rakon

Important information

Contents

This Climate Statement ('Statement') has been prepared for the year ended 31 March 2024 to meet Rakon's obligation to make Climate-Related Disclosures under Part 7A of the Financial Markets Conduct Act 2013 (FMCA) and the associated Aotearoa New Zealand Climate Standards (NZ CS) developed by the External Reporting Board (XRB).

The Statement covers Rakon and its subsidiaries (NZX:RAK). The Statement has not been subject to an independent audit. It has been prepared for our primary users, being existing and potential shareholders, customers, lenders and other creditors.

The External Reporting Board (XRB) develops and issues reporting standards on accounting, audit and assurance, and climate, for New Zealand entities across the private, public, and not-for profit sectors (www.xrb.govt.nz).

The XRB's NZ CS includes:

- NZ CS1, which contains the climate-related disclosure requirements and associated greenhouse gas emissions disclosures assurance requirements;
- NZ CS 2, which provides optional adoption provisions; and
- NZ CS3, which contains the principles, underlying concepts and general requirements.

The Statement contains climate-related and other forward-looking statements and metrics, including climate-related scenarios, transition planning, climate projections, assumptions, forecasts, statements of Rakon's future intentions, estimates and judgements which are not and should not be considered guarantees, predictions or forecasts of Rakon's present and future strategies, future climate-related outcomes or financial performance. These statements are subject to known and unknown risks, inherent uncertainties, limitations around inputs and available data, and other factors, many of which are beyond Rakon's control. Readers are cautioned not to place undue reliance on such statements in light of the significant uncertainties that limit the extent to which they are useful for decision-making.

The underlying risks and assumptions involved in climate change modelling may cause actual outcomes to differ materially from those set out in the Statement. The risks and opportunities described here may be more or less significant than anticipated. There are many factors that could cause Rakon's actual performance or achievement of our objectives to differ materially from that described, including economic and technological viability, as well as climatic, government, consumer and market factors outside Rakon's control.

While we have prepared the information in this Statement based on our current knowledge and understanding, we reserve the right to change our view in the future. We caution against reliance on aspects of this Statement which is necessarily subject to the caveats above.

References to 'Rakon', 'we', 'us' and 'our' mean Rakon Limited.

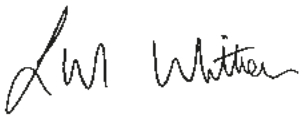
Statement of Compliance

For this our first Climate Statement, we have elected to use the following adoption provisions from NZ CS2, as permitted:

Provision	Disclosure	Page ref.
1	Current financial impacts	09
2	Anticipated financial impacts	16
3	Transition plan and alignment with internal capital deployment and funding decision-making processes	18
4	Scope 3 emissions	23
6	Report metrics for two preceding periods (any metrics)	22
7	Analysis of trends evident from comparing previous and current periods	23

This Statement complies with Aotearoa New Zealand Climate Standards.

For and on behalf of the board of directors of Rakon:



Lorraine Witten
Chair of Board
30 July 2024

Sinead Horgan
Chair of Audit and Risk Committee
30 July 2024

Introduction

Rakon manufactures products that are critical to enabling connectivity between people, networks and machines.

Our products are at the heart of many applications around the world. Rakon's global operations include manufacturing sites, customer support locations and research and development centres of excellence.

We believe that connectivity can play a major role in the future sustainability of the planet and have established our Environmental, Social and Governance (ESG) framework to support our sustainability goals – see our latest annual report at: www.rakon.com/investors/reports-presentations-events.

We are continuing to build Rakon's capability to manage climate-related risks and opportunities and complete associated reporting. This Statement reflects our current work-in-progress. We have a roadmap of work and activity still to be undertaken and completed.

We are proud to present Rakon's first Climate Statement under the Aotearoa New Zealand Climate Standards.

Summary of disclosures

(Refer to the relevant climate-related disclosure (CRD) section for full details)

CRD section	Our current status	Our key work-on areas
Governance  Pages 6-8	• Rakon's board has ultimate responsibility, with oversight delegated to the Audit & Risk Committee • Climate-related risks that are Key risks (as defined on page 19) and associated opportunities reported to the Audit & Risk Committee twice per year • Education programme in place	• Metrics & targets reporting • Embedding climate-related risks and opportunities into strategy processes • Including climate-related performance metrics in remuneration policies
Strategy  Pages 9-18	• No material climate-related impacts in current financial year • Scenario analysis undertaken for three climate scenarios with time horizons spanning 2025 to 2050 • Transition risks and related opportunities impact from the short term, with physical risks gaining traction by the long term (all scenarios combined) • Transition plan framework created	• Bringing more local factors into the risk management process • Quantification of anticipated financial impacts • Transition planning
Risk Management  Pages 19-21	• Scenario analysis underpins the identification and assessment of climate-related risks • Climate-related risks are managed through the execution of risk reduction measures • Limited integration of climate-related risk processes into the overall risk management framework	• Further value chain analysis • Refining our climate change risk management framework
Metrics & Targets  Pages 22-25	• Slight decrease (2.7%) in total Scope 1 and 2 GHG emissions compared to calendar year 2022 • Sustainability management software platform implemented (went live April 2024 and used to record FY24 measurements)	• Considering the establishment of reduction targets for Scope 1 and 2 GHG emissions • Measurement of Scope 3 GHG emissions • Considering the establishment of reduction targets for Scope 3 GHG emissions

Climate Roadmap

This roadmap records Rakon's progress as we develop our capability to manage climate-related risks and opportunities and complete associated reporting.

Pillar	Action	FY24 Intent*	FY24 Status	FY25 Intent	FY26 Intent
Governance 	Establish climate change education programme	•	✓		
	Update structures and documentation to include climate change risk	•	✓		
	Establish board level monitoring of climate change action programme	•	✓		
	Include climate-related risks & opportunities in strategy processes at board and management levels	•	✗	•	
	Metrics & targets reporting at board level			•	
	Include climate-related performance metrics in remuneration policies	•	✗		•
Strategy 	Complete initial review of expected climate change impacts on strategy & business model	•	✓		
	Identify significant climate change risks & opportunities at global level	•	✓		
	Carry out global level scenario analysis for three scenarios	•	✓		
	Update the initial review of climate change impacts on strategy & business model	•	✗	•	
	Expand scenario analysis and the global level assessment of climate change risks & opportunities to include local factors	•	✓	•	
	Start transition planning activity for the net zero future	•	✓		
	Quantify estimates of current and anticipated financial impacts for material climate risks & opportunities			•	
	Complete initial transition plan for the net zero future			•	

Pillar	Action	FY24 Intent*	FY24 Status	FY25 Intent	FY26 Intent
Risk Management 	Establish climate change risk management framework	•	✓		
	Further value chain analysis, supported by measurement of upstream Scope 3 GHG emissions			•	
	Refine climate change risk management framework	•	✗		•
Metrics & Targets 	Measure and disclose Scope 1 & 2 GHG emissions	•	✓		
	Consider establishment of initial Scope 1 & 2 GHG emissions reduction targets	•	✗	•	
	Begin process to measure Scope 3 GHG emissions	•	✓		
	Introduce other metrics & targets required for CRD, including cross-industry metrics, industry-based metrics, other relevant KPIs	•	✗		•
	Complete the first annual measurement of Scope 3 GHG emissions			•	
	Consider establishment of initial Scope 3 GHG emissions reduction targets				•

* FY24 Intent is as stated in Rakon's FY23 Annual Report, combining FY23 and FY24 activities

As shown in the FY24 Status column in the roadmap, we made less progress than expected during the financial year. Our work has been delayed due to factors including:

- Difficulty in establishing a baseline operating position for our new Rakon India facility in India, construction of which was completed during FY24 (impacting our ability to establish Scope 1 and 2 GHG emissions reduction targets); and
- Reduced revenue in a tough macro-economic environment putting increased pressure on budgets and available resources.

As a result of these factors, we have also reassessed our previous FY25 intent for some actions and moved them to intended FY26 actions. Rakon will continue to assess whether we can set meaningful targets and the appropriate timing for setting such targets.

