



PRESENTATION TO INDUSTRY A

17 January 2022

Data Analytics to Boost Wind Energy Asset Returns

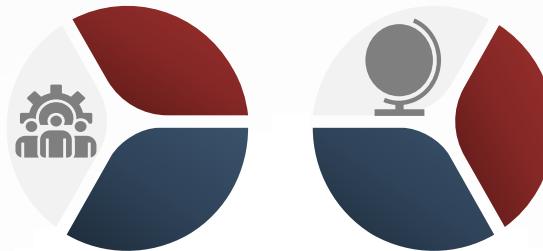
€2 million Fundraise



Investment Highlights

Disruptive digital solution in commercial acceleration phase

Dynamic team supported by experienced & engaged sector experts



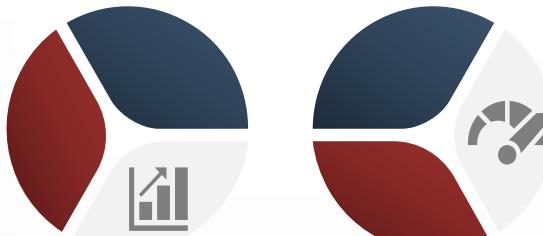
Huge addressable market (300K installed base @ end-2020¹) and high growth (+20K pa)

Attractive business-model (40%+ recurrent revenues)



Highly differentiated SaaS solution + "solid-state" sensor²

System sales already with 5 of global Top 20 (63 commercial units³) with strong commercial pipeline



Capital-lite & flexible ("fabless") operating model

¹ Global Wind Energy Council (GWEC); ² 3rd generation (already "offshore-ready"); ³ sold / booked (Sales & Rental business models)

Agenda

Our Go-to-Market

Key account strategy,
internationalisation, competitive
position, commercial progress

Team & Resourcing

Team Profile & resourcing plans

Financials & Funding

New Business Plan highlights, funding
needs & uses

Appendix

GTM by Geography, Detailed Competitive Analysis

Epsiline's Go-To-Market Strategy

The existing funding round will enable Epsiline to execute its GTM strategy



Target Market

- 300,000+ units installed base
- Existing windfarms:
 - France 2020+
 - EU 2021+
 - NA 2023+
 - China 2024+



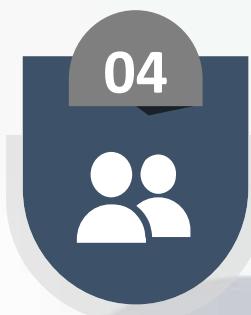
Unique Selling Proposition

- Accurate & relevant data capture
- Sophisticated data analysis tools
- Ease-of-installation
- Low capital outlay
- Compelling functionality roadmap



Channel

- Direct B2B sales
- Agents (currently) for Qualified Lead generation
- Existing windfarms under:
 - **Limited-scope OEM contracts → Utilities & IPPs**
 - Full-scope OEM contracts → OEM Services Divisions

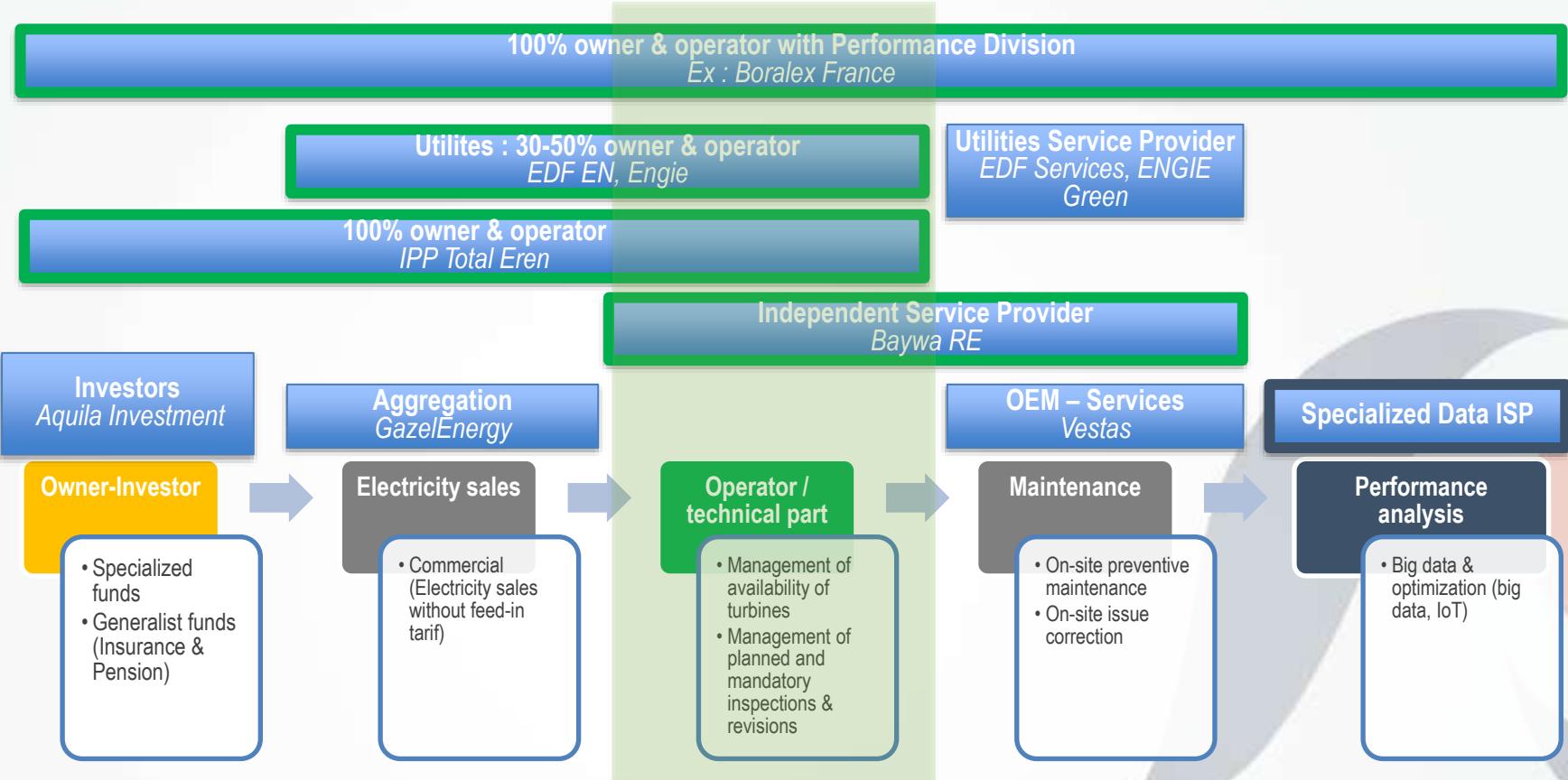


Launch Market Team

- Hiring of dedicated international sales team 2022-2024
- Key near-term hires:
 - VP Sales Europe
 - Data analysts
- Dedicated resource for OEMs

Value Chain & Actors' Activities¹

Limited Scope Contract
OEM or no OEM contract
[~45%²]



Full Scope OEM contract
[~55%²]



¹ onshore segment; ² in Europe & North America

Commercial Internationalisation Plan

2019

2020

2021

2022

2023

2024

2025

2026

Examples

Contract Limited Scope (OEM)



EDF RE, Engie, Total (Eren)



Iberdrola, EDPR, ENEL, Acciona, RWE, Orsted, EON, ENBW



NextEra Energy, EDPR NA, EDF RE NA, Avangrid, Invenergy, Tradewind Energy, EON NA



- China Energy, China Huaneng, China Datang, China SPIC
- Goldwind, Envision

SIEMENS Gamesa

Vestas

ENERCON
ENERGY FOR THE WORLD



Enercon, GE, Vestas, Nordex, SGRE

Contract Full Scope OEM

BOLD = target Key Accounts for Epsiline

Commercial Internationalisation Strategy (2022-2025)

Europe
(ex-France)

North America

China

OEMs

Key Goals

- 2022: Field trials with main utilities (Iberdrola, EDPR, EON, ENBW etc.)
- 2023: fleet deployment with these utilities

- 2H23: Field trials with 5 of the top 10 US utilities
- 2025: US subsidiary @ breakeven

- 2H24: Field trials with 3 of the “Big 5”
- 2025: fleet deployment with 2 utilities

