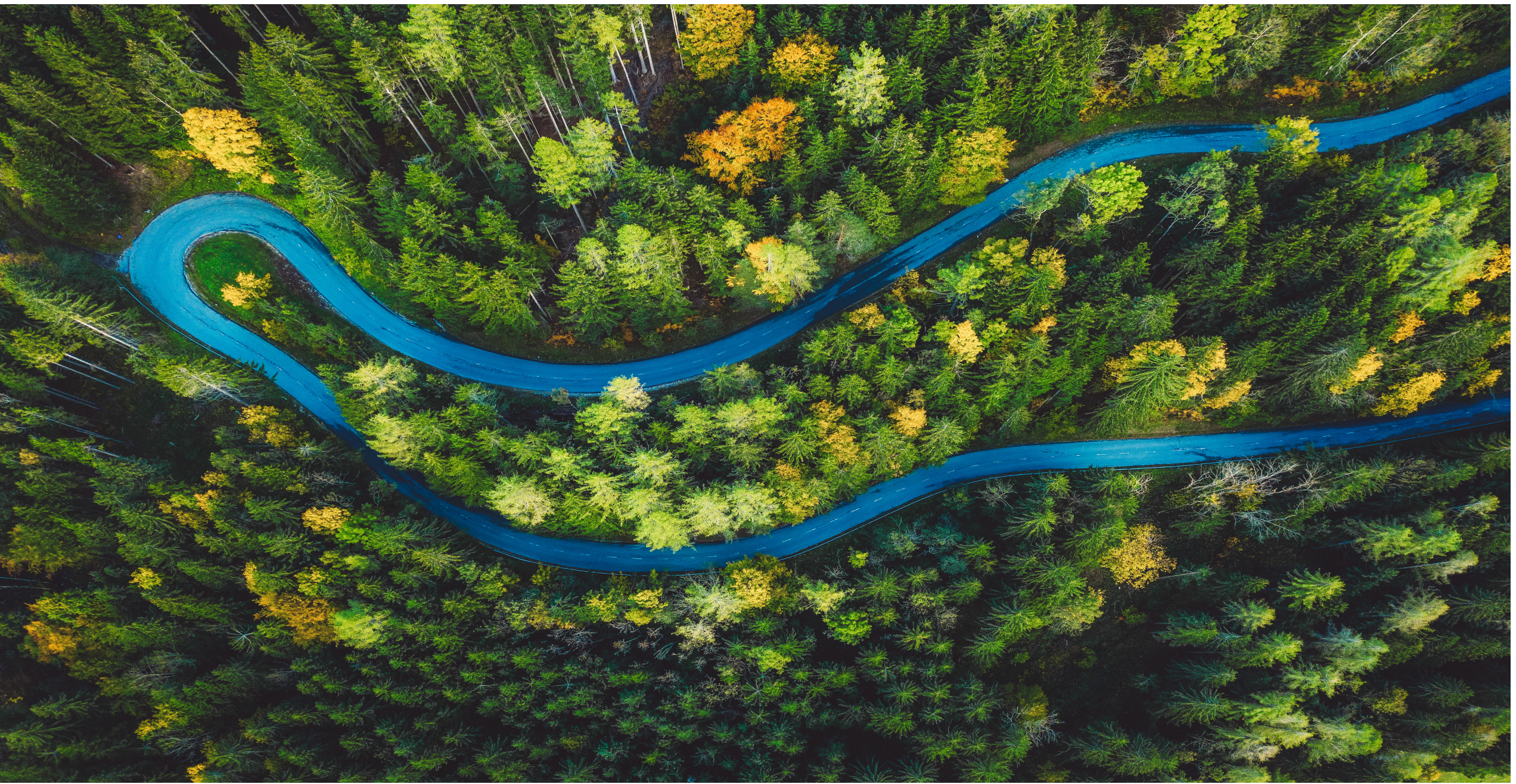




Double Materiality at VTT

VTT's double materiality assessment was conducted in the Autumn of 2022. The analysis was executed accordingly to the Corporate Sustainability Reporting Directive (CSRD) and EU Sustainability Reporting Standard (ESRS) drafts. We chose our list of possibly material topics based on our previously conducted materiality analysis, SASB's industry specific (Professional & Commercial Services) material topics and the ESRS standards. The analysis was conducted with the rebuttable presumption as it was stated in ESRS standard drafts published in April 2022 but will not be included since it was discarded in the ESRS November draft.



The analysis was conducted including the insights from several stakeholders, our employee inhouse experts, and management. In the beginning of the process, we received support from KPMG. The analysis was conducted in two steps: Internal workshops between 10.10.–28.11.2022 and the interviews of the management representatives and the external stakeholder interviews between 27.10.–21.12.2022. Finally, the results were analysed by VTT's sustainability team. VTT's executive leadership team validated the results on 13.1.2023 and VTT's board confirmed the results on 23.1.2023.