Governance

Disclosure objective for the Governance section – to enable primary users to understand:

- the role the board plays in overseeing climate-related risks and opportunities; and
- the role management plays in assessing and managing those climate-related risks and opportunities.

OVERSIGHT OF CLIMATE-RELATED RISKS AND OPPORTUNITIES

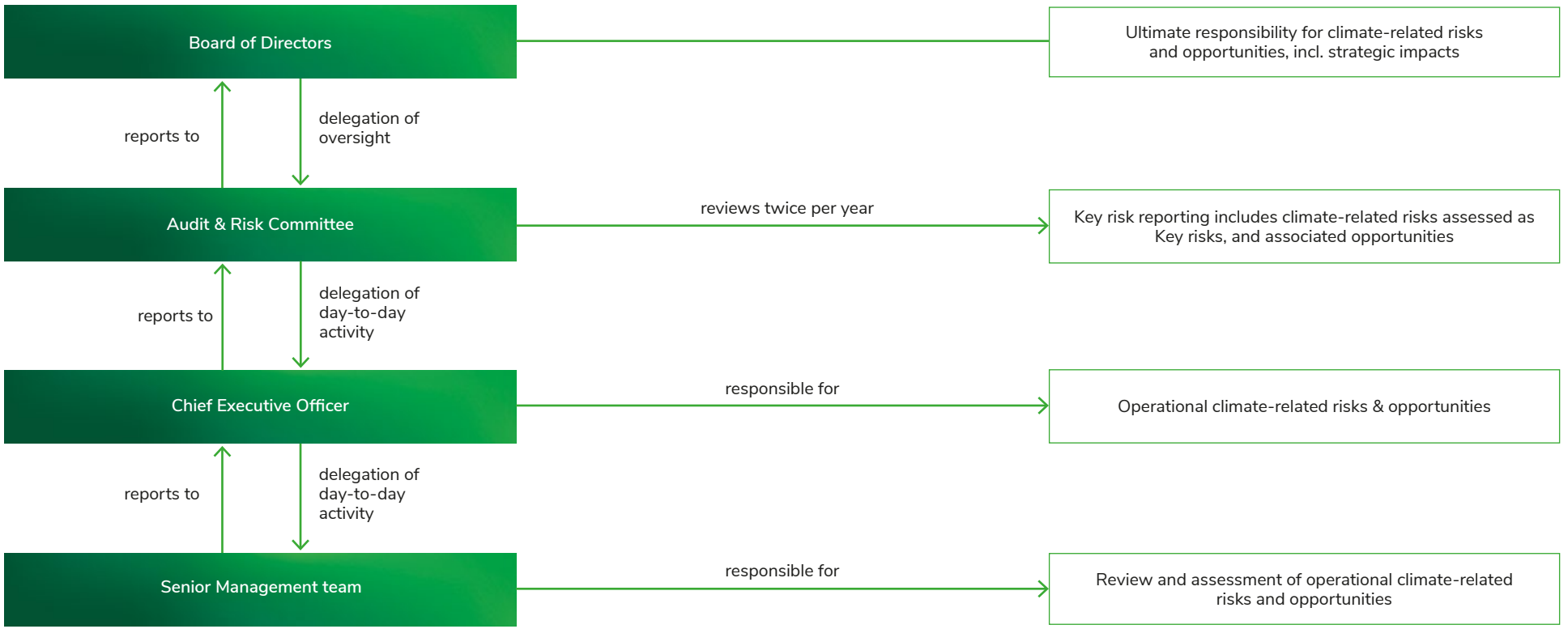
Rakon's board of directors (the 'board') has ultimate responsibility for oversight of climate-related risks and opportunities. The board has delegated oversight of climate-related risks and opportunities to the Audit and Risk Committee. This is evidenced by our Board and Audit and Risk Committee Charters which include these responsibilities.

How the board oversees climate-related risks and opportunities:

The Audit and Risk Committee is scheduled to meet four times per year, with two of the four meetings focusing primarily on risk-related matters, including climate-related risks that meet Key risk status in Rakon's risk management framework (please refer to the Risk Management section of this Statement for more information). Climate-related opportunities that relate directly to Key risks are reported to the Committee. The Committee reports directly to and advises the board on climate-related risks and opportunities.

Rakon has established a climate change education programme. The programme focuses on the board, the senior management team and business team leaders initially as the key decision makers for the business. It includes a combination of in-person briefings on climate change from subject matter experts, reading material and access to appropriate online climate change resources.

Figure 1: Climate Governance structure at Rakon



The board reviewed an initial assessment of the potential impact of climate change on Rakon's strategic pillars (including climate-related risks and opportunities) as part of its review of Rakon's strategy. We expect to make further progress towards embedding climate-related risks and opportunities in strategy processes at board and management levels in FY25 as detailed in our climate roadmap.

We are currently building Rakon's capability to set, manage and report on climate-related metrics and targets. To support this, we have implemented a sustainability management software platform. The inclusion of associated metrics and targets in board-level reporting is an action for FY25 facilitated by the roll-out of that platform, which went live in April this year.

Currently, climate-related performance metrics are not incorporated in Rakon's remuneration policies. We expect to review the inclusion of appropriate climate-related performance metrics in remuneration policies as we build Rakon's maturity in this space.

MANAGEMENT'S ROLE

The Chief Executive Officer (CEO) is responsible for managing operational climate-related risks and opportunities on a day-to-day basis.

Where key operational climate-related risks and opportunities are identified via Rakon's ISO14001 Environmental Management System processes (assessment carried out on an annual basis in that respect), their review and assessment are delegated to the senior management team who consider whether appropriate risk management actions are being taken. Climate-related risks that meet Key risk status (and related opportunities) are reported by senior management to the Audit and Risk Committee twice per year.

The senior management team consists of the CEO, Chief Financial Officer, General Counsel and Company Secretary, Chief Technology Officer, GM Global People and Capability, Managing Director – Rakon India, GM Operations, Global Sales Manager, Advanced Technology Manager – Global Engineering, Chief Marketing Officer and Global Quality Manager.

Strategy

Disclosure objective for the Strategy section – to enable primary users to understand how climate change is currently impacting Rakon and how it may do so in the future. This includes:

- the scenario analysis Rakon has undertaken;
- the climate-related risks and opportunities Rakon has identified;
- the anticipated impacts and financial impacts of these; and
- how Rakon will position itself as the global and domestic economy transitions towards a low-emissions, climate-resilient future.

Climate-related risks and opportunities – an introduction

Climate-related risks typically fall into two categories:

- Physical risks – driven by the physical impacts of climate change and associated environmental degradation. They can be split between:
  - Acute – event driven, e.g., increasing severity of extreme weather; and
  - Chronic – due to longer term shifts in climate patterns, e.g., sea level rise; and
- Transition risks – driven by the transition to a low-carbon, more climate-friendly economy and associated uncertainties, e.g., changes to government regulation and policy.

Climate-related opportunities relate to efforts to mitigate and adapt to climate change.

The TCFD identified the following categories of opportunities (not mutually exclusive):

Opportunity Type	Example opportunity drivers
Resource efficiency	More efficient transport
	More efficient buildings
Energy source	Use of lower emissions sources of energy
	Use of new technologies
Products and services	Develop low emissions services
	Diversify business activities
Markets	Access to new and emerging markets
Resilience	Resource substitutes / diversification

(Refer to the Overview of the TCFD at: https://www.fsb-tcfd.org/publications/)

The Taskforce on Climate-related Financial Disclosures (TCFD) was an international organisation that was created to develop recommendations on the types of information that companies should disclose to support investors, lenders, and insurance underwriters in appropriately assessing and pricing risks related to climate change. The XRB based NZ CS on the recommendations of the TCFD. The TCFD released its climate-related financial disclosure recommendations in 2017 and disbanded in 2023, having fulfilled its remit (https://www.fsb-tcfd.org).