- 2022: Field trials with Enercon & GE
- 2023: WindEagle as an option / add-on in these OEMs' services catalogue

Key Initiatives

- Hire VP Sales Europe
- Open Sales offices in Hamburg & Madrid
- Target customers with dedicated "Performance Optimization" teams

- Leverage European HQ relationships
- Open office in Chicago
- Hire NA Sales Head

- 2024: Open office In Beijing with Chinese Senior Sales Team + dedicated after-sales service

- Active Advisor support for GE (Europe Offshore) & Enercon
- Hire OEM Senior Sales for Europe (initial focus SGRE & Enercon)

Go-To-Market SWOT Analysis

Strengths

- Strong solution USP
- Attractive customer value proposition
- Robust competitive moat
- Accomplished & active Advisory team

Opportunities

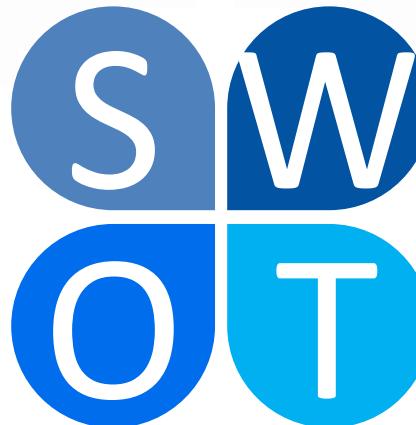
- “Digitalization” of wind sector the key trend 2020-2030
- Large portion of European & US windfarms exiting feed-in-tariff (& non-repowerable) in the coming 2 years
- OEMs need to develop their Services offering
- Offshore windfarm segment (“wake effect” ...)

Weaknesses

- Limited commercial (sales & after-sales) resources
- Narrow leadership team
- Insufficient balance sheet

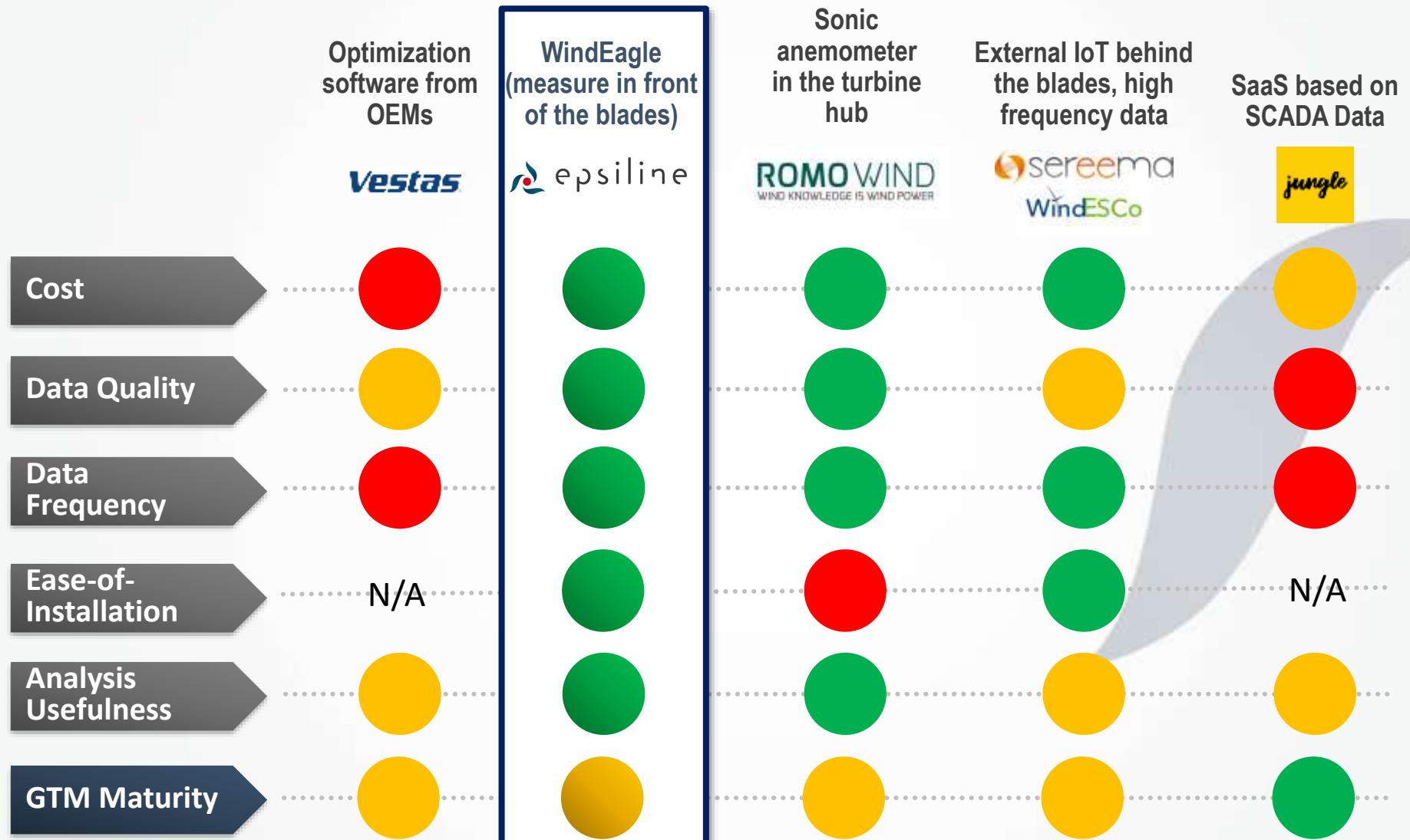
Threats

- OEM services strategy
- OEM “blocking” tactics (full-scope contracts only)
- Competitor actions (unknown)

