nvisionist is presenting nvbird®
adding value to global green energy

Nvisionist & nvbird® are participating (Hall 3, Stand D30) **in the leading Annual European Wind Energy Exhibition, organised by Wind Europe (Pan-European Wind Energy Association),** which takes place between 5-7 April in Bilbao, Spain. **This exhibition is a unique international event that brings together the entire wind industry.**

About nvisionist

Nvisionist is an **innovative high-tech start-up** that specializes **in applied digital technology solutions, based on Artificial Intelligence (AI) and Machine Learning**. **Nvisionist designs, creates and offers innovative solutions and services for the renewable energy sector. Our design implementation offers benefits to organizations, communities,** protects the environment, and contributes **both** to the quality of life and **conservation of resources.**
Our company has a team of experienced, qualified and highly trained professionals and we have completed the most demanding projects in Greece and abroad. Moreover, nivisonist's mission is to completely satisfy **our client's expectations with consistency and professionalism, to participate actively in technological improvements related to our field of expertise and invest in solid and long-term relationships with our associates, suppliers and clients.**

About nvbird®

Nvisionist's flagship product is **nvbird® – a pioneering Bird Deterrence and Monitoring system that prevents collisions of protected birds on wind turbine blades**. **nvbird®** stands out for its innovation, as it **adds value to the wind energy**, almost eliminating the erroneous shutdown of wind turbines, maximizing their productivity, while protecting rare birds from colliding with wind turbines blades.

nvbird® is a pioneering, integrated solution with application in Wind Energy and with significant benefits for the environment. It is at the forefront of global technology by using a state-of-the-art **artificial intelligence** and **machine learning technologies while at the same time** incorporating the latest hardware, software as well as business intelligence platforms.
It is based on a unique algorithm allowing the system to detect and recognize with unprecedented accuracy birds that fly dangerously near the wind turbines, analyzes their flight path, activates speakers with sounds to deter them and in case they do not fly away it stops the wind turbine until the birds are safe. Thus, achieving:

- to minimize WTG "wind turbine generator" shutdowns (almost eliminate them)
- to increase productivity
- not to strain the generators with unnecessary shutdowns that cause extreme loads
- and to minimize noise pollution in wind farms

Awards

Since Semptember of 2021 **nvisionist & nvbird®** have won **5 national and international awards, thus**

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being among the most internationally recognized innovative startups & solutions in the wind energy sector:

1. **Global. ICT Award Winner** at the (World Information Technology and Services Alliance) WITSA 2021 Global ICT Excellence Awards in the category «Emerging Digital Solutions Award (Private Sector)».

2. **Bite Awards first Platinum** overall award with the highest score in the entire event, a **Gold Award for the Energy category and another Gold Award at the Artificial Intelligence A.I. category**

3. **Hifa21 4th Hellenic innovation forum & awards with the HI Award for Business Model** - <100 employees **(Innovative Business Model Award)**

4. **Winner of the** "Sustainable Innovative & Responsible Enterpreneurship", "Innovation and New Products" **award of the Athens Chamber of Tradesmen"** in the presence of the President of the Hellenic Republic Mrs Sakellaropoulou.

5. **Wind Europe Technology Workshop 2021** one of the most important technological solutions among 109

For more information about **nvbird®,** visit www.nvisionist.com

Photo1, 2 : AI technology is continuously expanding, and more and more applications are based on it. Bird detection & monitoring systems are big data applications that communicate directly with the operating systems of the wind turbines. Access to all this data is crucial for the producers and environmental authorities.

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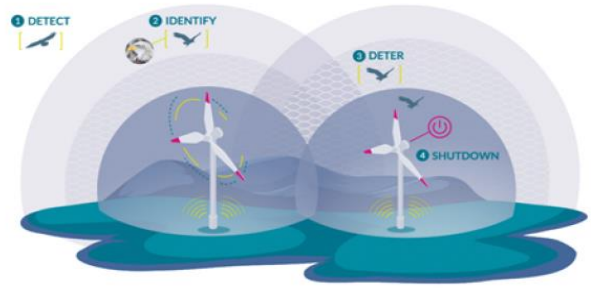
How nvbird® works



1.DETECTION PHASE
Radars and/or cameras should be installed to cover the area surrounding the wind turbine. In case of a bird or flockof birds approaching, the flight trajectory must be recorded.
2. IDENTIFICATION PHASE
AI and machine learning algorithms can be implemented to identify whether the bird or flock is on a collision route(direction and height data) with the wind turbines and, if needed, the system should have the ability to send an automatic command via the controller of the wind farm to slow down the rotor speed of those wind turbines within the route of the flock. At the same time, it is important to categorise the birds into critical or not critical species according to the environmental impact assessment of the wind park.
3. COLLISION AVOIDANCE – DETERRENCE PHASE
If the identified birds belong to critical species and enter a predefined critical zone, special sounds should beenabled in the direction of the birds to deter them.
4. SHUTDOWN PHASE
In case the birds remain in the critical zone or further approach the rotor swept area the system shouldcommunicate with the wind turbine and send a direct signal to shut it down.

ISO 9001:2015 and ISO 14001:2015 (Environmental Management System) certifications for Nvbird®

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#AddsValueToTheGreenEnergy

Nvisionist is an innovative high-tech company that specializes in applied digital technology solutions, based on Artificial Intelligence (AI) and Machine Learning. Nvisionist has developed nvbird® a pioneering, integrated solution that is at the forefront of global technology with application in Wind Energy and with significant benefits for the environment. Nvbird® stands out for its innovation, as it adds value to the wind energy, almost eliminating the erroneous shutdown of wind turbines, maximizing their productivity, while protecting rare birds from colliding with wind turbines blades. Nvbird® is installed in wind farms for bird monitoring and incorporates state-of-the-art hardware, software as well as a business intelligence platform. Nvisionist is a member of Wind Europe, a member of ELETAEN (Hellenic Scientific Association of Wind Energy), as well as a member of SEPE (Federation of Hellenic Information Technology and Communications Enterprises