CURRENT CLIMATE-RELATED IMPACTS

In the financial year to 31 March 2024, Rakon has not experienced any material current climate-related physical or transition impacts and no associated material financial impacts. Our supply chain was not subject to any climate-related physical impacts during the financial year to 31 Match 2024. We have incurred some transition costs, for example costs incurred to licence and implement our sustainability management software platform and in relation to this Statement. However, such costs were not material.

RAKON'S SCENARIO ANALYSIS

At Rakon we use climate scenario analysis to support our preparedness for climate change by better understanding the potential physical and transition impacts. The goal of our scenario analysis is to be prepared for what realistically may occur and therefore promote resilience under plausible future states. This analysis is used as a guide for strategic and risk-related decisions and in the future will be used as input to investment decisions.

Climate-related scenarios are plausible, challenging descriptions of how the future may unfold. These descriptions are based on coherent and internally consistent sets of assumptions about the drivers of future physical and transition risk and opportunity (and the relationships between them) (www.xrb.govt.nz).

We are building our capability in scenario analysis. Scenario analysis is currently being conducted as a standalone exercise with input from several teams within the business. The Rakon board has noted the scenario narratives and outputs. The scenario analysis project team reports to the General Counsel and Company Secretary. We intend to increase engagement with internal stakeholders in future as we continue to build Rakon's capability in this area.

The scope of Rakon's scenario analysis was set by asking the following focal question:

- 'How could climate change plausibly affect our business model and strategy through creating risks and opportunities?'

After concluding that a sector-level scenario analysis approach was not feasible, we followed the TCFD's six-step framework for developing scenario analysis for evaluating climate-related risks and opportunities (see section 2d at https://www.tcfdhub.org/scenario-analysis/).

We have undertaken a global level scenario analysis exercise to support our assessment, using the GeSI-CDP Scenario Analysis Toolkit as the underlying tool for our scenario analysis process for three scenarios.

The **GeSI-CDP Scenario Analysis Toolkit** is a set of resources that enables organisations to build the foundations for the development of climate-related scenario analysis in alignment with the recommendations of the TCFD.

GeSI is a leading, cross-industry sustainability initiative creating and enabling digital solutions to address society's most pressing challenges (www.gesi.org).

CDP is a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts (www.cdp.net).

Key reasons for selecting the toolkit were:

- CDP is a well-established and respected provider in the sustainability arena and has partnered with GeSI to deliver this toolkit for the specific purpose of enabling entities like Rakon to develop scenario analysis; and
- Purchase of the scenario analysis toolkit enabled Rakon to access climate risks and opportunities disclosed by Rakon's global peers at sector level, providing our team with a good starting point and comparison for its own analysis.

External factors which are variable and influence the direction of change are referred to as driving forces of specific risks and opportunities in a particular scenario. These forces were identified as differing scenario parameters and assumptions for each scenario. See Appendix 1 of this Statement for further details.

An overview of each scenario we have used for our analysis is set out on the next page:

Overview of Rakon's Climate Scenarios

Scenario name	Temp. Increase[1]	Brief description of scenario & further information
Rapid Transition	1.5°C	Rapid transition to a low carbon world, limiting temperature increase to 1.5°C. High degree of transformation across the economy. Some increase in physical climate-related impacts but the worst physical impacts of climate change are avoided. Based on the following reference scenarios: • IPCC SSP1-1.9 • Supported by parameters from the IEA Net Zero Emissions by 2050 scenario (2023) where required. • IPCC timeframe to 2100, IEA timeframe to 2050.
Status Quo	2.7°C	A middle of the road scenario in which the world follows a path in which social, economic, and technological trends do not shift markedly from historical patterns until close to mid-century. Some emissions reductions occur in line with stated policies, but those reductions do not prevent wide ranging acute and chronic physical climate impacts. Based on the following reference scenarios: • IPCC SSP2-4.5 • Supported by parameters from the IEA Stated Policies scenario (2023) where required (although this is a slightly lower emissions scenario, leading to a c. 2.4°C temperature increase[1]) • IPCC timeframe to 2100, IEA timeframe to 2050.
Limited climate action	4.4°C	Limited action towards a low carbon global economy and lack of coordination result in high emissions and a resulting temperature increase of more than 4˚C. There is minimal political and social traction towards decarbonisation despite increasing levels of environmental, economic and social degradation. Significant disruption globally due to catastrophic physical climate impacts from around mid-century. Based on the following reference scenarios: • IPCC SSP5-8.5 • IPCC timeframe to 2100.

1 change in average global temperature by 2100 relative to 1850–1900 (°C)

Narratives for each of Rakon's climate scenarios outlined on the previous page are set out in Appendix 2 of this Statement.

Time horizons applied by Rakon for its scenario analysis are detailed below:

	Short term	Medium term	Long term
Time horizon	1-3 years	5-10 years	>30 years
Approx. year (rel. to 2024)*	2025	2030	2050+
Rationale	Aligns with Rakon's 3-year business planning horizon for strategy purposes	Aligns with interim international emissions reduction targets Aligns with Rakon's current capital expenditure time horizon of up to five years	Aligns with international emissions reduction targets

* time horizon years are indicative only

Reference scenarios

We have used international reference scenarios to inform Rakon's scenario analysis.

The Intergovernmental Panel on Climate Change (IPCC) is a body of the United Nations. Its job is to advance scientific knowledge about climate change caused by human activities. The IPCC has created reference scenarios that are widely used to understand the potential future impacts of climate change (www.ipcc.ch).

The IPCC's sixth assessment reporting cycle provided SSP-RCP ('SSPX-Y') scenarios based on the Shared Socio-economic Pathways (SSPs), and partly informed by relevant Representative Concentration Pathways (RCPs) scenarios. SSP scenarios indicate different socioeconomic global changes over this century. RCP scenarios indicate different greenhouse gas concentrations in the atmosphere through this century.

The International Energy Agency (IEA) is an autonomous intergovernmental organisation that works with countries around the world to shape energy policies for a secure and sustainable future. The IEA has created reference scenarios that focus on future energy usage (www.iea.org).

Key reasons for selecting these reference climate scenarios for use by Rakon were:

- reference sources for the scenarios are internationally recognised and widely used for this purpose;
- as a Climate Reporting Entity with a global footprint, it is appropriate for Rakon to use scenarios that have international relevance and coverage;
- the selected scenarios and associated temperature increases meet the XRB's requirements for scenarios as set out in NZ CS1, i.e., at a minimum, a 1.5 degrees Celsius climate-related scenario, a 3 degrees Celsius or greater climate-related scenario, and a third climate-related scenario; and
- the selected scenarios have time horizons that cover the time horizons chosen by Rakon.

The Financial Sector (Climate-related Disclosures and Other Matters) Amendment Act 2021 requires:

- listed companies with a market capitalisation of more than $60m; and
- large registered banks, licensed insurers, credit unions, building societies, and managers of investment schemes (large meaning with more than $1bn in assets)

to start making climate-related disclosures from financial years starting on or after 1 January 2023. The organisations are known as **Climate Reporting Entities**.

RAKON'S CLIMATE-RELATED RISKS AND OPPORTUNITIES

We have undertaken a global level exercise to identify climate-related risks and opportunities and assess their anticipated impact on our business, using the scenario analysis approach (including time horizons) outlined above, supported by sector level data sourced from CDP.
The scenarios are:

- Rapid Transition
- Status Quo
- Limited Climate Action

The risks and opportunities disclosed in this section are those considered to have a material anticipated impact on Rakon for the stated scenario.

The material anticipated impacts are assessed prior to the implementation of the identified strategies for mitigation shown in the following tables for each scenario. Whilst likelihood is a standard part of risk assessment at Rakon, for this scenario analysis-driven exercise we have treated impacts as either occurring or not occurring under a given scenario. A material impact is one that reaches either a High or Very High consequence level under Rakon's standard risk assessment approach (please refer to the Risk Management section of this Statement for an overview of this).

The following tables set out our current assessment of the climate-related risks by scenario that Rakon faces that are considered to have a material anticipated impact. Associated opportunities for those risks are also shown below each table. In each case, we would need to take action to be able to benefit from the climate-related opportunities.