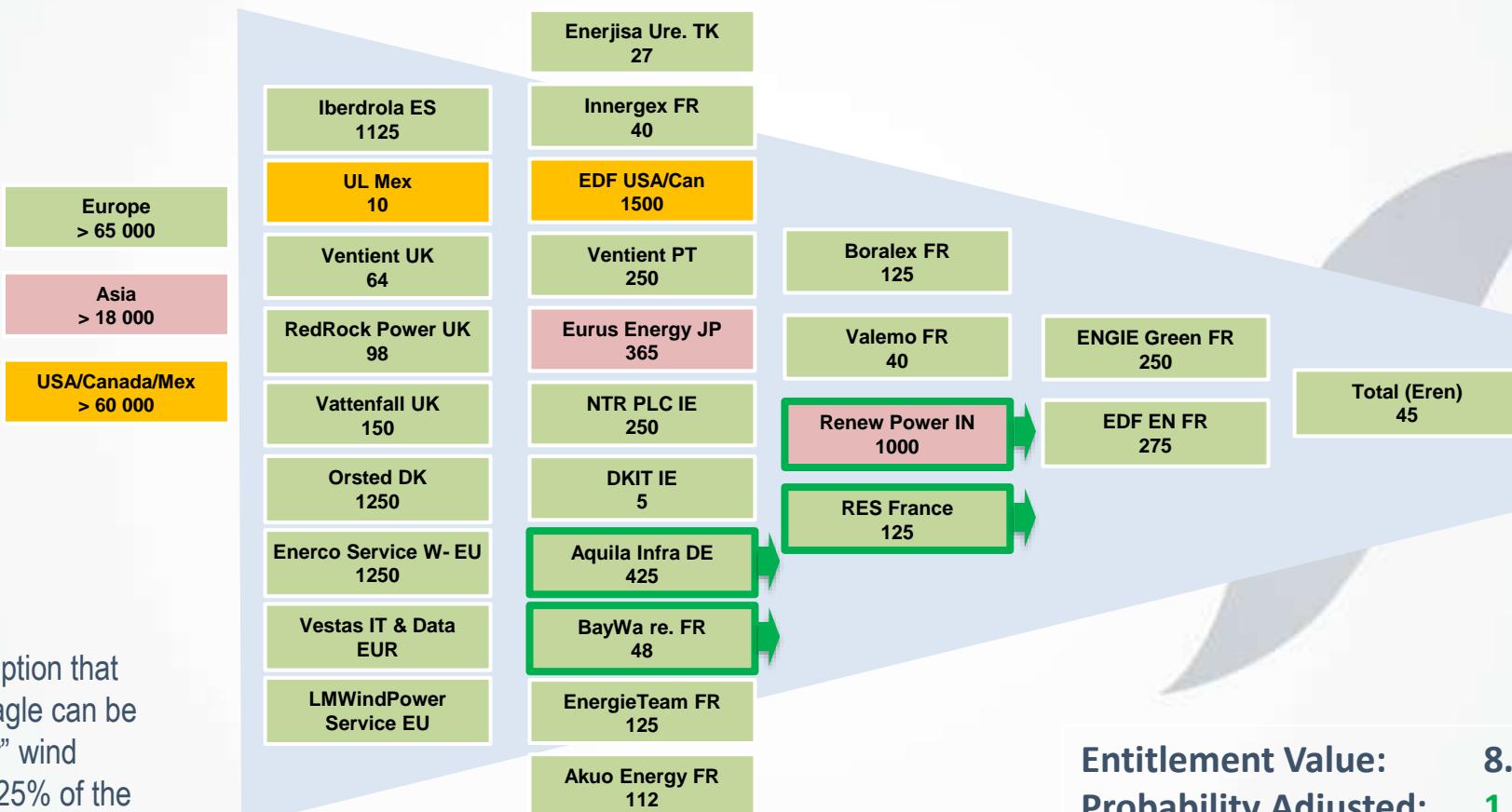


Competitive Position

Epsiline optimizes important criteria



Commercial Funnel [units¹] – End-December 2021



Note: Assumption that “one” WindEagle can be used for “four” wind turbines, i.e. 25% of the total turbines of the client

¹ total demand over 2-3 years

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Start-2022 Operating Team



Christophe LEPAYSAN

CEO, Founder (after studies)

- Engineer Sup-Optique, branch Entrepreneur (Institut d'optique, Paris-Saclay)
- Founded EPSILINE

