



The long-range radar solution that protects birdlife while optimizing wind energy production

Solutions & expertise

High- performance solution :

- **24/7 radar detection** for both **offshore & onshore** wind farms
- Real-time tracking of bird **trajectories and flight** altitudes
- **Automatic alerts** in case of risk
- **Reduces unnecessary** turbine shutdowns
- **Operational** during both **development and exploitation** phases of wind farms

Ornithological expertise :

- **Customizable settings** based on local species and environmental stakes
- **Trajectory and behavior** analysis
- Support for curtailment **strategies and regulatory reporting**

Technical expertise:

- SCADA **integration** (Modbus, OPC UA, dry contact)
- **SCADA data** analysis
- Technical optimization **recommendations**



Performance and safety

Mastering performance :

- **Availability rate** monitoring
- **Data** on flight paths and alert events
- **Curtailment efficiency monitoring**

Maintain availability :

- System and turbine interaction **monitoring**
- **Automatic alerts** in case of hardware or software anomalies
- Predictive maintenance and failure **anticipation**

Cybersecurity :

- **Secure data storage**
- **Enhanced cybersecurity** (firewall, VPN)
- **Continuous support** from a dedicated team

A tailor-made service

- **Specific configuration** to meet customer needs and regulations
- A **scalable solution** to meet each of your challenges
- **Custom installation** based on regulatory issues

Weak maintenance cost

- **Robustness and Durability** : Low replacement rate of wear parts
- **Turnkey offer** including wear parts (Preventive & corrective maintenance)

Customer Service

- **Personalized support** according to the **needs** of the park (ornithological and regulatory techniques)
- **Hotline**
- **Dedicated contacts**

Technical Specifications and Equipment

Equipment:

- ✦ Long-range bird surveillance radar
- ✦ Rotating or fixed antenna depending on site configuration
- ✦ Local processing unit and server

Technical Specifications:

- ✦ Horizontal beam width: 5.2° / Vertical: 25°
- ✦ Rotation speed: 24 rpm
- ✦ Power supply: 12–24 V DC, 2.1 A at 12 V / 1 A at 24 V
- ✦ Ingress protection: IPX6
- ✦ Operating temperature range: -25 °C to +55 °C
- ✦ Mounting on dedicated structure at turbine base platform

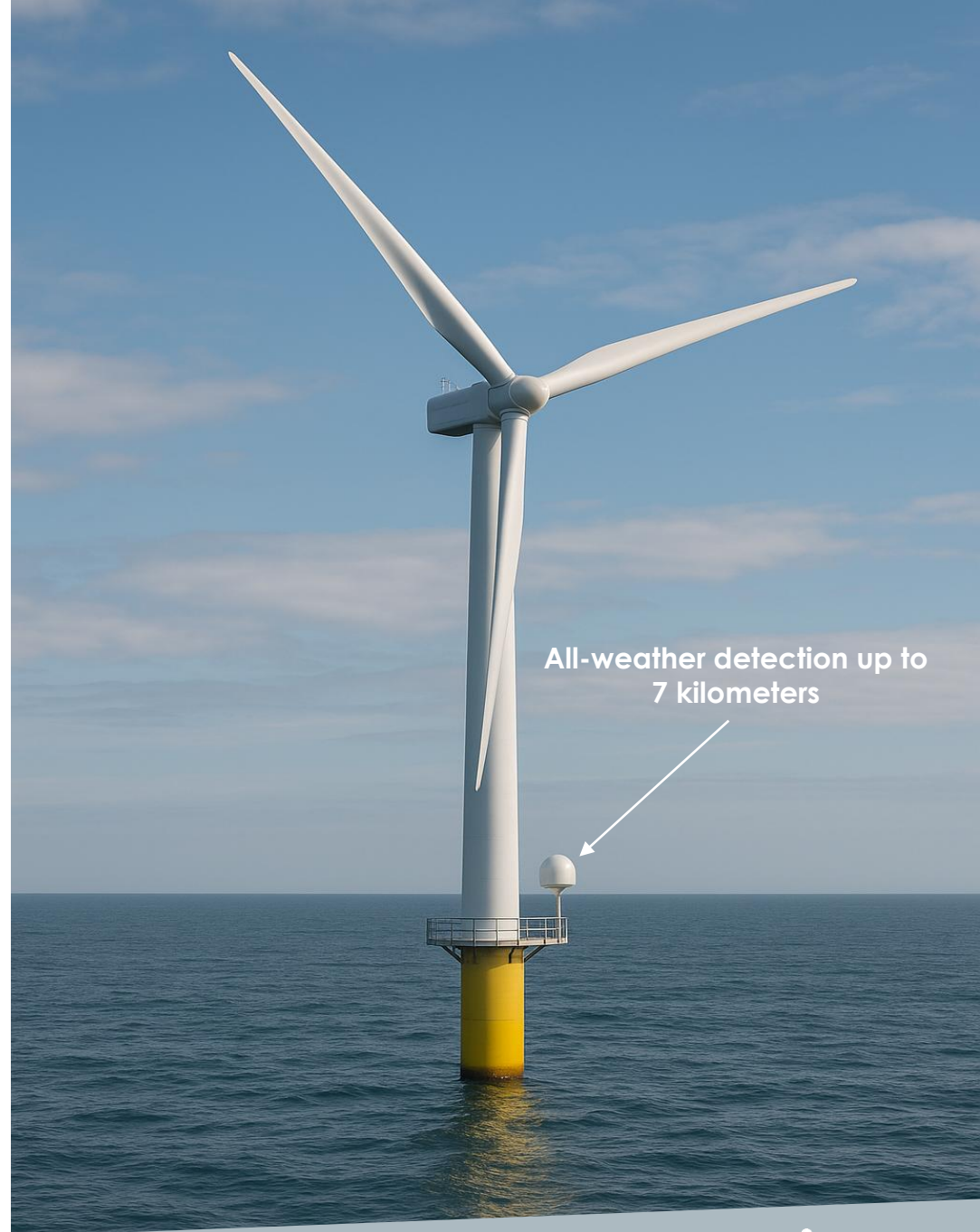


Protective measures

- ✦ **Dynamic regulation** based on real-time bird trajectories and altitudes
- ✦ **Targeted settings** based on species and flight behavior
- ✦ **Differentiated detection** by bird size and flight speed
- ✦ **SCADA compatibility** (Modbus, OPC UA, TOR)

Installation & support

- ✦ **GWO-certified** installers with Sea Survival module
- ✦ **Compatible with all turbine manufacturers** (Vestas, Nordex, Siemens, etc.)
- ✦ Post-installation follow-up with **immediate and accurate system checks**
- ✦ **Training** for service providers or on-site technical teams



All-weather detection up to
7 kilometers