

HighTech XL

New Venture with Multi-functional protective coating

Fieldlab Zephyros

May 20, 2022



Image Sources: <https://www.intertek.com/blog/2017-11-10-corrosion-offshore-wind-industry/>

HighTechXL

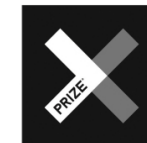
is a venture-building accelerator that builds teams of entrepreneurs and tech talents around the most advanced technology in the world ... technology from CERN, European Space Agency, TNO, Philips, PhotonFirst, Waterloo Institute for Nanotechnology and other global innovators.



5 out of 10 Extreme Tech Challenge regional finalist are HTXL alumni



Founding Partners



XPRIZE
CARBON
REMOVAL

ELON MUSK

Alumni winner of XPRIZE

+400

EXPERT COMMUNITY

2735

JOBS CREATED

97%

NPS ON
ACCELERATION PROGRAM

New Venture

Our mission is to grow renewable energy share by maximizing assets availability and extending their service life through our multi-functional coating



Sundas



Urnaa



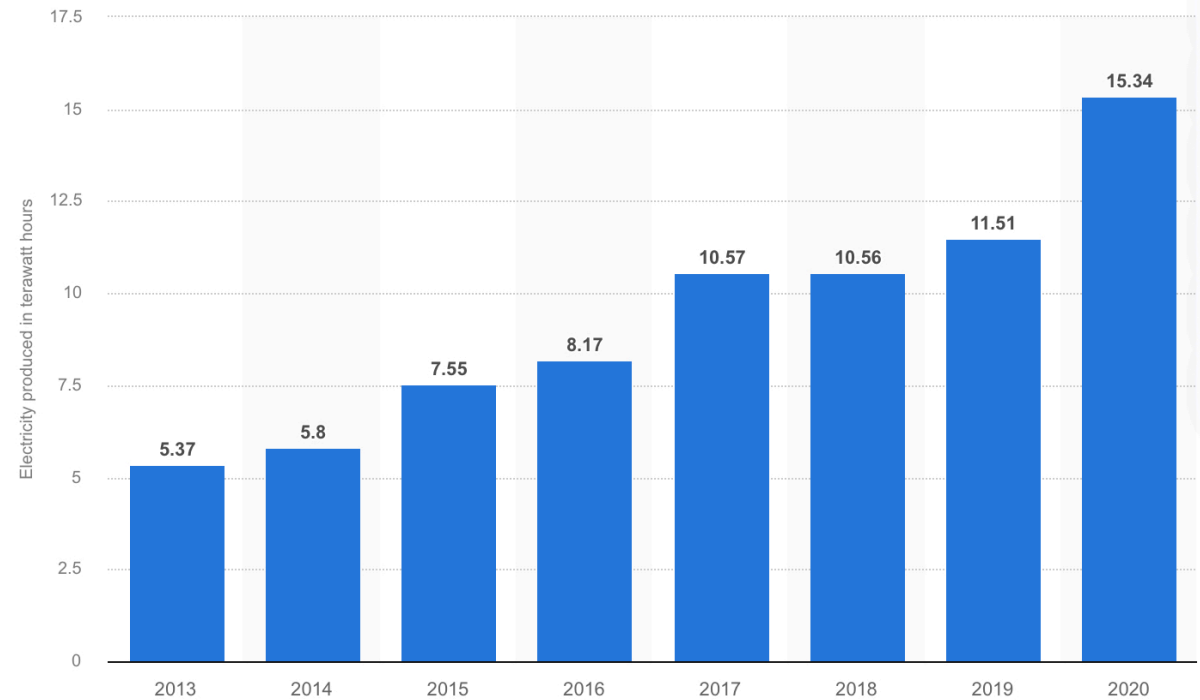
Valentina

An all women, diverse and multi- disciplinary team with a passion for creating a sustainable and equitable systems in the renewable energy field

2021 Wind energy

- Electricity generated – 19058 GWh
- % of total electricity consumption – 15,60%
- Capacity factor – 27,89%

Electricity produced by wind in the Netherlands



Source: [Www.statista.com](https://www.statista.com)

Wind Energy Challenges



- Challenging maintenance
- Environment + speed impact: rain, hail, sun, dust, etc.
- Shortened asset life
- Cost of downtimes
- Unpredicted climate change conditions

Image Sources: <https://www.energy.gov/eere/articles/how-do-wind-turbines-survive-severe-storms>
<https://www.azocleantech.com/article.aspx?ArticleID=459>
https://www.researchgate.net/figure/Leading-edge-erosion-of-wind-turbine-blades-16_fig16_339517021

Example: ICING

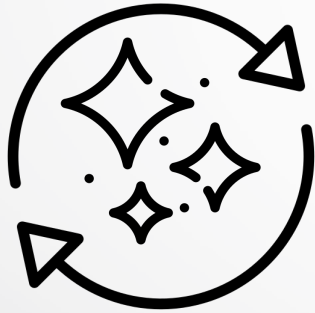
60% of Wind Turbines are affected by it



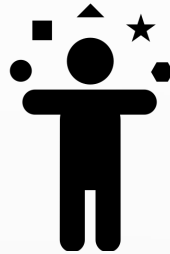
- Power losses up to 50% obtained output energy
- Turbine downtime or failure (average turbine price approx. € 1.2 million)

- Additional service costs: 20000 –60000 € for failure of a single turbine;
- Safety hazards

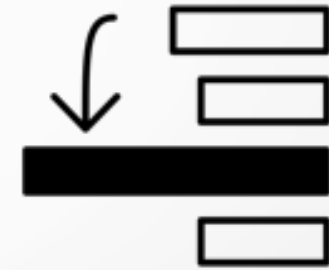
Multi-functional Protective Coating



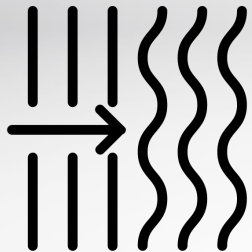
Anti-erosion, anti-icing
& self-cleaning
properties



Optimum coating
quality with user-
friendly materials



One layer application
needed



Durable and robust

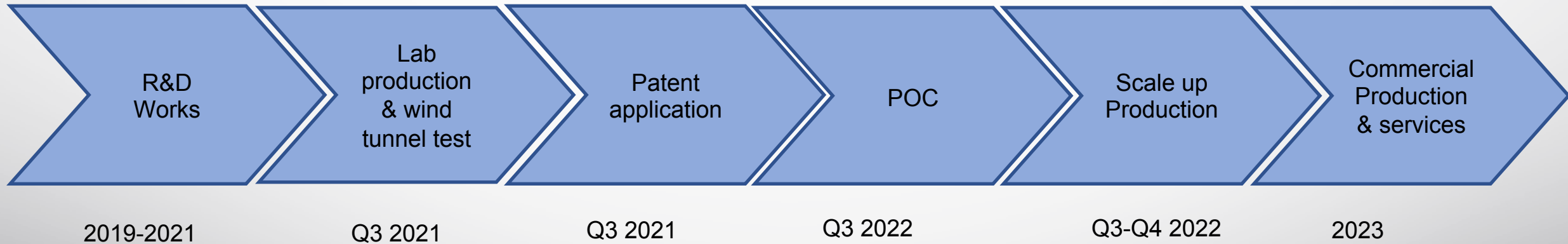


Sustainable zero
VOC



Applicable for
fabrication and in
situ environments

Our roadmap



We may use some help:

- Share your insights;
- Ask your questions;
- Give some technical specifications;



THANK YOU

For further questions:

Valentina.d.litovchenko@gmail.com

+31 6 2250 4203