Commercial Team



Murray DAWSON

Sales, Europe

- 30 years sales experience in multinationals
- BAE Systems, Elf, Louis Dreyfus



Inmaculada SOMOSIERRA

Sales Agent, Southern Europe

Since 03/2021

- 15 years experience in wind turbines : Envision Energy, EDPR, Siemens Gamesa



Fabrice MARTIN

Sales Agent, DACH Zone
Since 12/2021

- Background in German wind energy market

Technical Team



Raphaël TEYSSEYRE

Doctorate, R&D Optics & Software

- Co-inventor of patents
- 10 years technology sector experience



Marc PREVOSTO

Mechanical engineer

- 4 years technology sector experience



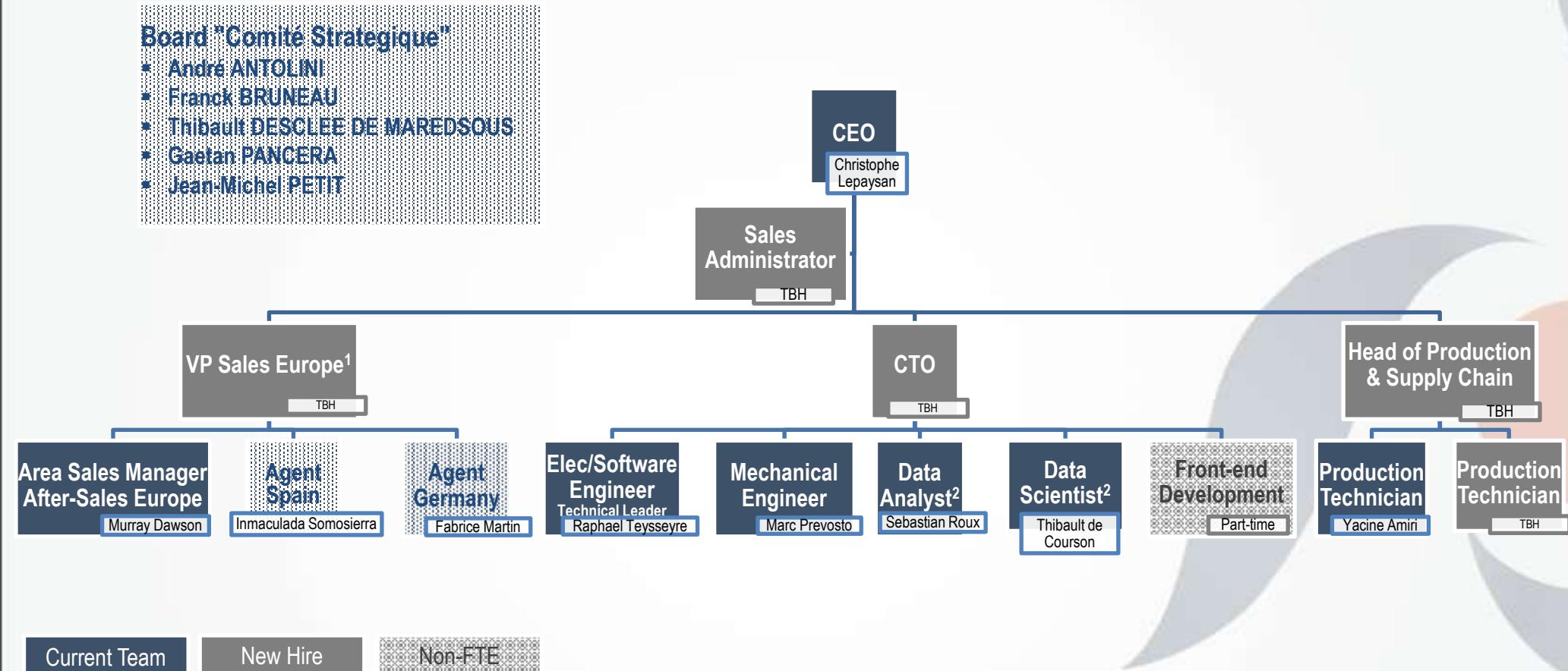
Sébastien ROUX¹

Data Analyst

- MSc Mathematics & AI

¹ interim targeted for full-time role

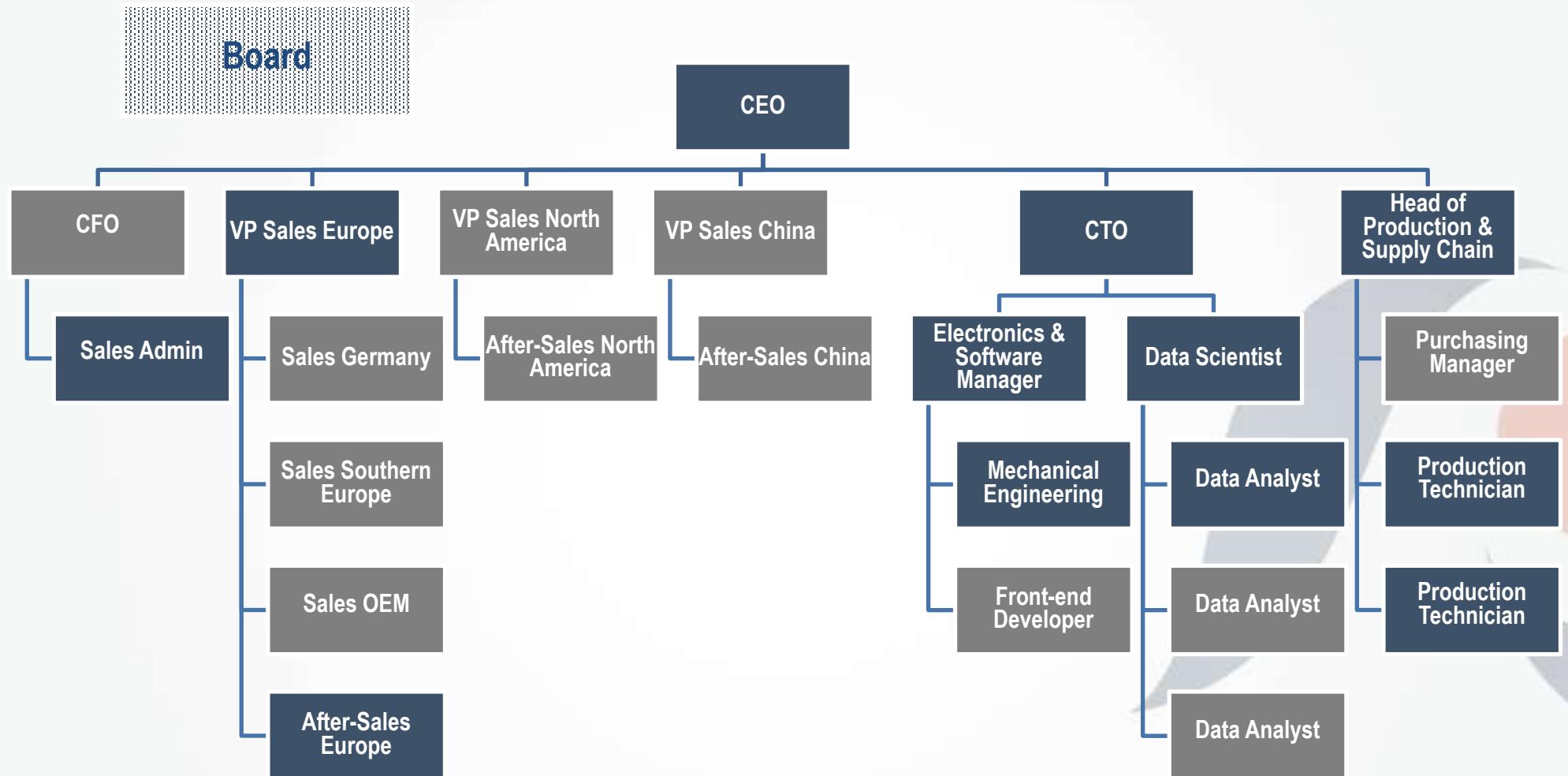
Organisation Chart: 2022



¹ recruitment in progress; ² current interims, targeted for full-time roles

Note: Sales activities currently undertaken by C. Lepaysan & M. Dawson + Sales Agents (Qualified Lead generation)
 André ANTOLINI's active support for contacts with Senior Executives of French Utilities
 Thibault DESCLEE DE MAREDSOUS' active support for contacts from European OEMs

Target Organisation Chart: "by end-2025"



End-2022

By end-2025

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Business Model

Epsiline is rolling out an attractive new services model
in response to customer demand

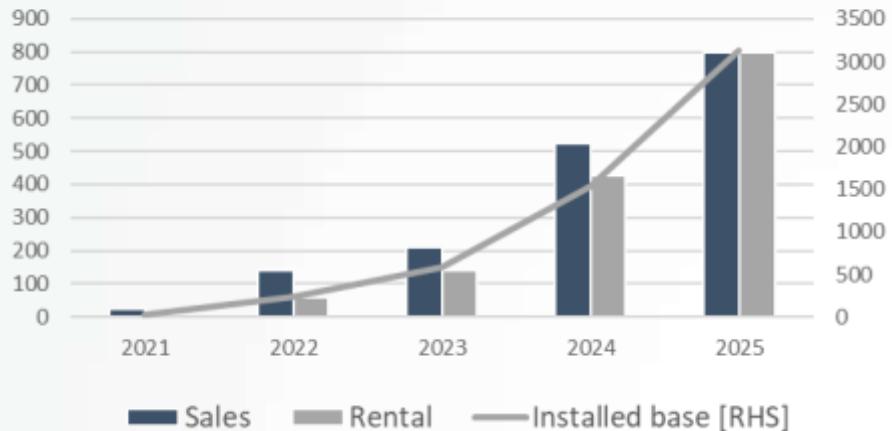
Business Model	Description	Comments
IoT sales & subscription to web platform	<ul style="list-style-type: none">Purchase of IoT sensor (9k€-13k€ subject to volume)Web platform subscription 600-900 €/yr (subject to volume), data transfer costs included	<ul style="list-style-type: none">Initial business model (2020+)
Full Services	<ul style="list-style-type: none">Wind turbine selection service from SCADA data: 700 € / dayInstallation of the sensor on a wind turbine: € 550 / wind turbineRental (3-year commitment) for monitoring to ensure immediate detection when problems arise:<ul style="list-style-type: none">€ 575 / month / wind turbine the first year€ 325 / month / wind turbine the following yearsData post-analysis included	<ul style="list-style-type: none">New business model responding to specific customer requestMore attractive margin + ARR profilesSensors partially funded by our banks¹First step towards a “Data-as-a-Service” business model

¹ Currently €85,000 approved, renegotiating to €150,000 (no firm order obligation necessary)

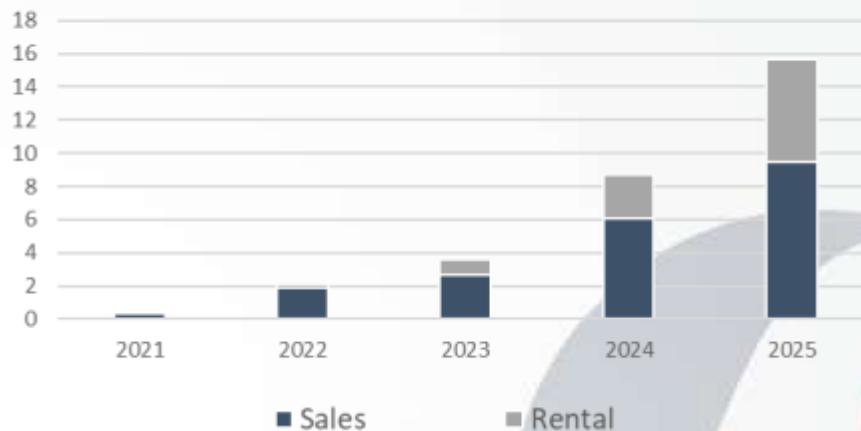
Revised Business Plan¹ – Scale-Up

Attractive new business model supporting sales ramp ...

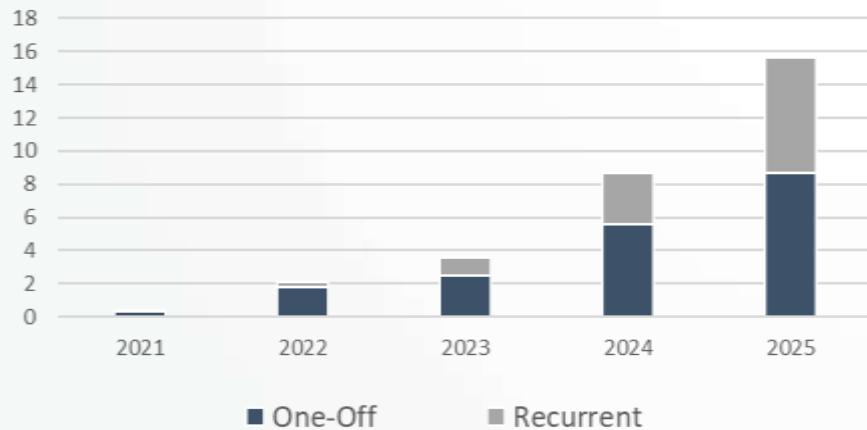
Unit Trends



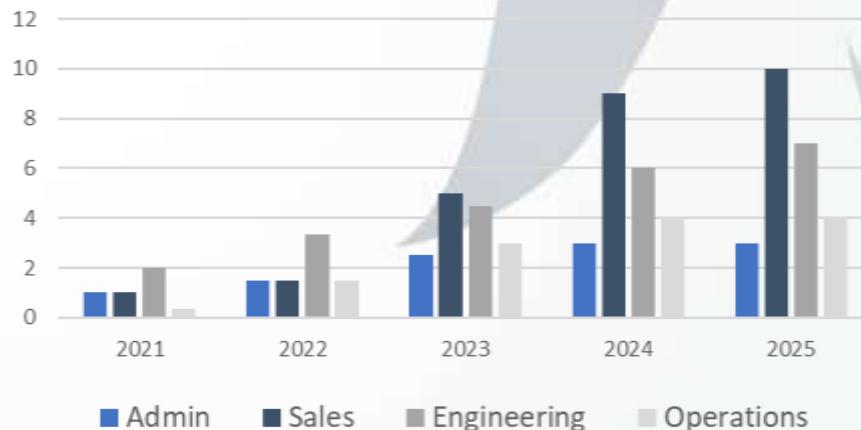
Revenues - by Business Model [€ million]



Revenues - by Type [€ million]