This assessment should be read in conjunction with the climate data limitations section of Appendix 3 and the Important Information note at the start of this Statement.

Rapid Transition:

Climate Risk Type	Climate-related risk	Time horizon	Strategies for mitigation
Transition	Increased costs due to mandates on and regulation of existing products and services	From the medium-term	Develop products and invest in systems to meet the enhanced regulation in an efficient manner
Transition	Increased costs due to enhanced emissions & related reporting obligations	From the short-term	Improve on existing management systems & build out from existing CDP reporting
Transition	Increased costs due to carbon pricing mechanisms	From the short-term	Move to renewable energy sources, strengthen carbon emissions monitoring & set reduction targets
Transition	Increased costs due to carbon emerging mechanisms	By the long-term	Monitor progress of these mechanisms. Move to renewable energy sources, strengthen carbon emissions monitoring & set reduction targets
Transition	Increased capital expenditure to transition to lower emissions technologies	From the medium-term	Explore decarbonisation funding mechanisms

The general physical risks associated with climate change increase over the time horizons considered for this scenario, but we do not expect the associated physical impacts to be material to Rakon by 2050 (long term time horizon).

Associated opportunities with a material anticipated impact on Rakon:

- Transition: use of lower emissions sources of energy to reduce costs, starting in the short-term and onwards
- Transition: incremental increases in product revenues, starting in the short-term and onwards, driven by:
  - access to new markets
  - development of lower emissions products
  - shifts in customer preferences
- Transition: move to more efficient buildings to reduce costs (from the medium-term onwards)

Status Quo:

Climate Risk Type	Climate-related risk	Time horizon	Strategies for mitigation
Transition	Increased costs due to enhanced emissions & related reporting obligations	From the short-term onwards, based on current NZ reporting requirements	Use existing management systems & build out from existing CDP reporting
Transition	Increased costs due to carbon pricing mechanisms	From the medium-term	Move to renewable energy sources, strengthen carbon emissions monitoring & set reduction targets
Transition	Increased capital expenditure to transition to lower emissions technologies	From the long-term	Explore decarbonisation funding mechanisms

The general physical risks associated with climate change increase over the time horizons considered for this scenario and exceed those for the Rapid Transition scenario. However, we do not expect the associated physical impacts to be material to Rakon by 2050 (long-term time horizon).

Associated opportunities with a material anticipated impact on Rakon:

- Transition: Use of lower emissions sources of energy to reduce costs (long-term)
- Transition: Move to more efficient buildings to reduce costs (long-term)

Limited Climate Action:

Climate Risk Type	Climate-related risk	Time horizon	Strategies for mitigation
Transition	Increased costs due to enhanced emissions & related reporting obligations	From the short-term onwards, based on current NZ reporting requirements	Use existing management systems & build out from existing CDP reporting

The general physical risks associated with climate change increase over the time horizons considered for this scenario and exceed those for the Status Quo scenario. By 2050 for this Limited Climate Action scenario, we expect associated physical risks for Rakon to be at a consequence level just below that required for a material impact to be disclosed.

No associated opportunities with a material anticipated impact were noted for this scenario.

Consideration of local factors:

Part of maturing our approach to managing climate-related risks is to include additional consideration of local factors. We have started that process by engaging ClimSystems to provide a climate-related physical risk report for Rakon India's manufacturing facility. The report covers environmental, chronic and acute climatic variables, with some hazards and risks assessed for the current day and others modelled under future climate scenarios.

ClimSystems have been providing data on the changing climate for over 20 years. Their climate risk management services support asset owners globally (www.climsystems.com).

These climatic variables showed changes from the baseline (2005) defined in the IPCC Sixth Assessment Report for the following scenarios and time horizons:

Scenarios	SSP1-2.6 (slightly higher emissions than the Rapid Transition scenario) SSP2-4.5 (emissions per the Status Quo scenario) SSP5-8.5 (emissions per the Limited Climate Action scenario)
Time horizons	2030 (Rakon's medium term horizon) 2050 (Rakon's long term horizon) 2070 (beyond Rakon's long term horizon)

The output from the ClimSystems report identified some physical risks for Rakon India (both acute and chronic) associated with climate driven events, such as high rainfall events and water scarcity, that may have significant impacts in future for some scenarios. Typically, the impacts are modelled to occur for the higher emissions scenarios and for the long-term time horizon and beyond.

Our initial work on these physical risks has noted that:

- Sustainability measures already in place at Rakon India (for example, rainwater harvesting and water recycling) may mitigate the potential risk of impacts from water scarcity; and
- The industrial hub where Rakon India is located has been planned and developed with consideration of the risk of impacts from high rainfall events (for example, the hub has a large rainwater drainage system in place).

However, these risks require further analysis before their potential materiality can be assessed and any necessary further mitigating actions identified.

Relationship to capital deployment and funding:

Climate-related risks and opportunities do not currently serve as an input to Rakon's internal capital deployment and funding decision-making processes. This is something that we expect to tackle as we build our maturity in managing them.

ANTICIPATED IMPACTS AND FINANCIAL IMPACTS

In the previous section we have disclosed qualitative information on anticipated impacts that we have assessed as material to Rakon. We are not currently in a position to make reasonable estimates of associated anticipated financial impacts.

TRANSITION PLAN ASPECTS OF RAKON'S STRATEGY

Our business model and strategy:

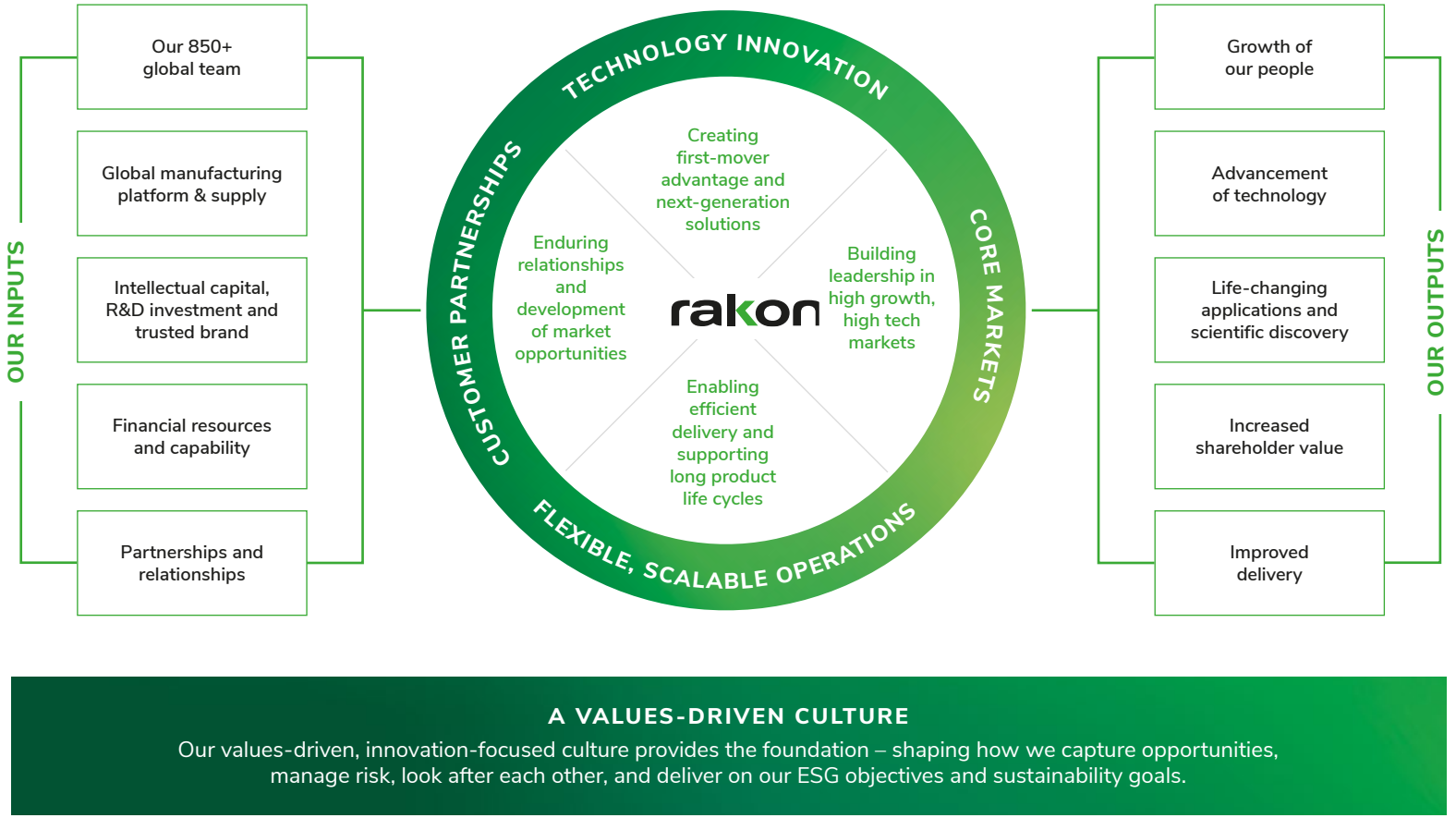
Our strategic pillars are our key drivers of value and underpin our planning, activities and how we measure performance. They are:

