

Action on Climate

Task Force on Climate-related Financial Disclosures Statement

Since 2019, Ayala Corporation has been integrating recommendations from the Task Force on Climate-related Financial Disclosures' (TCFD) into its annual reports. In 2021, Ayala and its core business units became formal signatories to the TCFD. This disclosure, the first of its kind for Ayala Corporation, summarizes actions and processes across the four TCFD pillars as of December 31, 2022. The group remains dedicated to a full implementation of the framework's recommendations.

Governance

The Ayala **1 Board of Directors (the Board)** oversees the group's strategy, systems and procedures, including climate-related issues and business resilience. For example, the Board provides approval and oversight of the commitment to achieve net-zero greenhouse gas (GHG) emissions by 2050 through the Climate Ambition Project. In 2022, the Board and managing directors took part in environmental, social and governance training (ESG) to deepen their understanding of climate science, changing business and sustainability landscapes and the role of the Board in sustainability leadership. The training supports the Board's application of sustainability considerations to corporate governance and decision making.

The Board receives information on climate-related risks and opportunities from the **2 Risk Management and Related Party Transactions (RMRPT)** and Sustainability Committees. The RMRPT is responsible for overseeing

the risk management framework—the identification of material risks and associated impacts, including those that are climate-related. The **3 Sustainability Committee** supports sustainability efforts and the integration of ESG matters in strategy formulation. After evaluating the Climate Ambition project, the Sustainability Committee endorsed it to the Board in 2021. Both committees meet a minimum of twice a year and report their discussions to the Board.

As an exercise of its oversight function, the Board holds regular sessions with the Ayala **4 Group Management Committee** to discuss group-level objectives and strategic plans. Topics include climate-related issues such as progress on group-wide GHG emissions reduction targets. The discussions align group and parent-level priorities and pinpoint areas for collaboration. The relevant recommendations of the Group Management Committee are discussed with the RMRPT and Sustainability Committees prior to Board approval.



The **5 Chief Risk and Sustainability Officer (CRO/CSO)** is a member of the Ayala Group Management Committee. He holds the highest management-level position mandated to lead the identification, assessment and management of climate-related risks and opportunities, as well as direct the group's overall sustainability strategy. As one of the most senior management executives under whose leadership falls both the Sustainability and Risk Management departments, the CRO/CSO leads integration efforts, including with other departments such as finance. The CRO/CSO's key climate-related responsibilities include: leading management in the identification and assessment of climate related risks and opportunities, leading functional councils such as the Ayala Sustainability, Insurance and the Enterprise Risk Management (ERM) councils and ensuring that programs align with best practices. The CRO/CSO directly reports to the **6 President and Chief Executive Officer (CEO)**, who reports to the Board of Directors. The President and CEO is the ultimate sustainability champion at Ayala.

Supporting the CRO/CSO is the **7 Group Risk Management and Sustainability Unit (GRMSU)**. The GRMSU helps convene the **8 Sustainability, 9 Insurance and 10 Enterprise Risk Management (ERM) councils**. The GRMSU manages the inclusion of climate-related risks in the ERM program, establishes the relevant risk financing strategy and supports the rollout of the Climate Ambition Project across the Ayala group.

The Sustainability, Insurance and ERM Councils include sustainability, insurance and risk officers from across the subsidiaries. Council members share information and best practices pertinent to climate change, the transition to a low-carbon economy, the circular economy and the Sustainable Development Goals (SDGs). The councils discuss Ayala group-level climate goals, targets and policies at their meetings, then report their summaries to the Board via the governance structure outlined in the chart above.

Strategy

In 2022, Ayala assessed its exposure to specific climate-related risks and opportunities in alignment with the TCFD recommendations. Ayala worked with Aon Global Risk Consultants (Aon) to assess the potential impacts of climate-related risks and opportunities for the group and key business units. The considerations and assessments of physical and low-carbon transition risks covered the time horizon 2020 to 2100.

Physical risks and opportunities Linked to the impact of acute risks (e.g., increased severity of tropical cyclones, wildfires and floods) and chronic risks (longer-term shifts in climate patterns such as sustained increase in temperatures and water stress)

Transition risks and opportunities Linked to the impact of a transition to a low-carbon economy (e.g., carbon pricing schemes)

Aon evaluated the asset value at risk for the parent and unlisted subsidiaries and six business units: the Energy group (ACEIC and ACEN), Ayala Land, Bank of the Philippine Islands (BPI)¹, Globe Telecom (Globe)², Integrated Micro-electronics, Inc. (IMI) and Manila Water Company, Inc. (MWC).

