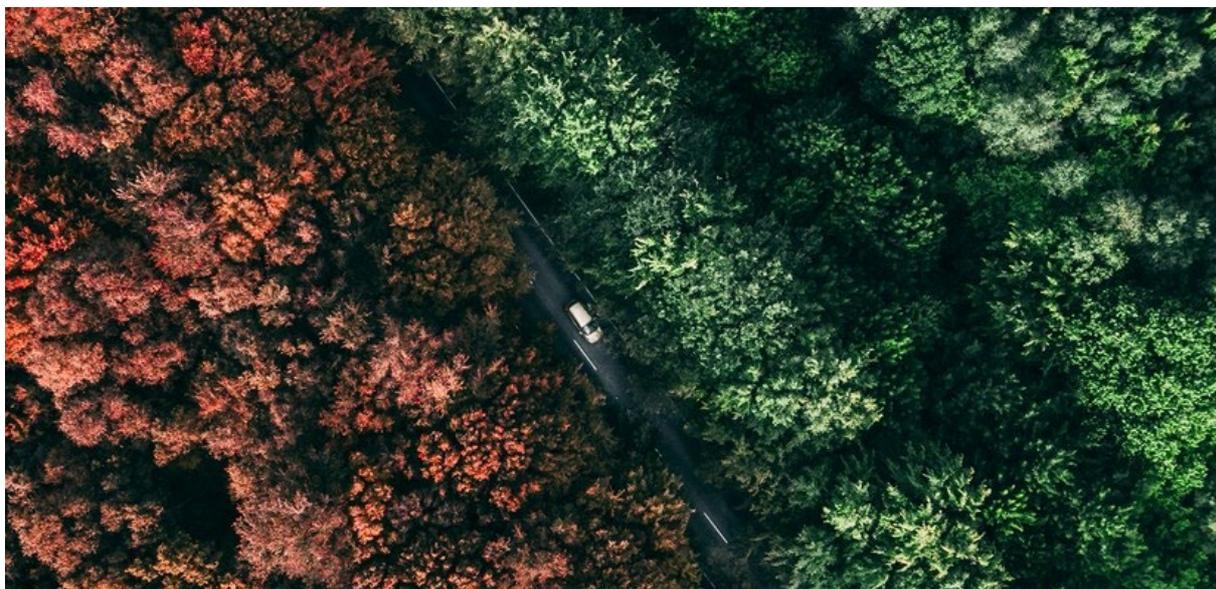


TCFD report 2021



VOW



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Vow as an enabler

Vow is passionate about mitigating climate change, meaning Vow can act as an important enabler for climate change mitigation through the various solutions provided by the group. To be able to pursue Vow's mission, the company needs to develop an increased understanding of how risks linked to climate change affects Vow. That is why Vow has decided to start reporting on climate risks and opportunities after the Task Force on Climate Related Financial Disclosure (TCFD) framework. Vow recognises that reporting according to the TCFD recommendations can enhance both internal and external understanding and capabilities that support the green transition, promote transparency, and contribute to climate action.

As a growing company playing an important role within decarbonisation and waste valorisation, Vow knows that it is important to measure what matters. The implementation of the TCFD framework is part of the process to critically evaluate our sustainability strategy and KPIs.

The first TCFD inspired climate related risks and opportunities assessment was included in the sustainability report for 2020. This report is Vow's first TCFD report following all 11 disclosure recommendations from the TCFD framework.

This report describes identified climate risks and opportunities for Vow and outlines how Vow will work on climate-related issues going forward.

The TCFD recommendations and index

Recommendations

The Task Force on Climate Related Financial Disclosure (TCFD) developed the TCFD disclosure recommendations to enhance market transparency and stability. TCFD encourages standardised reporting of financially material climate-related risks and opportunities to provide investors, creditors, and insurers with comparability when assessing and pricing companies.

The TCFD recommendations are categorised into four areas of disclosure that represent core elements of how organisations operate: governance, strategy, risk management, and metrics and targets. Furthermore, the framework separates recommended disclosures into three main categories: risks related to the transition to a lower-carbon economy, risks related to the physical impacts of climate change, and climate-related opportunities. The TCFD has also incorporated potential financial impact as an integral part of its disclosure recommendations.





