



VTT

Sustainability @VTT

Framework and priorities

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Tiina-Liisa Forsell
VP, Operational excellence

07/11/2022 VTT – beyond the obvious

Content

- Sustainability as a part of VTT strategy
- Background of VTT sustainability program
- Sustainability framework and priorities
- Our actions and plans forward



Our strategy 2021–2025: The path of exponential hope

OUR PEOPLE

Top professional capable of systemic and technological breakthroughs that can bring about fundamental transformation.

The choices we make every day



OUR PURPOSE

We bring together people, business, science and technology, to solve the world's biggest challenges, creating sustainable growth, jobs and wellbeing.

5. Always build the world's most **meaningful** place to work



4. Always drive **sustainable** business

OUR AMBITION

We bring exponential hope to a world that needs to deal with the climate crisis, achieve resource sufficiency, drive industrial renewal, provide safety and security, and enable good life for all.

1. Always aim for **impact**

2. Always create impact together with a **customer**

3. Always lead for **excellence**

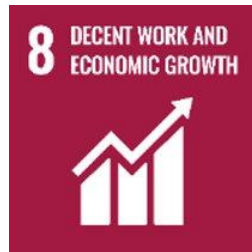


Background and backbone of VTT sustainability program

- Materiality analysis
 - First round 2020
 - 2022 renewal ongoing with double-materiality approach
- Commitment to UN Global Compact initiative
 - Member since beginning of 2021
- Previous work in the areas of quality, environmental, compliance and research ethics



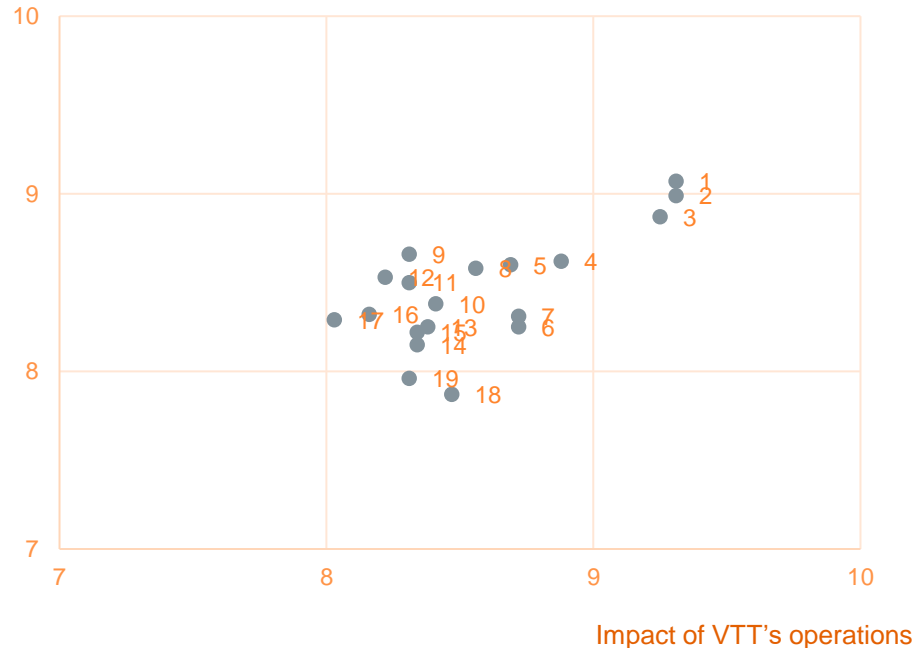
United Nations
Global Compact



VTT's materiality matrix: Stakeholder view in 2020

1	follows ethical practices
2	high ethical standards for research
3	handles the information and assets in its possession in a reliable and secure manner
4	develops technology for combatting climate change
5	requires that its partners follow ethical practices
6	implements responsible tax policies
7	invests in and maintains nationally significant research infrastructure
8	financing of VTT comes from ethical sources
9	takes care of the wellbeing and safety of its employees
10	results of publicly funded research made available to the scientific community and society
11	provides an equal work community and promotes diversity
12	recruitment practices are fair
13	participates in societal discussions and brings research-based knowledge into political decision-making
14	green technology VTT has developed ends up on the market
15	actively cooperates with its stakeholders
16	supports the continuous development of its personnel's skills and offers versatile career opportunities
17	minimizes the adverse environmental impact of its activities
18	aims for creative and disruptive research and innovations
19	technology-based business increases customer value and the client company's business

Stakeholder perspective





Thriving professionals

We treasure the wellbeing, diversity and fair treatment of our brilliant minds.

Empowered customers

We help our customers to unleash superior performance and productivity that lead to sustainable growth.

Resilient society

We solve the world's biggest challenges through innovations, research and co-operation.

Sustainable foundation

Our impeccable ethical principles – impartiality, reliability, integrity and responsibility – form a solid basis for our research and business.