- Customer partnerships;
- Technology innovation;
- Core markets (telecommunications / space and defence / positioning); and
- Flexible, scalable operations – enabling efficient delivery.

These strategic pillars are critical to the creation of long-term value, while providing the flexibility to explore emerging opportunities and thrive.

This is shown in the strategic value chain diagram on the next page.

Figure 2: Rakon's strategic value chain



We have assessed Rakon's future potential climate-related risks and opportunities based on scenario analysis for this business model and strategic value chain out to the long-term.

We have undertaken a preliminary assessment of the impact of climate change on Rakon's strategy focused on our four strategic pillars.

The assessment did not identify any significant potential impacts of climate change on the four strategic pillars. There may be some challenges that our assessment did not identify, but currently we consider that Rakon is well-placed to tackle challenges without significant potential impacts. For example, we believe that our continuing focus on building flexibility and resilience into Rakon's manufacturing operations and supply chain provides a good foundation for managing impacts related to climate change.

Transition planning update:

We are developing our Transition Plan, being our response to the identified material climate risks and opportunities and our plan to build resilience to those risks and benefit from the opportunities. We expect to disclose the key elements of that plan in Rakon's FY25 Climate Statement. We have created a Transition Plan Framework as the first step towards that plan.

Risk management

Disclosure objective for the Risk Management section – to enable primary users to understand how Rakon's climate-related risks are identified, assessed, and managed and how those processes are integrated into existing risk management processes.

OUR PROCESSES FOR IDENTIFYING, ASSESSING AND MANAGING CLIMATE-RELATED RISKS

The tools and methods we use:

Operational management of climate-related risks at Rakon is covered by our ISO14001 Environmental Management System processes. We support those 'bottom-up' processes by:

- using TCFD generic risk listings and sector specific listings of risks from CDP to ensure that a wide range of potential climate-related risks are identified for consideration;
- using a scenario analysis toolkit to support our assessment of the anticipated impacts and time horizons of climate-related risks under plausible climate futures; and
- using an adapted risk assessment matrix with specific time horizons and the inclusion of three climate scenarios.

Rakon's standard risk assessment matrix splits risks into two levels:

1. Key risks; and
2. Non-key risks.

Risks are assessed in our standard approach based on the size of the potential consequence of a risk and the likelihood of the risk occurring. However, for the scenario analysis-driven assessment of climate-related risks, we treat impacts as either occurring or not occurring under a given scenario. As a result, climate-related risks with a High or Very High consequence assessment are those considered Key risks. The following consequence categories are considered in our assessment of risks:

Figure 3: Risk assessment – consequence categories

Financial	Legal	Contract
Reputation	Environmental	Social
	Safety	

Under our standard approach, Key risks are generally those with a larger potential consequence and higher likelihood of occurrence.

A simplified version of this is shown in the diagram on the next page.

Management of climate-related risks that are classed as Key risks is guided by the strategies for mitigation identified as part of the scenario analysis (see Strategy section). In addition, other climate-related risks are managed within our ISO14001 Environmental Management System processes.

The short-term, medium-term, and long-term time horizons we have considered, and their duration

We have considered the same time horizons for risk assessment as used for scenario analysis:

	Short term	Medium term	Long term
Time horizon	1-3 years	5-10 years	>30 years
Approx. year (rel. to 2024)*	2025	2030	2050+

* approximate year relative to 2024 is indicative only

Rakon recognises the worsening physical impacts of climate change beyond 2050 in higher emissions scenarios. Accordingly, we consider potential physical impacts beyond 2050 as part of our consideration of local factors in assessing climate-related risks. This is an exercise we started in this financial year and expect to expand in future.

Management of climate-related risks at Rakon occurs through the execution of risk reduction measures for Key risks and the management of Non-key risks through normal business processes.

Figure 4: Standard risk assessment matrix

Value chain exclusions:

Rakon's climate-related risks have been identified and assessed based on the strategic value chain shown in Figure 2 (see the Strategy section of this Statement). We have not excluded any part of that value chain from the exercise.

However, we recognise that, as we build Rakon's climate change capability, we will gain a greater understanding of our value chain and may uncover climate-related risks that are not currently identified. For example, as we intend to measure all our upstream and downstream GHG emissions (Scope 3) in FY25, there may be significant emission sources that we are not currently aware of.

Frequency of assessment:

We review our assessment of climate-related risks annually and whenever we update our climate scenario analysis. Climate-related risks that are classed as Key risks are reviewed at least every six months as part of reporting on those risks to the Audit and Risk Committee.

Our processes for prioritising climate-related risks relative to other types of risks:

We previously undertook an assessment to better understand which ESG issues are most material to our stakeholders. That assessment identified that the management of carbon emissions, climate adaptation and resilience are amongst the most important topics for Rakon's stakeholders, with decarbonisation a priority for that group. Accordingly, Rakon seeks to ensure that climate-related risks assessed as Key risks for any scenario are given sufficient priority for action within wider risk management activity, despite the occurrence of potential impacts of climate change typically having a longer time horizon than other risks.

HOW OUR PROCESSES FOR IDENTIFYING, ASSESSING, AND MANAGING CLIMATE-RELATED RISKS ARE INTEGRATED INTO OUR OVERALL RISK MANAGEMENT PROCESSES

Currently there is limited integration of climate-related risk processes into Rakon's overall risk management processes. For example, operational management of climate-related risks at Rakon is covered by our ISO14001 Environmental Management System processes. However, apart from that, climate-related risk management processes sit largely outside our overall risk management processes.

We expect to undertake the integration of climate-related risk management processes within the overall framework as we mature our approach to climate-related risk management.

Metrics & Targets

Disclosure objective for the Metrics and Targets section – to enable primary users to understand how Rakon measures and manages its climate-related risks and opportunities and provide a basis upon which primary users can compare Rakon with its sector or industry peers.

THE METRICS RELEVANT TO ALL ENTITIES

Greenhouse gas (GHG) emissions (incl. intensity):

Rakon's most relevant climate change metrics relate to GHG emissions. We have been reporting to CDP since 2010 (on a calendar year basis) and currently measure our Scope 1 (Direct) and Scope 2 (Indirect Energy) GHG emissions. We have changed the basis of our GHG emissions measurement from a calendar year basis to a financial year basis to meet the requirements of the climate-related disclosures regime.