Governance

The organisation’s governance around climate-related risks and opportunities

Strategy

The actual and potential impacts of climate-related risks and opportunities on the organisation’s business, strategy, and financial planning

Risk management

The process used by the organisation to identify, assess, and manage climate-related risks

Metrics and targets

The metrics and targets used to assess and manage relevant climate-related risks and opportunities

TCFD content index

Governance	Strategy	Risk management	Metrics and targets
Disclose the organisation’s governance around climate-related risks and opportunities	Disclose the actual and potential impacts of climate related risks and opportunities on the organisation’s business, strategy, and financial planning where such information is material	Disclose how the organisation identifies, assesses, and manages climate-related risks.	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.
Recommended disclosures			
a) Describe the board’s oversight of climate-related risks and opportunities	a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long-term	a) Describe the organisation’s process for identifying and assessing climate-related risks	a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.
b) Describe management’s role in assessing and managing climate-related risks and opportunities	b) Describe the impact of climate-related risks and opportunities on the organisation’s business, strategy, and financial planning	b) Describe the organisation’s process for managing climate-related risks	b) Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse (GHG) emissions, and the related risks
	c) Describe the resilience of the organisation’s strategy, taking into consideration different climate-related scenarios, including a 2-degree or lower scenario	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation’s overall risk management.	c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets

TCFD disclosure summary

Governance

- a) Climate-related issues are integrated into Vow's overall business strategy. All climate-related risks and opportunities (R&Os) are thoroughly discussed and reviewed by the board and its newly formed sustainability committee.
- b) In Vow, the corporate management team is led by the CEO, who is responsible for the overall assessment and management of climate-related R&Os. The CFO is responsible for the general assessment on climate-related R&Os related to project financing and reviewing the yearly sustainability report.

Strategy

- a) Vow has identified several potential climate-related R&Os, over both the short, medium, and long term. These R&Os have the potential to broadly affect the financial strategies and R&D. Most risks are linked to the value chain, while most opportunities are identified within the policy and regulation sphere.
- b) Climate-related R&Os have the potential to impact the company's balance sheet in different ways, and it is also driving much of the R&D. Vow has appointed its first sustainability director to further improve the work on climate-related R&Os.
- c) This is a work in progress. So far, Vow's business model is perceived to be fairly resilient to different climate scenarios.

Risk management

- a) The risk management process is driven by the sustainability director working across subsidiaries and business areas to ensure full integration of climate reporting throughout the organisation. After the risk management process, the sustainability director reports to and confers with the CFO before the CFO presents the same information to the CEO.
- b) Vow analyses macro trends, policy changes and the state of the climate. Vow follows and monitors news and international organisations and institutions such as, but not limited to, the UN, EU, OECD, IMO, IMF and relevant central banks. Communication with stakeholders, such as investors and customers, is also valuable for managing climate risk. Assessment of different risks is first done across different parts of the organisation by the sustainability director and CFO before management conducts a holistic risk assessment along with the board.
- c) The responsibility for climate-related reporting is part of the responsibility of the CFO and the sustainability director. Vow's climate-related risk review is a risk table illustrating all key risks with corresponding potential financial and reputational outcomes. This table is compiled by the sustainability director before it is reported to the CFO and corporate management. Then it is presented to the board on a regular basis with new and especially important R&Os highlighted.

Metrics and targets

- a) Different key metrics are used to measure and manage climate-related R&O.
- b) Vow's carbon footprint accounting is in accordance with the Greenhouse Gas Protocol. Complete carbon accounting for scope 1 and 2 was achieved for the year 2020 and is now an annual procedure. Vow is working on calculating scope 3 emissions.
- c) Vow has a net-zero target for scope 1 and 2 emissions to be reached by 2025. When scope 3 emissions are calculated, an emissions reduction target for scope 3 will be set.

Governance



Board level

This past year, the board of directors have formed a sustainability committee as an important step in the overall work and monitoring of sustainability for Vow. A holistic focus on sustainability is key for Vow's purpose and the development of Vow's business model and strategy.

In terms of climate risk and climate risk reporting emerging as increasingly important, the board is in the process of implementing more specific strategies on how Vow can enhance the company's climate risk reporting. Awareness and the importance of climate risk and opportunities in the light of financial impact is already well integrated in the business model and mission statement of the company. Vow has put emphasis on these risks and especially opportunities since the company's inception.

The board gets updates from the management group on a regular basis through meetings. The CEO, CFO, and the sustainability director present climate related issues to the sustainability committee and to the board.

Executive management level

The highest management level with responsibility for climate related issues is the CEO. Climate-related issues will be discussed on meetings with the corporate management on a regular basis.

