Risk management at Vestas provides a transparent portfolio view on Vestas’ strategic and operational risk position and direction with the aim to assess and adjust the risk exposure.

Being a multinational company and global leader in wind energy, Vestas is exposed to a variety of risks in its daily business. To protect and create shareholder value and achieve its strategic objectives, the broad spectrum of risks needs to be managed, including operational risks relating to the design and manufacturing of wind turbines, execution risks stemming from the transportation, installation, and servicing of wind turbines, and risks of a macroeconomic and regulatory nature. Vestas strives to actively ensure that such risks are understood, monitored, and managed, to warrant a minimal negative impact on the realisation of Vestas’ strategic and financial ambitions.

Risk management is an integral part of the decision making in Vestas and is supported by its corporate Enterprise Risk Management (ERM) framework. The ERM framework is a holistic, consistent, and continuous approach to managing Vestas’ risk exposure and covers risks across the entire organisation.

ERM is not only about identification, evaluation, and management of the individual risks, but also about communication and providing the necessary foundation for making business decisions.

Governance

At Vestas, risk management is the responsibility of everyone, and all parts of the organisation work with risk management as part of the daily operations. Vestas works systematically with risks and follows a plan for the year – the ERM annual wheel – according to which each region, corporate function and selected support functions, identifies, assesses, prioritises, and reports on relevant risks on a quarterly basis in accordance with the ERM framework.

The assessment of the potential financial and/or non-financial impact is done by using Vestas’ risk criteria and the identified risks are mapped as either being short-term, medium-term, or of a strategic nature.

- **Short-term risks** typically have financial impact within the current year and are thus often related to execution and single events.
- **Medium-term risks** have a time horizon of one to three years and are often characterised as emerging risks.
- **Strategic risks** are linked to the execution of Vestas’ strategy, and to the operational business.

All risks are consolidated by Global Risk Management and signed off by relevant risk owners throughout the organisation. Each quarter, key risks are presented and discussed in the Risk Committee, including the status and exposure of those risks in order to support decisions on mitigating actions. The Risk Committee currently consists of all members of Executive Management, with the exception of the Group President & CEO, and is chaired by the Executive Vice President & CFO.

On a quarterly basis, the key risks and mitigations are presented to the Group President & CEO on an Executive Management meeting with the participation of the Group Senior Vice President & Head of Strategy. Semi-annually, the risks are reported to the Audit Committee as well as the Board of Directors.

Financial risks, including risks related to currency, interest rate, tax, credit, and commodity exposures are addressed in the notes to the Consolidated financial statements, see page 061.

Enterprise Risk Management annual wheel

The purpose of the annual wheel is to illustrate the frequency of the Risk Committee meetings and higher level reporting on ERM in Vestas. The sequence of the annual wheel is repeated throughout the organisation.
Adapting to markets with greater complexity

**Description**
Several of the markets in which Vestas is exploring business opportunities have characteristics, that differ from the more mature markets in Europe and the USA. Some of the main risk areas to be understood and addressed are:

- Security in relation to employees and subcontractors
- Impacts to local communities near construction of wind farms
- Corruption in the country or sector
- Sanctions and export control according to international law
- Protection of intellectual property rights

**Impact**
The adverse impacts relating to risks in complex markets are many and different but amongst others, adverse reputational impact or legal implications may occur if risks are not mitigated.

- Risks relating to intellectual property rights may impact competitiveness, lead to adverse claims or limit freedom to operate.

**Mitigation**
To prevent and mitigate potential risks within these areas, Vestas uses a stage gate-based process to systematically evaluate and adapt the product and project offering during the contracting, construction, and servicing phases of a project.

Trade barriers

**Description**
During 2019, the imposition of tariffs on trade goods and commodities on a global level has risen. Vestas has a global supply chain, and is naturally not immune to this development, due to the large amount of steel and high number of materials and components that wind turbines consist of.

**Impact**
Prices of both domestically sourced material and imported components are expected to go up due to the imposition of tariffs and an increased uncertainty regarding the international development of tariff levels. Increased prices of materials and components lead to higher costs for wind turbine manufacturing and could lead to higher energy costs.

**Mitigation**
Vestas continuously works to minimise the impact from existing and potential tariffs by leveraging its global footprint, procurement options as well as the entire value chain. With details changing daily, Vestas continues to monitor and explore multiple avenues of mitigating the impacts.

Execution of high volumes

**Description**
Vestas is manufacturing, delivering, and installing significant volumes of wind turbines. A significant proportion of deliveries are typically concentrated in the second half of the year, especially driven by the phase out of the Production Tax Credit in the USA. Some of the main risks lie within ramp-up of manufacturing internally in Vestas as well as with Vestas’ vendors, including constraints on sourcing of materials, components, and transportation. Extreme weather conditions in the fourth quarter in the Northern hemisphere, can impact Vestas’ ability to execute commitments on time.

**Impact**
Financial impact expressed as costs related to liquidated damages and budget overrun is an evident potential impact. Utilisation of Vestas’ manufacturing footprint and the flexibility it provides may expose Vestas to exchange rate fluctuations. Maintaining quality levels in a high-volume scenario is a challenge and poses a risk for Vestas.

**Mitigation**
In the contracting phase, Vestas works to ensure a certain flexibility in delivery schedules to mitigate delay impacts on the revenue stream. Vestas has a continuous high internal focus on execution in every part of the organisation and the value chain Vestas operates within.
Cyber risks

Description
Vestas’ dependence on its commercial, technical, and operational IT infrastructure is significant and hence, Vestas is exposed to potential loss or harm relating to this.

Impact
Risks include financial loss and theft of intellectual property rights or personal data, which may result in monetary losses in the form of lost business opportunities or fines and penalties from authorities.

Malicious hacking activities can in addition harm the infrastructure and create physical loss of property and consequential difficulties for Vestas to meet its contractual obligations.

Mitigation
Vestas works systematically to educate its organisation in methods to address exposure and is continuously working on improving the technical ability to protect against, detect, and respond to any attempts to enter its commercial, technical, or operational IT infrastructure.

Increased complexity leading to faster product cycles

Description
The competitive landscape has in the past few years driven wind turbine manufacturers towards increased agility when it comes to introduction of new technology. The fact that wind energy in many markets today is unsubsidised and competes with fossil technologies, demands lower cost of energy from the wind turbine manufacturers (OEMs) and the speed of changes requires the OEMs to react faster than in the past. Shorter product development cycles and faster production ramp-up provide challenges and risks for Vestas. The OEMs are offering new technologies at an earlier stage in the design and market introduction phases compared to just a few years ago and this puts new demands on the organisation throughout the value chain.

Impact
Shorter introduction cycles can lead to uncertainty in product costs in the early introduction phase. Delays in product certifications also constitutes a risk with shorter cycles.

Furthermore, shorter development cycles pose an increasing need for investments for wind turbine manufacturers.

Mitigation
It has been Vestas’ strategy to achieve shorter design and product introduction cycles by introducing the modular wind turbine platform, EnVentus™. This enables a larger product variety utilising the same basic design and a limited number of major components. Enhanced design and virtual testing tools are applied. Flexibility in Vestas’ manufacturing footprint, hereunder the engagement of trusted external vendors on a global scale, is also a mitigant.