Scenarios: In its analysis, Aon considered two scenarios informed by the Intergovernmental Panel on Climate Change (IPCC).

RCP 8.5 Temperature Outcome³ 3.2-5.4°C The RCP 8.5 scenario assumes no major global effort to limit GHG emissions. RCP 8.5 is characterized by increasing GHG emissions leading to higher global average temperatures.

RCP 4.5 Temperature Outcome 1.7-3.2°C This scenario considers coordinated action to limit GHG emissions and achieve average global warming of approximately 2°C by the end of the century when compared to pre-industrial levels. It is a stabilization scenario where atmospheric GHG concentrations are stabilized before 2100.

The climate-risk modeling is based on The Climate Service's (an S&P Global company) Climonomics' current understanding of climate science and may change as understanding of atmospheric climate science improves. Data for temperature, drought and wildfire hazards are based on IPCC Coupled Model Intercomparison Project Phase 5 (CMIP5). Modeling for coastal flooding, fluvial basin flooding, tropical cyclones and water stress is sourced from a combination of peer-reviewed scientific studies and statistical-stochastic models. For transition risk modeling, temperature extremes were used to provide a forcing function. This was coupled with impact functions to model potential future litigation, reputation, technology and market risks.

Under both climate scenarios, when considering an aggregated perspective for Ayala and six business units, **coastal flooding is the most material climate-related physical risk. By asset type, the largest risk is to data center assets** because of a higher potential for business interruption and clean-up and repair costs. Most of the data centers are located in the Philippines. For further details on the response to coastal flooding, refer to the physical risks with highest potential financial impact table.

The outcome of the first scenario analysis indicates that overall, **transition risk is minimal** under both scenarios and in all timeframes. At the time of the scenario analysis, GHG emissions data was incomplete across the group. This reduces the accuracy of the risks and opportunities modeling. As GHG emissions reporting and climate-related activities develop, Ayala will look to reevaluate the outcomes of this assessment.

Risks with highest potential financial impact: Based on the outcomes of the scenario analysis exercise, Ayala identified specific climate-related issues with the highest potential financial impact on the business. Financial impact is defined as the asset value at risk.

¹ The modeling for BPI contains only a subset of office locations and not the full asset portfolio. Subsequently it does not take into account the potential for increased market risk in investment portfolios or credit risk in loan portfolios.
² All business interruption values for Globe Telecom were assigned to one asset.
³ Global average temperature increase by the end of the century when compared to pre-industrial levels.

The risks presented below uses the following timeframes aligned to overall business planning:

- **Short-term:** current to two years in the future; these climate-related risks and opportunities integrate with existing risk management processes
- **Medium-term:** two to five years in the future
- **Long-term:** five to 12 years in the future

Physical risks with highest potential financial impact

Coastal flooding
Increases in the frequency and severity of extreme precipitation events can lead to localized flooding. Rising sea-levels can also cause substantive impacts.

Transition risks with highest potential financial impact

Increased stakeholder concern or negative stakeholder feedback
The rising awareness of customers and stakeholders on climate change issues such as GHG concentrations in the atmosphere and the transition to a low-carbon economy

Shifts in technology
In the transition to a lower carbon economy, technological advancements may reduce competitiveness, production, efficiency or demand and may lead to impaired or stranded assets.

Asset value at risk (approx. excluding mitigation)

US\$270 million to 1,440 million⁴

US\$18 million to 22 million⁵

US\$25 million to 31 million⁵

Management response

Risk response and mitigation includes:

1. Review and test the adequacy and effectivity of crisis management and IT disaster recovery plans on a regular basis;
2. Assess the effectiveness of business continuity plans through tabletop testing or simulation exercises every two years;
3. Distribute go-bags, CPR kits and other paraphernalia that will help all employees to recover from any disaster;
4. Invest in a comprehensive insurance program and periodically review the adequacy of insurance coverages; and
5. Collaborate with business units on how to share resources for faster recovery.

Ayala's response is further explored in the business resilience discussion.

The largest scope 1 emissions are from ACEN contributing 97% to scope 1 emissions following the operational control approach. ACEN has committed to transition its generation portfolio to 100% renewables by 2025 and in 2022 completed its divestment from the SLTEC coal-fired power plant through the world's first energy transition mechanism. This will allow the early retirement of the coal plant about 15 years ahead of the end of its useful life.