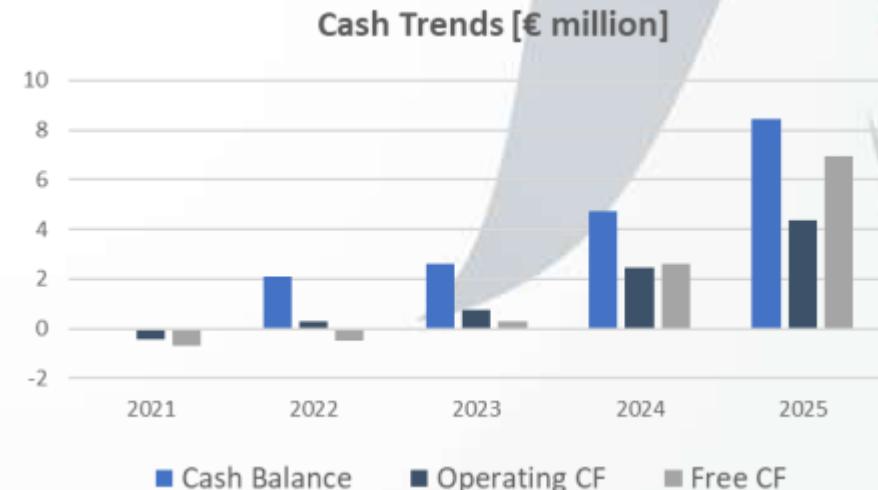
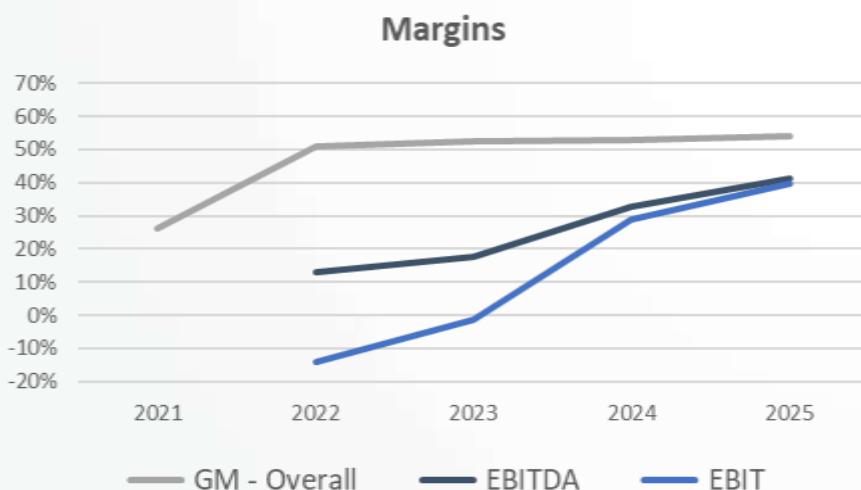
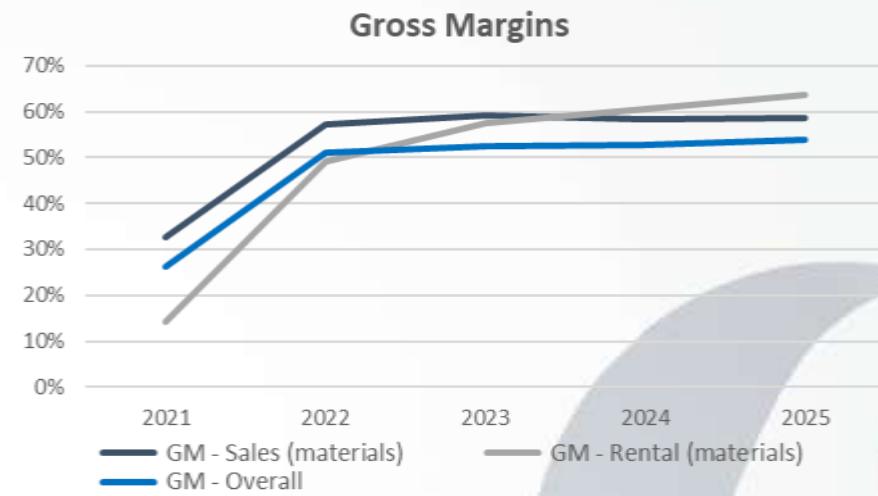
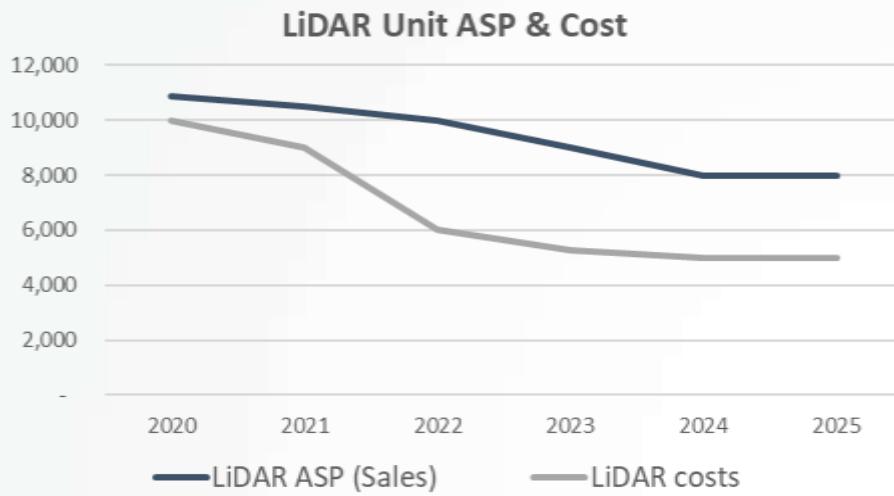
Headcount [#/year]



¹ assumes €2 million fundraising in 1Q22; awaiting final Board approval

Revised Business Plan¹ – Returns

... as well as attractive margin profile



¹ assumes €2 million fundraising in 1Q22; awaiting final Board approval

Uses of Funds

2M€ to accelerate commercial scale-up

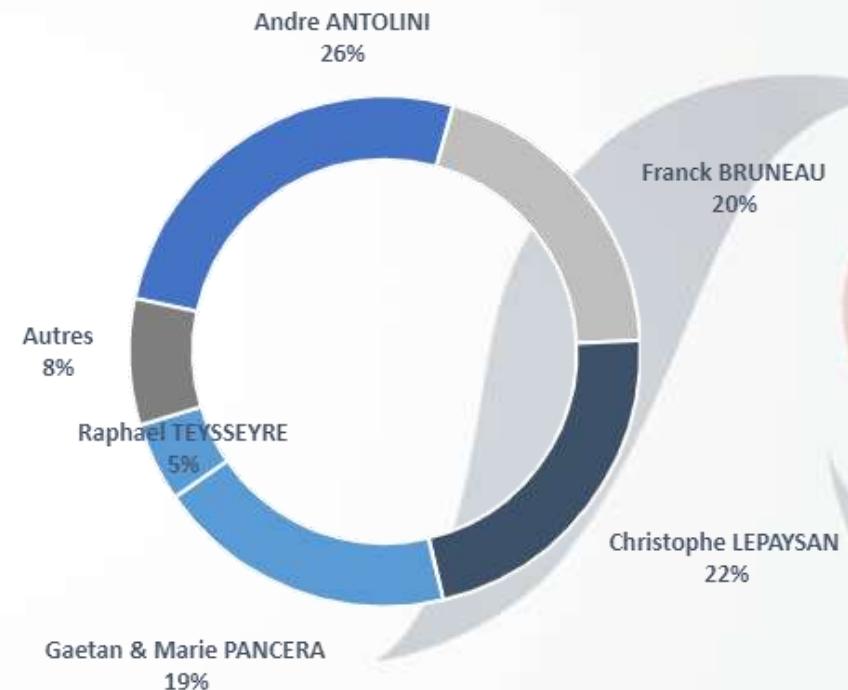
2022:

- ❖ Commercial scale-up in Europe
 - VP Sales - Europe
 - EU country offices
- ❖ Working capital
- ❖ Supply chain hires
- ❖ Reinforcement of the technical team (data analysis)

2023-2025:

- ❖ Worldwide scale-up
 - Europe country Sales
 - OEM Sales
 - VP Sales – North America
 - VP Sales China
 - Country offices
- ❖ Ongoing Engineering efforts
- ❖ Working capital (incl. Rental model ...)

Shareholder Base - Fully-Diluted¹



¹ includes an agreement in principle with the current shareholders on a BSPCE plan to increase the ownership of Christophe LEPAYSAN and Raphaël TEYSSEYRE over 3 years, pre current funding round.