Sustainability shows in everything we do

1. We develop **sustainable solutions** for customers and society – that's our biggest impact
2. We have to act responsibly and promote sustainability in **our own operations** as well

Sustainability programme shows our next steps towards 2025



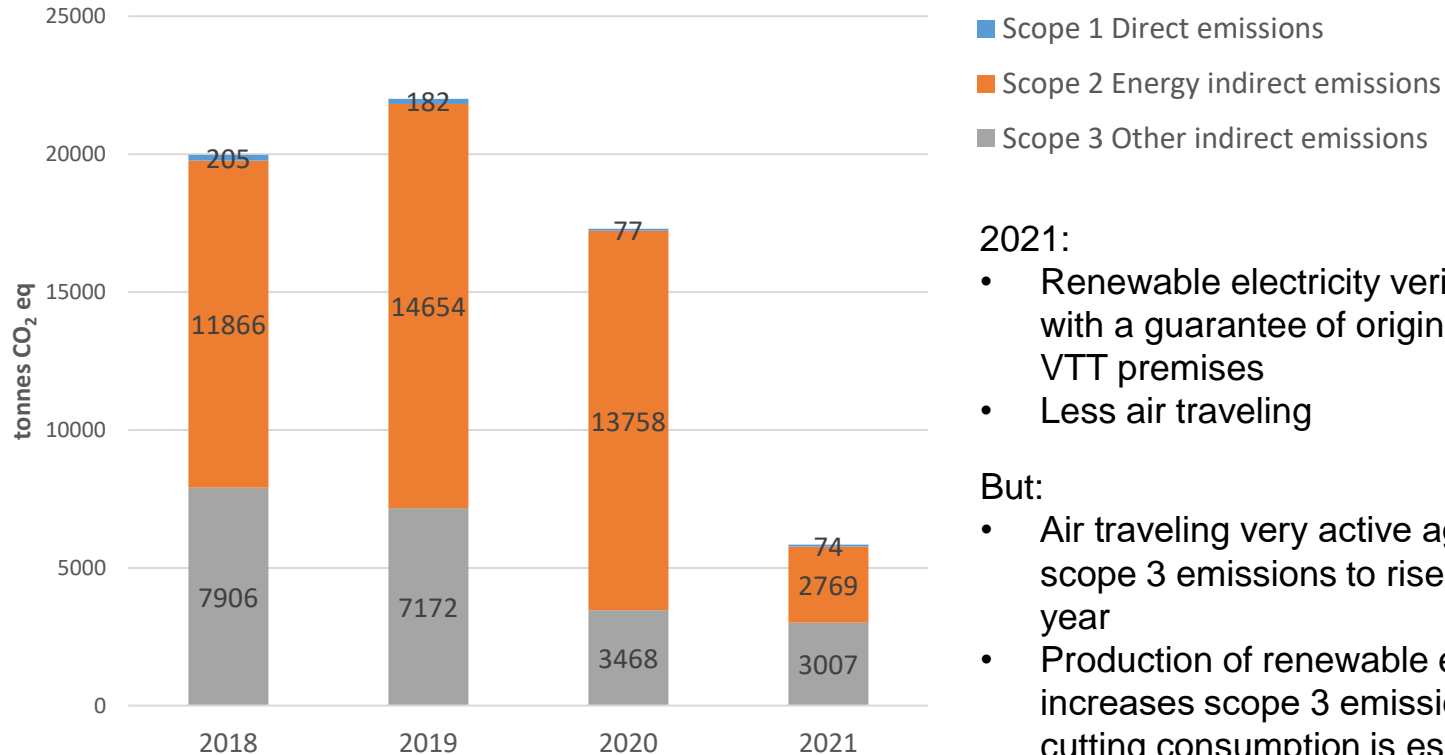
Sustainable foundation

- Environment
 - Our goal: We want to become carbon neutral by 2030
- Research and business ethics
 - #1 expectation from our stakeholders
 - Our goal: We act ethically in everything we do
- Safety
 - Our goal: Our workplace safety is first-class

Sustainable foundation

We are an all-around sustainable company from environmental, societal, and financial points of view. Impeccable ethical practices – impartiality, reliability, integrity and responsibility – form a solid basis for our business. All our operations are continuously developed to reduce our environmental footprint and enhance our handprint.

VTT's GHG emissions 2021



2021:

- Renewable electricity verified with a guarantee of origin for VTT premises
- Less air traveling

But:

- Air traveling very active again → scope 3 emissions to rise this year
- Production of renewable energy increases scope 3 emissions → cutting consumption is essential

We take responsibility: everyday actions are important

Carbon footprint
estimate about
events

We prefer
seasonal,
vegetarian and
local food

Always 20% less
catering due to
no show in big
events

No more bottled
water – we have
top tap water!