The largest scope 2 emissions come from Globe. Globe has committed to set science-based targets through the Science Based Targets Initiative (SBTi) and achieve Net Zero by 2050. In line with its climate ambition roadmap, Globe has shifted 24 high-energy utilization facilities to renewable energy through Power Purchase Agreements (PPA) bundled with retrievable Renewable Energy Certificates (REC). It has deployed over 9,000 Green Network Solutions and energy-efficient equipment to drive energy efficiency and network optimisation. It has also piloted alternative hybrid power sources (i.e., hybrid solar gensets) and employee EV shuttles to reduce reliance on fuel consumption. It will continue to integrate sustainability in its value chain through sustainability criteria in the procurement process and supply chain onboarding.

IMI is focused on delivering energy efficient technologies for customer connectivity and mobility.

For the Energy group, technology developments may increase the competitiveness of alternative energy generation and storage solutions. Renewable energy solutions underpin the GHG emissions reduction targets of the Energy group, which are presented in the Metrics and Targets section.

⁴ Reported for 2020 to 2040 timeframe to align with long-term business timeframe under RCP8.5 modeling
⁵ Reported for 2020 to 2040 timeframe to align with long-term business timeframe under RCP4.5 modeling

Risk management

Business strategy

Climate-related issues manifest in changing stakeholder expectations and consumer behavior and shifts in the overall business environment. Ayala responded by redefining its strategic initiatives. These include significant structural changes such as the transformation of ACEN, which has become one of the fastest-growing renewable energy platforms in Southeast Asia and is a core driver of Ayala's earnings. In addition, BPI intends to halt all coal plant financing by 2032. The Climate Ambition underpins many of Ayala's emission-reduction initiatives. It continues to influence business decision-making and research and development activities to meet both interim and longer-term net-zero commitments.

Ayala Climate Ambition: Ayala partnered with South Pole, a leading project developer and global climate solutions provider, to develop a roadmap for reaching net-zero GHG emissions across the business units and at the parent level. Over the last 12 months, Ayala and South Pole have:

Climate Ambition Updates

- 
Developed a detailed GHG footprint across scopes 1, 2 and 3 for the Energy group, Ayala Land, Globe Telecom and BPI
- 
Assessed potential emission reduction activities and strategies to help prioritize and budget for these interventions across our core business units
- 
Set emission reduction targets for the Energy group and Ayala Land, while BPI and Globe are in the process of finalizing their emission reduction targets

Targets are aligned with a science-based 1.5°C pathway and will be rolled up to set the ambition at the parent level. Furthermore, Ayala will extend the emission reduction initiatives to cover more business units by sourcing renewable energy, implementing energy efficiency initiatives and adding value chain mitigation targets using supplier engagement and circular economy principles.

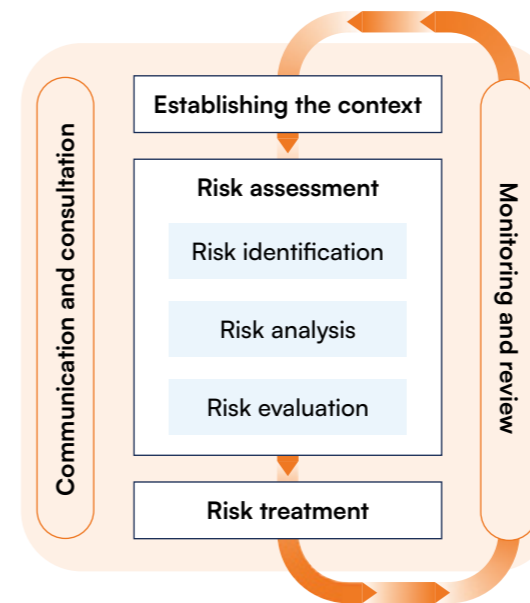
Climate-related risks and opportunities have influenced business units to be more critical of their supply chains. For instance, Ayala Land set the ISO 20400:2017 Guidelines for Sustainable Procurement as its benchmark for supply chain policies and processes, while Globe Telecom began a complete assessment of its value chain for sustainability risks and opportunities.

Climate-related issues are inputs in financial planning for revenues, access to capital, capital allocation and capital expenditure. As a case in point, the Energy group utilized financial planning data across several time horizons to inform its plans to fully divest coal generation assets by 2030. Targeted budgetary allocations, such as Project Kasibulan, the initiative for reforestation and forest protection, support GHG reduction. The project has a dedicated internal budget approved by the Board.