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Our Value Proposition

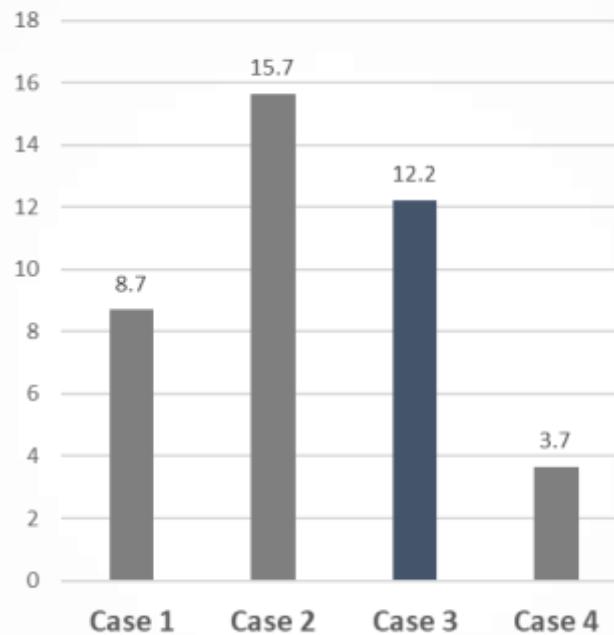
RoI typically < 1 year

WindEagle Functionality

- Yaw Misalignment
- Aerodynamic Imbalance
- Turbulence Intensity Gain
- Mass imbalance



Payback Time [months]



Case #1: 3MW, 25% capacity factor, newer turbine, several optimisations necessary

Case #2: 3MW, 25% capacity factor, newer turbine, moderate misalignment and weak aerodynamic imbalance

Case #3¹: 2MW, 30% capacity factor, older turbine, moderate misalignment

Case #4: 2MW, 30% capacity factor, older turbine, significant misalignment

Site / Turbine Specifics

- Age
- Rating (MW)
- Current degree of optimization
- Complexity of terrain

¹ Most common case for wind turbines installed from 2005-2015

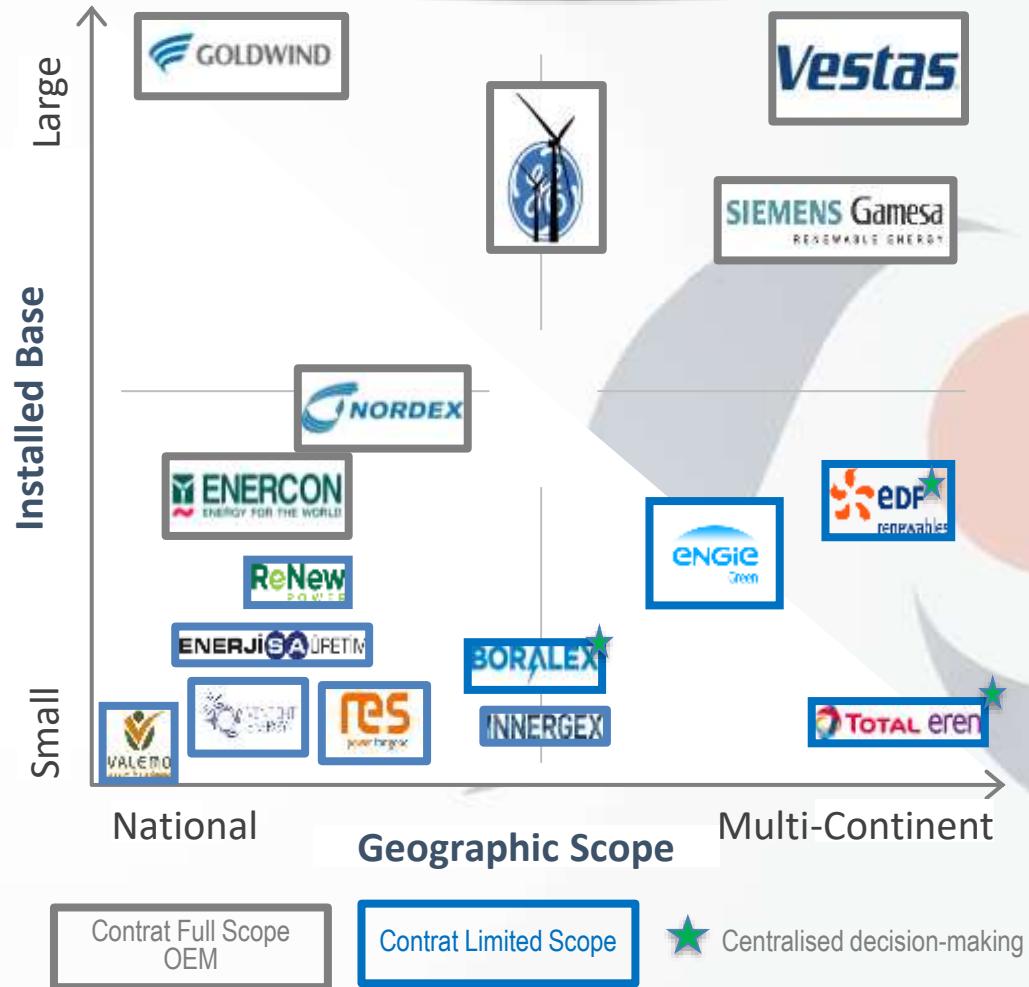
Geographic Market & Customer Profiles

by Geography



¹ Significant portion (~30%) of market is owned by councils & farmowners

by Key Account



Commercial Strategy : Europe ex-France

Target Accounts [GW]	Market Specificities (pertinent to Epsiline)
<ul style="list-style-type: none">Iberdrola 17 GWAcciona 8 GWEDPR 12 GWENEL 15 GWEON 13 GWEDF 8 GWENGIE 6 GWENEL 6 GW	<ul style="list-style-type: none">Many of installed wind turbines will be out of feed-in tariff in the next 2 years + full-scope contract prices increase every year → opportunity when O&M is brought in-houseGermany:<ul style="list-style-type: none">Utilities purchasing decision decentralized by Länder (most HQ located in Hamburg)Relatively old wind farmsSpain: Relatively old windfarms

Commercial Initiatives (2022-2025)
<ul style="list-style-type: none">Hire VP Sales EuropeGermany: Open office in Hamburg; Sales process by regionSpain : Open office in Madrid in 2022-2023 & enter AEE & AEMERTarget customers with dedicated Performance Optimization team

2022-2025 Goals
<ul style="list-style-type: none">2022 : Field trials with main utilities (Iberdrola, EDPR, EON, ENBW etc.)2023: fleet deployment with these utilities

Commercial Strategy : North America

Target Accounts [GW]	Market Specificities (pertinent to Epsiline)
<ul style="list-style-type: none">▪ NextEra Energy Resources 15 GW▪ Avangrid 7 GW▪ MidAmerican Energy 6 GW▪ EDP NA 6 GW▪ ENEL NA 5 GW▪ RWE NA 4 GW▪ EDF NA 4 GW▪ Invenergy 3 GW	<ul style="list-style-type: none">▪ Same target customers US & Canada▪ European Utilities (esp. Spain, Portugal, Italy) are present on this market▪ Tariffs (PPA) ~1/2 European level▪ Big and remote windfarms (30-70 WT/WF), bulk orders targeted▪ US: Modern WT specifically in the MidWest (from Illinois) to Texas▪ Canada : most of WT in Ontario & Quebec
Commercial Initiatives (2022-2025)	2022-2025 Goals
<ul style="list-style-type: none">▪ Leverage European HQ relationships▪ Open office in Chicago▪ Hire NA Sales Head▪ Customer after-sales team	<ul style="list-style-type: none">▪ 2023 : Field Trial stage with 5 of the top 10 US utilities▪ 2024 : US subsidiary @ breakeven

Commercial Strategy : China

Target Accounts [GW]	Market Specificities (pertinent to Epsiline)
<ul style="list-style-type: none">■ China Energy 43 GW■ China Huaneng Group 23 GW■ China Datang Group 20 GW■ China SPIC 19 GW■ CGN Power Group 17 GW■ China Huadian Group 15 GW	<ul style="list-style-type: none">■ Several large State-owned utilities dominate the market (most HQ'ed in Beijing)■ No subsidies since end-2020 → pressure for owners to optimize■ Big and remote windfarms (30 WT/WF) - bulk orders targeted■ Not so much local technical competence near the windfarms■ After-sales service important
Commercial Initiatives (2022-2025)	2022-2025 Goals
<ul style="list-style-type: none">■ 2023 : Open office In Beijing with <u>Chinese</u> Senior Sales Team + dedicated after-sales service	<ul style="list-style-type: none">■ 2023 : Field trials with 3 of the “Big 5”■ 2024 : fleet deployment with 2 utilities