GHG emissions	Sources
Scope 1	CO_2 usage in production, leakage of air conditioning refrigerants, fuel consumption (LPG, natural gas, diesel, petrol)
Scope 2	Electricity usage

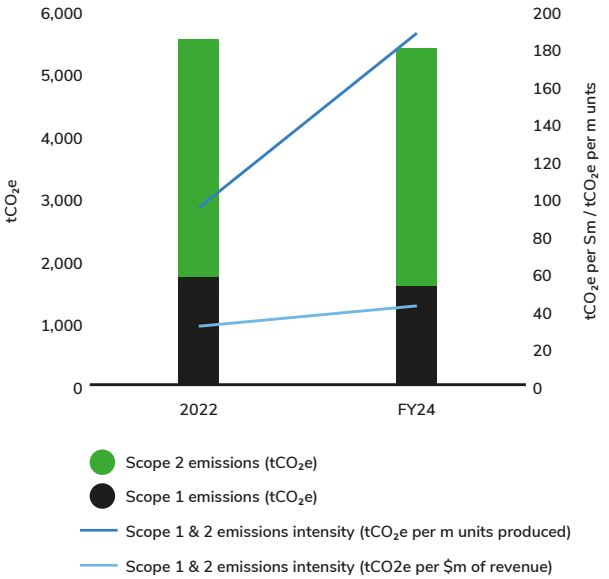
Our latest GHG emissions for the 2024 financial year and calendar year 2022 (using the location-based method and including intensity metrics) are shown in the table below:

Measure	2022	FY24
Scope 1 emissions (tonnes CO_2e)	1,725	1,572
Scope 2 emissions (tonnes CO_2e)	3,803	3,807
Scope 1 & 2 emissions (tonnes CO_2e)	**5,528**	**5,379**
Scope 1 & 2 emissions intensity (tonnes CO_2e per $m of revenue)	31.2	42.0
Scope 1 & 2 emissions intensity (tonnes CO_2e per m units produced)	94.3	187.4

The above emissions have not been audited. The emissions factors used by Rakon have been reviewed by Toitū.

Toitū Envirocare provides a system of carbon and environmental programmes to organisations, supporting them to measure and manage their GHG emissions. Toitū also provides carbon management and carbon certifications through their programmes (www.toitu.co.nz).

Figure 5: Our Scope 1 & 2 GHG emissions



We have not reported Scope 3 (Other Indirect) GHG emissions in this Statement. We have started the process to enable Rakon to measure those emissions and expect to include them in FY25 reporting.

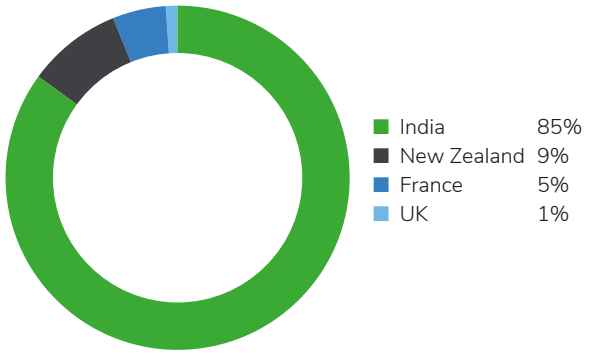
The overall 9% reduction in Scope 1 GHG emissions between 2022 and FY24 has been driven mainly by a reduction of carbon dioxide (CO_2) use in production processes at Rakon New Zealand (Rakon NZ), where it has been replaced by nitrogen (N_2) use, with some offset by increased CO_2 use for the same purpose at Rakon India.

Scope 2 GHG emissions remained similar between 2022 and FY24. This is driven mainly by a reduction in electricity usage by Rakon NZ due to lower production output, which has mainly been offset by increased electricity usage by Rakon's new larger production facility in India. Rakon India uses higher carbon intensity electricity than Rakon NZ due to a higher reliance on fossil fuels for grid electricity generation.

Total Scope 1 and 2 GHG emissions have reduced by 2.7% from 2022 to FY24, mainly driven by the factors described above.

Total Scope 1 and 2 GHG emissions by country are shown in the graphic below:

Figure 6: Our Scope 1 & 2 GHG emissions by country



Increases in Rakon's emissions intensity measures (tCO_2e per $m of revenue and tCO_2e per million units produced) between 2022 and FY24 reflect:

- The impact of changes in the mix of products sold / produced. In 2022, production and sales included large high volume one-off chip shortage contracts that required production to run at high capacity. This was not repeated in FY24, leading to lower production volumes at lower, less energy efficient capacity due to fixed costs being a substantial proportion of the cost base; and
- The planned reduction in Rakon's holding of units of finished goods stock over FY24, leading to reduced production volumes to meet demand.

Electricity consumption is relatively fixed for a given Rakon facility regardless of the volume of production. As a result, we expect significant on-going variability in these intensity measures and consider the absolute GHG emissions measures (tonnes CO_2e) to be of more relevance.

We have implemented a sustainability management software platform (went live April 2024 and used to record FY24 measurements) to support us to measure and manage GHG emissions (and other sustainability metrics). The platform facilitates the collection of sustainability data across our operations globally with local responsibility for measurement. Ultimately, we expect this to lead to local responsibility for achievement of sustainability outcomes.

Further disclosures in relation to GHG emissions:

GHG emissions measurement is often based on estimates or proxy data and, as a result, does not provide a perfect view of Rakon's exposures or risks. Data quality improvements are an on-going focus for Rakon, but any outputs should be interpreted as approximate and not precise (see Appendix 3 for further detail on data limitations).

Rakon's GHG emissions have been measured in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard and following the principles of ISO 14064-1:2018, the international standard for quantification and reporting of GHG emissions and removals.

Those principles are:

- Relevance
- Completeness
- Consistency
- Accuracy
- Transparency

We have used the financial control GHG emissions consolidation approach to set Rakon's organisational boundary for GHG emissions measurement purposes.

All emissions were calculated using emission factors and Global Warming Potentials from:

- New Zealand – Ministry for the Environment – Measuring Emissions Guidance – Detailed Guide – 2023
- United Kingdom – Department for Energy & Net Zero – Conversion Factors Methodology – 2023
- France – Climate Transparency – Comparing G20 Climate Action – 2022
- India – Ministry of Power – CO_2 Baseline Database – 2023

(See Appendix 3 for more details on emissions calculation methodology, associated limitations and references)

We have excluded the following sources of GHG emissions from Rakon's FY24 Scope 1 and 2 GHG emissions measurement:

Sources*	Justification for exclusion
Overseas Sales functions (China, Taiwan, USA, Korea, Germany)	Estimated to be below a de minimis threshold, and adequate data collection processes are not in place
Natural gas used by UK operation (Cambridge)	Used only to heat common areas of a shared building. Rakon UK premises use isolated electric heating. Estimated as below a de minimis threshold

* sources includes facilities, operations or assets

Amount or percentage of assets or business activities vulnerable to transition risks:

A description of Rakon's identified transition climate-related risks and strategies for their mitigation can be found under the 'Rakon's climate-related risks and opportunities' heading in the Strategy section of this Statement.

Our work on transition risks is in its infancy and we note that we have more work to do to further assess our transition risks, including the consideration of our Scope 3 GHG emissions. As a result, we are unable to disclose a measure for this metric at this time.

Amount or percentage of assets or business activities vulnerable to physical risks:

Our work to consider Rakon's physical climate-related risks can be found under the 'Rakon's climate-related risks and opportunities' heading in the Strategy section of this Statement. We consider such risks to be approaching a material level in the long-term time horizon and increasing thereafter in the higher emissions scenarios.

Our work on physical risks is in its early stages and we note that we have more work to do in that regard, including the consideration of local factors in our work to identify climate-related physical risks and associated impacts for additional Rakon locations. As a result, we are unable to disclose a measure for this metric at this time.

Amount or percentage of assets or business activities aligned with climate-related opportunities:

The production process of a significant percentage of the products manufactured in Rakon's New Zealand factory has switched from the use of CO_2 to N_2. Currently we do not record the associated revenue for these products separately but plan to implement this measurement in FY25. In FY24 57% of Rakon's revenue was earned from products manufactured in its New Zealand factory.