Double materiality judges' materiality from two perspectives: (1) A company's development, performance, position and in the broad sense of affecting the value of the company and (2) the environmental and social impact of the company's activities on a broad range of stakeholders. It also explores these two concepts interconnectivity.

Climate Change
Biodiversity
Resource use and Circular Economy
Own Workforce
Workers in Value Chain
Customer Responsibility
Resilient Society
Research Ethics
Business Conduct
Data Security

beyond the obvious

Assessment organisation and resources

The analysis was conducted through internal workshops on each topic identified. Our management was also interviewed regarding all topics. After gaining an insight into in-house analysis, we conducted external stakeholder interviews. Finally, the sustainability team analysed the results and was able to conclude what topics can be regarded as material at VTT. Double materiality functioned as a pivotal principle followed for the assessment and a description of how it applied in practice in the steps leading to VTT's results.

Resources allocated to the double materiality assessment consisted of VTT's sustainability team members as well as the time provided by the employees and management who participated in workshops and interviews. Our internal cross-functional sustainability task force, and our sustainability reporting renewal working group as well as its steering group provided their insights on the parties that should be involved in the process and on the scales on how the materiality was assessed.



Scope of identification of sustainability matters

The ESRS standard draft defines a topic's impact as positive and negative impact through scale, scope, irremediable character, and likelihood. The impact is also measured over different time-intervals. All requisites were then given a three-step scale:

- The time scale was defined in the ESRS standard and was measured by a timespan of 1. Short (1 year), 2. Medium (2–5 years) and 3. Long (over 5 years) impact.
- Scale was chosen to be measured through the following scale: 0. No impact, 1. Some (change) in impact and 2. Significant (change in) impact.
- Scope was chosen to be measured through the following scale: 0. No impact, 1. Impact to a degree, 2. Widespread impact.
- Irremediable character was chosen to be measured through the following scale: 0. Easily remediable, 1. Possible (requires efforts) to remediate, 2. Impossible/Nearly impossible (significant time interval) to remediate.
- Likelihood was chosen to be measured through the following scale: 0. Unlikely = has not happened at VTT, 1. Possible = has happened to us before, and 2. Probable = has happened to us several times or several near accident events.



The ESRS standards define a topic's financial impact as risks and opportunities, and these are to be measured through magnitude of financial effects and probability of occurrence. Financial impact is also measured over different time intervals. All requisites were then given a three-step scale (in accordance to how we chose to measure impact materiality):

- The time scale was defined in the ESRS standard and was measured by a timespan of 1. Short (1 year), 2. Medium (2–5 years) and 3. Long (over 5 years) impact.
- Probability of occurrence was chosen to be measured through the following scale: 0. Unlikely = has not happened at VTT, 1. Possible = has happened to us before, and 2. Probable = has happened to us several times.
- Magnitude of financial effects was chosen to be measured through an identified financial threshold that was calculated from our operating income in 2021: 0. Not material: $<0,5\%$, 1. Material: $0,5\% \leq x \leq 1\%$ and 2. Highly material: $>1\%$.



Due diligence

Our due diligence process was used to identify and assess potential and actual impacts, including the extent to involve a review of VTT's own activities and business relationships across operations and value chains, as well as impact that VTT may contribute to via own actions and decisions, and impact that may be linked to VTT's operations, products or services by business relationships and reputation.

VTT's impact on its own activities were identified by professionals with the topics discussed being their area of expertise. Impact that VTT may contribute to via own actions and decisions, and impact that may be linked to VTT's operations, products or services by business relationships and reputation was identified through stakeholder interviews. The stakeholder groups identified were our customers, owner, trade unions, sub-contractors, funders, and the scientific community.



We interviewed one customer per customer classification (3), our owner (2), trade unions (2), sub-contractors (5), funder (1) and the scientific community (6). This double materiality analysis was the first one conducted at VTT. We chose to conduct it as a qualitative analysis as it was VTT's first double materiality analysis, and that's why we chose mediums of workshops and interviews. We did not have a widespread reach but focused on the quality of the data. We wanted to focus on gaining deeper understanding, rather than collecting a big sample.

Our internal workshop themes were Climate change (8 participants), Pollution (12 participants), Water and marine resources (4 participants), Biodiversity (10 participants), Resource use & circular economy (7 participants), Own workforce (9 participants), Workers in the value chain (8 participants), Affected communities (10 participants), Customers, consumers and end-users (9 participants), Business conduct (8 participants), Research ethics (4 participants), and Data security (5 participants).

Our management was interviewed and were asked to voice their opinions on all topics presented. We interviewed VTT's Chair of the Board, CEO and 3 Executive Vice Presidents (EVP). The interviews with the EVPs had focus on gaining understanding regarding financial materiality at VTT.