Commercial Strategy : OEMs

Target Accounts [GW]

- Vestas 145 GW
- Siemens-Gamesa 115 GW
- GE 62 GW
- Enercon 50 GW

Market Specificities (pertinent to Epsiline)

- OEMs pursuing strategy to increase service revenues (more profitable than turbine sales)
- OEMs have to increase the value of their services (e.g. with IoT)

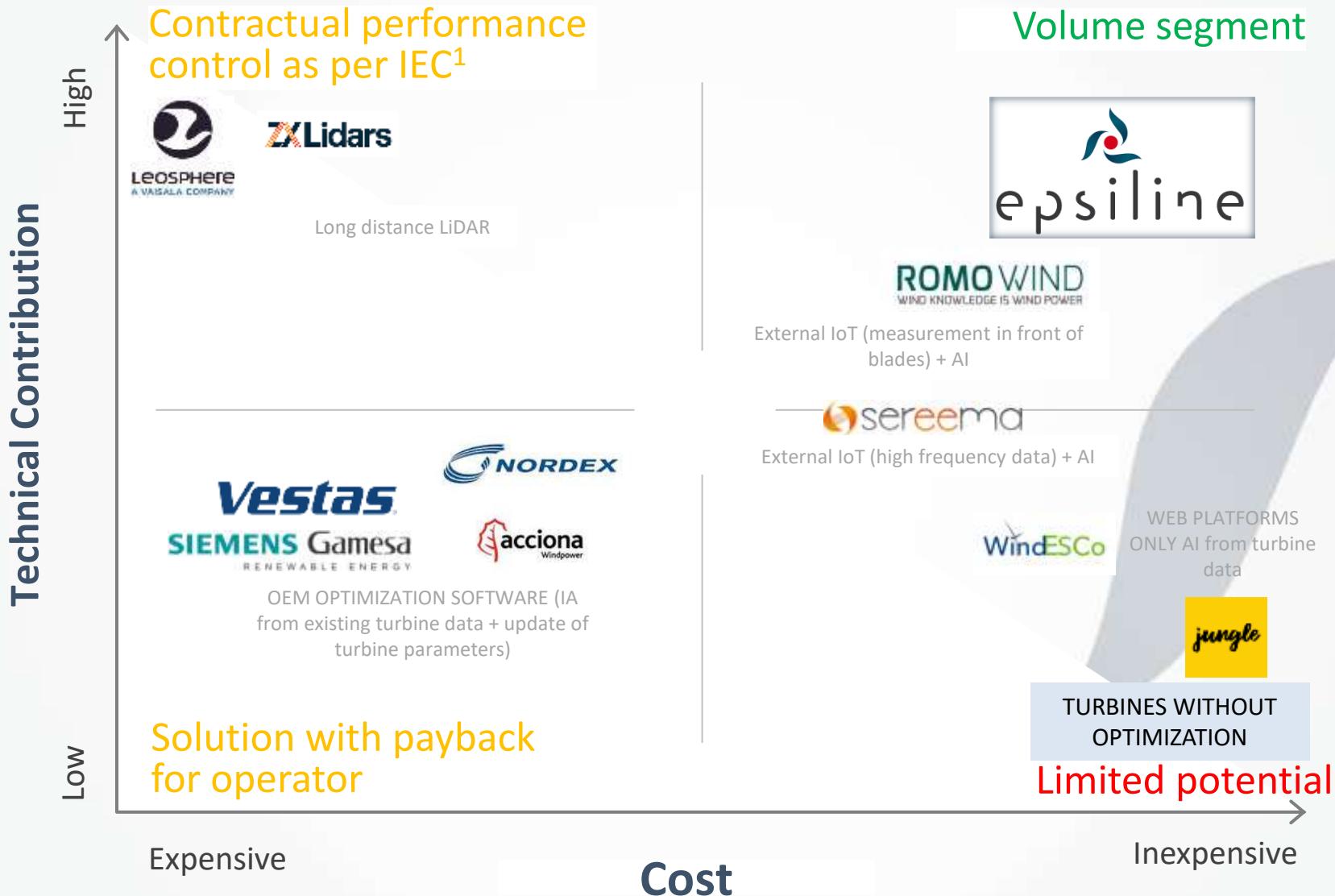
Commercial Initiative (2022-2024)

- Active Support of Thibault Desclée for GE (Europe Offshore) & Enercon
- Hire OEM Senior Sales for Europe (initial focus SGRE & Enercon)

2022-2025 Goals

- 2022 field trials with Enercon & GE
- 2023 : WindEagle as an option / add-on in these OEMs' services catalogues

Competitive Position



¹ International Electrotechnical Commission norms

Competition - Details

	Epsiline	RomoWind	Sereema/WindEsco	Jungle	Vestas/SGRE
Technology	Short range Lidar+ PTU+ accélérometer	Sonic Anemometer +PTU	Sonic Anemometer + Vibrations	SCADA based Saas	OEM Optimization software
Yaw misalignment (precision)	✓✓✓	✓✓✓	✓ measures behind the blades, same than nacelle sensors	✓ (IA with unprecised data)	✓ (IA with unprecised data & update of turbine parameters)
Power Curve	✓✓✓	✓✓✓	✓ measures behind the blades, same than nacelle sensors	✓ Same issues than nacelle sensors	✓ (nacelle anemometers)
Turbulence	✓	✓	✗	✗	✗
Pitch	✓	✗	✓	✗	✗
Wake steering	R & D	✗	R & D	✗	✗
Installation	Nacelle roof (1H), customers can install themselves	Installation in the hub, specialized teams	Nacelle roof, customers can install themselves	N/A Software update	N/A Software update
Possibility to move the sensors	✓	✗	✓	N/A Software update	N/A Software update
Diagnostics reports (dashboard)	One-clic SaaS (under development)	Diagnostic, option with fee for raw data	One-clic SaaS	One-clic SaaS	Data & diagnostics not sent
Public price (€) + annual subscription	Sales : 9K-13K € + 600-900 €/an (export)	9K € – 12K € + 600 €/year	Lease model 3.200 €/year/sensor for 20 units	2.000 € + 400€/turbine/year	25.000 €/turbine
5 years total (€) for 6 WT	78 000 €	78 000 €	96 000 €	14 000 €	150.000 €

Competition vs. SEREEMA – 1/2

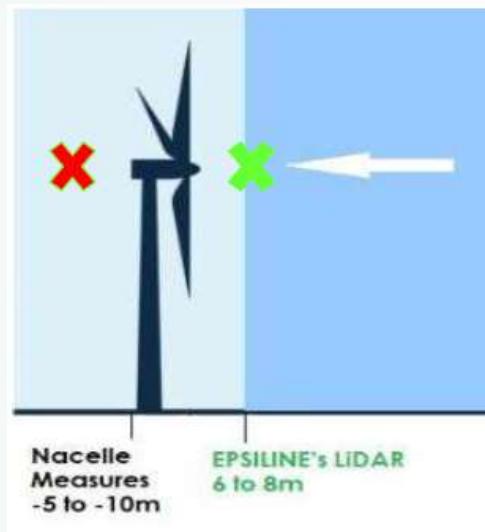
Epsiline : reliable measurement in front of the blades

The wind turbines are controlled by sonic anemometers located behind the blades. The measurements are disturbed by the turbulence generated by these blades and are by nature erroneous, despite sophisticated software to correct them.

Sereema solution provides a partial and imprecise response because it uses the same technology (sonic anemometers) located behind the blades, simply with a higher measurement frequency than turbine anemometers.



The only reliable solution is to measure in front of the blades: the EPSILINE LiDAR allows this thanks to its remote measurement



Competition vs. SEREEMA – 2/2

Epsiline : Yaw and Rotor Imbalance diagnostics more precise

	SEREEMA	EPSILINE
Technological Key benefits		
Independent data from OEM	YES	YES
Static yaw correction	Unprecise No direct measure	Precise
Yaw reactivity	YES	YES
True North Detection	YES	YES
Aerodynamic rotor imbalance (Pitch)	Overestimated	Precise
Mass Rotor Imbalance	YES	YES
Turbulence	NO	YES
Solution		
Easy installation	YES	YES
Business model	All-inclusive subscription	IoT sales + web subscription or all-inclusive subscription
Dashboard		
At-a-glance tracking	YES	YES
Double-check after corrections	YES	YES
Gain estimation	Automatic	Manual / automation in progress
Monitoring	Automatic	Manual / automation in progress

Competition vs. WINDESCO – 1/2

Epsiline : reliable measurement in front of the blades

**Data from the wind turbines
(sonic anemometers which
measure behind the blades)**
are unprecise and do not
allow optimal control of the
wind turbine.

