Konecranes - Climate Change 2022

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Konecranes is a world-leading group of Lifting Businesses™, serving a broad range of customers. We are truly a global company: in 2021, we had 16,600 employees in 50 countries. As a leading manufacturer of lifting equipment, Konecranes offers a vast range of advanced lifting solutions and services to different industries worldwide. The solutions provided by our three Business Areas – Service, Industrial Equipment and Port Solutions – complement each other and enable our customers to meet their lifting and material handling needs through one supplier. In addition to offering a wide range of lifting solutions, we provide specialized maintenance services and spare parts for all types and makes of industrial cranes, hoists and port equipment – from single pieces of equipment to entire operations. We create value for our stakeholders on multiple fronts: through circular economy, digitalization and our deeply rooted safety culture. Our customers operate in various fields, including the automotive sector, waste to energy and biomass, general manufacturing, mining, nuclear energy, petroleum and gas, paper and forest, container handling, shipyards, power and metals production. We are a part of our customers' processes, as they don't only invest in equipment and services but look for solutions they can rely on. Konecranes' business aims to deliver optimal productivity while improving our customers' safety and mitigating environmental impacts by making intelligent and connected lifting devices and optimizing material handling flows. With our knowledge, products, services and solutions Konecranes seeks to maximize the positive contributions to our different stakeholders and society around us.

The climate crisis demands action now, and we are fully committed to being a part of the solution. Konecranes has set new ambitious targets for its own operations and for its value chain that are in line with the goal of limiting global warming to 1.5°C. These targets were submitted in 2021 and received validation in early 2022 by the Science Based Targets initiative (SBTi). Within Scope 1 and 2 greenhouse gas (GHG) targets, Konecranes is committed to reduce its carbon emissions by 50 percent by 2030. For scope 3, Konecranes aims to reduce absolute carbon emissions by 50 percent by 2030, encompassing the use of sold products and steel related purchases. The focus of our climate work is to understand the impact climate change has across the company and to strive to limit global warming with our actions.

Our business aims to improve our customers' safety and deliver optimal productivity. Konecranes' Code of Conduct and Corporate Governance Framework guide the everyday activities of the company by clearly describing our internal standards and ethical values as well as our legal obligations. By driving fair practices and high ethical standards, we can deliver long lasting impacts and generate better financial results.

- Market leader in industrial cranes, as well as crane service
- One of the largest suppliers of port cranes and lift trucks
- Three major business areas; Service, Port Solutions and Industrial Equipment
- In 2021, the Group had 16,600 employees at 600 locations in 50 countries.
- In 2021, Group sales totalled EUR 3185,7 million
- Headquarters located in Hyvinkää, Finland
- Konecranes shares are listed on the Nasdaq Helsinki (KCR).

BUSINESS AREA SERVICE

With 600 service locations in 50 countries, Konecranes provides specialized maintenance services and spare parts for all types and makes of industrial cranes and hoists – from a single piece of equipment to entire operations. Konecranes is the market leader in crane service, with the world's most extensive crane service network. More than 600,000 pieces of equipment are covered by Konecranes service agreements.

BUSINESS AREA PORT SOLUTIONS

Business Area Port Solutions offers a full range of container handling equipment, equipment for handling bulk, general and project cargo, shipyard handling equipment and heavy-duty lift trucks, backed by a complete range of services. Products and services are marketed under the Konecranes brand, with some product groups marketed under the labels Konecranes Gottwald, Konecranes Noell and Konecranes Liftace. Consulting services are marketed under the TBA brand. We rank #1–3 in the market in all product categories for ports and container terminals.

BUSINESS AREA INDUSTRIAL EQUIPMENT

Business Area Industrial Equipment offers hoists, cranes and material handling solutions for a wide range of customers, including industries like Waste-to-Energy, Paper and Forest, Automotive and Metals Production. Products are marketed through a multi-brand portfolio that includes Konecranes and the brands: Demag, MHE-Demag, SWF Krantechnik, Verlinde, R&M, Morris Crane Systems, and Donati. Our family of leading brands secures our position as the global market leader in industrial cranes.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2021	December 31 2021	No	<Not Applicable>

C0.3

(C0.3) Select the countries/areas in which you operate.

Australia
Austria
Bangladesh
Belgium
Brazil
Canada
Chile
China
Croatia
Czechia
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
India
Indonesia
Ireland
Israel
Italy
Japan
Latvia
Lithuania
Malaysia
Mexico
Morocco
Netherlands
New Zealand
Norway
Peru
Philippines
Poland
Portugal
Romania
Russian Federation
Saudi Arabia
Singapore
Slovakia
Slovenia
South Africa
Spain
Sweden
Switzerland
Taiwan, China
Thailand
Turkey
Ukraine
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland
United States of America
Viet Nam

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

EUR

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	FI0009005870

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board-level committee	We have a two-tiered system, where “board of directors” refers to the “supervisory board” and “executive board” refers to the top leadership team we call Konecranes Leadership Team. Board of Directors HR Committee is an official supervisory board committee following climate topics minimum on an annual basis. HR Committee approves long-term focus, ambition level and targets and reviews performance and activities annually. Senior Vice President Human Resources (SVP HR) is a member of HR Committee and has a role and responsibility in Konecranes Leadership Team to manage climate topics. In 2021 HR Committee approved Science Based Target ambition proposal and the start of the validation process and followed the progress in two of their meetings.
Board-level committee	Sustainability Council is a decision making body nominated by Konecranes Leadership Team. Sustainability Council consist of Business Area Heads, Heads of all the functions and Sustainability team. Senior Vice President Human Resources (SVP HR) is acting as a chair of the Council. All the other members are responsible for leading their own organizations according to the decisions made in Sustainability Council. Council has the most significant responsibility for managing sustainability matters at Konecranes, including climate issues. Sustainability Council has a role in evaluating climate related risks and opportunities, setting climate targets, programs and driving action to mitigate climate change on a strategic level. Long-term focus, ambition level and targets are then introduced also to Konecranes Leadership Team and to the Board of Directors HR Committee who approves long-term focus, ambition level and targets. Sustainability Council meets systematically minimum on quarterly basis. In 2021 Sustainability Council convened eight (8) times and made a decision e.g to start Science Based Target validation process with defined ambition, approved new sustainability targets for 2021 for example a target guiding our new products and solutions to be more sustainable than the previous generation and offsetting flight related emissions. Council also followed our progress towards our targets.
Other C-Suite Officer	Senior Vice President Human Resources (SVP HR) has the highest personal responsibility for managing sustainability matters at Konecranes, including climate issues. SVP HR has a significant role in evaluating climate related risks and opportunities, setting climate targets, programs and driving action to mitigate climate change on a strategic level. SVP HR is a member of the Konecranes Leadership Team (KLT), which is the most senior executive team at Konecranes.

C1.1b

(C1.1b) Provide further details on the board’s oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Setting performance objectives Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<Not Applicable>	The group executive board, Konecranes Leadership Team (KLT), the most senior executive team at Konecranes. KLT is responsible for strategy planning, implementation and reviewing progress. KLT is involved in risk and financial planning process. KLT also approves major climate related action plans and targets. KLT approves and reviews sustainability strategy annually. Sustainability is integrated to Konecranes company strategy. KLT follows own operations emission data on a monthly basis and oversee other climate-related issues occasionally. In 2021 KLT approved Science Based Target ambition and starting of the validation process and approved climate target for own operations. Sustainability Council nominated by the KLT reviews and guides the overall sustainability strategy, targets and action plans. Progress of climate targets is being followed in dedicated Sustainability Council meetings as well as the follow-up of the most important activities. In 2021 Sustainability Council approved and followed the Climate Roadmap related progress approved new sustainability targets for 2021 for example a target guiding our new products and solutions to be more sustainable than the previous generation and offsetting of flight related emissions.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	We have a two-tiered system, where "board of directors" refers to the "supervisory board" and "executive board" refers to the top leadership team we call Konecranes Leadership Team.. In this case we refer to executive board member. We consider that basic level competence is sufficient in the executive board level to enable fact based decision making, strategy development and progress follow-up. We have defined specific topics that serve as a criteria to evaluate the competence. Konecranes criteria to evaluate competences on climate-related issues include know-how on: • company level emission inventory • how to impact to emission inventory. Understanding what activities are minimizing the emissions • Science Based Target frame • Climate related risks and opportunities framework defined in TCDF and company level assessment In case there is a basic level competence for all of the topics we consider a person has competence on climate-related issues.	<Not Applicable>	<Not Applicable>

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Corporate responsibility committee *Sustainability Committee*	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Other C-Suite Officer, please specify (Senior Vice President Human Resources)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Chief Sustainability Officer (CSO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Sustainability Council is a decision making council nominated by Konecranes Leadership Team. Council consist of Business Area Heads, Heads of all the functions and global Sustainability Team. Leader of the global Sustainability team (CSO) organizes the meetings minimum quarterly according to our governance model. Sustainability Council reviews and approves Sustainability policies, targets and performance. Sustainability Council sets the strategic direction for climate-related issues together with all core functions and Business Area Heads. The members have a responsibility to implement the decision in their functional and business strategies and roadmaps. Council monitors the progress against the climate targets, develops and approves the programmes and spars if additional activities must be taken.

Senior Vice President Human Resources (SVP HR) is a member of the Konecranes Leadership Team (KLT), which is the most senior executive team at Konecranes and acts as a chair for Sustainability Council. SVP HR has the highest-level authority to decide what climate-related improvement projects shall be taken forward, what practices will be implemented and follows the progress and to secure the topics are in the top-managements agenda. SVP HR has a significant role in evaluating climate related risks and opportunities, setting climate targets, programs and driving action to mitigate climate change on a strategic level. In 2021 SVP HR followed the progress and results of climate targets and SBT process.

Chief Sustainability Officer (CSO), coordinates the work of Sustainability Council. Chief Sustainability Officer reports to SVP HR. Global Sustainability team reports to Chief Sustainability Officer who leads the global sustainability work. Chief Sustainability Officer is having the responsibility to take action and take the decisions to the operative level. CSO is responsible for the data gathering, analysis and practical guidance on climate action. In 2021 CSO finalized group level SBT emission calculations, climate roadmap and started the Science Based Target validation process

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Konecranes currently provide incentives according to the answer below. Konecranes is currently evaluating top-executive ESG remuneration programme and will set executive remuneration in place for 2023.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Chief Sustainability Officer (CSO)	Monetary reward	Emissions reduction project Emissions reduction target Energy reduction project Behavior change related indicator Environmental criteria included in purchases	Role responsible for leading Sustainability activities. Incentives based on listed activities including for example climate roadmap and Science Based Target.
Environment/Sustainability manager	Monetary reward	Emissions reduction project Emissions reduction target Energy reduction target Efficiency target	The role responsible for product development, efficient internal practices and stakeholder engagement
Other, please specify (Local HSE Managers)	Monetary reward	Emissions reduction project Energy reduction project Efficiency project Behavior change related indicator	Local Health, Safety and Environmental managers (HSE) have incentives related to local environmental targets such as energy efficiency projects and emission reductions due to their local ISO 14001 environmental management system.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	1	Konecranes is working towards reaching its climate target. We monitor our progress by continuously assessing our performance against our Science based target roadmap. Our climate targets have a major influence on portfolio development, therefore, roadmaps are aligned with our strategy and driven by our Business Areas
Medium-term	1	5	We have a medium-term and a long-term plan for our Science Based targets that can be divided for each Business Area, driving future investments. The medium-term goal mainly focuses on scope 3 where our largest amount of emissions is. We develop our medium-term planning with cross functional discussions, guiding the future strategy work.
Long-term	5	10	For our long-term planning, we include relevant stakeholder views, such as our customers and investors. The Board of Directors opinions are especially relevant. These discussions are all key elements of our future planning and in the assessment of climate change risks and opportunities.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Konecranes defines substantive financial or operational impact as having financial impact of EUR 5 to 10 M such as asset destruction or profit loss depending on a business unit.

Substantive strategic financial impact would mean example 2 percentage points change of adjusted EBITA margin. In 2021 adjusted EBITA was 312,2MEUR and adjusted EBITA margin 9,8 and 2% point change of adjusted EBITA would result as 63,7MEUR. We assess monetary value, risk likelihood (probability of occurrence in time scale) and potential size of the impact in a scale of 1-4. Strategic risk impact can be assessed as substantial if the assessment result in both non-monetary aspects is significant resulting minimum score of 7. This allows us to estimate the potential impact to our business and to prioritize key risks. The strategic risks refer to risks that have global relevance and possible effect for Konecranes. The strategic climate related risk might be e.g. reputational, operational or financial. Strategic risk might have a lower financial impact in the short term but a wider impact on the long term. Therefore, many climate risks can be seen having a substantial strategic impact.

On a company-level, substantive financial impacts can be calculated in millions euros, whereas on a local level substantive financial impacts are significantly lower. Locally physical hazards may cause substantial company-level impact in case there are many locations impacted. An example is in 2021 a storm caused challenges in one of our largest manufacturing sites in Germany. There are three manufacturing locations near to each other and the impact would have been significant in case the weather hazard would have been wider.. Local level risks might turn into company-level financial and strategic risks if for example a central manufacturing operation that is feeding components to our other manufacturing operations or to front-line sales is impacted and causes delays in multiple sites. This would result as substantial financial impact where the monetary impact is over EUR 5 M.

One potential financial risk is Konecranes being impacted by one or several emission trading system. We expect carbon pricing mechanisms similar to emission trading system in EU being adopted in several locations globally. Today our operations do not fall under any mechanism directly. As a part of climate risk scenario analysis, carbon pricing risks were assessed in short-term and in long-term. Globally it has been analysed that the annual cost would be 1,6 M€ in 2030 if we would fall under such an emission trading mechanisms globally and if we would maintain the same emission level. The most significant financial regional risk in in the EMEA region due to biggest manufacturing operation being located in EMEA..

One potential financial market risk that would cause a potential customer concern could be for example shift in the needs or expectations from customers and unsuccessful introduction of new products or services. Our future portfolio and its implementation is considered having significant strategic impact on business. Our electrification plans on ports equipment and the speed of transformation is a strategic risk we follow closely. We have manufacturing sites that are more crucial to our overall performance than others so the dependency on that unit is also considered a strategic risk. It is challenging to categorise risk as just strategic and there are several connections to one or more risk categories and their financial impact.

TCFD guided risks and opportunity analysis. We follow the TCFDs recommendations for climate related risk assessments. Konecranes has done a comprehensive climate related risk and scenario analyses in 2019 and hosted climate risks and opportunities workshops with all business areas and procurement function in 2020. During the process we identified all potential transitional and physical risks and opportunities and scored their severity and probability.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered
Direct operations
Upstream
Downstream

Risk management process
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
More than once a year

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process
Company level climate-related risks and opportunities are assessed annually as part of the company-wide risk assessment . Also, mitigation planning is part of our enterprise risk management process. Short term (0-1), medium (1-5) and long term (5-10 years) risks and opportunities are identified and assessed. In the context of a climate-related risks, we also consider the strategic impact of the risk as they might have a lower financial impact in the short term but a wider impact long term.

Konecranes risk management principles serve as part of our set of controls and are designed to ensure that any risks related to the company's business operations are identified and managed adequately and appropriately. This is done to ensure a for safeguard the continuity of our business at all times. The risk management principles have been set by the Board of Directors of Konecranes based on widely accepted international good management practices along with the internal risk management policy that has been approved by Konecranes Leadership Team.

The Group's risk management principles provide a general framework, and each Business Area and operating unit is responsible for its own risk management. This approach guarantees the best possible knowledge of local conditions, experience and relevance. We drive risk mitigation and climate actions with our Environmental Policy, Code of Conduct, HSE standards and especially with our global emissions targets. The governance for driving the climate change roadmap follows the general governance structure managed by Konecranes' Sustainability Team and through the Sustainability Council. The key risks, including climate risks, are reported to the Internal Audit Committee. Climate themes and metrics are also regularly on the agenda of the Konecranes Leadership Team as well as the Board of Directors annually.

In the risks evaluations, we take advantage of the climate risk scenario analysis from December 2019, natural hazard risk evaluations done by an insurance company of our manufacturing sites throughout the years and the annual site specific environmental risk evaluations that are part of the local 14001 environmental management system requirements are also used. Site specific climate risks are evaluated with more detail and a mitigation plan and activities are defined. Unit level risk assessments are then consolidated to a company-level.

