Technology Radar - Systematic exploration of the technological future of Wind Turbines

CHALLENGE

Goldwind Science & Technology Co., Ltd. (Goldwind), headquartered in China, is one of the largest global wind turbine manufacturers. With € 2.3 bn, Goldwind is the third-largest wind turbine manufacturer by revenue and with a market share of 12.5%, the largest by installed capacity.

International growth was Goldwind's key strategic goal which led them to establish an R&D center in Denmark. This unit was created to become a competence center for international technology, competitor, and trend intelligence, and observatory for changing industry dynamics. They sought Rohrbeck Heger's expertise for building up technology foresight competencies and triggering adequate reactions to change.

IMPACT

Technology scan and profile development

A technology scan in selected segments of wind turbines resulted in the identification of 56 emerging technologies. Thereof, 20 were prioritized high in a first assessment round and further researched and summarized in technology profiles.

Matching & Mapping

In the pilot, a technology foresight acceleration workshop with Goldwind participants from Denmark and China enabled the translation of the technological opportunities into actionable recommendations for the optimization of Goldwind's strategic technology and R&D portfolio.

The pilot resulted in the initiation of 4 new technology development activities, the acceleration of 2 existing activities, and divestment of 1 existing activity.

Technology Radar Pilot

Together with Rohrbeck Heger, Goldwind initiated a technology radar to identify emerging technologies and create an evaluation procedure to optimize the firm's strategic technology portfolio.

Platform Proof of Concept

To prepare institutionalized technology foresight with a technology radar, Rohrbeck Heger implemented a proof of concept (PoC) of a technology radar IT platform.

APPROACH

In a first step, Goldwind and Rohrbeck Heger specified a customized technology radar framework and two initial search areas.

In the selected two fields we conducted a technology scan based on scientific and technology databases, expert interviews and a competitor analysis. The findinds were consolidated and aggregated, resulting in a long list of 56 technologies of which 20 were prioritized high in a first assessment.

The 20 priortized technolgies were further analyzed, substantiated, and triangulated through patent analysis, in-depth desk researched, and interviews with internal and external experts revealing key actors, patent trends, value creation potential, and related internal activities. Subsequently, a step-wise assessment of technological opportunities from both, an outside-in and inside-out perspective, was conducted.

In a final assessment workshop with technology management leaders from Goldwind the existing Goldwind R&D pipeline was reviewed and matched against identified technology opportunities.

As result, actionable recommendations and initiatives to improve the Goldwind R&D portfolio were derived.

BENEFITS

⊘ Management engagement

To complement the technology radar tool, we piloted workshops to engage with relevant stakeholders and establish a matching and mapping logic between technological possibilities and existing assets and resources at Goldwind.

⊘ Creating common understanding

The combination of tool-supported technology radar & workshops with key stakeholders fostered a common understanding of emerging technologies, risks and opportunities for the company's R&D portfolio.

⊘ Increased future preparedness

Deep dive into the next-generation wind turbine components enabled Goldwind to systematically understand, optimize, and manage required change in the portfolio and development projects. workshops to drive individual employee learning through experience.

ABOUT THE CLIENT

GOLDWIND

⊙ Beijing, China

€ > €300 million

⊕ 27 countries

👥 8000+ employees

For more information please contact:

TOBIAS HEGER
Founder & Managing Partner
theger@rohrbeckheger.com