Amount of capital expenditure, financing, or investment deployed toward climate-related risks and opportunities:

In FY24 Rakon's R&D operations in the United Kingdom changed premises and as part of this move invested in new testing equipment that did not require the use of CO_2. The necessary capital expenditure was not material. There was a small amount of capital expenditure in FY24 on the conversion of production processes from CO_2 to N_2 but it was not a material amount.

Internal emissions price and management remuneration:

Rakon has not currently implemented internal GHG emissions pricing or linked management remuneration to climate-related risks and opportunities. We expect to work on these initiatives as we increase our maturity in this space.

INDUSTRY-BASED METRICS

At present we have not identified any industry-based metrics relevant to our industry or business model that could be used to measure and manage climate-related risks and opportunities. This is something we expect to work on as we increase our maturity in this space.

OTHER KEY PERFORMANCE INDICATORS

There are no other key performance indicators used by Rakon to measure and manage climate-related risks and opportunities.

TARGETS USED TO MANAGE CLIMATE-RELATED RISKS AND OPPORTUNITIES

While we measure our Scope 1 and 2 GHG emissions and have commenced initiatives focused on reducing our Scope 1 GHG emissions, we have not yet set reduction targets. We had planned to set reduction targets by the end of FY24, but that work has been delayed due to factors including:

- Difficulty in establishing a baseline operating position for our new Rakon India facility, construction of which was completed during FY24; and
- Reduced revenue in a tough macro-economic environment putting increased pressure on budgets and available resources.

Similarly, the work we previously signaled towards becoming a Toitū carbonreduce certified organisation and related initiatives has also been delayed.

Rakon will continue to assess whether it can set meaningful targets and appropriate timing for setting any such targets.

GHG EMISSIONS REDUCTION OPPORTUNITY

As the GHG emissions data demonstrates, Rakon India's operations are the greatest source of emissions for Rakon. Therefore, Rakon India also presents the greatest challenge and opportunity for emissions reduction.

Rakon India continues to assess opportunities to purchase renewable electricity for at least some of its electricity usage for FY25. If this initiative is viable and verifiable, it would lead to a reduction in total Scope 1 and 2 GHG emissions for Rakon India in FY25 and for Rakon globally, using the market-based method*.

*Scope 2 GHG emissions measurement approaches:

- Location-based method – uses an emission factor calculated from all electricity delivered to the grid in a period; and
- Market-based method – uses contractual instruments (e.g., renewable energy certificates) which reflect emissions from renewable electricity generation that organisations have purposefully chosen.

Sourced from: www.toitu.co.nz

Appendices

APPENDIX 1: SCENARIO PARAMETERS AND ASSUMPTIONS

Scenario Parameters & Assumptions		Rapid transition to a low carbon world, limiting temperature increase to 1.5°C. High degree of transformation across the economy.	A middle of the road scenario in which the world follows a path in which social, economic, and technological trends do not shift markedly from historical patterns until close to mid-century. Resulting temperature increase of c. 2.7°C	Limited action towards a low carbon global economy and lack of coordination result in high emissions and a resulting temperature increase of c. 4.4˚C.
Scenario Description	Emissions levels	Global emissions decline to around 22 $GtCO_2e$ per annum by 2030, reaching net zero by ~2050. The second half of the century is characterised by net negative CO_2e emissions, implying the use of carbon dioxide removals such as negative emissions technology	Global emissions peak at around 42 $GtCO_2e$ per annum by 2040, are falling by 2050 but fail to reach net zero by 2100	Global emissions continue to rise, reaching around 83 $GtCO_2e$ per annum by 2050, continuing to rise until very late in the century
	Physical impacts	Increase in physical climate-related impacts such as increased extreme temperatures, increased heavy precipitation, increased droughts. Worst impacts avoided	Extreme weather events become increasingly damaging. Signs of climate instability globally. Increasing risk to human health	Catastrophic climate-related impacts result in severe damages, displacement and economic instability
		The warming over the next few decades is largely already determined by past emissions & inertia in the climate system, so whilst there is limited divergence of physical impacts between scenarios up to 2050, the 2nd half of the century is when the physical impact differences between scenarios become much more apparent		
	Global policy response	Policy coordination. All regions demonstrate strong leadership in reducing emissions	Global and national institutions work toward but make slow progress in achieving sustainable development goals, including emissions reductions	Lack of robust action to reduce emissions, fossil fuelled development continues, minimal environmental policy
	Technological impacts	Technology disruptions required to drive the transition. New markets created for energy efficient and zero emission products and services	Uneven and delayed transition drives some technology disruption but that is limited until a later wave of disruption, driven by increasing physical impacts	Minimal demand for low-emissions goods and services. Increasing physical impacts drive technology uptake for adaptation in the longer term

Scenario Parameters & Assumptions		Rapid transition to a low carbon world, limiting temperature increase to 1.5°C. High degree of transformation across the economy.	A middle of the road scenario in which the world follows a path in which social, economic, and technological trends do not shift markedly from historical patterns until close to mid-century. Resulting temperature increase of c. 2.7°C	Limited action towards a low carbon global economy and lack of coordination result in high emissions and a resulting temperature increase of c. 4.4˚C.
Scenario Description	Reference sources	IPCC, 2021: Summary for Policymakers: The Physical Science Basis / IPCC SSP1-1.9 (Riahi, et al., 2017), supported by parameters from the IEA Net Zero Emissions by 2050 scenario (2023) where required	IPCC, 2021: Summary for Policymakers: The Physical Science Basis / IPCC SSP2-4.5 (Riahi, et al., 2017), supported by parameters from the IEA Stated Policies scenario (2023) where required (although this is a slightly lower emissions scenario, leading to a c. 2.4°C temperature increase)	IPCC, 2021: Summary for Policymakers: The Physical Science Basis / IPCC SSP5-8.5 (Riahi, et al., 2017)
Assumptions	Global population	8.0 billion 2030, 8.5 billion 2050 (IPCC)	8.3 billion 2030, 9.2 billion 2050 (IPCC)	8.0 billion 2030, 8.6 billion 2050 (IPCC)
	Economics	World GDP assumed to grow at rate of c. 3.2% between 2030 & 2050 (IPCC)	World GDP assumed to grow at rate of c. 2.5% between 2030 & 2050 (IPCC)	World GDP assumed to grow at rate of c. 4.0% between 2030 & 2050 (IPCC)^ (^ - impact of assumed economic growth & associated growth in energy demand in SSP5 reduced for assessment of business strategy & financial implications due to the expected substantial physical impacts of climate change on growth in this scenario)
	Timeframe	to 2100 (IPCC) (IEA to 2050)	to 2100 (IPCC) (IEA to 2050)	to 2100 (IPCC)
Key Scenario Metrics	Carbon Price	Estimate per tCO2e range from 15-140 USD in 2030, and 55–250 USD in 2050 depending on the stage of development of a country's economy & its net zero pledge status (WEO 2023)	Estimate per tCO2e range from 0-130 USD in 2030, and 0–155 USD in 2050 depending on the country's stated policy (WEO 2023)	Carbon Price remains low or not in place (IPCC)
	Energy demand	Total final energy consumption declines by an annual average of 0.9% every year from 2022 to 2050 (WEO)	Total final energy consumption rises by 1.1% per year to 2030 & then continues to rise at a slower rate through to 2050 (WEO)	A more than tripling of energy demand over the course of the century (IPCC) ^