Process for responding to risk is build into the risk process. Risks evaluated having potential for being significant must be analysed and a response plan needs to be build on local or on global level. Local response plan can be energy efficiency improvement or in case where strong mitigation is challenging like severe weather-related risks, one opportunity is insurance. Diversifying of supplier network to minimize the physical transportation risks and transitional local market risks is another. R&D has a major risk mitigation and opportunity enhancement impact.

Biggest climate related risks are physical risks related to value chain, technology risks related to our offering and market risks related to cost impacts. Costs are impacting the direct material purchasing (i.e. possible carbon taxes) and the potential physical risks are mostly related to transportation. Identified significant transition risks were emerging regulation and policy changes, the costs the energy industry faces in developing low-carbon technologies and the requirements of additional reporting as well as lack of climate ambition.The transitional risksare managed through regulation follow-up and participation of a numbers of organisations. Facility improvements, sourcing of green activities and research and development projects help mitigate the risk. Activities require careful transitional climate risk evaluation and mitigation but also leveraging the climate opportunities for our customers.

Direct operations:
Climate risks, such as the increase in extreme weather conditions like storms, cyclones, hailstorms and lightning could have a potential impact on the shipment of our products or spare parts. Physical risks of our production sites are assessed as part of our natural hazard risk evaluations done together with an insurance company. Having a continuance plan for production changes due to e.g. extreme weather conditions lowers the interruption risk for production.

Decarbonizing our own operations:
Konecranes actively follows its energy and emission performance and has set Science Based Targets to reduce absolute Scope 1 and 2 GHG emissions by 50% by 2030 from a 2019 base year. Konecranes strategic decision is to power all its manufacturing sites with renewable electricity and systematically investigating the potential related to electric vehicles. We also continue to reduce the emission from our own operations by investing in energy efficiency activities. This will have short- and medium-term risk mitigation impact to for example cost allocation by securing energy expenses and potential emission allowances are minimized.

Downstream:
Significant opportunity is our ability to enable our customers to reach their climate targets with our low carbon solutions. The use of sold products is the largest source of emissions. We have set a Science-Based Target to reduce absolute Scope 3 GHG emissions from purchased goods and services and use of sold products with 50% by 2030 from a 2019 base year. We want to engage with our customers in emission reductions and provide them with fact-based information on GHG emission reductions. Providing information about our products' environmental impact and the technical specification for actual carbon reductions gives our customers the opportunity to better understand and minimize their climate impact. As we already have energy efficient products in all product segments available and focus on continuous product development and technological improvements, growing demand for low-emission products present a great opportunity for us - especially in traditional diesel engine powered product segments such as Ports.

Upstream:
Physical risks, like the increase in extreme weather conditions such as storms, cyclones, hailstorms and lightning could have a potential impact on the shipment of our products or spare parts. Market risks are significant since they might have significant financial impact in case of increased carbon taxation for steel or availability challenges causing disruption for our production. Mitigation activities include for example diversifying our supplier network and investment in R&D to investigate new raw-materials.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	The relevance and inclusion of this risk type in our risk assessment: Risks related to regulation are always included in the risk assessment as it is considered relevant... Changes in energy prices (such as electricity, heat, natural gas or liquefied petroleum gas) have an effect on our factories' operational costs. The process to mitigate risk Environmental legislation and regulation regarding climate action are followed on the corporate level when these requirements have global business relevance or impact disclosures on a global level. We follow i.e. the carbon border adjustment mechanism, emission trading system development and regulation on energy efficiency. On a local level, reviewing environmental legislation and local environmental risks is an important part of the ISO 14001 Environmental management system to verify compliance. Other business functions and product development follow product specific legislation requirements on e.g. motors as we need to comply against the local exhaust emissions limits. Specific risk considered in our assessment: Konecranes is not currently under any emission trading scheme globally, but we are following developments as well as the price of carbon as the regulation on this might change. This risk for widening the scope for carbon tax would be more administratively easier to implement than regulatory controls on energy use and GHG emissions.
Emerging regulation	Relevant, always included	The relevance and inclusion of this risk type in our risk assessment: Risks related to emerging regulation are always included in the risk assessment, and considered relevant. Climate related emerging regulation may have strategic impact on our businesses as their financial implications can be relatively high, and impact profitability. On a practical level, climate-related emerging regulation have a significant impact on our operations considering the risk related to the transition to a low-carbon economy. The process to mitigate risk Konecranes has a systematic way to follow up emerging regulations. Konecranes participates in relevant industry organizations to hear about the implications to upcoming regulation well in advance, taking part in the consolidation of the proposals if possible. We follow national, EU-level and international regulation and agreements on emerging regulation having impact on climate change. Relevant aspects to pay attention to are new regulations on emission trading systems and emission taxes, on energy efficiency, substances and circular economy. Emerging regulation impacting climate change are followed on the corporate level as well as on the local level.. We share information about emerging regulation for example in Sustainability Council's meetings where all business areas are represented. Specific risk considered in our assessment: An example is vast package of legislative proposals on climate that will reduce the EU's net emissions by at least 55 per cent by 2030 was introduced by the EU Commission in July 2021 (Fit for 55). The proposals have several have implications particularly for our business area ports. These concern maritime fuels, fuels infrastructure, emissions trading, and energy taxation. For our customers to reach the needed reductions levels, we need to secure our offering meets the requirements also in the future. Furthermore, the government in Finland, where Konecranes' headquarters is located, has committed to carbon neutrality by 2035, that will affect regulation related to emissions. The risks in environmental legislation changes are related to the impact on overall energy and fuel efficiency, and the financial feasibility of the various alternative ways to meet regulatory demands.
Technology	Relevant, always included	The relevance and inclusion of this risk type in our risk assessment: Risks related to technology, especially technological development that link to decrease emissions and increase energy efficiency, are always included in the risk assessment, and considered very relevant. Technology plays a crucial part in our business, especially technological solutions that cut the dependency on fossil fuels . We closely follow the market, have a strong network of partners offering technological solutions and follow the risk of solutions and component availability. Therefore, this is a strategic element included in the risk assessment. The process to mitigate risk The significant risk for us related to technology lies in the selection of technologies used in our portfolio. Technological development pressure in carbon-intensive industries might also increase costs and the availability of technology or key components. The cost of running unsupported technology can be high. To mitigate technology related risks Konecranes ensures that our low-carbon solutions and selected technologies are effective, attractive and available for our clients. Specific risk considered in our assessment: Technological development pressure in carbon-intensive industries might also increase costs and the availability of technology or key components. For example, if a specific type and model of a battery in a hybrid or full electric mobile crane is very common in the automobile industry, there might be challenges in availability. This then could interrupt order deliveries and possible spare part support, leading to financial implications can be relatively high, impacting profitability and service levels.
Legal	Relevant, not included	The relevance and inclusion of this risk type in our risk assessment: Risks related to climate-related litigation claims are negligible, therefore this aspect is not included in the risk assessment and therefore considered relevant but not included. We need to stay alert but not systematically follow. Majority of products operate full electric and the part that uses a diesel genset, have strict emission limits. Any possible climate related case would direct to the motor manufacturers if any. The process to mitigate risk For own operations, we follow all local environmental legislation, emission limits and calculate, monitor and measure our emissions annually. We disclose our full carbon footprint on a granular level and have actions plans, policies and processes to manage emission reduction for scope 1 and 2, so see no risk related to lack of transparency. We have environmental management processes in place for our own operations. More than 80% of our own manufacturing operations are certified with ISO14001 management system. A specific risk considered in our assessment: For managing value chain related risks, we have compliance programmes ensuring no unexpected climate related risks will appear. In 2021 at least 56% of our suppliers have signed our Supplier Code of Conduct. We evaluate suppliers by conducting audits and with systematic assessments. Therefore, we consider the risk of climate-related litigation claims in the value chain minor.
Market	Relevant, always included	The relevance and inclusion of this risk type in our risk assessment: Risks related to changes in the markets that link to climate change and demand for low carbon products as well as have impact to material availability and carbon risk are always included in the risk assessment. The risks are considered very relevant as they often have a substantial impact to our profitability. The process to mitigate risk Technology plays a crucial part in our business, and we closely follow technological developments in sectors material to us and our customers. Market risks can relate to increased production costs due to changing input prices (energy, raw-materials etc.) and output requirements (waste treatment). Technological development pressure in carbon-intensive industries might also increase costs and the availability of technology or key components. Environmental awareness regarding climate topics is growing in all markets, especially in emerging markets. To understand the changes in attitudes and requirements in different regions, we closely monitor shifts in the global megatrends, "quiet signals" and customer feedback on climate issues by engaging with our customers via e.g. our Voice of Customer surveys. We use this feedback in our strategic planning and discuss these demands internally with our R&D, sales, marketing, management and engineering teams and externally with other stakeholder groups. To mitigate technology and market related risks Konecranes ensures that our low-carbon solutions and selected technologies are effective, attractive, and available to our clients. A specific risk considered in our assessment: One example is the limited availability of biobased fuel that could be used in our mobile equipment. There has been a growing interest towards bio-based fuels, such as HVO100. This fuel can be used in most diesel engines, but there is very limited availability of this fuel in markets relevant to us. Wide electrification trend might cause availability risks in i.e. batteries.
Reputation	Relevant, always included	The relevance and inclusion of this risk type in our risk assessment: Risks related to reputation that link to climate change and our low carbon solution offering are always included in the risk assessment and considered very relevant. We need to perform towards our ambitious targets, share results transparently and engage the whole value chain in climate mitigation and adaptation. The process to mitigate risk Climate-related issues are not seen as major reputational risks as we annually disclose our emissions and performance in emission reduction. We have environmental management systems and audits in place as well as global guidelines and controls about demands for suppliers. We very openly share the results of our climate actions providing material for our sales and customers. This way they can base their decision on proven facts as our product-related environmental claims are critically verified by a third party. A specific risk considered in our assessment: We want to be known for setting ambitious targets and for to be a leader in low carbon solutions. Therefore we want to safeguard our reputation and base our facts on climate science, TCFD guidance, best practices for NFRD, using the commonly accepted data sources for emission factors, calculate using the commonly agreed methodologies. Third party verification a excellent tool to get objective feedback and prove the savings the product can bring.

	Relevance & inclusion	Please explain
Acute physical	Relevant, always included	Relevance and inclusion of this risk type in our risk assessment: Risks related to the physical impacts of climate change are always included in risk assessments and considered very relevant since these climate hazards could have a substantial impact to our own operations and to continuity. An increase in extreme weather conditions such as cyclones, hurricanes, hailstorms and lightning could especially affect our crane installations and project sites. Heavy rainfall, floods and the rise of sea levels would put some of our production sites at risk. Extreme weather conditions can also have a potential impact on the shipment of our products or spare parts. The process to mitigate risk Physical risks of our production sites are assessed as part of our natural hazard risk evaluations done together with an insurance company and actions are taken accordingly. The potential physical risks are mostly related to transportation. Having a continuance plan for production changes due to e.g. extreme weather conditions lowers the interruption risk for production. A specific risk considered in our assessment: For example, heavy rainfalls and floods have caused disturbance in our production sites. We have biggest risks in the APAC and EMEA region based on extreme weather risk heatmaps (internal scenario analysis done in 2019) and materialized risks in recent years.
Chronic physical	Relevant, sometimes included	Relevance and inclusion of this risk type in our risk assessment: Risks related to a chronic physical phenomenon to the climate are relevant and included in risk assessments and considered relevant if these climate hazards could have a substantial impact to our own operations and to continuity. Rising sea levels could potentially affect future Port operations by hindering the service or installation of port cranes, and rising sea levels might also endanger some of our production or subcontracted production sites. A specific risk considered in our assessment: Increasing temperatures will influence health and safety risks for our service operatives working in warm areas. Heatwaves significantly lower labor productivity and safety. We have mitigation practices in place.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Technology	Unsuccessful investment in new technologies

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Technology plays a crucial part in our offering. Biggest transitional risk is if our chosen technologies are not attractive for our customers. Investment to a new technology might be unsuccessful if we invest to a new technology too early and don't yet have market for a new solution. We have continued to monitor general market trends, technological developments, competitors' actions, customer behaviour and developments in various industry segments to identify signs of potential changes that could impact us.

The significant risk for us related to technology lies in the selection of technologies used in our portfolio. If technologies, related to i.e. fuel type or energy saving are not properly assessed, it might resume in not becoming popular amongst customers (due to i.e. some fuel not being in use globally like hydrogen in the future, availability of batteries, material scarcity and cost increase or other supply chain issues). Risk is global and may impact mostly our Ports Solutions and Industrial Equipment business.

Also, sudden change in local regulations might cause a substantial risk for us. This risk is global, but some regional differentiation might occur for example due to regional differences in energy infrastructure. This risk would have the biggest impact to our business area Port Solutions where 42% of sales were eco-portfolio. In industrial equipment the share of eco-portfolio is 100% since full portfolio is electrified. For example, regional push to electrify operations lead to our customers supporting our electrified offering versus in case there is no such push to electrify it might result our electrified offering not to be attractive.

One great example from successful development project is the launch of a new product. In 2021 we finalized investigation about the use of HVO100 fossil-free fuel in lift trucks at its Markaryd, Sweden factory, to meet customer demand for equipment using renewable fuels. Results show the latest generation of Konecranes lift trucks can use HVO100, giving customers the possibility to reduce their carbon footprint. In 2021 Konecranes launched generation 6 electric mobile harbour crane that can be operated with onshore grid electricity or with a new battery solution. This new product can substitute traditional diesel driven mobile harbour cranes.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)
31857000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
If the shift in customer preferences is not taken into account appropriately, this might result in loss of sales. In 2021, our annual sales were 3,185.7 million euros. Already a 1% decrease in annual sales would mean almost 32 million in euros. We decided to use 1% change as since it allows us to understand how big impact. In total we expect the sales of our eco-portfolio products to increase and the potential financial impact figure on group level is estimated at 1%. This is then also used to define the potential risk.

3 185 700 000*0,01=31 857 000 ~32MEUR

Cost of response to risk
23229000

Description of response and explanation of cost calculation
Mitigating this risk requires investments in low carbon technology (battery technology, electrification of diesel equipment and new innovations) to ensure our offering is attractive for our customers. Core of Lifting technologies create competitive advantage for us since we can use the same technologies across our wide offering. We actively participate in relevant industry organizations, have dialogue with our customers and follow up of international standardization and the global legislation development on i.e. requirements on motors and emission reduction technology to learn where the market is moving and what new technologies are being discussed.

We see that the customer demand for low carbon products is increasing. For example, the transportation industry, including ports in the EU area needs to decrease their emissions by 40% by 2030 according to IMO (International Marinetime Organization). We need to systematically investigate the possibilities of electrification, re-chargeable batteries and other technologies to decrease carbon emissions. We will continue investing in the research of new technologies and discussing with potential customers finding the best partners in battery technology and developing software that also aims to decrease the use of energy and emissions, to be able to expand our offering of low-carbon solutions. We also participate in global standardization work in ISO and CEN to ensure we fulfil existing and future safety and environmental standards. In case we fail to develop our offering to be attractive we will lose market.

In 2021, we spent 47,7 million euros in R&D, excluding engineering work. 49% (=48,7%) of the overall are related to products and solutions advancing climate related improvements for example developing our eco-efficient portfolio and advancing electrification. As an example, in 2021 we continued investing in R&D to develop our battery driven container handling machines. We now offer Konecranes Battery RTG, the Battery Konecranes Noell Straddle Carrier, and all-electric Konecranes Gottwald Generation 6 Mobile Harbor Cranes. R&D also focuses on developing digital solutions. Konecranes Data Science Lab developed a data-based model to predict the fuel consumption of reach stackers, making it possible to provide a guarantee to customers on which consumption levels and emissions to expect from the machines they acquire.