Business resilience

Ayala's business units have started to mitigate the impact of climate-related hazards and extreme events. For example, learning from the Typhoon Haiyan experience, Globe has started replacing its guyed towers with those that can withstand super typhoons. Should one of its data centers suffer significant physical damage due to an extreme climate event, an automatic swap can be initiated to alternative sites. Globe has also elevated base transceiver station (BTS) cabinets for sites in flood-prone areas or near river systems. Ayala Land's focus area of site resilience serves to mitigate vulnerability to climate change and natural disaster. Ayala will continue the process of integrating potential climate-related risks and opportunities into business strategy in 2023 to strengthen business resilience.

Since 2019, Ayala has intentionally included sustainability issues in the risk identification and evaluation processes. The ERM policy includes the identification, assessment and management of climate-related risks and potential impacts on business, strategy and financial planning. The ERM process is shown in the figure below.



and sustainability megatrends such as natural hazards and climate change. Sustainability targets and objectives form part of the internal context setting. The Board, management committees, President/CEO, CFO/CRO/CSO, GRMSU and risk owners collaborate to define the context and objectives for the risk management process.

As part of its annual business activities, the GRMSU conducts risk assessment sessions to identify, evaluate and prioritize climate-related risks. During these sessions (described further below), climate-related risks are identified, evaluated and prioritized based on their relative significance to other risks. The outcomes of the risk management process are semi-annually reviewed by the GRMSU and communicated to the CRO/CSO and reported to the Board. The CRO/CSO is responsible for reporting risks, including climate-related risks and opportunities, and their potential financial impacts. The CRO/CSO continues to monitor the management of climate-related risks in relation to overall risk exposure.

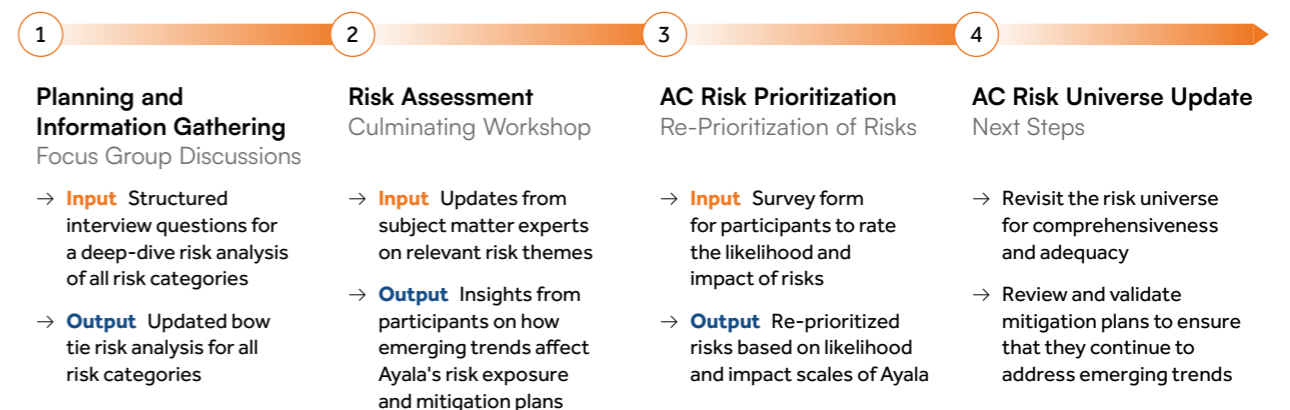
Annual risk assessment

Every year, risk owners join focus group discussions to establish the broader risk universe. At the Risk Assessment workshop, subject matter experts analyze relevant risk themes and lead discussions about emerging market trends' impact on business. The approach to establishing the context for the annual risk assessment is shown below.

Context setting, the first step of the risk management process, explains the internal and external environments influencing risk identification, assessment and management objectives. As part of the external context setting, Ayala considers environmental factors

Risk Assessment Approach

The approach is a combination of information gathering, stakeholder interviews and workshops



Metrics and targets

During the annual risk assessment exercise, risk owners and risk designates map risks based on their likelihood (1 is the lowest and 5 is the highest) and their grade of impact (0 is the lowest and 5 is the highest). The risk score is based on the combination of the overall impact grade and the likelihood score. Risks are then prioritized based on their total scores.