Scenario Parameters & Assumptions		Rapid transition to a low carbon world, limiting temperature increase to 1.5°C. High degree of transformation across the economy.	A middle of the road scenario in which the world follows a path in which social, economic, and technological trends do not shift markedly from historical patterns until close to mid-century. Resulting temperature increase of c. 2.7°C	Limited action towards a low carbon global economy and lack of coordination result in high emissions and a resulting temperature increase of c. 4.4˚C.
Key Scenario Metrics	Energy mix	Low emissions electricity generation increases to 71% of total electricity generation by 2030, reaching nearly 100% by 2050. Approx. 73% of global total final energy consumption is fueled by low emissions electricity and modern renewables by 2050 (WEO)	The global share of electricity generation from low emissions sources rises to about 56% by 2030 & 78% by 2050. Approx. 34% of global final energy consumption is fueled by low emissions electricity and modern renewables by 2050 (WEO)	Primary Energy Triangle shows increasing domination of coal and oil in the energy mix with continuing low level of renewables through to 2100 (IPCC)
	Forestry and Afforestation	There is a pervasive expansion of land under forestry from the late 2030s. This increases by around 300 million hectares from that time by the end of the century. These changes are the result of dedicated measures to reduce deforestation and encourage afforestation and reforestation activities (IPCC)	Deforestation continues to occur up to around 2050. The global loss of land under forestry does not exceed 100 million hectares of land by that time. After that there is a modest increase of land under forestry by the end of the century. These changes reflect a reduction and eventual elimination of deforestation, with some afforestation, but supportive measures are not effective until the 2nd half of the century (IPCC)	Deforestation continues to occur up to about 2060 and the global loss of land under forestry exceeds 200 million hectares of land by then. After that there is a modest increase of land under forestry by the end of the century. This is driven by an eventual elimination of deforestation, not by mitigation-induced afforestation (IPCC)
	Technology investment	Solar PV capacity additions reach 820 GW by 2030 and the same level is achieved by 2050 (was 220GW in 2022). Wind capacity additions reach 320 GW in 2030 & 350 GW in 2050 (was 75GW in 2022) (all above are per annum and per WEO).	Solar PV capacity additions reach 500 GW by 2030 and 580 by 2050 (was 220GW in 2022). Wind capacity additions reach 175 GW in 2030 & 195 GW in 2050 (was 75GW in 2022) (all above are per annum and per WEO).	Limited given the substantial exploitation of fossil fuel resources that is noted for IPCC SSP5. Investment focus is more on adaptation than mitigation (IPCC).

Further details of the reference scenarios are available at:

IPCC –

- IPCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the IPCC https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf
- Riahi et al. (2017). The Shared Socioeconomic Pathways and their energy, land use, and greenhouse gas emissions implications: An overview, Global Environmental Change, Volume 42, Pages 153-168, 2017, ISSN 0959-3780, DOI: 110.1016/j.gloenvcha.2016.05.009

IEA –

- World Energy Outlook 2023 https://www.iea.org/reports/world-energy-outlook-2023

APPENDIX 2: SCENARIO NARRATIVES

Scenario name	Narrative
Rapid Transition	Collective global climate action is taken from the short term in this scenario and the ambitious goals of the Paris Agreement are met. Governments worldwide move forward simultaneously towards a low carbon economy. Carbon prices rise steadily and significantly in the short term and onwards, adding costs to all industries, especially higher emitting ones. Regulations promoting low carbon products, services and operations are strengthened. For example, increases in the size and scope of carbon border taxes. These changes promote low-carbon producers and drive customer behaviour change substantially. End consumers are well aware of the need to decarbonise the economy and so expect products and services to have low carbon emissions associated with them. Similarly, businesses and other organisations are expected to reduce their emissions in line with global carbon net zero by 2050. This flows through the global economy, impacting all industries. From the short term onwards, technology is steadily but quickly developed to mitigate emissions. For example, electrification of transport and industry happens at pace whilst carbon capture and sequestration becomes a viable option. Global electricity generation moves towards fully renewable sources as fossil fuels are gradually phased out to be replaced by these low emissions technologies. Resilience measures also benefit from technology development, which also support adaptation initiatives. As a result of this coordinated and timely action around the world to curb GHG emissions, annual emissions decline to 2030 and reach net zero by 2050 globally, preventing the worst predicted physical impacts of climate change and their impact on GDP.
Status Quo	Worldwide, action to decarbonise is limited at first and fossil fuels continue to dominate energy use until near to mid-century. In some countries, decarbonisation occurs in line with stated policies, but the overall emissions impact is minimal. There is limited development of low emissions technologies which limits the possible transition until near to mid-century. Global emissions per annum continue to increase in the short and medium term, peaking in about 2040 before they start to decline. The global transition commences between the medium and long terms, driven by the clear physical effects of climate change and awareness of its harmful consequences to society, the economy and the environment. From this time global carbon prices increase and there is widespread adoption of low emissions technologies. Those changes cannot prevent more acute and chronic physical climate impacts occurring from the long term onwards. Those impacts negatively affect GDP.
Limited Climate Action	There is minimal action across all time horizons towards a low carbon global transition, with minimal low carbon regulations and carbon pricing remaining ineffectually low. This leads to little behaviour change, coupled with a lack of technology development and uptake. Fossil fuel use continues increasing as does mass consumption. Actions are driven by cost-saving concerns rather than a change in societal expectations and behaviour. Renewable electricity grows globally but that growth is not significant. There are increasing levels of social, economic and environmental degradation caused by the significantly worsening climate by the long term but there is minimal shift in social and political traction towards a low emissions future. The combined impact of the above pushes annual emissions higher until very late in the 21st century. This leads to significant materialisation of acute and chronic physical risks globally, especially after 2050. Between the medium and long terms, this sees some increase in severity of extreme weather, accompanied by rising sea levels beyond the long term that drive high physical risk. As these risks materialise, they increasingly impact GDP negatively.

APPENDIX 3: OTHER METHODOLOGY, LIMITATIONS & REFERENCES

GHG emissions measurement methodology, limitations & references

The calculation methodology we have used to quantify the emissions inventory is based on the following calculation approach below (unless otherwise stated):

Emissions = activity data x emissions factor

Activity data is derived from reports, invoices and data from the relevant data source/supplier and the most relevant and recent emission factors available are applied to calculate the emissions.

Where applicable, unit conversion methods were also applied when processing activity data.

Uncertainty has been calculated through using estimates of uncertainty, using both the data completeness category and the emission factors themselves. The uncertainty values have been assessed in accordance with Greenhouse Gas Protocol guidance.

There are systems and procedures in place that will ensure applied quantification methodologies will continue in future GHG emissions inventories.

References:

World Resources Institute and World Business Council for Sustainable Development. 2004. The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (revised), https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf

International Organization for Standardization. 2018. ISO14064-1:2018. Greenhouse gases - Part 1: Specification with guidance at the organisation level for quantification and reporting of greenhouse gas GHG emissions and removals, https://www.iso.org/standard/66453.html

Ministry for the Environment NZ. 2023. Measuring emissions: A guide for organisations, 2023 detailed guide, https://environment.govt.nz/assets/publications/Measuring-Emissions-Guidance_DetailedGuide_2023_ME1764.pdf

United Kingdom – Department for Energy & Net Zero - Conversion Factors Methodology – 2023, https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2023

France - Climate Transparency – Comparing G20 Climate Action – 2022, https://www.climate-transparency.org/wp-content/uploads/2022/10/CT2022-France-Web.pdf

India - Ministry of Power – CO2 Baseline Database – 2023, https://cea.nic.in/wp-content/uploads/baseline/2024/04/User_Guide__Version_19.0.pdf

GHG Protocol guidance on uncertainty assessment in GHG inventories and calculating statistical parameter uncertainty, https://ghgprotocol.org/sites/default/files/2023-03/ghg-uncertainty.pdf

Climate data limitations

Climate change is an evolving challenge, with high levels of uncertainty; climate data is subject to the uncertainties of scientific and technical research. It is important to have an understanding of the uncertainties and limitations inherent to climate projections and modelling when considering the information in this Statement.

Climate change science is currently unable to accurately forecast how the future impacts of climate change will affect the environment, economy or society. In addition, the wide range of variables that will influence global GHG emissions trajectories cannot be predicted with certainty. Rakon is committed to progressing its response to climate-related risks and opportunities over time but is constrained by the novel and developing nature of this subject matter.

The evolution of climate change science and associated datasets is constant, and climate scenario analysis uses the best information available at the relevant time. However, the underlying datasets and assumptions, on which climate models are built, may not be reliable.

We have prepared the information in this report based on our current knowledge and understanding. However, as a result of the limitations noted here, our estimates of the potential impacts of climate change on Rakon involve a high degree of uncertainty.

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