47 700 000*0,486=23 229 000 ~ 23,2MEUR

Comment

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Cyclone, hurricane, typhoon

Primary potential financial impact
Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
A risk is extreme weather such as storms, heavy rains, strong winds, hailstorms and increased lightning may impact our sites, exposing them to a risk of floods, sewage problems, leakage through roof and windows, development of mold, increased risk for fires etc. We have several production sites that are at risk of having their production and deliveries impacted. Storms and related physical risk are considered as potential substantial operational risk according to Konecranes 2019 climate risk scenario analysis done by a third party the probability of this risk is minor in most of our operating locations. Weather related hazards are becoming more severe and common, and this increases the probability of this risk.

Storms cause a local risk but since Konecranes has a global supply chain and we feed components globally to our own supply chain the risk could end up being global. Locally physical hazards may cause substantial company-level impact in case there are many locations impacted.

We have researched possible scenarios that can harm our operations. A calculation done by our insurance company show that , storm and flooding damages to one of our factories at risk could result in 1-5 million euros in costs, including property damage and short-term business interruptions.

According to natural hazard studies made by insurance company substantial risks were found in APAC region related to hailstorm hazard and lightnings. According to climate risk scenario analysis conducted by a climate specified consultant China is a hotspot with medium damage to infrastructure and high productivity loss risks. The losses in productivity could go up to 16% according to the climate risk scenario analysis. APAC region accounts for 16% of our sales, 7% from our scope 1 emissions and 25% from our scope 2 emissions.

Extreme weather conditions can also hinder the port operations by making maintenance on cranes or crane installations challenging. Extreme weather conditions are getting more frequent, and the magnitude of these phenomena will be more severe. Acute physical weather events may cause several indirect risks in our supply chain. These risks are not taken into consideration in the cost analysis.

Time horizon
Medium-term

Likelihood
About as likely as not

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
1000000

Potential financial impact figure – maximum (currency)
5000000

Explanation of financial impact figure
According to one calculation done by our insurance company, storm and flooding damages to one of our factories at risk could result in 1-5 million euros in costs, including property damage and business interruptions. Cost division between property damage and business interruption varies significantly since some manufacturing locations are more central for our internal operations. Local level risks might turn into company-level financial and strategic risks if for example a central manufacturing operation that is feeding components to our other manufacturing operations or to front-line sales is impacted and causes delays in multiple sites. This case is rarer and the financial impact for business interruption could be higher than 5M. This would cover one local manufacturing operation. The costs can vary significantly depending on the size and business importance of the factory and scale of damages, so this is a rough estimate of possible financial impacts.

Our insurance analysis focuses on manufacturing locations with the highest potential impacts of natural hazards, based on global natural hazard risk maps. Our largest factories are not in the scope of this risk due to their location.

Calculation is based on the analysis and we do not disclose more detailed information.

Cost of response to risk
1000000

Description of response and explanation of cost calculation
Risk response plan is first to minimize risks. This includes paying attention to constructional safety, emergency preparedness and continuity planning. If weather conditions continue to deteriorate, having an effect on our production, purchasing on goods, logistics, timetables and serviceability, we need to include this force majeure in our contracts and consider change the way we operate to guarantee customer satisfaction. As a case example we conducted a special climate hazard inspection with our insurance company in three of our manufacturing sites to identify potential risks. One risk identified was flooding and for that the insurance company provided a flood emergency response plan that was introduced to our manufacturing operations. These findings were included in the annual risk evaluation including creating a response plan.

The risks that cannot be fully eliminated we have insurance to mitigate the end risk. Insurance covers our major natural hazards property and business interruption risks. Cost of management refers to a rough estimate of the annual cost of our insurance payments, and respective deductibles.

Calculation is based on the insurance expenses.

Comment

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Upstream

Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms

Primary potential financial impact
Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
We expect carbon pricing mechanisms similar to emission trading system in EU being adopted in several locations globally. At present our operations don't fall under any mechanism directly. We assume that at some point our operations will be impacted by some regional regulation and that would increase our direct costs. As a part of climate risk scenario analysis, carbon pricing risks were assessed in short-term and in longer term.

Konecranes ambition is to cut half the emissions from our own operations between 2019 and 2030. In the climate risk scenario analysis, it was analysed that the annual cost would be 1,6 M€ in 2030 if we would fall under such an emission trading mechanisms globally and if we would maintain reach our science based targets in 2030.

The biggest financial risks were seen in European area where the price of the emission allowances has increased significantly during the past years and where our biggest manufacturing operations are located. Germany would be the most impacted country.

Increased costs of carbon can also affect us indirectly by increasing the price of raw materials. For example, increased carbon pricing will likely have an impact on energy and steel prices. The price of fuels is also affected by different carbon taxes and this has high impact to the costs in our service business.

Time horizon
Long-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
0

Potential financial impact figure – maximum (currency)
1620000

Explanation of financial impact figure
As a part of climate risk scenario analysis, carbon pricing risks were assessed in mid-term and in long-term. A quantitative scenario analysis was performed using the carbon prices from the IEA World Energy Outlook strongest mitigation scenario, the Sustainable Development Scenario, which limits climate change to 1,7-1,8C by the end of 2100. Different scenarios were evaluated. According to current emission reduction scenario that enables us to decrease our emission level by 50% (475,000 tCO2) the annual cost of carbon would be 1,62 M€ in 2030.

45 000 tCO2e x 36€ ~1,62 EUR/t = 1,6MEUR

Potentially increasing raw-material costs are not included in the calculation. Calculation takes into consideration the costs related to emission allowances.

Cost of response to risk
4681000

Description of response and explanation of cost calculation
What is comes to minimizing costs of potential carbon allowances, we systematically improve the energy efficiency of our manufacturing facilities to minimize the emission volume. We have set energy and emission intensity targets to all manufacturing facilities and we are systematically following the progress and effectiveness of the actions. One example is lighting renewal actions that have enabled big emission savings. Annual investments to energy efficiency varies. In 2021 investment costs were 4 681 000 euros.

We closely follow the future development of carbon pricing and other related taxation. Follow up mechanisms include taking advantage of legislation follow up systems, actively participating in relevant industry organizations and having dialogue with our stakeholders. These costs are not calculated.

Calculation is based on 2021 energy efficiency activities.

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?
Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Opp1

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Use of more efficient production and distribution processes

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
Konecranes has systematically improved the energy efficiency of it's own operations to reduce our environmental footprint and reduce energy costs at the same time. While this is a value for our company to minimize our climate impact it improves our capability to manage energy related costs in our manufacturing sites and with our vehicle fleet. We have over 30 factories and service operations in almost 50 countries. Energy efficiency minimizes the potential carbon taxation costs in the future. In our factories, we regularly invest in more energy efficient real estate technology and develop production following lean-principles. In service operations, the focus is on substituting existing vehicles with fuel-efficient low-emission vehicles for example with hybrid vehicles. Energy efficiency reduces emissions simultaneously. Our target level is defined in our Science Based Targets.

Our biggest regional footprint of our manufacturing operations is in Germany. We see that the price of energy is increasing so we need to invest in energy efficiency as well as substitute fossil energy with renewable. In Germany the electricity is 100% renewable from the beginning of the 2021.We are currently investigating whether there is a business case for solar panels in one of the sites in Germany.

In service side our biggest vehicle footprint is in AME region. There we focus on substituting service vehicles with more fuel-efficient ones and are starting to pilot electric vehicles. The charging infrastructure in the regions is not yet sufficient for full electric fleet but we expect that to develop in future.

For example, in 2021 total of 21 energy efficiency improvements were implemented. This included investments in LED lights, improved heating systems and insulation of

buildings, better compressors, and awareness raising. The timeframe for this opportunity is mid-to long-term. Energy efficiency activities have a payback time of 3 to 15 years.

Time horizon
Medium-term

Likelihood
Virtually certain

Magnitude of impact
Medium-low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
700000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
With energy efficiency activities finalized in 2021 and with those planned for 2022 there could be an opportunity to reduce energy costs by around 6.69 million euros (cumulative figure) during 2021-2030. If investment costs are subtracted from this figure, the cumulative 2021-2030 savings opportunity could be around 700 000 euros. The most significant savings result from heating, ventilation, insulation, and lighting solutions improvements in buildings as well as from machinery replacements in production. The calculation only takes into consideration the energy costs and energy efficiency investments from manufacturing operations.

Cost to realize the 6.69 million euros energy saving opportunity (by improving the fuel efficiency of the fleet and the energy efficiency of the production processes) is estimated to be about 6 million euros. This rough calculation mainly consists of real estate investments (building renovation, new technology and machinery that are more energy efficient). We have over 30 factories and have evaluated their energy efficiency potential and made a prioritized roadmap for investments.

During 2021 we saved 14,500 CO2 tons equivalent in our own operations (scope 1+2) due to various energy saving initiative and investments. We also managed to grow our renewable electricity share to 67 % (30 % in 2020).

Calculation: Cumulative energy savings: 6 690 000 EUR.- energy efficiency activities 6 000 000
6 690 000- 6 000 000= 690 000 ~0.7 MEUR

Cost to realize opportunity
6000000

Strategy to realize opportunity and explanation of cost calculation
We continue working towards our energy and emissions targets by raising energy efficiency awareness, following our energy/emission performance systematically and continuously seeking for potential improvement opportunities. On a global level, we collect information about our energy and emission reduction initiatives on a yearly basis and analyze how these initiatives impact our performance. Best practices about energy and emission saving projects are shared actively.

As part of the Science Based Targets ambition, we tightened the schedule of the previous target of powering our factories with 100 percent renewable electricity from 2025 to 2022. We will focus on increasing the use of solar power in our factories and for the remaining part, we will purchase renewable electricity with guarantees of origin. We also investigate the possibilities to purchase renewable LPG and replace some in-house mobile warehouse equipment as full electric vehicles.

For example, in 2021 total of 21 energy efficiency improvements were implemented. This included investments in LED lights, improved heating systems and insulation of buildings, better compressors, and awareness raising. In service operations, the focus is on substituting existing vehicles with fuel-efficient low-emission vehicles for example with hybrid vehicles. Energy efficiency investments are well worth the effort.

For the service side we have created a vehicle fleet electrification strategy. Currently globally we see a lot of challenges with the charging infrastructure, but we expect that to develop. In 2022 we have adopted first fully electrified vehicles in Singapore and ordered also electric vehicles in the US and Finland. This minimizes our dependency on fossil fuels, emissions and fuel related costs.

Cost to realize the 6.69 million euros energy saving opportunity (by improving the fuel efficiency of the fleet and the energy efficiency of the production processes) is estimated to be about 6 million euros. This rough calculation mainly consists of real estate investments (building renovation, new technology and machinery that are more energy efficient). We have over 30 factories and have evaluated their energy efficiency potential and made a prioritized roadmap for investments.

Comment

Identifier
Opp2

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
Signals from markets, legislation development, voluntary agreements made by industries, customer feedback and requests for quotations all indicate that the demand for low emission products and services will continue to increase. (source: world economic forum global risks report 2021, Konecranes Voice of Customer survey, 'Fit for 55' package, IMO GHG strategy). We expect that the eco-portfolio sales (50% in 2021) will increase due to legislative changes and customer needs, creating more additional sales of low emission goods and services.

Konecranes has set Science Based targets for its scope 3 emissions and a part of that is to enhance electrification of the market. Our solutions are widely in use where the Ports infrastructure supports electric products and therefore, we expect also our sales to increase also due to market changes. In 2021 we defined a company-level climate roadmap on how to further improve the overall environmental sustainability, which is currently being implemented to the Business Area product strategies. We also work to include this requirements to the development projects, guiding especially the solutions design process.

As we already have energy efficient products in all product segments available and focus on product development and technological improvements, growing demand for low-emission products present a great opportunity for us - especially in traditional diesel engine powered product segments such as Ports.

To provide accurate data on the environmental impact of our solutions for decision-making, we calculate products' energy consumption and CO2 emissions and critically assess this data with the help of a third party (as part of our Environmental Product Declarations).The long-lasting design also supports resale values when customers choose to renew their fleets. Expanding our low carbon offering is done, for example, through the Ecolifting concept that provides equipment and power solutions that reduce the carbon footprint of container terminals. From eco-optimizing diesel drives, to hybridization and fully electrified fleets, we enable our customers to choose low carbon power options and other energy-saving solutions like regenerative breaking. For example, choosing a full electric option for terminal operation instead of a traditional diesel equipment fleet, for example RTG´s, can decrease emissions up to 60-80% during products' use phase.

Time horizon
Medium-term

Likelihood
Virtually certain

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
31850000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
We expect sales to increase for hybrids and full electric equipment in the business area Port Solutions. We also offer special energy efficiency options for industrial customers and expect the offering in our Industrial Equipment to be equally increasing.

Konecranes launches new products relatively rarely. In 2021 Konecranes introduced generation 6 MHC and in 2020 electrified lift truck E-VER. We expect the new launches to contribute positively to out net sales. In total we expect the sales of our eco-portfolio products to increase and the potential financial impact figure on group level is estimated at 1%. In 2021, our annual sales were 3,185 million euros. Already a 1% increase in annual sales would mean almost 32 million in euros. We do see that we have a portfolio that has a lot of potential to increase revenues. Reported figures are rough estimates. Our strategy focuses on accelerating growth and increasing profitability.

Cost to realize opportunity
23182200

Strategy to realize opportunity and explanation of cost calculation
The customers are purchasing the best solution for their purposes. We provide information about the carbon impacts of our products, recommend the most energy efficient solutions accompanied by Smart Features for our customers' needs but the decision about the investment is theirs. We invest in new power options and expand our offering of full electric mobile material handling equipment. We utilize a concept in product development called Design for Environment that aims to reduce the environmental impacts throughout the life cycle of the product, focusing on efficient material usage, recyclability and energy efficiency.

An example of a specific activity to realize this opportunity is to focus on battery technology, hybrid products, energy efficiency features and improved content on eco-efficiency (ECOLIFTING concept). We provide also Environmental Product Declarations for our products, which are critically reviewed by a third party, to help us deliver fact-based eco-efficiency benefits. We enable our customers to choose low carbon power options and other energy-saving solutions like regenerative breaking. For example, choosing a full electric option for terminal operation instead of a traditional diesel equipment fleet, for example RTG´s, can decrease emissions up to 60-80% during products' use phase. (LCA calculation, 3 party verified)

In 2021, we spent 47,7 million euros in R&D, excluding engineering work. 49% (=48,7%) of the overall work is related to products and solutions advancing climate related improvements for example developing our eco-efficient portfolio and advancing electrification.

47 700 000*0.486=23 182 200 ~ 23,2MEUR

For example, our as a result of RnD work our Generation 6 mobile harbor crane and our electric E-VER Lift Trucks reduce energy consumption compared to standard diesel engines. In addition to lower emissions, the design of the mobile harbor crane takes circularity into account through a more durable design: its robust construction doubles the cranes' service life in container operation compared to earlier generations, and more powerful lifting capacity curves and high working speeds ensure greater efficiency and faster cargo turnaround times. Konecranes Data Science Lab developed a data-based model to predict the fuel consumption of reach stackers, making it possible to provide a guarantee to customers on which consumption levels and emissions to expect from the machines they acquire.

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Other, please specify (Prolonging the lifetime of the equipment)

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
Increased demand for services that aim to decrease the customers carbon impact and enhance production performance, such as major modernizations, can result in increased net sales. One example of a significant local driver is the state of California that offers investment subsidies for non-road product modernizations, turning traditional diesel driven equipment into hybrids or full electric to reduce the local emissions.

Our retrofitting and modernization services can extend the lifecycle of equipment and update the equipment to meet today's standards. Modernizations are tailored upgrades designed to extend the life of an existing crane and to meet current regulatory, maintenance and production requirements. Modernizations are extensive lifecycle extension projects, where worn out or obsolete components and modules are repaired or changed with most of the steel structure remaining in use. Our service business supports the mitigation of climate impacts with efficient maintenance concept, spare part availability and re-engineering obsolete spare parts, utilizing data from the fleet and by taking part in the product development.

Modernizations can provide a complete transformation for an existing crane as an alternative to replacing it and incorporating new technology that did not exist when the crane was originally delivered. Modernizations improve safety and performance, increase the availability of technical support and spare parts, and decrease the number of repairs and unscheduled maintenance. Modernizations save a significant amount of steel and in most cases increase the energy efficiency of the crane.

We can use the customers own data to prove when a modernization project is justified.