Vow has decided to put the main responsibility with the CFO as the management find it imperative that climate related work is closely tied with the financial performance and reporting. This makes sure that the climate related work is soundly anchored in numbers and consistently reported on and evaluated.

In 2021, Vow appointed the company's first sustainability director who reports to the CFO and who is responsible for the day-to-day work on sustainability and climate-related issues, including assessments of climate related risks and opportunities.

As the work on climate reporting is still an ongoing process, there is close cooperation between the sustainability director and CFO to navigate and map out the optimal strategy and reporting path. The CFO reports on climate related issues to the CEO, and the CEO reports to the board.

Strategy

In terms of managing climate risk, Vow analyses macro trends, policy changes and the state of the climate. Vow follows and monitors news and international organisations and institutions such as, but not limited to, the UN, EU, OECD, IMO, and relevant central banks. Communication with stakeholders, such as investors and customers, is also valuable for managing climate risk. Assessment of different risks is first done across different parts of the organisation before management conducts a holistic risk assessment along with the board.

In order for Vow to contribute to the Paris Agreement, the SDG's and the EU fit for 55 plan, Vow is continuously assessing and managing climate related risks and opportunities. An important part of this work is to determine what Vow defines as short term, medium term, and long term. Below are estimated timeframes:

Short term (ST):	0-1 years
Medium term (MT):	1-5 years
Long term (LT):	5+ years

Vow identifies short-, medium- and long-term climate-related risks and opportunities. For each short-, medium- and long-term risk and opportunity, an impact assessment is performed, and a mitigation strategy is planned.

Climate risks

Physical and transition risks

Type of risk	ST climate risk	MT climate risk	LT climate risk	Impact assessment	Mitigation strategy
Physical	Extreme weather happenings	Increasing extreme weather happenings	Changing weather patterns and more frequent extreme weather conditions	ST/MT: Can disrupt power supply, affect operations (increase cost, halt production), damage PP&E, cause delays in the supply chain. LT: Can impact power supply, increase price of electricity (increased cost of production), increase supply chain costs.	ST/MT: Make sure to have a rapid response strategy linked to extreme weather damage. Stress-testing. Solid insurances. LT: Prepare for periods of heightened electricity prices. Make sure to have alternatives for long term power disruptions.
Physical	Environmental damage or delays in supply chain	Serious environmental damage or delays in supply chain	Catastrophic environmental damage or delays in supply chain	ST: Delays to customers and/or from suppliers. Potentially impact sales and/or delivery schedule. MT/LT: Could significantly delay or distort deliveries to customers and/or from suppliers, impacting sales and potentially distort contracts.	ST: Ensure continuous communication through the supply chain to be aware of potential damage or delays due to climate factors. MT/LT: Ensure continuous communication through the supply chain to be aware of potential damage or delays due to climate factors. Set up strategic plans for environmental damage or delays.
Transition	Increased competition	More sophisticated competition in Vow's business segment	More sophisticated competition within waste valorisation	ST: At present unlikely. Could potentially increase competition for projects. MT/LT: Could take market shares affecting revenues and increase competition in terms of access to capital.	ST: Keep track of Vow's market share and competitive advantage. MT/LT: Ensure and emphasise Vow's competitive advantage. Continuous communication with investors, creditors, and other stakeholders.

Transition	Lag in predicted climate regulation	Lag in/slow implementation of predicted climate regulation	Inefficient climate regulations	<p>ST/MT: Vow's solutions are not seen as cost-efficient for carbon-intensive and polluting industries.</p> <p>LT: Vow's solutions and business model do not reach optimal value creation and market valuation.</p>	<p>ST/MT: Keep track on current and emerging policies and policy discussions locally and globally.</p> <p>LT: Keep track on current and emerging policies and policy discussions locally and globally.</p>
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Climate opportunities

Type of opportunity	ST climate opportunity	MT climate opportunity	LT climate opportunity	Impact assessment	Mitigation strategy
Market	Diversified solutions portfolio for cruise segment and some landbased segments	Increased diversification of solutions portfolio across cruise and landbased segments	Become a catalyst for diversified waste valorisation and decarbonisation technology	<p>ST: Solid revenue streams from cruise and increasing opportunities within landbased segment.</p> <p>MT: More diversified revenue streams, new market access, increased investor attractiveness.</p> <p>LT: Increased revenue streams, new market access, increased market shares, increased investor attractiveness, becoming a global leader in waste valorisation and industry decarbonisation.</p>	<p>ST: Keep regular dialogue with current and potential clients across Vow's geographic presence. Investing time and resources into the R&D department.</p> <p>MT: Following up on short-term strategy and consider different strategic investments in technology and human capital.</p> <p>LT: Keep emphasis on Vow's mission to mitigate climate change and prevent pollution. Invest in innovative technologies and human capital. Ensure strong communication with all stakeholders.</p>
Products and services	Profitable sustainable technology	Profitable sustainable technology and innovation	Climate resilient technology and innovation	<p>ST/MT/LT: Increased and diversified revenue streams. Investments, more attractive loan terms.</p>	<p>ST/MT/LT: Continue strong focus on strategic partnerships and R&D investments. Continuously communicate with</p>