Assessing impacts VTT may contribute to via own actions and decisions

The internal workshops included an impact materiality assessment, financial materiality assessment, and considering interdependencies between the two dimensions. The mission was described as providing criteria for determining which sustainability matters must be included in sustainability reporting with two perspectives: Inside-out (Impacts on people and the environment) and outside-In (Financial risks and opportunities).

The workshop started with an impact assessment on the actual and potential impacts on people and planet. It was measured with scale, scope and irremediable character (and in potential impacts also likelihood). The financial materiality assessment then covered both opportunities (positive impact on operating income) and risks (negative impact on operating income) and was measured through magnitude of financial effects and probability of occurrence.

Finally, the participants analysed disclosures of the reporting standard relevant for VTT, by asking: Are all disclosures material for VTT? If not identified as a material disclosure, the group laid out reasonable and supportable evidence to honor the rebuttable presumption. This was done by describing how the disclosure cannot be considered material and describing to what extent it's not material. Sometimes the group also described what aspects the undertaking is different from other undertakings in reference to the particular sustainability matter. The undertaking gave justification and appropriate evidence that the undertaking is not involved with the negative impacts through its activities or business relationships; or that the relative severity and likelihood of these impacts do not meet a threshold of impact materiality.

Future revision dates of the assessment

VTT's sustainability task force with representation from finance assesses the need for revision of the double materiality assessment annually. At the latest, the next double materiality assessment will be conducted during autumn of 2024 to support planning of VTT's next strategy. Afterwards the materiality assessment will be conducted approximately every three years if need to revise it earlier is not identified.

Potential and actual positive impact	Topic	Potential and actual negative impact	Theme	Potential and actual financial opportunity	Topic	Topic Potential and actual financial risk
VTT’s strategy contributes to reaching carbon neutral economy and VTT itself strives to be carbon neutral by 2030. Our research has significant impact on a national level.	Climate change	We emitted 6 727 tonnes of CO2 in 2023. VTT’s most emissions stems from international flights and heating.	Environmental	We identified material growth in sales of climate change mitigation and adaptation solutions.	Climate change	In order to reach carbon neutrality in 2030 some compensations are likely to be necessary.
VTT is conducting research that is contributing to reducing pressure on biodiversity loss drivers e.g., habitat loss and climate change.	Biodiversity and ecosystems	VTT’s new offices and other premises are being built, which has some impact on land-use, and our operations emit CO2 .		There is a growing demand for solutions supporting ecosystems and halting biodiversity loss.	Biodiversity and ecosystems	Not material.
VTT is developing solutions that support circular economy.	Resource use and circular economy	Not material.		There is a growing global demand for circular solutions and VTT has highlighted this in our strategy as we aim to achieve a 10-fold productivity leap from resources.	Resource use and circular economy	Not material.
VTT supports employee health and wellbeing, as our own workforce is identified as our most material asset.	Own workforce	More focus is needed on employee safety and mental health. Our safety objective is to ensure that all VTTERS come to work healthy and leave work healthy.	Social	Our innovative and diverse workforce are key to VTT’s success. VTT has in-house expertise that cannot be found elsewhere. The most significant opportunities lie in attracting and retaining talent. There is potential of growth by gaining agile orientation of how we direct knowledge towards where the demand is.	Own workforce	Our workforce creates our value. Without healthy, safe and competent employees, there is no business to be conducted. There are potentially risks if we cannot attract and retain the brilliant minds. Salary raises can bring pressure on the expenditure side due to high inflation in 2023. However, proper remuneration can improve employee retention.
Not material.	Workers in value chain	As we operate in the global environment, there is a potential risk of negative impact. Increasing supply chain visibility is important.		Not material.	Workers in value chain	Potential risk if VTT would fail to ensure collaboration with ethical partners.
Working with partners that follow high ethical standards ensures that VTT’s solutions have a sustainable impact via the customers. We must be courageous enough to provide beyond the obvious solutions to increase our impact.	Customer responsibility	Not material.		Potential growth opportunity in relation to a good reputation.	Customer responsibility	Unethical research projects could potentially lead to loss of reputation and financing.
Not material.	Resilient society	Not material.		VTT is committed to with deal with complex societal problems and provide solutions.	Resilient society	Not material.
Not material.	Research ethics	Potential grave impact if we don’t maintain a good standard of practice in research ethics.	Governance	Potential growth in projects within the theme.	Research ethics	Potential grave impact via losing reputation, trust and financing if we don’t maintain a good standard of practice in research ethics.
It is important that VTT continuously develops practices to ensure sustainable business conduct that is the foundation of all sustainable business.	Business conduct	Not material.		Not material.	Business conduct	Not material.
Data security needs to be continuously developed. Secure handling of data enables quality research.	Data security	Potential negative impact if VTT would fail to keep sensitive data safe.		Not material.	Data security	If we cannot provide for needed data environments, this will cause loss of projects and damage our reputation.