Our low carbon services can cut up to 30-80% of emissions in i.e. ports where old existing port cranes can be modernized from diesel to hybrids or even full electric depending on the baseline. This is done by utilizing low-carbon and energy-efficient technology in products and services. Also, modernizing an old crane instead of purchasing a new one, saves hundreds of tonnes of steel, resulting in remarkable emission savings. One example of carbon emission savings from an extensive modernization project of several process cranes ended up saving 148 tons of CO2 t eq, doubling the life span of those excising products.

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
24106000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
In recent years the sales of modernizations and retrofits has been lower than the historical average. In 2021 they accounted for 16% of service net sales. Based on the historical averages we expect that the potential is 2% of service net sales
0.02* 1 205 300 000 = 24 100 000 = EUR 24.1 M

Konecranes' "eco portfolio", consists of fully electrified and hybrid equipment, as well as modernizations and retrofits. We estimate that the eco-portfolio sales (50% in 2021) will increase due to legislative changes and customer needs, creating more additional sales of low emission goods and services. Our estimate is based on our Science Based Targets, changes in regulation (Fit for 55), technology availability and decrease of cost in some components and key materials.

Cost to realize opportunity
7733300

Strategy to realize opportunity and explanation of cost calculation
In 2021, we spent 47,7 million euros in R&D, excluding engineering work. 49% (=48,7%) of the overall work is related to products and solutions advancing climate related improvements for example developing our eco-efficient portfolio and advancing electrification. We estimate that one third from R&D spend is related to modernizations and retrofits, including developing related equipment, solutions or services.

((47 700 000*0.486)=23 182 200)/3 =7 7 33 300
~ 7,7MEUR

For example, as a result of R&D work our Generation 6 mobile harbor crane was introduced in 2021. In addition to lower emissions, the design of the mobile harbor crane takes circularity into account through a more durable design: its robust construction doubles the cranes' service life in container operation compared to earlier generations, and more powerful lifting capacity curves and high working speeds ensure greater efficiency and faster cargo turnaround times.

Our circular strategies focus on using less, using longer, and using again. Circularity plays an essential role also in tackling climate change as greenhouse gas emissions can be reduced by improving resource efficiency, designing out waste and pollution and keeping materials and products in use longer. The lifecycle of our products can last for decades. Investing in data-driven, eco- and resource-efficient products that can be repaired and modernized means the customer can preserve the value of their equipment for a longer period of time and consequently decrease their environmental impact and cost. Our vast service and spare part offering and systematic approach to maintenance is supported by digital tools to help predict failures and optimize the need for maintenance, modernizations and spare parts.

We are currently calculating the expected emission avoidance related to maintenance services.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan

Yes, we have a transition plan which aligns with a 1.5°C world

Publicly available transition plan

Yes

Mechanism by which feedback is collected from shareholders on your transition plan

We have a different feedback mechanism in place

Description of feedback mechanism

Konecranes has active dialogue with shareholders, and encourages shareholders to share any feedback with the company and also welcomes all feedback. The feedback is gathered by the Investor Relations team and is forwarded to the Board of Directors, if relevant.

According to the Finnish Companies Act, a transition plan is not be something that would be on the agenda of the AGM. Matters to be discussed at the AGM are defined in Article 10 of Konecranes' Articles of Association and in Chapter 5, Paragraph 3 of the Finnish Companies Act. These matters include the adoption of the financial statements, the distribution of profits, discharging Board members and the Managing Director from personal liability, the election of Board members and auditors, and the fees payable to them. Konecranes' Articles of Association can be consulted here – Articles of Association. However, shareholders are entitled to have considered by the AGM a matter falling within the remit of the General Meeting provided that the matter is presented in writing in time for it to be included in the notice convening the Meeting. Thus, in case shareholders would request the transition plan to be considered in the AGM, they could propose this.

Frequency of feedback collection

Less frequently than annually

Attach any relevant documents which detail your transition plan (optional)

sustainability_report_2021.pdf

Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future

<Not Applicable>

Explain why climate-related risks and opportunities have not influenced your strategy

<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios: RCP 2.6	Company-wide	<Not Applicable>	In 2019 physical risk assessment was analysing at three scenarios from the Intergovernmental Panel on Climate Change over a medium time horizon to 2040. Time horizon was determined based on objective to stay business oriented while still displaying meaningful results. Selected focus countries were United States, Finland, Germany, Ukraine and China. Selection was decided based upon significance of the respective operations in these countries. Selected physical risks (i.e heat waves and windstorms) were investigated further.
Physical climate scenarios: RCP 4.5	Company-wide	<Not Applicable>	In 2019 physical risk assessment was analysing at three scenarios from the Intergovernmental Panel on Climate Change over a medium time horizon to 2040. Time horizon was determined based on objective to stay business oriented while still displaying meaningful results. Selected focus countries were United States, Finland, Germany, Ukraine and China. Selection was decided based upon significance of the respective operations in these countries. Selected physical risks (i.e heat waves and windstorms) were investigated further.
Physical climate scenarios: RCP 8.5	Company-wide	<Not Applicable>	In 2019 physical risk assessment was analysing at three scenarios from the Intergovernmental Panel on Climate Change over a medium time horizon to 2040. Time horizon was determined based on objective to stay business oriented while still displaying meaningful results. Selected focus countries were United States, Finland, Germany, Ukraine and China. Selection was decided based upon significance of the respective operations in these countries. Selected physical risks (i.e heat waves and windstorms) were investigated further.
Transition scenarios: Bespoke transition scenario	Company-wide	1.6ºC – 2ºC	This scenario is company-wide Policy and carbon pricing risk. Analysis of transitional risks started with qualitative short-term analysis of carbon prising. A quantitative scenario analysis was performed using the carbon prices from IEA World Energy Outlook's strongest mitigation scenario, the Sustainable Development Scenario (SDS), which limits climate change to 1,7-1,8C by the end of 2100. Potential future carbon prices were assessed based on three emission reduction scenarios: no reductions, current reduction scenario and Science Based target scenario. To asses carbon prising risks in longer term, a qualitative scenario analysis was performed using carbon prices from the IEA World Energy Outlook. The discount rates used for the carbon pricing modelling were 2,5% and 5%.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

What are the potential impacts of physical risks to our own operations and what countries are the potential hotspots?
What are the potential impact of carbon pricing risks for our own operations?

Results of the climate-related scenario analysis with respect to the focal questions

What are the potential impacts of physical risks to our own operations and what countries are the potential hotspots?

A qualitative rating (low, medium, high) was provided for 2040 scenarios. The main findings of the physical risk vulnerability and literature review screening are:
- In below 2C scenario high to very high vulnerability can be avoided
- In scenarios higher than 2C; Asian with service business and facilities both had high vulnerability rating.

Regionally the vulnerability screening provided high-level overview of Konecranes general vulnerability to physical climate change effects. APAC region hotspots are China and India. In EMEA Ukraine emerged as a hotspot. In AME region Mexico and Brazil emerge with less significance but also high vulnerability ratings.

For heatwaves the two most material impacts identified were damage to infrastructure and productivity loss. Under strong mitigation scenario, the projected changes in heatwaves are small.

For windstorms the two most material impacts identified are direct damage to facilities and indirect damage to infrastructure and power lines. Similar to heatwaves under strong mitigation scenario, the projected changes in heatwaves are small and so are the resulting risks on operations.

This information was used in Climate risks and opportunities workshops conducted for Business Areas and procurement. Business areas might use the information when they plan their factory footprint strategy and local objectives. Location use the information in their annual planning. Since risk level is relatively low no urgent activities were planned. Our insurance analysis focuses on manufacturing locations with the highest potential impacts of natural hazards, based on global natural hazard risk maps.

What are the potential impact of carbon pricing risks for our own operations?

For transitional risks related to carbon pricing, the analysis started with qualitative short-term (current and planned decisions) analysis and continued with a longer-term quantitative scenario analysis. Estimated carbon prices were combined with internal scenarios which correspond to different CO2 emission pathways (no activities, modest emission reduction scenario, SBT 1,5C scenario). According to the study the SBT 1,5C scenario would mitigate the carbon pricing cost by close to 80% compares to the scenario of having modest emission targets. Regionally Germany and US are the countries with the highest potential carbon costs in the future.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	We believe market will move to low-carbon direction that offer us significant opportunities. Providing low-carbon solutions is climate change mitigation action. We focus on developing and providing eco-efficient solutions for our customers and extending lifecycles with our service concepts. For example, we offer hybrids and electric alternatives for traditional diesel cranes, and energy-saving features such as regenerative braking to help our customers minimize emissions. As we already have energy efficient products in all product segments available and focus on continuous product development and technological improvements, growing demand for low-emission products present a great opportunity for us - especially in traditional diesel engine powered product segments globally. Our customers are facing more stringent environmental regulation that demand carbon emission reductions. Therefore, our customer are seeking ways to cut their dependency on fossil fuel. For this need we offer several options: retrofitting diesel equipment into hybrids or even full electric. For industrial equipment (hoists, overhead cranes) we invest in material efficiency and light weight without compromising safety and reliability. We have made a strategic decision to grow our eco-efficient offering and to invest in RD supporting this development. We want to electrify our full equipment portfolio. We have committed in Science Based Emission Targets and know that the share of emissions from the category use of sold products is our biggest emission category. Therefore this commitment leads us making more strategic decisions related to increasing the share of eco-efficient portfolio including electrification, in the future. We anticipate that the time horizon for this opportunity is short- to long-term. We see that the green transition has started already since customers are more focusing on requesting more climate related data from us. Will expect this impact to accelerate in the coming 5 to 15 years. This is having short-term and long-term impacts to our strategy. Share of sales in eco-portfolio has increased from 49 % in 2019 to 54% in 2020.
Supply chain and/or value chain	Evaluation in progress	Biggest climate related risks are physical risk related to value chain and market risks related to cost impacts. We take advantage of the findings from climate risk scenario analysis in building our strategic programmes and supplier evaluation. Costs are impacting the direct material purchasing via i.e. possible carbon taxes and our actions are to mitigate climate change by minimizing the emissions. The potential physical risks are mostly related to transportation. Activities are planned in short-term to mid-term horizon of 1 to 3 years and the time-horizon for this risk and opportunity is between short to medium. Currently, we demand adequate environmental management from our suppliers, having 58% of of our total procurement spend sign our Supplier Code of Conduct. Our target is to increase the coverage. In 2022 we will continue to evaluate supply chain climate risks.
Investment in R&D	Evaluation in progress	Climate-related risks and opportunities have not yet influenced our R&D investment strategy. We expect to begin evaluating the impact of risks and opportunities on our R&D in 2023. Currently we take products and services related risks and opportunities into consideration in R&D planning.. Currently we focus on investing in the best available technologies for low-carbon solutions. The annual in 2021 49% from R&D budget contains investments for environmental improvements, for example hybrid technology, more material efficient ways to assemble the crane and energy and mechanical efficiency. Time horizon in these topics is medium to long-term. Decision to commit to Science Based targets leads us to consider allocation of R&D spend to climate projects. One great example from successful development project is the launch of a new product. In 2020 Konecranes launched Konecranes E_VER fully electric forklift. Konecranes E-VER cuts energy consumption by up to 70% compared to standard diesel engine. This project is an example of how we are electrifying our portfolio. In 2021 Konecranes Data Science Lab developed a data-based model to predict the fuel consumption of reach stackers, making it possible to provide a guarantee to customers on which consumption levels and emissions to expect from the machines they acquire.
Operations	Yes	We want to mitigate climate change by investing in energy efficiency. According to climate scenario analysis, in the company-wide policy and carbon pricing risk evaluation it was analysed that the risk of being impacted by emission trading system is significant. This would result a financial impact of 1,6 MEUR in 2030. Our strategic decision is a commitment to power all our manufacturing sites with renewable electricity by the end of 2022 and we are systematically investigating the potential related to electric vehicles. We also continue to reduce our own emissions from production by investing invest in energy efficiency of facilities and service fleet. Examples: investing in LED lights, improved heating and insulation, more energy-efficient machinery and compressors and more fuel-efficient cars such as hybrids. In 2020 total of 9 lighting related investments were implemented. These risks have an impact to us in mid-term or long-term 3 to 10 years. We have a short-term annual investment plan to mitigate this risks as well as a group level long-term roadmap. This has an impact to for example to cost allocation and minimizing potential

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures Capital allocation Access to capital	Climate-related risks and opportunities impact our capital expenditures as we seek to minimize the scope 1 and scope 2 emissions. To manage the risk of increasing costs due to cost of carbon and opportunity due having good reputation if having ambitious targets we focus on minimizing our emissions. In 2018 we made a detailed energy efficiency analysis where we estimated existing and future energy costs and potential energy efficiency activities. At the same time we committed to ambitious emission and energy efficiency targets on medium time horizon, between 2018 and 2025. In 2020 total of 9 lighting related investments were implemented. Total investment cost was 177 000€. These kinds of investments are taken into account in annual budgeting. We make very detailed budgets for R&D work. We focus for example on electrifying our portfolio, energy efficiency improvements and take this into account in our financial planning. As we have identified low-carbon portfolio being an opportunity for us we have decided to invest in it's development. In 2021, we spent 47,7 million euros in R&D, excluding engineering work. We expect our revenue to increase when we can develop our low-carbon portfolio. Investors and shareholders provide funding with better terms and conditions for companies that are actively involved in climate change mitigation and have risk mitigation actions implemented. This encourages us further to improve our sustainability and climate action performance, giving as much information about our risk and opportunities work for the investors as well as other financiers. We have started reporting according to TCFD reporting guidelines. Tangible property assets are insured with Property Damage insurance against Natural Hazards. If such losses increase, this may have an impact on insurance premiums and terms respectively. We have recognized that there is a disruption risk in our service and manufacturing operations. We have insurance and emergency preparedness in place to safeguard our continuity against this kind of continuity risk. We have been prepared in our budget for force majeure incidents in installations and service operations due to extreme weather conditions.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?

Yes

C3.5a

(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization's transition to a 1.5°C world.

Financial Metric
Revenue

Percentage share of selected financial metric aligned with a 1.5°C world in the reporting year (%)
14

Percentage share of selected financial metric planned to align with a 1.5°C world in 2025 (%)
25

Percentage share of selected financial metric planned to align with a 1.5°C world in 2030 (%)
100

Describe the methodology used to identify spending/revenue that is aligned with a 1.5°C world
Konecranes has activities that qualify as environmentally sustainable according to the EU Taxonomy Regulation. The activities are eligible according to the first published technical screening criteria for climate change mitigation. We consider the EU taxonomy eligible revenue being aligned with 1,5C world. Konecranes has activities that are in the scope of Technical Screening Criteria (TSC) 3.6. Manufacture of other low carbon technologies and 8.2. Data-driven solutions for greenhouse gas (GHG) emissions reductions.

Taxonomy-eligible activities are, according to Article 16 of the Taxonomy Regulation, enabling substantial contribution towards climate change mitigation, which is one of the objectives defined in Article 9 of the Regulation. The total taxonomy-eligible revenue is expected to increase in 2022 as the activities of the Service Business Area are partially expected to fall in the forthcoming scope of the environmental objective "Transition to a circular economy and waste prevention".
The calculation of the revenue percentage of taxonomy-eligible activities for TSC 3.6. (Manufacture of other low carbon technologies) is based on low carbon technology such as inverter-controlled drives, regenerative breaking and hybrid and electric power options. These technologies substitute existing technology with lower-emission alternatives. Eligibility of revenue was evaluated at product level. Taxonomy-eligible products represent 14% percent of Konecranes' revenue. The revenue percentage of software solutions eligible for TSC 8.2. (Data-driven solutions for GHG emissions reductions) represents 0–1 percent of total revenue.

We expect the share of 1,5C aligned revenue to increase in short- ja mid-term , but we have not set clear targets.

Financial Metric
CAPEX

Percentage share of selected financial metric aligned with a 1.5°C world in the reporting year (%)
5

Percentage share of selected financial metric planned to align with a 1.5°C world in 2025 (%)
5

Percentage share of selected financial metric planned to align with a 1.5°C world in 2030 (%)
5

Describe the methodology used to identify spending/revenue that is aligned with a 1.5°C world
CapEx and the specifically defined categories of OpEx described in the Taxonomy Regulation are reported at company level. Five percent of CapEx and 39 percent of specifically defined OpEx is taxonomy-eligible. These activities include, for example, facility improvements, sourcing of green activities and research and development projects. They support the transition towards a low carbon economy and achieving the Science Based Targets set for own operations and for the value chain.