WindEsco offers tools based mainly on wind turbine data, which results in great imprecision in the detections and in the modeling of the wake effect

The only reliable solution for measuring turbulence and thus accurately modeling the wake effect and measuring in front of the blades : the EPSILINE LiDAR allows this thanks to its remote measurement

Competition vs. WINDESCO – 2/2

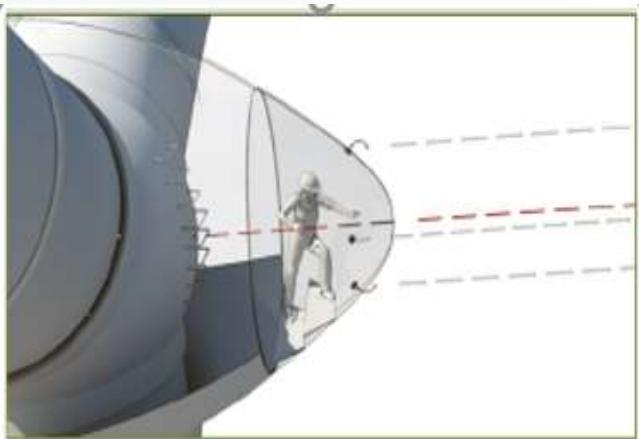
Epsiline : Yaw and Turbulence Intensity measurements more precise

	WINDESCO SWARM	EPSILINE
Technological Key benefits		
Independent data from OEM	NO (SCADA)	YES
Static yaw correction	Unprecise No direct measure	Precise
Yaw reactivity	NO	YES
True North Detection	NO	YES
Aerodynamic rotor imbalance (Pitch)	Overestimated	Precise
Mass Rotor Imbalance	NO	YES
Turbulence	NO	YES
Solution		
Easy installation	YES	YES
Business model	All-inclusive subscription	IoT sales + web subscription or all-inclusive subscription
Wake steering	Pilot project with an IoT accelerometer (new - nov21)	R&D
Dashboard		
At-a-glance tracking	YES	YES
Double-check after corrections	YES	YES
Gain estimation	Automatic	Manual / automation in progress
Monitoring	Automatic	Manual / automation in progress

Competition vs. RomoWind – 1/2

Epsiline : easy installation possible by the customer

The only reliable solution is to measure in front of the blades: but the solution must be easy to install



The solution provided by RomoWind measures in front of the blades, where it is most precise like WindEagle

but the installation requires entering the hub or "nose" of the wind turbine with teams who have unusual authorizations (therefore very limited number of teams).

In addition, the angle between the three parts of this instrument must be achieved with great precision, otherwise the measurement is totally disturbed. This severely limits the ability of the customer to install this solution: the owner-operator of the wind farm must call on RomoWind to come and install the solution.

The WindEagle is easy to install: the customer can do it himself thanks to an installation video

Competition vs. RomoWind – 2/2

Epsiline : easy installation possible by the customer

	RomoWind (nabla wind hub)	EPSILINE
Technological Key benefits		
Independent data from OEM	YES	YES
Static yaw correction	YES	YES
Yaw reactivity	YES	YES
True North Detection	YES	YES
Aerodynamic rotor imbalance (Pitch)	NO	YES
Mass Rotor Imbalance	NO	YES
Turbulence Intensity	YES	YES
Bats detection	Detection through weather conditions, unprecise	R&D for curtailment optimization
Ergonomie de la solution		
Easy installation	NO	YES
Business model	IoT sales + web subscription	IoT sales + web subscription or all-inclusive subscription
Dashboard		
At-a-glance tracking	YES	YES
Double-check after corrections	YES	YES
Gain estimation	Automatic	Manual / automation in progress
Monitoring	Automatic	Manual / automation in progress

Competition vs. Software from OEMs

Epsiline : easy installation possible by the customer

The wind turbine is not producing at the maximum



Wind turbines are supplied by the turbine manufacturers with anemometers which do not allow precise measurement (measurement behind the blades)

Optimization software are offered by the turbine manufacturer himself -> conflict of interest

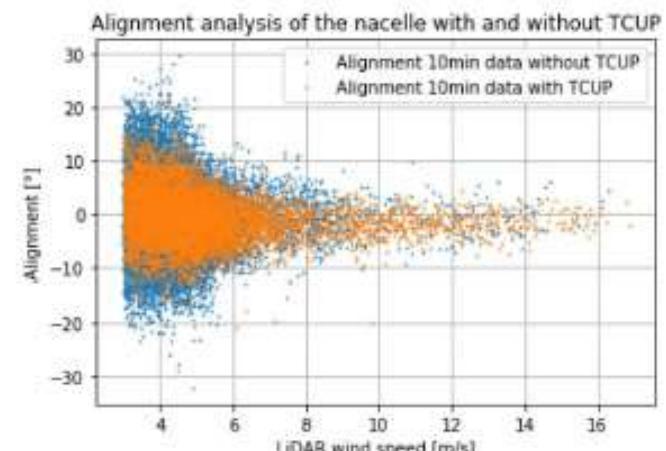
In addition, the software is a "black box", the owner-operator does not know exactly what is optimized.

Finally, it is not possible to measure the gain precisely with SCADA data from the wind turbine

WindEagle allows PRECISE and INDEPENDENT measurement

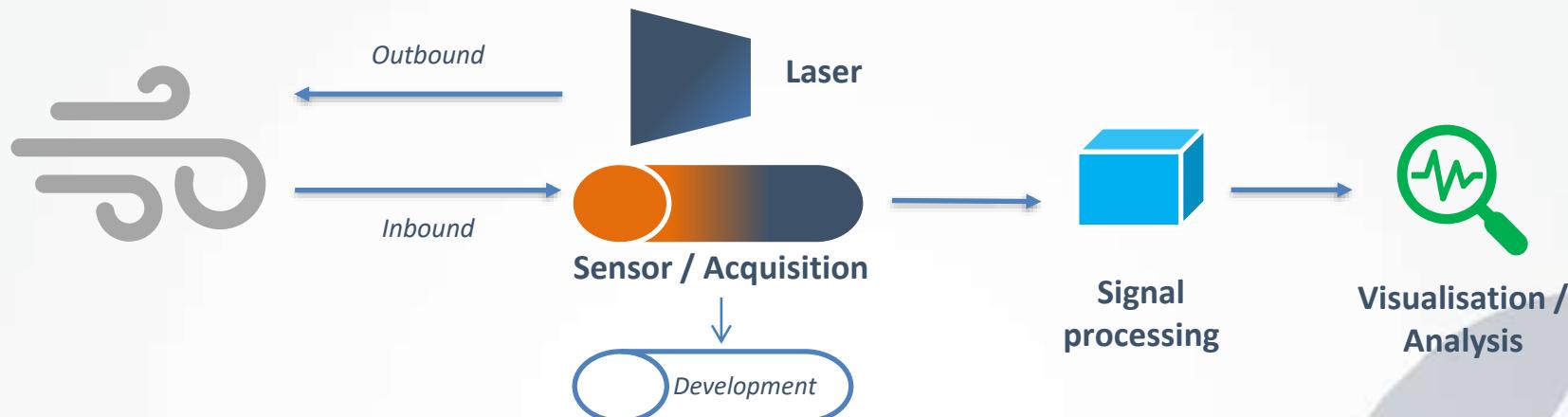
Example : characterization of the Siemens-Gamesa TCUP software by EPSILINE

In this study, the operator has to use the WindEagle solution to assess the gain of this software provided by the turbine manufacturer



Intellectual Property

Concept impossible for our competitors to replicate



Equipment/Material

- ❖ Precise measurement ahead of blades enabled by proprietary laser technology
⇒ Other projecting LiDAR technologies much more expensive
- ❖ External installation which improves autonomy and minimises incremental installation costs

Services/Data

- ❖ Sensor « all-in-one » : Algorithms developed to automatically combine multiple data sources for diagnostics on the overall operating behaviour of the turbine
- ❖ Web portal: Availability of data visualisation portal to minimise operator IT costs



Patented (100%)



Patented (50:50 with CNRS)



Trade secrets



Network effects / switching costs



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