Unifying our
recycling points
and signs

Bye bye
disposable cups
and tableware

Sustainability
(ESG) tool to
support
procurements

Research ethics
training

When traveling,
we favour direct
flights

Safety slide,
safety signs and
visitor guidelines

**The aim is to guarantee a safe and
sustainable living for all.**

Thriving professionals

- Diversity, equality/equity and inclusion (DEI) - Working group and target setting
- Sustainability criteria has been added to the recognition reward and Customer Excellence Reward.
VTTers can receive monetary rewards for promoting sustainability by:
 - Significantly contributing to sustainability of customers' operations or business model
 - Improving VTT's own environmental or social sustainability performance
 - Contributing to sustainable development in project work

Thriving professionals

We treasure the wellbeing, diversity and fair treatment of our brilliant minds.

Responsibility in customer work

- Sustainable solutions for our customers
- Know-Your-Customer inspections as a part of sales process. Helps us to make sure that also our customers take care of:
 - Environment
 - Anti-corruption
 - Human rights
 - Labor rights

Empowered customers

We help our customers to unleash superior performance and productivity that lead to sustainable growth.

Improving handprint methodologies

Carbon handprint, 2016-2018

Calculation and communication guideline
for a carbon handprint of products



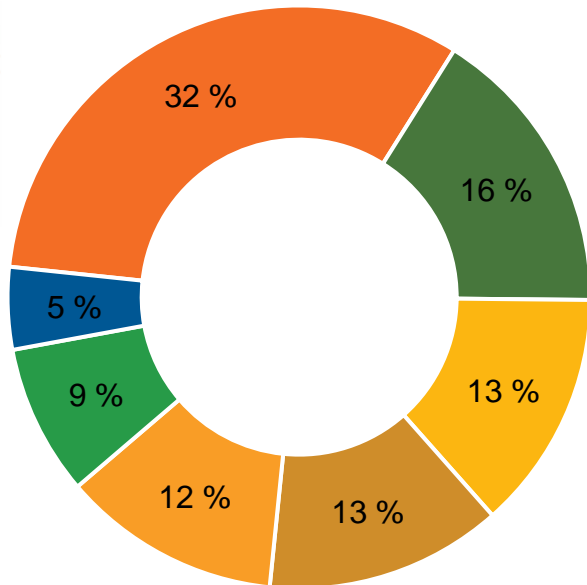
Environmental handprint, 2018-2021

Handprint concept extended to other environmental impact
categories (water, resource, air quality, nutrient)
as well as corporate and project levels



Resilient society: VTT's impact on Sustainable Development Goals

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



13 CLIMATE ACTION



7 AFFORDABLE AND CLEAN ENERGY



- SDG 9 Industry, innovation & infrastructure
- SDG 13 Climate action
- SDG 7 Affordable and clean energy
- SDG 12 Responsible consumption and production
- SDG 11 Sustainable cities and communities
- SDG 3 Good health and wellbeing
- Others

Resilient society

We solve the world's biggest challenges through innovations, research and co-operation.

Our agenda consists of measurable challenge focus areas

SYSTEMIC CHALLENGES

1. To reach a carbon neutral economy in the coming decades

- Carbon-neutral process industry
- Low-carbon and smart mobility
- Sustainable and smart built environment
- Sustainable food system
- Carbon neutral and flexible energy system
- Hydrogen for future society

2. To achieve a 10-fold productivity leap from resources

- Value creation and sharing in circular economy
- Recovery of materials from challenging secondary streams
- Sustainable discrete manufacturing
- High-impact renewable materials

3. To secure society's functions, fiscal sustainability and wellbeing while demographics shift

- Safe and secured society's functions
- Personalized health and wellness

TECHNOLOGICAL CHALLENGES

4. To bring about the quantum leap in computing

- Technologies and algorithms for quantum computers

5. To create superior-performing materials and shorten design cycle by 50%

- Fully virtual material design and testing for optimized performance

6. To unleash superior performance and sustainability in digital systems

- Integrated electronics and photonics for critical systems
- Performance driven next-generation microelectronics
- Space based communication and observation technologies

7. To match nature's engineering skills through synthetic biology and bioinspired production

- Bioinspired production for sustainable products and processes

EMERGING TOPICS

- Small Modular Reactors (SMR) for carbon neutral district heat production
- Competitiveness in Volatile, Uncertain, Complex, Ambiguous (VUCA) world
- Connectivity in Critical Environments

SUPPORT FOR PUBLIC SECTOR

- Supporting the technology needs of Finnish Defence Forces
- Safety of nuclear energy in Finland
- SI unit system realization in Finland
- Support for decision making and innovation of resilient, sustainable society

Priority actions 2023

- Impeccable practises for research and business ethics
- Boosting safety culture
- DEI
- Better understanding sustainability impact of VTT project portfolio
- Preparing for upcoming EU regulation (EU sustainability reporting directive, incl. taxonomy related requirements)

bey⁰nd

the obvious

Tiina-Liisa Forsell
VP, Operational excellence
tiina-liisa.forsell@vtt.fi
+358 40 8239362

@VTTFinland

www.vtt.fi