We expect the share of 1,5C aligned Capex to increase in short- ja mid-term , but we have not set targets.

Financial Metric
OPEX

Percentage share of selected financial metric aligned with a 1.5°C world in the reporting year (%)
39

Percentage share of selected financial metric planned to align with a 1.5°C world in 2025 (%)
39

Percentage share of selected financial metric planned to align with a 1.5°C world in 2030 (%)
39

Describe the methodology used to identify spending/revenue that is aligned with a 1.5°C world
CapEx and the specifically defined categories of OpEx described in the Taxonomy Regulation are reported at company level. Five percent of CapEx and 39 percent of specifically defined OpEx is taxonomy-eligible. These activities include, for example, facility improvements, sourcing of green activities and research and development projects. They support the transition towards a low carbon economy and achieving the Science Based Targets set for own operations and for the value chain.

We expect the share of 1,5C aligned Opex to increase in short- ja mid-term , but we have not set clear targets.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?
Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number
Abs 1

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Market-based

Scope 3 category(ies)
<Not Applicable>

Base year
2019

Base year Scope 1 emissions covered by target (metric tons CO2e)
52500

Base year Scope 2 emissions covered by target (metric tons CO2e)
33200

Base year Scope 3 emissions covered by target (metric tons CO2e)
<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
85700

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
100

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
100

Target year
2030

Targeted reduction from base year (%)
49.5

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
43278.5

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
44500

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
14400

Scope 3 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
58900

% of target achieved relative to base year [auto-calculated]
63.1755124170527

Target status in reporting year
New

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Target ambition
1.5°C aligned

Please explain target coverage and identify any exclusions
Target: Reduce absolute Scope 1 and 2 GHG emissions 49.5% (~50%) by 2030 from a 2019 base year. The target is based on financial years. The target covers 100% of total base year emissions of both Scopes.

Scope 1 includes emissions from fuel, natural gas and LPG consumption and fugitive emissions (refrigerants).
Scope 2 includes emissions from electricity and district heat consumption. Scope 2 indirect emissions are calculated according to the GHG Protocol Scope 2 Guidance on

market-based method.

All reported emissions are taken into account. In our data collection: Potential renewable shares are not taken into account for fuels. Other energy streams than electricity from our service office operations' figures are excluded as the consumption amounts are estimated to be very marginal.

Plan for achieving target, and progress made to the end of the reporting year
New target. The Scope 1 and 2 targets will be achieved by investing into renewable electricity and by improving the fuel efficiency of the fleet and the energy efficiency of the production sites and processes. As part of the Science Based Targets ambition, we tightened the schedule of the previous target of powering our factories with 100 percent renewable electricity from 2025 to 2022. We will focus on increasing the use of solar power in our factories and for the remaining part, we will purchase renewable electricity with guarantees of origin. We expect electrification of fleet to increase from 2025 forward, which will result in emission savings.

We anticipate that the rate of progress towards the target is logarithmic, faster at the start. Increased share of renewable electricity has already affected emissions.

Progress in 2021: Emissions from electricity decreased significantly due to increased share of renewable electricity (from 30% in 2020 to 67% in 2021) and decreased electricity consumption resulting from conducted energy efficiency activities. Several energy efficiency improvement projects that reduced CO2 emissions were implemented in 2021. Biggest overall emission savings were gained by increasing the share of renewable electricity and by improving heating, ventilation and insulation at factories and replacing old machinery with more energy efficient ones.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Abs 2

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 3

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
Category 1: Purchased goods and services
Category 11: Use of sold products

Base year
2019

Base year Scope 1 emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 2 emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3 emissions covered by target (metric tons CO2e)
4233633

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
4233633

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
<Not Applicable>

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
<Not Applicable>

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
76

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
76

Target year
2030

Targeted reduction from base year (%)
49.5

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
2137984.665

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3 emissions in reporting year covered by target (metric tons CO2e)
3673751

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
3673751

% of target achieved relative to base year [auto-calculated]
26.7164099362119

Target status in reporting year
New

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Target ambition
1.5°C aligned

Please explain target coverage and identify any exclusions
Reduce absolute Scope 3 GHG emissions from purchased goods and services and use of sold products 49.5% (~50%) by 2030 from a 2019 base year. The target is based on financial years.

Target covers emissions from all Konecranes operations in all the countries we operate, focusing our core business and excluding joint ventures and subsidiaries. In relevant categories in Scope 3 emission calculations joint ventures and subsidiaries are included. Konecranes aims to reduce absolute carbon emissions by 49.5 (=50) percent by 2030, encompassing the use of sold products and from purchased goods and services from where only steel related purchases are within the target boundary. This covers 76 percent of the value chain emissions.

Plan for achieving target, and progress made to the end of the reporting year
The Scope 3 target will be reached by electrifying our offering in Business Area Ports, developing more energy-efficient hoists for Business Area Industrial Equipment and reducing value chain emissions from steel purchases in cooperation with our suppliers. As steel is a carbon intensive material, we will need to cooperate with our steel suppliers to reduce the overall emissions related to steel. We have investigated the maturity level of the climate targets our suppliers have set and will challenge suppliers to set ambitious climate targets. We will also work to increase the share of recycled steel.
We will also focus on advancing digitalization to make material flows more productive while minimizing emissions. To limit any excess waste, we design our products to be maintainable, durable and optimized for overall weight.

As supportive actions, Konecranes will also fully offset flight emissions and will continue to seek new ways to decrease emissions and drive its sustainable portfolio development.

We anticipate that the rate of progress towards the target is variable, progress changes from year to year. This is because the sold portfolio varies annually based on customer choices, which affects the emissions from the use of sold products.

Progress in 2021: The sold portfolio varies annually significantly based on customer choices. Between 2020 and 2021 there was a change in sold product mix but the end emissions were only slightly smaller. In 2021 we focused on investigating the emissions from steel suppliers and will create a supplier engagement programme to ensure we collaborate with supplier sharing our climate ambition. For steel purchases use weight volume data to calculate the emissions so the follow up is more accurate than with spend based approach.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
Target(s) to increase low-carbon energy consumption or production

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number
Low 1

Year target was set
2018

Target coverage
Business activity

Target type: energy carrier
Electricity

Target type: activity
Consumption

Target type: energy source
Renewable energy source(s) only

Base year
2017

Consumption or production of selected energy carrier in base year (MWh)
15960

% share of low-carbon or renewable energy in base year
20

Target year
2022

% share of low-carbon or renewable energy in target year
100

% share of low-carbon or renewable energy in reporting year
67

% of target achieved relative to base year [auto-calculated]
58.75

Target status in reporting year
Revised

Is this target part of an emissions target?
This renewable electricity target supports our Science-Based emission target (Abs 1). A significant amount of electricity is used in our factories, and by changing its source from non-renewable to renewable, we can achieve significant decrease in our emissions. As part of the Science Based Targets ambition, we tightened the schedule of the previous target of powering our factories with 100 percent renewable electricity from 2025 to 2022.

Is this target part of an overarching initiative?
Science Based Targets initiative

Please explain target coverage and identify any exclusions
Renewable electricity target has been set to our factory operations. As part of the Science Based Targets ambition, we tightened the schedule of the previous target of powering our factories with 100 percent renewable electricity from 2025 to 2022. Our aim is that all electricity used (100 %) in our factories is produced with renewable methods by 2022.

Plan for achieving target, and progress made to the end of the reporting year
We will focus on increasing the use of solar power in our factories and for the remaining part, we will purchase renewable electricity with guarantees of origin.

The target was set during 2018, with a base year of 2017. Target is 100 % renewable electricity. In 2017 (base year) 20 % of
our electricity was generated from renewable sources. In 2021, we managed to raise the percentage to 67 %. Therefore, we have reached 58,8% of our target.
Calculation: ((100-20) - (100-67)) / (100-20) = (80-33)/80 = 0.5875 = 58,8%

List the actions which contributed most to achieving this target
<Not Applicable>

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.
Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	14	3280
To be implemented*	6	1977
Implementation commenced*	15	457
Implemented*	21	1387
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)

Estimated annual CO2e savings (metric tonnes CO2e)
900

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
173600

Investment required (unit currency – as specified in C0.4)
2113300

Payback period
4-10 years

Estimated lifetime of the initiative
11-15 years

Comment
Heating systems improvements done in five factories. Reported figures are estimates, and they represent average values of all the HVAC improvement projects done in 2021. The biggest project was implemented in our manufacturing site in Hyvinkää, Finland.

Initiative category & Initiative type

Energy efficiency in buildings	Lighting

Estimated annual CO2e savings (metric tonnes CO2e)
78

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
36400

Investment required (unit currency – as specified in C0.4)
115400

Payback period
4-10 years

Estimated lifetime of the initiative
11-15 years

Comment
Old lights changed to LED lights in several factory halls. Reported figures are estimates, and they represent average values of all the lighting improvement projects done in 2021.

Initiative category & Initiative type

Energy efficiency in production processes	Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)
390

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
51500

Investment required (unit currency – as specified in C0.4)
2072600

Payback period
4-10 years

Estimated lifetime of the initiative
6-10 years

Comment
New forklifts and welding machines. Reported figures are estimates, and they represent average values of all the machinery replacement projects done in 2021.

Initiative category & Initiative type

Energy efficiency in buildings	Maintenance program

Estimated annual CO2e savings (metric tonnes CO2e)
20

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
21000

Investment required (unit currency – as specified in C0.4)
380250

Payback period
1-3 years

Estimated lifetime of the initiative
3-5 years

Comment
Optimizing heating and compressed air in two factories. Replacement of the steam heating in 1 factory. Reported figures are estimates, and they represent average values of all the maintenance program improvement projects done in 2021.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	Several regional and local for example EU level laws and regulations are aiming to increase the energy efficiency and to decrease the emissions. Our manufacturing sites are compliant with local regulations. For example, in all sites that are located in EU an energy efficiency audit has been done according to Energy Efficiency Directive and related national legislation. In Finland we have committed to national Energy Efficiency Agreement.
Financial optimization calculations	We systematically evaluate potential energy efficiency investments and calculate which are the most optimal ones considering the amount of decreased emissions , energy consumption and money invested. This kind of optimization enables us to invest in the most effective projects. Projects are systematically identified for example during energy efficiency audits and in planning fleet efficiency. In 2021 we updated our investment to include the requirement to analyse the energy efficiency of the investment proposal.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?
Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation
Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon
The EU Taxonomy for environmentally sustainable economic activities

Type of product(s) or service(s)

Other	Other, please specify (Manufacture of other low carbon technologies)

Description of product(s) or service(s)
Konecranes has activities that qualify as environmentally sustainable according to the EU Taxonomy Regulation. Konecranes has activities that are in the scope of Technical Screening Criteria (TSC) 3.6. Manufacture of other low carbon technologies. These activities are, according to Article 16 of the Taxonomy Regulation, enabling substantial contribution towards climate change mitigation, which is one of the objectives defined in Article 9 of the Regulation.

The calculation of the revenue percentage of taxonomy eligible activities for TSC 3.6. (Manufacture of other low carbon technologies) is based on low carbon technology such as inverter-controlled drives, regenerative breaking and hybrid and electric power options. These technologies substitute existing technology with lower-emission alternatives.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
Yes

Methodology used to calculate avoided emissions
Other, please specify (Life Cycle Assessment ISO 14040, 14067 + GHG Protocol)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
Cradle-to-grave

Functional unit used
Operating fully electric crane in ports or terminal for 20 years compared to diesel driven crane having a fuel saver feature for 20 years. The estimated lifespan of RTG is 20 years. The use scenario is defined based on customer data averages.

Reference product/service or baseline scenario used
For business area Port Solutions we classify hybrid and electrified equipment as low-carbon. Our reference product is Rubber Tired Gantry (RTG) crane. We compare fully electrified product with a diesel variant including Fuel saver feature that lowers the fuel consumption.

For Industrial Equipment our baseline is 2-speed control versus inverter control during the use phase. In this case example data only represents RTG.

Life cycle stage(s) covered for the reference product/service or baseline scenario
Cradle-to-grave

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
2879

Explain your calculation of avoided emissions, including any assumptions
In this context we use Rubber Tired Gantry (RTG) crane as an example. Attributional estimation approach was used where we compare two different power options for the same product. This approach was chosen since the results are beneficial in giving clear emission reduction information for our customers to support their decision-making.

The estimated cradle to crave avoided emissions with the electrified crane are 2897 tCO2eq compared to diesel variant with fuel saver feature during the 20 years life-time. The biggest positive impact happens during the use phase.

In the calculation we use EU electricity grid average as an emission factor for electricity. The actual avoided emissions depends on the use, length of life span, maintenance and configuration. In the calculation we created a use scenario that is based on customer data averages.

Revenue generated from low-carbon product is Konecranes taxonomy eligibility share of revenue.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
14

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?
No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?
No

Name of organization(s) acquired, divested from, or merged with
<Not Applicable>

Details of structural change(s), including completion dates
<Not Applicable>

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in boundary	Data collection boundary has been updated to align with Science Based Target criteria, service and offices electricity consumption and refrigerants have been included to boundary. 2020 and 2019 are recalculated to offer transparent information.

C5.1c

(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	Yes	In case of a significant changes (meaning 10 % change in the values) in the organization, calculation methodology or data accuracy, historical environmental figures are recalculated to ensure our reporting gives a realistic view on our environmental impacts and our progress. In case of recalculations, these are always remarked and explained in the report. Konecranes can recalculate values even if the change is smaller than 10 % if necessary. In 2021 data collection boundary was updated to align with Science Based Target criteria, service and offices electricity consumption and refrigerants have been included to boundary. 2020 and 2019 have been recalculated to offer transparent information.

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
52500

Comment

Scope 2 (location-based)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
29700

Comment

Scope 2 (market-based)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
33100

Comment

Scope 3 category 1: Purchased goods and services

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
1573000

Comment

Scope 3 category 2: Capital goods

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
3700

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
19900

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
39500

Comment

Scope 3 category 5: Waste generated in operations

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
600

Comment

Scope 3 category 6: Business travel

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
12100

Comment

Scope 3 category 7: Employee commuting

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
18100

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not relevant for Konecranes

Scope 3 category 9: Downstream transportation and distribution

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
3900

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not relevant for Konecranes

Scope 3 category 11: Use of sold products

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
3984200

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
5900

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not relevant for Konecranes

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not relevant for Konecranes

Scope 3 category 15: Investments

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
6700

Comment

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

44500

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

23800

Scope 2, market-based (if applicable)

14400

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1515600

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

The emissions from purchased goods and services are calculated based primarily on monetary data split by purchased goods and service category, using the Greenhouse Gas Protocol's and Quantis's Scope 3 Evaluator web-based tool. Volume data was collected separately for steel raw materials and aluminium raw materials, as they are the largest source of emissions, and Ecoinvent material-specific emissions factors were used to calculate the emissions from these raw materials. Inverter related emissions were calculated based on volume data and using emission factors from suppliers. Share of this data will be disclosed in 2022.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

3400

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

The emissions from capital goods are estimated based on monetary data split by purchased goods category using the Greenhouse Gas Protocol's and Quantis' Scope 3 Evaluator web-based tool.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

14000

Emissions calculation methodology

Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

The emissions from fuel and energy related activities that are not included in Scope 1 or 2, are calculated based on the breakdown of Konecranes' energy consumption by country and source (fuels and electricity) using DEFRA's UK Government
emission factors for WTT and Transmission and distribution (T&D) losses.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

53800

Emissions calculation methodology

Supplier-specific method
Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

62

Please explain

The emissions from upstream transportation and distribution were calculated using emissions data provided by Konecranes biggest logistics service providers for the services they provided during the reporting year. These logistics providers represent 62% Konecranes´ total logistics spend and the remaining 38% was extrapolated to cover 100% of the logistics spend.

Waste generated in operations

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
300

Emissions calculation methodology
Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Konecranes measures the volume of waste generated in its operations split by waste category (scrap metal, paper and board, hazardous and WEE, and other waste) and waste treatment streams (recycling, incineration, composting, and
landfill) aggregated at the Group level. The emissions from waste generated in operations were calculated using DEFRA's UK Government emission factors for waste disposal.