					investors, creditors, and other stakeholders. Continue investments in developing Vow's technologies. Actively use relevant media to promote Vow's solutions for climate change mitigation.
Market	Carbon tax	Carbon taxation in line with net-zero by 2050	Extra stringent carbon taxation to ensure net-zero by 2050	<p>ST: Increased interest and revenues from current and potential customers in need of decarbonisation. Further enhance Vow's position as a strategic business partner.</p> <p>MT/LT: Increased revenues from multiple industries looking for efficient decarbonisation. Capture larger market shares within waste valorisation and decarbonisation. Can further increase in-house innovation and enhance Vow as a desired research and strategic business partner.</p>	<p>ST: Clearly communicate the potential Vow's solutions can have for customers through various channels.</p> <p>MT/LT: Continue clear and efficient communication on the different solutions Vow can offer in terms of climate change mitigation technologies. Invest time and resources in R&D.</p>
Resilience	Strategic partnerships with multiple research environments and key clients	Strategic partnerships with more companies	Strategic partnerships with sectors and sector leaders within heavy industry	<p>ST: Increased innovation.</p> <p>MT/LT: Increased market share regionally and globally.</p>	<p>ST: Ensure active and well-funded R&D.</p> <p>MT/LT: Ensure well-funded and innovative R&D. Communicate opportunities with relevant stakeholders.</p>
Resilience	Increased interest from potential employees	Increased interest from the new	Increased interest and reputation as an attractive and	ST: Attract and retain talented and motivated employees across	ST: Communicate in relevant channels the opportunities

	<p>who cares about climate change (particularly engineers)</p>	<p>generation (Millennials/ Gen-z) of employees across fields (particularly engineers)</p>	<p>desired employer across generations and across fields such as STEM-backgrounds, engineers, business backgrounds, etc.</p>	<p>nations who cares about climate change and innovation. MT/LT: Automatically attract the best and brightest across nations, generations (especially Millennials and Gen-Z) and backgrounds. Lead to continuous innovation of both the company and solutions. Secure LT sustainable development of the company.</p>	<p>within Vow and Vow’s mission of mitigating climate change. MT/LT: Communicate opportunities within Vow through relevant channels. Increase visibility in universities and research institutions.</p>
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Climate related R&O's influencing our strategy

Climate risks and opportunities are getting increasingly more important as part of the overall strategy work for the company. Vow's mission of climate change mitigation and pollution prevention can be said to be well-aligned with the green transition that is under way. Therefore, climate related risks and opportunities have always been important factors in the company's strategy work, yet today Vow is working on making this even more clear.

Business area influenced by climate-related R&O's	Description	Actions taken and planned
Products and services	The demand for Vow's solutions is driven by global megatrends such as decarbonisation and circular economy. The increasing cost of carbon constitutes a potential risk for Vow's customers. Both cruise and landbased industries demand efficient solutions for decarbonisation and waste valorisation.	Be a leading provider of technology and solutions, and a partner of choice for decarbonising of industrial processes, production of CO2 neutral energy, and for cleaner oceans.
Investments in R&D	For Vow it is important to have a strong R&D department. Investing time and resources in R&D is key to keep developing and improving technological solutions for climate change mitigation.	Ensure to put efforts on the R&D projects that create the highest value and continue fostering close cooperation between the R&D department and the overall organisation.
Operations and supply chain	Vow is working to improve its sustainability performance and to reduce its climate footprint in all operations and phases of a project. This includes setting requirements for suppliers and accelerate green purchasing.	Accelerate green purchasing to reduce the climate footprint in Vow's supply chain. Appointed first ever sustainability director to drive sustainability initiatives.

Scenario analysis

At the point of writing this report, Vow has not yet started the work on conducting a rigorous scenario analysis for climate-related risks and opportunities. Still, Vow's is keeping track on publications from the IPCC to stay up to date on the latest information regarding the climate.

