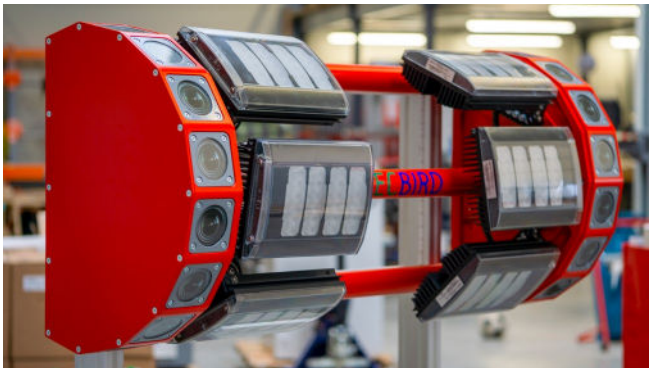
The AVES Wind® High Precision Counter utilizes cutting-edge AI technologies to detect and count bird migration through offshore wind farms with high precision in the rotor area. This system is specifically designed for use in offshore wind farms and enables the efficient and reliable fulfillment of regulatory requirements.

Compliance with Regulatory Requirements

With the AVES Wind® High Precision Counter, the detection and counting of bird migration in offshore wind farms – specifically within the rotor-swept area of the turbines – is automated. This ensures accurate and continuous monitoring that meets all regulatory requirements.

The AVES Wind® High Precision Counter offers precise, efficient, and legally compliant detection of bird migration in offshore wind farms, ensuring compliance with all relevant regulations.

It ensures that the wind farm project is operated in an environmentally responsible and legally compliant manner.



AVES Wind® HPC

Features:

- Systematic detection of flight movements within the rotor-swept area
- AI-based monitoring of bird and bat rotor crossings, continuous 24/7
- Camera resolution and configuration enable precise detection of passerine migration at night

About us.

ProTecBird. Strong in partnership.

ProTecBird was founded with the vision to protect birds at wind farms by using state-of-the-art technologies.

Our success is based on the combination of ornithological expertise, the experience of our developers in AI-based systems, in-house production, and strong industrial partnerships. ProTecBird's mission is the automatic protection of wind turbine-sensitive bird species while simultaneously increasing wind energy yields by eliminating blanket shutdown requirements.

While our anti-collision systems are already successfully in use at onshore wind farms across Europe, we have expanded our expertise to the offshore wind sector. Our innovative monitoring systems accurately track bird migrations at offshore wind farms, enabling precise counts of individual birds navigating through offshore wind parks.

At ProTecBird, we take pride in making a significant contribution to the protection of our avian world while driving forward the energy transition. As one of Germany's leading companies in species protection and energy efficiency, we set new standards in the integration of technology and nature conservation.

The managing director of ProTecBird, Thorsten Heinzen, with a Red Kite next to the AVES Wind® camera system at a wind turbine.

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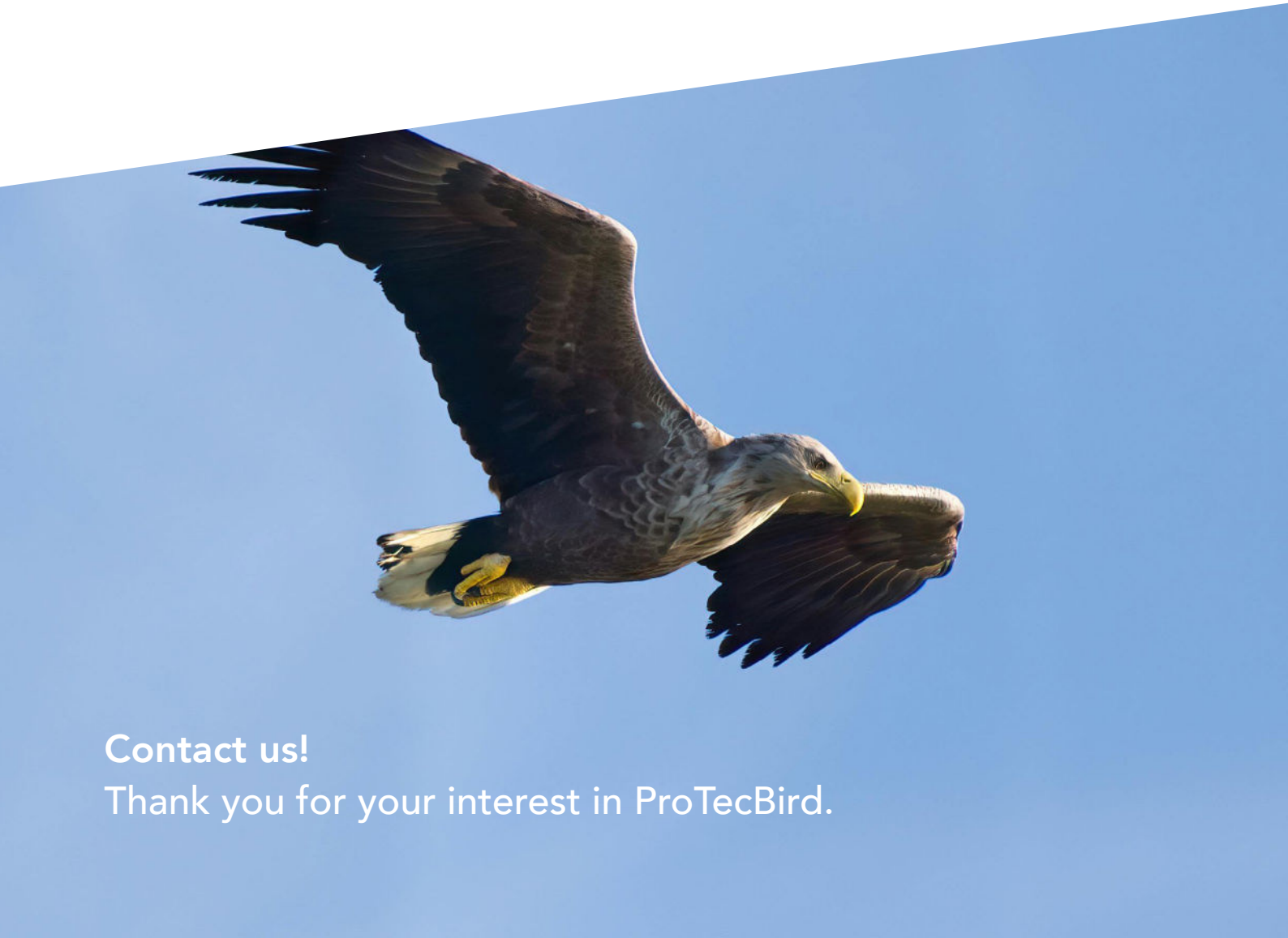

Contact us!
Thank you for your interest in ProTecBird.