Business travel

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
2400

Emissions calculation methodology
Supplier-specific method
Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
87.5

Please explain
Business air travel emissions are reported by Konecranes' travel management companies annually. Emissions from air travel are calculated using DEFRA's UK Government emission factors without radiative force (RFI).
Overall business travel category calculation is based on data provided by global travel agency. This covers around 87,5% of all Konecranes business travel spend and the remaining 12,5% were extrapolated by using employee headcount data to
cover 100% of the business travel spend (including land business travel and hotel accommodation).

Employee commuting

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
18600

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
The emissions associated with employee commuting were estimated using Quantis' Scope 3 Evaluator web-based tool, using an average emission factor per FTE.

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
This Scope 3 category does not apply to Konecranes. Leased vehicles and facilities
are included in scope 1 calculation.

Downstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
5400

Emissions calculation methodology
Supplier-specific method
Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
62

Please explain
The emissions associated with downstream transportation and distribution were estimated using the assumption that Konecranes' customer share of the total transportation costs is around 10%. The emissions are based on the same split
between air, train, ocean, and road transportation as for upstream transportation and calculated using the emission data provided by the upstream logistics service providers.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
This scope 3 category does not apply to Konecranes as it does not sell intermediate products that require further processing, transformation, or inclusion in another product before use.

Use of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
3522200

Emissions calculation methodology
Hybrid method
Average product method
Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
The emissions associated with the use phase of sold products were calculated using energy data (electricity and fuel consumption), use rate (stand-by, operational and traveling phases) and lifetime (~10 to 30 years) assumptions for all Konecranes product categories. Total expected lifetime emissions from all products sold in the reporting year were calculated using AIB and DEFRA emission factors for fuel combustion and WTT and Transmission and distribution (T&D) losses.

End of life treatment of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
5000

Emissions calculation methodology
Average product method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
The emissions associated with end-of-life treatment of sold products were calculated using Environmental Product Declarations (EPDs) for representative Konecranes product categories to infer the total mass of sold products per material
types (mainly steel). Average waste treatment streams per material types obtained from Eurostat (primarily recycling) and DEFRA's UK Government/Ecoinvent emission factors for waste disposal were used to estimate the end-of-life emissions
from all products sold by Konecranes in the reporting year.

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
This scope 3 category does not apply to Konecranes as it does not own or operate assets that it leases to other entities.

Franchises

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
This scope 3 category does not apply to Konecranes as it does not have franchises as part of its business model.

Investments

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
18000

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Emissions from equity investments not included in Scope 1 and 2 (where Konecranes does not have operational control) were calculated based on Konecranes' proportional share of investment in the investees in the reporting year. These emissions were estimated through an average-data method, using investee revenue data combined with EEIO Scope 1 and 2 emissions factors by investee geography and sector(s) of operation and allocating emissions to Konecranes based on its share of investment.

Other (upstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
All relevant upstream emission categories are already included. This category is not relevant to Konecranes.

Other (downstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
All relevant downstream emission categories are already included. This category is not relevant to Konecranes.

C-CG6.6

(C-CG6.6) Does your organization assess the life cycle emissions of any of its products or services?

	Assessment of life cycle emissions	Comment
Row 1	Yes	

C-CG6.6a

(C-CG6.6a) Provide details of how your organization assesses the life cycle emissions of its products or services.

	Products/services assessed	Life cycle stage(s) most commonly covered	Methodologies/standards/tools applied	Comment
Row 1	All existing and new products/services	Cradle-to-grave	GHG Protocol Product Accounting & Reporting Standard ISO 14040 & 14044 ISO 14067	We have estimated the life cycle emissions of all our products and services for Science Based Target calculation using the LCA methodology, GHG Protocol, data bank information and collecting information down the supply chain. We have ongoing a larger project to assess all products using the LCA 14067 methodology to improve on accuracy. These studies are and will be critically reviewed by a independent third party. We also plan to incorporate a calculator for LCA information in the future.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?
No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure
19

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
58900

Metric denominator
unit total revenue

Metric denominator: Unit total
3185700000

Scope 2 figure used
Market-based

% change from previous year
26

Direction of change
Decreased

Reason for change
Emission intensity in 2020 was 23 tco2/MEUR. 73400/3178,00=23,10 =23 tCO2/MEUR. Emission intensity in 2021 was 58 900 (metric tons CO2e)/3 185 700 000 (EUR)=18,49=19 tCO2/MEUR Intensity has decreased from 23 to 19 tCO2/MEUR.

Identified reasons behind the decrease in the emission intensity figure: Increased share of renewable electricity (from 30% of total electricity in 2020 to 67% in 2021) has the biggest impact. On top of that we have implemented multiple emission reduction activities in 2021. For example replacing old machinery, improving insulation of buildings and their heating systems and investing in energy-efficient LED lights. We have also pursued to increase our employees awareness about energy efficiency and that might impact in decreasing our emissions. One additional reason is COVID-19 that continued to impact the production and amount of service maintenance visits and driving.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	44500	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	1.63	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	0.3	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Americas	13550
Asia Pacific (or JAPA)	3300
Europe, Middle East and Africa (EMEA)	27650

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division
By activity

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Business Area Industrial Equipment	9000
Business Area Port Solutions	6900
Business Area Service	28600

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Manufacturing operations	15900
Service operations	28600

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Americas	3200	4500
Asia Pacific (or JAPA)	4700	3650
Europe, Middle East and Africa (EMEA)	15900	6250

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Business Area Industrial Equipment	17200	11200
Business Area Port Solutions	4500	500
Business Area Service	2100	2700

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	13113	Decreased	18	Emissions from electricity decreased significantly due to increased share of renewable electricity (from 30% in 2020 to 67% in 2021). Fuel consumption has increased from 2020 to 2021 and other energy streams have stayed relatively the same, thus, we can assume that most of the emission savings in Scopes 1 and 2 come from increased share of renewable electricity. Our total scope 1 and scope 2 emissions from previous year (2020) was 73 400 tCO2. Our total scope 1 and scope 2 emissions from previous year (2021) was 58 900 tCO2. 73 400 - 58 900= 14 500 tCO2 14500 - 1387 = 13113 tCO2 13 113/73 400=17.9% ~18% decrease in emissions
Other emissions reduction activities	1387	Decreased	2	Several energy efficiency improvement projects that reduced CO2 emissions were implemented in 2021. Biggest overall emission savings were gained by improving heating, ventilation and insulation at factories and replacing old machinery with more energy efficient ones. Our total scope 1 and scope 2 emissions from previous year (2020) was 73 400 tCO2. Totally 21 energy efficiency actions were implemented in 2021 resulting worth of 1,387 tCO2 emission reductions annually. 1387/73400= 1,89% ~2% decrease in emissions
Divestment	0	No change	0	No changes in Scope 1 and 2 emissions because of divestments.
Acquisitions	0	No change	0	No major changed because of the acquisition. Due to COVID-19 impacting operations we cannot calculate the impact of acquisition.
Mergers	0	No change	0	No identified changes in Scope 1 and 2 emissions because no mergers.
Change in output	0	No change	0	No identified changes in Scope 1 and 2 emissions because of change in output.
Change in methodology	0	No change	0	No changes in Scope 1 and 2 emissions because of change in methodology.
Change in boundary	0	No change	0	No changes in Scope 1 and 2 emissions because of change in boundary.
Change in physical operating conditions	0	No change	0	No changes in Scope 1 and 2 emissions because of change in physical operating conditions.
Unidentified	0	No change	0	
Other	0	No change	0	

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C-CG7.10

(C-CG7.10) How do your total Scope 3 emissions for the reporting year compare to those of the previous reporting year?

Increased

C-CG7.10a

(C-CG7.10a) For each Scope 3 category calculated in C6.5, specify how your emissions compare to the previous year and identify the reason for any change.

Purchased goods and services

Direction of change
Increased

Primary reason for change
Other, please specify (As we use spend based methodology in calculating the emissions from this category the reason for increased emissions is increased spend compared to previous year.)

Change in emissions in this category (metric tons CO2e)
124202

% change in emissions in this category
9

Please explain
As we use spend based methodology in calculating the emissions from this category the reason for increased emissions is increased spend compared to previous year. In 2021 we focus on investigating the emissions from steel purchases since that is the most carbon intensive purchasing category. In that category we currently use weight volume data so the follow up is more accurate.

Capital goods

Direction of change
Decreased

Primary reason for change
Other, please specify (As we use spend based methodology in calculating the emissions from this category the reason for increased emissions is increased spend compared to previous year.)

Change in emissions in this category (metric tons CO2e)
288

% change in emissions in this category
8

Please explain
In 2020 we updated Konecranes group level investment policy to include a requirement to analyse the energy efficiency of that particular investment proposal. We expect this to develop positively the energy efficiency of our capital goods investments.

Fuel and energy-related activities (not included in Scopes 1 or 2)

Direction of change
Decreased

Primary reason for change
Change in renewable energy consumption

Change in emissions in this category (metric tons CO2e)
3591

% change in emissions in this category
20

Please explain
The share of renewable electricity doubled during 2021 and this had the biggest impact to this category.

Upstream transportation and distribution

Direction of change
Increased

Primary reason for change
Change in supplier or distributor

Change in emissions in this category (metric tons CO2e)
19009

% change in emissions in this category
55

Please explain
In 2021 the share of air freight heavily increased compared to previous years and resulted as increased emissions. This will be analysed in 2022.

Waste generated in operations

Direction of change
Decreased

Primary reason for change
Change in physical operating conditions

Change in emissions in this category (metric tons CO2e)
288

% change in emissions in this category
49

Please explain
The biggest reason fore decreased emissions was increased volume in 2020 that was resulted by the site closures in EMEA and emptying the locations.

Business travel

Direction of change
Decreased

Primary reason for change
Change in physical operating conditions

Change in emissions in this category (metric tons CO2e)
600

% change in emissions in this category
20

Please explain
Emissions from business travels continued to be in a very low level due to the global covid-19 pandemic. We expect emissions to increase in years to come. In 2020 Konecranes global travel policy was updated and it includes clear instructions to minimize the business travel, to meet in hub locations and to prioritize low-emission transportation method.

Employee commuting

Direction of change
Decreased

Primary reason for change
Other, please specify (We use external Quantis scope 3 calculator where the nominator in the number of employees. Number of employees decreased.)

Change in emissions in this category (metric tons CO2e)
493

% change in emissions in this category
3

Please explain
We use external Quantis scope 3 calculator to calculate emissions from the category employee commuting. In the calculator the nominator in the number of employees. Number of employees decreased in 2021 compared to 2020.

Downstream transportation and distribution

Direction of change
Increased

Primary reason for change
Change in output

Change in emissions in this category (metric tons CO2e)
636

% change in emissions in this category
13

Please explain
The emissions increased due to increased need for transportation.

Use of sold products

Direction of change
Decreased

Primary reason for change
Change in output

Change in emissions in this category (metric tons CO2e)
64570

% change in emissions in this category
2

Please explain
The sold portfolio varies annually significantly based on customer choices. Between 2020 and 2021 there was a change in sold product mix but the end emissions were only slightly smaller.

End-of-life treatment of sold products

Direction of change
Decreased

Primary reason for change
Change in output

Change in emissions in this category (metric tons CO2e)
937

% change in emissions in this category
16

Please explain
The end of life treatment emission calculation is based on sold products. The sold portfolio varies annually significantly based on customer choices. Between 2020 and 2021 the sales mix was different and caused 16% decreased emissions.

Investments

Direction of change
Increased

Primary reason for change
Other, please specify (Investee revenues increased)

Change in emissions in this category (metric tons CO2e)
11300

% change in emissions in this category
169

Please explain
Emissions from equity investments not included in Scope 1 and 2 (where Konecranes does not have operational control) were calculated based on Konecranes' proportional share of investment in the investees in the reporting year. These emissions were estimated through an average-data method, using investee revenue data combined with EEIO Scope 1 and 2 emissions factors by investee geography and sector(s) of operation and allocating emissions to Konecranes based on its share of investment.

Investee revenues increased from 2020 to 2021, thus emissions from investments increased.

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?
More than 0% but less than or equal to 5%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	193000	193000
Consumption of purchased or acquired electricity	<Not Applicable>	41300	26200	67500
Consumption of purchased or acquired heat	<Not Applicable>	12600	400	13000
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	1400	<Not Applicable>	1400
Total energy consumption	<Not Applicable>	55300	219600	274900

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other biomass

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Coal

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Oil

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Gas

Heating value
LHV

Total fuel MWh consumed by the organization
63400

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
LPG & Natural gas. GHG protocol: emission factors from Stationary_combustion_tool_(Version_4-1).xlsx

We can't confirm the heating value, thus we are basing the heating value on the location from which the data is sourced. Most of the consumption happens in EMEA region it is likely that LHV is applicable.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value
LHV

Total fuel MWh consumed by the organization
129600

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
Petroleum and Diesel. GHG protocol: emission factors from Stationary_combustion_tool_(Version_4-1).xlsx

Total fuel

Heating value
LHV

Total fuel MWh consumed by the organization
193000

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
GHG protocol: emission factors from Stationary_combustion_tool_(Version_4-1).xlsx

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	1400	1400	1400	1400
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.

Sourcing method
Unbundled energy attribute certificates (EACs) purchase

Energy carrier
Electricity

Low-carbon technology type
Sustainable biomass

Country/area of low-carbon energy consumption
Finland

Tracking instrument used
GO

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

17800

Country/area of origin (generation) of the low-carbon energy or energy attribute
Finland

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Comment
All electricity consumed by Konecranes Finland is covered by this Guarantee of Origin certificate. Production method was Finnish bioenergy. Sustainable biomass used in energy generation is from biodegradable feedstocks such as inedible bio-waste from shops, commercial garden waste as well as many other types of biodegradable fractions such as spent grains from beer brewing.

Sourcing method
Unbundled energy attribute certificates (EACs) purchase

Energy carrier
Electricity

Low-carbon technology type
Hydropower (capacity unknown)

Country/area of low-carbon energy consumption
Germany

Tracking instrument used
GO

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
20700

Country/area of origin (generation) of the low-carbon energy or energy attribute
Germany

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Comment
All electricity consumed by Konecranes GmbH, Langenhagen is covered by this Guarantee of Origin certificate. Production method was German hydropower.

Sourcing method
Unbundled energy attribute certificates (EACs) purchase

Energy carrier
Electricity

Low-carbon technology type
Renewable energy mix, please specify (Electricity is from renewable energy sources, such as hydropower (built before 1996), wind power, solar energy, wave and tidal energy, biomass or biogas combustion.)

Country/area of low-carbon energy consumption
Sweden

Tracking instrument used
GO

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
2800

Country/area of origin (generation) of the low-carbon energy or energy attribute
Sweden

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Comment
All electricity consumed by Konecranes Lifttrucks AB is covered by this Guarantee of Origin certificate. Electricity is produced in Sweden using renewable energy sources, such as hydropower (built before 1996), wind power, solar energy, wave and tidal energy, biomass or biogas combustion.

Sourcing method
Purchase from an on-site installation owned by a third party

Energy carrier
Electricity

Low-carbon technology type
Solar

Country/area of low-carbon energy consumption
India

Tracking instrument used
Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
1200

Country/area of origin (generation) of the low-carbon energy or energy attribute
India

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Comment
Solar panels on the roof of our factory in India produced 1 200 MWh of electricity in 2021. All of this electricity is being used by the manufacturing facility.

Sourcing method
Purchase from an on-site installation owned by a third party

Energy carrier
Electricity

Low-carbon technology type
Solar

Country/area of low-carbon energy consumption
Philippines

Tracking instrument used
Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
100

Country/area of origin (generation) of the low-carbon energy or energy attribute
Philippines

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Comment
Solar panels on the roof of our factory in Philippines produced 100 MWh of electricity in 2021. All of this electricity is being used by the manufacturing facility.

Sourcing method
Purchase from an on-site installation owned by a third party

Energy carrier
Electricity

Low-carbon technology type
Solar

Country/area of low-carbon energy consumption
Czechia

Tracking instrument used
Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
100

Country/area of origin (generation) of the low-carbon energy or energy attribute
Czechia

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Comment
Solar panels on the roof of our factory in Czechia produced 100 MWh of electricity in 2021. All of this electricity is being used by the manufacturing facility.