Risk management

Physical/ transition	Risk type	Relevance in risk assessment	Description
Transition risks	Technology	Relevant, always included	In terms of technology, one risk identified is the development of potential competitors that: <ul style="list-style-type: none"> • May result in lower market shares • Could affect revenue • Could affect access to capital
	Current and emerging regulations	Relevant, always included	Vow works to align well with upcoming regulations and aims to be an important contributor to the green transition, providing cost-efficient solutions for industry. Thus, a lag in predicted climate regulation is seen as a relevant risk. This could lead to: <ul style="list-style-type: none"> • Vow's solutions are not seen as cost-efficient for polluting and carbon-intensive industries • Vow's solutions and business model do not reach optimal value creation and market valuation
	Legal	Relevant, sometimes included	Vow makes sure to comply with all relevant laws and regulations across geographical locations. As Vow is helping its customers with compliance of environmental regulations, the group considers slow development of environmental regulations as a potential risk.
	Market	Relevant, always included	Climate risks linked to market risk is for Vow intertwined with risk of competitors developing alternative technologies. <ul style="list-style-type: none"> • May result in lower market shares • Could affect revenue • Could affect access to capital
	Reputation	Relevant, sometimes included	Vow continuously works on making sure that the company is behaving as a serious actor in the green transition. <ul style="list-style-type: none"> • A damaged reputation could affect access to capital. • It could also affect credibility among stakeholders
Physical	Acute	Relevant, sometimes included	More extreme weather such as heavy rain and hurricanes on a more frequent basis can affect both Vow's operations and supply chain in all Vow's locations. <ul style="list-style-type: none"> • May disrupt power supply and affect operations (increase cost, halt production). • Could damage PP&E • Delays to customers or from suppliers. Potentially impact sales and/or delivery schedule
	Chronic	Relevant, sometimes included	<ul style="list-style-type: none"> • Within Vow's current operations, the risk of sea-level rise, temperature rise stress or wind are not yet defined as substantive risks. Today these risks are not classified as chronic for Vow but could have the potential to become chronic events in the future due to climate change. • In the future this could impact power supply, increase price of electricity, and fundamentally shift the production cost curve.

Metrics and targets

Vow's ambition is to play a significant part in the green transition with the company's multiple solutions for waste valorisation and decarbonisation both for the cruise industry and landbased industries. With a business model grounded in a mission to mitigate climate change, Vow recognises the importance of taking responsibility for own emissions. Vow has started the work on gathering and synthesising the company's GHG emissions data. This is an important part of the company's work to set ambitious and reachable targets within Vow's climate strategy.

Emissions metrics

Vow has calculated the company's GHG emissions within Scope 1 and 2 and is working on calculations for Scope 3 emissions.

- Scope 1 covers all direct emissions sources, including all use of fossil fuels for stationary combustion and transportation.
- Scope 2 includes indirect emissions related to Vow's purchased energy (i.e., electricity and heating/cooling). This includes purchased energy for Vow's offices and sites globally.
- Scope 3 comprises indirect emissions resulting from the company's value chain activities.

(tCO ₂ e)	2021	2020
Scope 1		
Propane	3.4	1.4
Diesel	39.7	15.4
LPG	3.8	8.1
Natural gas	7.2	11.9
Stationary combustion	54.1	36.7
Diesel	81.7	69.6
Petrol	41.7	30.3
Transportation	123.4	99.9
Scope 1 total	177.6	136.6
Scope 2		
Electricity buildings	31.1	31.4
Electricity cars	0.6	0.4
Electricity	31.6	31.8
Scope 2 total	31.7	31.8
Scope 1 and 2 total	209.3	168.4

(tCO ₂ e per employee)	2021	2020
Emissions intensity	1.24	1.22

Scope 3*	2021	2020
Waste	7.2	5.7

*More categories to be included

With an activity-based approach, Vow will expand its scope 3 emissions reporting each year and aim for full scope 3 reporting by 2025 at the latest.

Emissions reduction target

Vow has an ambition to reach net zero within Scope 1 and 2 emissions by 2025. To reach this target, Vow will:

- 1) replace fossil fueled cars with electric cars,
- 2) replace fossil fuels in R&D testing with biofuels,
- 3) obtain certificates of origin for electricity, and
- 4) buy carbon offsets to reduce the rest of the emissions to net zero.

Vow will work to reduce its emissions before offsetting the remaining emissions.