Sourcing method
Heat/steam/cooling supply agreement

Energy carrier
Heat

Low-carbon technology type
Low-carbon energy mix, please specify (biofuel from wood chips)

Country/area of low-carbon energy consumption
Finland

Tracking instrument used
Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
12600

Country/area of origin (generation) of the low-carbon energy or energy attribute
Finland

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Comment
All district heat consumed by Konecranes Finland is produced by using at least 88% biofuels from wood chips.

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area
Australia

Consumption of electricity (MWh)
300

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
300

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Austria

Consumption of electricity (MWh)
150

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
150

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Belgium

Consumption of electricity (MWh)
20

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
20

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Brazil

Consumption of electricity (MWh)
1150

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1150

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Canada

Consumption of electricity (MWh)
100

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
100

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Chile

Consumption of electricity (MWh)
70

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
70

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
China

Consumption of electricity (MWh)
2250

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
2250

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Czechia

Consumption of electricity (MWh)
1850

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1850

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Denmark

Consumption of electricity (MWh)
60

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
60

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Finland

Consumption of electricity (MWh)
18350

Consumption of heat, steam, and cooling (MWh)
12600

Total non-fuel energy consumption (MWh) [Auto-calculated]
30950

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
France

Consumption of electricity (MWh)
400

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
400

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Germany

Consumption of electricity (MWh)
21200

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
21200

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Greece

Consumption of electricity (MWh)
10

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
10

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Hungary

Consumption of electricity (MWh)
40

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
40

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
India

Consumption of electricity (MWh)
1700

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1700

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Indonesia

Consumption of electricity (MWh)
450

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
450

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Italy

Consumption of electricity (MWh)
1200

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1200

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Japan

Consumption of electricity (MWh)
20

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
20

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Malaysia

Consumption of electricity (MWh)
1100

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1100

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Mexico

Consumption of electricity (MWh)
350

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
350

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Netherlands

Consumption of electricity (MWh)
60

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
60

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
New Zealand

Consumption of electricity (MWh)
10

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
10

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Norway

Consumption of electricity (MWh)
40

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
40

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Peru

Consumption of electricity (MWh)
10

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
10

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Philippines

Consumption of electricity (MWh)
350

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
350

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Poland

Consumption of electricity (MWh)
10

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
10

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Romania

Consumption of electricity (MWh)
20

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
20

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Russian Federation

Consumption of electricity (MWh)
90

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
90

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Saudi Arabia

Consumption of electricity (MWh)
1400

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1400

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area
Singapore

Consumption of electricity (MWh)
400

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
400

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
South Africa

Consumption of electricity (MWh)
500

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
500

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Spain

Consumption of electricity (MWh)
200

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
200

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Sweden

Consumption of electricity (MWh)
3100

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
3100

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Switzerland

Consumption of electricity (MWh)
30

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
30

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Taiwan, China

Consumption of electricity (MWh)
90

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]

90

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Thailand

Consumption of electricity (MWh)
500

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
500

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
United Kingdom of Great Britain and Northern Ireland

Consumption of electricity (MWh)
500

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
500

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Ukraine

Consumption of electricity (MWh)
4850

Consumption of heat, steam, and cooling (MWh)
400

Total non-fuel energy consumption (MWh) [Auto-calculated]
5250

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
United States of America

Consumption of electricity (MWh)
5900

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
5900

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Viet Nam

Consumption of electricity (MWh)
40

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
40

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Bangladesh

Consumption of electricity (MWh)
10

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]
10

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Slovakia

Consumption of electricity (MWh)
10

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
10

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Slovenia

Consumption of electricity (MWh)
10

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
10

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

C-CG8.5

(C-CG8.5) Does your organization measure the efficiency of any of its products or services?

	Measurement of product/service efficiency	Comment
Row 1	No, but we plan to start doing so within the next two years	As our offering is is very wide it is challenging to provide one single measurement. We plan to investigate this in the next two years. We measure efficiency in different ways for different products as the mass lifted, moved and operational hours differ. We calculate our efficiency in CO2 tons/hours worked. This changes per product, customer and site, so there is no single number for all products. We measure that equipment is used efficiently during inspections and maintenance (wear & tear). We make sure that the waste amount from production is as low as possible and follow the TRUCONNET data on the use hours of our equipment. From all of this data, we continue to design even more efficient equipment fir for our customers needs.

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description
Waste

Metric value
19100

Metric numerator
tons

Metric denominator (intensity metric only)

% change from previous year
7.7

Direction of change
Decreased

Please explain
Lean practices implemented in the factories have resulted into less waste.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	We have made a strategic decision to grow our eco-efficient offering and to invest in RnD supporting this development path. In 2021 total 49% of our R&D spend was linked to low-carbon offering, totalling 23,2M (47 700 000*0,486=23 229 00 ~ 23,2MEUR). We have committed to Science Based Emission Targets and know that the share of emissions from the category use of sold products is our biggest emission category. Therefore, this commitment leads us making more strategic decisions related to increasing the share of eco-efficient portfolio including electrification, in the future. We investigate new technologies both hardware and software that help our customers to transition to a low carbon future. Konecranes has activities that qualify as environmentally sustainable according to the EU Taxonomy Regulation. The calculation of the revenue percentage of taxonomy-eligible activities for TSC 3.6. (Manufacture of other low carbon technologies) is based on low carbon technology such as inverter-controlled drives, regenerative breaking and hybrid and electric power options. These technologies substitute existing technology with lower-emission alternatives. Eligibility of revenue was evaluated at product level. Taxonomy-eligible products represent 14% percent of Konecranes' revenue. 5% percent of CapEx and 39% percent of specifically defined OpEx is taxonomy-eligible. These activities include, for example, facility improvements, sourcing of green activities and research and development projects. They support the transition towards a low carbon economy and achieving the Science Based Targets set for own operations and for the value chain.

C-CG9.6a

(C-CG9.6a) Provide details of your organization's investments in low-carbon R&D for capital goods products and services over the last three years.

Technology area
Other energy efficient products or efficiency drivers

Stage of development in the reporting year
Large scale commercial deployment

Average % of total R&D investment over the last 3 years
41 - 60%

R&D investment figure in the reporting year (optional)
23200000

Comment
Our low-carbon R&D is directed to projects that increase digitalization and automation capabilities, to electrify our offering to increase the energy efficiency like motor efficiency as well as to investigate more sustainable raw-materials.

We offer complete automated systems as well as manual equipment with a built-in growth path to automation for RTG, RMG and straddle carrier operations.

We have also heavily invested in hybrid mobile cargo handling equipment, battery technology and electric inverters. For large installations we offer regenerative braking, where the energy from the lowering movement is fed back to the grid. Regenerative braking is a system that sends some power back to a crane's power grid during every downward or decelerated motion, instead of being dissipated by resistors. This system decreases crane downtime, and it is more applicable for several supply voltages. Best of all, it saves energy and returns clean, low harmonic power to the network. During 2020 and 2021 we have successfully introduced electrified versions from our lift-truck and Mobile Harbour Crane.

Calculation

((20550000+24250000+23229000)/(411000+48500000+47700000)*100
=68029000/137300000 =49,5%

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Third party verification/assurance underway

Attach the statement
CDP verification statement 2022.pdf

Page/ section reference
1-2

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach
Scope 2 market-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Third party verification/assurance underway

Attach the statement
CDP verification statement 2022.pdf

Page/ section reference
1-2

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Third party verification/assurance underway

Attach the statement
CDP verification statement 2022.pdf

Page/ section reference
1-2

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category
Scope 3: Business travel

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement
CDP verification statement 2022.pdf

Page/section reference
1-2

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Product footprint verification	Study conducted according to and in compliance with the ISO standard 14067 .	We have 3rd party verification for our Environmental Product Declarations and Life Cycle Assessments.

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?
No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?
Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase
Credit purchase

Project type
Forests

Project identification
VCS ID 987, Reforestation of degraded forest reserves, Ghana.
This ARR VCS project aims at the reforestation of 15,000 ha in degraded forest reserves in Ghana. Project activities comprise CO_2 sequestration in tree plantations with exotic (86%) and indigenous (14%) tree species, natural forest restoration in riparian buffer zones and harvesting of high quality timber.

VCS ID 674, Rimba Raya Biodiversity Reserve Project, Indonesia.
The Rimba Raya Biodiversity Reserve Project, an initiative by InfiniteEARTH, aims to reduce Indonesia's emissions by preserving tropical peat swamp forest. This area, rich in biodiversity including the endangered Bornean orangutan, was slated by the Provincial government to be converted into four palm oil estates. Vision is to develop a project that harnesses the global carbon market in order to successfully compete with commercial agricultural interests in order to provide social and environmental benefits that would not otherwise be attainable.

Verified to which standard
VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)
1900

Number of credits (metric tonnes CO2e): Risk adjusted volume
0

Credits cancelled
Yes

Purpose, e.g. compliance
Voluntary Offsetting

Konecranes has been fully offsetting flight emissions since 2020.

C11.3

(C11.3) Does your organization use an internal price on carbon?
No, but we anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our suppliers
Yes, our customers/clients
Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement
Information collection (understanding supplier behavior)

Details of engagement
Collect climate change and carbon information at least annually from suppliers
Other, please specify (LCA calculations)

% of suppliers by number
1

% total procurement spend (direct and indirect)
10

% of supplier-related Scope 3 emissions as reported in C6.5
14

Rationale for the coverage of your engagement
Purchased goods and services is second biggest source of emissions for Konecranes. It is relevant to co-operate with our supply chain partners to reduce our scope 3 emissions. The steel material equals 14% from Konecranes total purchased goods and services emissions and 10% of total spend from the category purchased goods and services. From our purchases this is clearly the biggest emission category. For this category we directly contact suppliers to collect the emission data on an annual basis. Within our Science Based Target boundary we only include steel purchases from the category purchased goods and services. This is a rationale how the coverage of our supplier engagement programme is calculated. This target will be reached by reducing value chain emissions from steel purchases in cooperation with our suppliers. As steel is a carbon intensive material, we will need to cooperate with our steel suppliers to reduce the overall emissions related to steel.

On top of contacting steel suppliers to collect the emission information, we collect emission information annually or monthly from our transportation, travel and vehicle leasing (part of scope 1) companies. We also collect information from our supply chain for our Life cycle assessments calculations as we need to determine the carbon footprint of that specific part or material. We have been able to engage many suppliers in carbon footprint calculation or provide them with a calculation of their product when they have provided the primary information.

Impact of engagement, including measures of success
In 2020 and 2021 we investigated the maturity level of our steel suppliers' climate targets. We used this info to create emission reduction scenarios to support our climate target setting. We have contacted all steel suppliers globally during the first half of 2022 to understand their capabilities to provide us detailed carbon calculations and to calculate the share of recycled content in the material. Unfortunately we have learned that the data sharing capabilities are still fairly low. We measure success by following how many suppliers (by number) have been able to deliver us the data. Currently we consider our cooperation being successful since the first step in our engagement programme is to start the discussions and we have managed to contact our most relevant supplier globally. We also measure the GHG emissions and see clear decrease on those. The decrease is partly because of lower purchasing volume due to global supply chain challenges.

We are planning to launch a supplier engagement programme in 2022 to define how to improve the cooperation with our suppliers sharing our climate ambition and to do our best to support our suppliers with the data capabilities. We will also define new KPIs to follow our success. Currently we expect our suppliers to follow Konecranes Supplier Code of Conduct minimum requirements for suppliers on topics such as human rights, health and safety, environmental management, anti-corruption and compliance with laws and regulations. The Code requires suppliers to push similar requirements towards their sub-suppliers and subcontractors.

We started applying the Supplier Code of Conduct in 2018, before which we required suppliers to follow Konecranes' general Code of Conduct. By the end of 2021, globally approximately 1,500 suppliers (13% more than in 2020), representing approximately 56% of our total procurement spend, have signed to commit to our Supplier Code of Conduct. In 2021 we started to evaluate what would be the additional requirements for carbon intensive suppliers and the work continues in 2022. We analyse that the threshold for adequate engagement is over 50%, thus, we assess that the impact of our engagement is successful. We expect that the share of suppliers impacted by our engagement programme will increase in next few years. Currently we see that we are in the beginning of our journey.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Education/information sharing	Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

75

% of customer - related Scope 3 emissions as reported in C6.5

75

Please explain the rationale for selecting this group of customers and scope of engagement

We estimate that 75% of our customer on global level are covered with information sharing, regarding emission reductions and providing them with fact-based information on climate change mitigation, which they can use in their decision making. We include information in our social media , sales presentations, quotations, marketing videos, documentation for local officials that support investments in emission reduction technology by approving grants, brochures such as Environmental Product Declarations (EDPs) andLife Cycle Assesments (LCA). We estimate that 75% of our customers have received some climate related information during the purchasing process.

Konecranes most significant emission category is the use of sold products. In this category ports equipment and their diesel variants play the biggest role. Thus, we want to support Ports customers with impact data. We have also taken this approach in service sales and industrial equipment, the main theme being preventive maintenance and energy efficiency.

To provide accurate data on the environmental impact of our solutions for decision-making, we calculate our products' use phase energy consumption and emissions related to raw-material sourcing, manufacturing, servicing and transportation. We critically assess this data with a third party (EPDs and LCAs). Providing sufficient information of energy use, power options and emission data of operative use to our customers is how we engage with our customers to support them reaching their climate targets.

Rationale for % of Scope 3 calculations: Emissions from the use of sold products were 3 673 800 tCO2e in 2021. 75% of this equals 2 7 55 350 (0,7*3673 800=2755350).

Impact of engagement, including measures of success

The measure of success is the increased sales of eco-portfolio and minimizing our scope 3 emissions. Share of sales in eco-portfolio was 50% from total 2021 revenue. Providing information about our products' carbon footprint impacts and the technical specification about actual fuel reductions gives our customers the opportunity to better understand their influence on climate change by offering solutions how to take action and minimize their climate impacts. This kind of environmental information help guide customers and public officials when making their purchasing decisions.
Biggest emission savings potential is in our business area Port Solutions due to existence of fossil fuel based solutions. We discuss with our customers about the possibility to purchase or modernize the current equipment into a fuel saver, hybrid or full electric solution and provide the customers with relevant material. In some sales cases, we calculate the carbon reductions for a specific customer case compared to the baseline solution. We discuss in detail what would be ideal for this port or terminal and what could be the annual savings in fuel and CO2 emissions. For example, in 2018 we had a project in Valencia where 18 diesel RTGs were converted to eRTGs (full-electric). We calculated that this results in 76% of emissions savings during crane lifespan (20 years). This case example highlights the relevance for customer engagement especially in Business Area Ports to electrify our offering.

For example, by choosing to select a fully electrical Rail Mounted Gantry Crane instead of a diesel-driven one, cuts GHG emissions by over 70 % during the life cycle (standard cycle, over a 20-year life span, based on LCA calculation). We can also showcase the carbon reduction impact of our technical solutions by conducting measurements from actual products. Example for the US officials: https://www.epa.gov/verified-diesel-tech/konecranes-plc-tier-4f-ecolifting-hybrid-system. Followed with PRESS RELEASES 29.07.2021: Konecranes wins first customer for EPA-approved new diesel-to-hybrid conversion technology)

We assess that the threshold for adequate engagement needs to be over 70%, and therefore we assess that the impact of our engagement is successful.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

Climate related information is grouped as one topic of environmental information that our stakeholders wish us to provide based on our materiality assessment. We are in close collaboration with our investors on climate related topics. Investors were expecting us to set Science Based Targets and engaged us with many related questions. Some owners and investors are more active than others and really challenge us when it comes to our work on climate but also on other sustainability related topics. We value the meetings with them as they give us important feedback on our work and even provide us with ideas on how to develop the work further. We strive to provide all relevant data for any interested party openly in our annual report and on our website. The engagement is mostly correspondence on e-mails, Teams meetings and providing information on website and replying to questionnaires.

The other partners of the value chain are shareowners, influential global NGO´s and providers of capital. In addition to our key stakeholders, we have identified other relevant stakeholder groups that are increasingly important for Konecranes, including local communities and authorities, associations, universities and research institutes, trade unions,, rating agencies, analysts and media. We answer questionnaires with strategic importance and inquiries from NGO´s, investors, shareowners, providers of capital and organizations such as CDP, MSCI, Sustainalytics and EcoVadis. Some of the questions are about how we deal with climate risks, how our business helps in the transition towards a circular economy, what our actions are and what kind of targets we have in place. We measure success by following the results of ESG ratings. We systematically follow the progress in Sustainability Council.

We host meetings and capital market days, hold separate events and discussions with all interested parties and provide them with data and insight on our actions and strategic decisions. In addition to investor questionnaires, we answer several global voluntary NGO questionnaires about environmental management.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?
Yes, climate-related requirements are included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement
Waste reduction and material circularity

Description of this climate related requirement
In our Supplier Code of Conduct we request our suppliers to manage their waste. Supplier shall monitor, control and minimize the environmental impact of its facilities and appropriately treat solid waste and wastewater generated from its business operations. A larger self-assessment is required for proposed suppliers with spend over a certain threshold and for all subcontractors irrespective of spend. This self-assessment has questions on finance, production, quality, safety and environment. With the self-assessment we also verify that the supplier complies with our Supplier Code of Conduct. The Konecranes Supplier Code of Conduct includes the minimum requirements for suppliers' on topics such as human rights, health and safety, environmental management, anti-corruption and compliance with laws and regulations. The Code requires suppliers to push similar requirements towards their sub-suppliers and subcontractors.

% suppliers by procurement spend that have to comply with this climate-related requirement
90

% suppliers by procurement spend in compliance with this climate-related requirement
56

Mechanisms for monitoring compliance with this climate-related requirement
Supplier self-assessment

Response to supplier non-compliance with this climate-related requirement
Retain and engage

Climate-related requirement
Complying with regulatory requirements

Description of this climate related requirement
We will do a basic background check for all proposed new suppliers, unless the spend is very low. With this check we verify, for example, that the company in question pays taxes, has all necessary insurances in place and agrees to comply with our key environmental and social requirements. A larger self-assessment is required for proposed suppliers with spend over a certain threshold and for all subcontractors irrespective of spend. This self-assessment has questions on finance, production, quality, safety and environment. With the self-assessment we also verify that the supplier complies with our Supplier Code of Conduct. The Code requires suppliers to push similar requirements towards their sub-suppliers and subcontractors.

By the end of 2021, globally approximately 1,500 suppliers (13 percent more than in 2020), representing approximately 56 percent of our total procurement spend, have signed to commit to our Supplier Code of Conduct. We will continue to increase the share in 2022.

We expect all supplier to comply with regulatory requirements but here specially highlight the supplier who has signed our Supplier Code of Conduct.

% suppliers by procurement spend that have to comply with this climate-related requirement
90

% suppliers by procurement spend in compliance with this climate-related requirement
56

Mechanisms for monitoring compliance with this climate-related requirement
Supplier self-assessment

Response to supplier non-compliance with this climate-related requirement
Suspend and engage

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate
Yes, we engage directly with policy makers
Yes, we engage indirectly through trade associations

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?
Yes

Attach commitment or position statement(s)
Konecranes' climate targets have been validated by SBTi as being in line with limiting global warming to 1.5°C.

https://investors.konecranes.com/releases?page=/konecranes/en/pressreleases/konecranes-presents-new-climate-targets-in-line-with-limiting-global-warming-to-1-5degc-1983487
Releases _ Konecranes climate targets.pdf
sustainability_report_2021.pdf

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy
Sustainability Council which is the highest decision-making body and include representation from all of our businesses and all the functions follows Konecranes Climate agenda. This is a place where we manage our commitments globally. Global sustainability team is also coordinating cross-functional discussions related to engagement activities. We have recently discussed about our approach to support including lead to the REACH list of authorized substances and shared information related to EU Circular Economy initiatives as well as EU Taxonomy to support aligned engagement in industry specific associations.

We have made a strategic decision to grow our eco-efficient offering and to invest in R&D supporting this development path. We have also committed to Science Based Emission Targets and need to improve in each category, especially the most impactful ones. Therefore, this commitment leads us making more strategic decisions related to all engagement activities.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
<Not Applicable>

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Focus of policy, law, or regulation that may impact the climate
Adaptation and/or resilience to climate change
Carbon tax
Circular economy
Climate-related targets

Specify the policy, law, or regulation on which your organization is engaging with policy makers
EU taxonomy for sustainable activities
EcoDesign for Sustainable Products Regulation ESPR
Corporate Sustainability Reporting Directive (CSRD) to substitute NFRD

Policy, law, or regulation geographic coverage
Global

Country/region the policy, law, or regulation applies to
<Not Applicable>

Your organization's position on the policy, law, or regulation
Support with no exceptions

Description of engagement with policy makers
We mostly influence through our local industrial organisations such as Technology Industry of Finland, Orgalim, PEMA and VDMA, to name a few. We comments on proposals and drafts and discuss the view we want to get across.
With Technology Industry of Finland we join their meetings quarterly and actively participate in the commenting emerging regulations by reviewing and commenting their responses on emerging regulations as well as creation on industry specific roadmaps. In 2021 we gave feedback to for example EU Taxonomy regulation via associations channels.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
<Not Applicable>

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.3b

(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association
BusinessEurope

Is your organization's position on climate change consistent with theirs?
Consistent

Has your organization influenced, or is your organization attempting to influence their position?
We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
We hold positions in BusinessEurope where we influence positioning papers and have direct discussions with members of the EU Commission. Especially we engage in matters related to trade and EcoDesign and circularity. Konecranes position on climate change is currently consistent with BusinessEurope's.

BusinessEurope is committed to and aware of the challenges that climate change presents as well as the impacts of human activities. This is why they highly welcomed the Paris Agreement, which reflects the long-term objective of limiting global warming below 2°C. The Paris Agreement is the single most important tool in providing clarity on the direction that society must take to tackle climate change. It is equally important to provide a global level playing field, as reaching the Paris Agreement requires all countries (especially major economies) to make significant efforts to bring down emissions. BusinessEurope is fully committed to implementation of the Agreement, and the companies it represents invest billions in low-carbon innovation, as well as in the development and deployment of low-carbon technologies for the future.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)
0

Describe the aim of your organization's funding
<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Trade association
Other, please specify (Technology Industries of Finland)

Is your organization's position on climate change consistent with theirs?
Consistent

Has your organization influenced, or is your organization attempting to influence their position?
We have already influenced them to change their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
The Federation of Technology Industries of Finland (TIF) is a lobbying organization for technology industry companies in Finland having significant influence on legislation development. One of the main goals of the Technology Industries of Finland is to support companies in converting environmental know-how into competitive advantage. They are widely focused on different areas of sustainability and driving matters such as circularity, carbon neutrality for technology industries, carbon handprint and biodiversity.

Sustainable value creation is one of the guiding principles of TIF strategy. TIF is committed to mitigating climate change and they share the Paris Agreement objective to pursue efforts to keep the global temperature increase to 1.5°C. At the beginning of 2019, TIF defined their climate and energy policy guidelines. Konecranes position on climate change is currently consistent with TIF's.

Technology Industries of Finland (TIF) is committed to the Finnish government's target of achieving a carbon-neutral Finland in 2035. TIF´s own low-carbon roadmap examines the technologies and actions required in the technology industry and offers companies the tools to reach this target. Additionally, the TIF´s roadmap investigates technologies and actions that the member companies could use, the amount of energy needed, and the costs incurred by business and society in mitigating climate change. It is of paramount importance to create new technologies, and research, development and innovation financing is the key to this.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)
0

Describe the aim of your organization's funding
<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Trade association
Other, please specify (Port Equipment Manufacturers Association (PEMA))

Is your organization's position on climate change consistent with theirs?
Consistent

Has your organization influenced, or is your organization attempting to influence their position?
We have already influenced them to change their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
PEMA's mission is to provide a forum and public voice for the global port equipment and technology sectors, reflecting their critical role in enabling safe, secure, sustainable and productive ports and thereby supporting world maritime trade. The key areas of focus for the Association are the environment, safety, security and performance. PEMA aims to support Port operations to develop towards a more sustainable direction.

PEMA has expressed its support for the "MAGPIE" initiative, which sets out how innovation can achieve green ports of the future by 2050 through technological innovation. The MAGPIE initiative is part of Horizon 2020, the EU's largest research and innovation programme, which calls for the building of a "low-carbon, climate resilient future".

PEMA does not have an official policy on climate change, but they have published their recommendation on eco-efficiency in products that impacts the climate by reducing emissions. Recommendations are used to inform members and aim to reduce energy consumption, enhance sustainability, and minimise the environmental impact of port and terminal operations. PEMA also actively shares articles about emission reduction technologies and the success of such investments.

PEMA focus points:
• Power management systems to conserve fuel (e.g., idling, speed switching and speed controlling)
• Energy storage and reuse
• Hybrid technologies (e.g. diesel electric)

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

0

Describe the aim of your organization's funding
<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is not aligned

Trade association
Other, please specify (FEM - European Material Handling Federation)

Is your organization's position on climate change consistent with theirs?
Mixed

Has your organization influenced, or is your organization attempting to influence their position?
We are attempting to influence them to change their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
FEM represents and defends the technical, economic and political interests of European manufacturers of materials handling, lifting and storage equipment. FEM encourages technical progress, safety at work, sustainable development and energy efficiency in the materials handling industry. FEM companies are committed to integrating environmental principles into each stage of the life cycle of their products (from production and transport to use, maintenance and end-of-life recycling). The combined action of regulatory requirements and industrial innovation has substantially reduced the environmental impact of materials handling equipment. Material handling manufacturers minimise the environmental impact of their equipment throughout its full life cycle when designing new products and systems, striving for minimal use of energy.

No clear position on climate change but having similar goals (energy and resource efficiency). We consider coordinating within Konecranes to define whether we would attempt to influence them to change their position.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)
0

Describe the aim of your organization's funding
<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is not aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication
In mainstream reports, incorporating the TCFD recommendations

Status
Complete

Attach the document
governance_and_financial_review_2021.pdf
sustainability_report_2021.pdf

Page/Section reference
Sustainability Report, page 19-27
Financial Review, page 47-51 (Non financial information)

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	No, but we plan to have both within the next two years	<Not Applicable>	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	No, but we plan to do so within the next 2 years	<Not Applicable>	<Not Applicable>

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	No, but we plan to assess biodiversity-related impacts within the next two years	<Not Applicable>

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	No, we are not taking any actions to progress our biodiversity-related commitments, but we plan to within the next two years	<Not Applicable>

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No, we do not use indicators, but plan to within the next two years	Response indicators

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Interim CEO and CFO, Teo Ottola	Chief Financial Officer (CFO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

By the end of 2021, globally approximately 1,500 suppliers, representing approximately 56 percent of our total procurement spend, have committed to our Supplier Code of Conduct. Among the top 1,000 suppliers by spend, the coverage was 72 percent. We have calculated that emissions from purchased goods and serviced represents almost 30% of Konecranes´s total carbon emission. Therefore, it is relevant to co-operate with our supply chain partners to reduce our Scope 3 emissions.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	3185700000

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Requesting member
Vattenfall Group

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
9

Uncertainty (±%)

Major sources of emissions
Direct energy and fuel consumption including car fleet.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied
Please select

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Not included in the disclosed value: Business area Service: rented service office spaces Scope1 (natural gas)

Requesting member
Vattenfall Group

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
3

Uncertainty (±%)

Major sources of emissions
Electricity and district heat

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied
Please select

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Not included in the disclosed value: Business area Service: rented service office spaces Scope 2 (district heat)

Requesting member
Vattenfall Group

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
1009

Uncertainty (±%)

Major sources of emissions
Note that over 70 % of the allocated scope 3 emissions is caused by use of sold products, which overlaps customer's Scope 1/Scope 2 emissions.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied
Please select

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member
NRG Energy Inc

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
2

Uncertainty (±%)

Major sources of emissions
Direct energy and fuel consumption including car fleet

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied
Please select

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Not included in the disclosed value: Business area Service: rented service office spaces Scope1 (natural gas)

Requesting member
NRG Energy Inc

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
1

Uncertainty (±%)

Major sources of emissions
Electricity and district heat

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied
Please select

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Not included in the disclosed value: Business area Service: rented service office spaces Scope 2 (district heat)

Requesting member
NRG Energy Inc

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
185

Uncertainty (±%)

Major sources of emissions

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied
Please select

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Note that over 70 % of the allocated Scope 3 emissions is caused by use of sold products, which overlaps customer's Scope 1/Scope 2 emissions.

Requesting member
International Paper Company

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
96

Uncertainty (±%)

Major sources of emissions
Direct energy and fuel consumption including car fleet.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied
Please select

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Not included in the disclosed value: Business area Service: rented service office spaces Scope1 (natural gas)

Requesting member
International Paper Company

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e

31

Uncertainty (±%)

Major sources of emissions
Electricity and district heat

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied
Please select

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Not included in the disclosed value: Business area Service: rented service office spaces Scope 2 (district heat)

Requesting member
International Paper Company

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
11085

Uncertainty (±%)

Major sources of emissions
Note that over 70 % of the allocated Scope 3 emissions is caused by use of sold products, which overlaps customer's Scope 1/Scope 2 emissions.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied
Please select

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

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Requesting member
WestRock Company

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
72

Uncertainty (±%)

Major sources of emissions
Direct energy and fuel consumption including car fleet.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied
Please select

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Not included in the disclosed value: Business area Service: rented service office spaces Scope1 (natural gas)

Requesting member
WestRock Company

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
23

Uncertainty (±%)

Major sources of emissions
Electricity and district heat

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied
Please select

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Not included in the disclosed value: Business area Service: rented service office spaces Scope 2 (district heat)

Requesting member
WestRock Company

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
8365

Uncertainty (±%)

Major sources of emissions
Note that over 70 % of the allocated scope 3 emissions is caused by use of sold products, which overlaps customer's Scope 1/Scope 2 emissions.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied
Please select

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

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SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	Konecranes has several different product families in all three business areas and many variants per each product family and tailored solutions also in most cases. Individual calculation is not possible due to lack of resources and tools. We are however building a tool to evaluate the emissions of a product in the design phase to make educated decisions at an early stage. We have quite detailed information in our Science Based Target (category: Use of sold products) but we still need to develop the information collection and if possible, automate most of it. When we get to the stage of automated information gathering, we are able to allocate emissions to customers even more accurately then by spend. We place thousands of products on the market each year and having manual calculation for allocating emissions is not efficient, so we need to automate and analyse the data more accurately.
Customer base is too large and diverse to accurately track emissions to the customer level	Konecranes has several different product families in all three business areas and many variants per each product family and tailored solutions also in most cases. We also share customers in all three business areas, so allocating services and product emissions per customer is currently only possible by spend. Individual calculation per customer is not possible due to lack of resources and tools. When we get to the stage of automated information gathering, we are able to allocate emissions to customers even more accurately then by spend.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.

Konecranes has several different product families in all three business areas and many variants per each product family and tailored solutions also in most cases. We also share customers in all three Business Areas (Service, Industrial Equipment and Port Solutions) , so allocating services and product emissions per customer is currently only possible by spend. Individual calculation per customer is not possible due to lack of resources and tools.

We have obtained the knowledge during 2021-2022 by recruiting several LCA experts that also have the capability of materials as well as waste handling processes. We have been building internally the strategy and criteria how we want to develop our products and calculations methods. Now we are building the platform for information gathering (also incorporating emissions), streamlining the internal processes and making sure the information is available for as many as possible (customer, product designer, sales, marketing, etc.). We also have quite detailed information in our Science Based Target (category: Use of sold products) but we still need to improve on the data accuracy, information collection and if possible, automate most of it. When we get to the stage of automated information gathering, we are able to allocate emissions to customers even more accurately then by spend.

We place thousands of products on the market each year and having manual calculation for allocating emissions is not efficient, so we need to automate and analyse the data more accurately. When we get to the stage of automated information gathering, we are able to allocate emissions to customers even more accurately then by spend.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

No, I am not providing data

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

The European Climate Pact Submission

Please indicate your consent for CDP to showcase your disclosed environmental actions on the European Climate Pact website as pledges to the Pact.

Yes, we wish to pledge to the European Climate Pact through our CDP disclosure

Please confirm below

I have read and accept the applicable Terms