The assessment of climate-related impacts considers the following:

- ① Business resilience
- ② Operations
- ③ Competitiveness and innovation
- ④ Political and regulatory themes
- ⑤ Portfolio management
- ⑥ Capital markets and financing
- ⑦ Brand and reputation
- ⑧ Partnerships
- ⑨ Technological advancements

Current regulations, such as the Philippines' Intended Nationally Determined Contribution (INDC) to the United Nations, are always included in climate-related risk assessments. With this commitment, the Philippines pledges to cut carbon emissions by 70% by the year 2030 from a 2020 baseline. Likely future regulations aligned with this commitment will cover the energy, transport, waste, forestry and industry sectors. Of particular relevance for Ayala is the energy business. **The Energy group has committed to ambitious targets for the growth of renewable energy and divestment from coal assets.**

The group also considers emerging regulations, such as the Low Carbon Economy Act. While the bill is still pending, it aims to establish an emissions cap-and-trade-system in the Philippines. As part of the Climate Ambition, improved measurement and tracking of GHG emissions and reduction opportunities will assist the group in responding to similar legislation as it emerges.

In 2022, as part of another dedicated risk management process, the business unit CEOs were invited to participate in an online survey to rate strategic risks and explore their interconnectivity. They then discussed their answers to the online survey to explore implications and opportunities for risk management. Participants noted several examples of interconnectivities among climate-related risks, stakeholder expectations of ESG commitments and brand reputation. The identification of risk clusters, or risks that may magnify impact on the business, was a key outcome of this process.

The risk universe remained at 13 risk categories, including a climate change risk category. Climate change risk, associated with a failure to prepare for climate-related physical and transition risk impacts, was ranked in the top four risks. The risks are discussed in more detail in the Risks and Opportunities section of Ayala's 2022 Integrated Report. The outcomes of the risk assessment conducted at the parent level were similar when compared to the assessments completed at the group level.

In the Environmental section of Ayala's 2022 Integrated Report, Ayala's key environmental performance metrics were discussed in relation to waste generated, materials and water use, fuel and electricity use and GHG emissions. A more detailed breakdown across business units can be found in the Performance Indices section of Ayala's 2022 Integrated Report.

Performance on sustainable business practices is included in the CEO scorecard. The targets for business units impact their performance ratings, which are the basis for financial rewards. The CEO and CRO/CSO are incentivized for performance related to GHG emissions reductions, efficiency and behavioral change activities. Other climate-related metrics include internal carbon pricing and executive remuneration. Ayala Land has set an internal price on carbon. Ayala Land business units are charged a carbon tax based on their annual fuel and electricity consumption. The fees encourage investments in energy efficient technologies and renewable energy sourcing. In 2022, the fee was set at ₱250 per metric tons of carbon dioxide equivalent (tCO₂e).

Targets

Through the net-zero engagement with South Pole, Ayala's four key businesses, Ayala Land, BPI, Globe and the Energy group, have now calculated their full scopes 1 to 3 footprint using the international Greenhouse Gas Protocol methodology, an internationally recognized standard for corporate GHG emissions accounting. Existing GHG emissions calculations were reviewed and updated where required, for example, to reflect the most up-to-date emissions factors available for relevant emission sources. All 15 scope 3 categories were then reviewed for relevance to the business units' operations. For all relevant categories, a detailed data collection and validation exercise was completed before a complete GHG inventory was developed. This represents the first complete scope 3 inventory for these business units. As Ayala continues to expand its Climate Ambition, more business units will develop full GHG footprints. This will form the basis of Ayala's robust GHG footprint. The approach followed to date also ensures that GHG inventories have been developed consistently across the group, regarding emission factor databases, methods of scope 2 electricity reporting and consistent application of assumptions.

After the development of a robust GHG emissions footprint, the business units worked with South Pole to identify emission reduction opportunities for identified emission hotspots. This involved a combination of desktop research, expert insights and brainstorming sessions with key Ayala attendees. These sessions also served as knowledge-sharing and engagement opportunities to accelerate the net-zero ambition.

Guided by the latest science, the business units set near- and long-term emission reduction targets that are aligned with a 1.5°C pathway. Where business units were part of specific sectors, for example the power sector, sectoral guidance was also considered to ensure that targets aligned with global best practice. All targets will use 2021 as the base year and 2030 as the target year for near-term targets. A combination of absolute and intensity targets will be used across the business units, reflecting their unique operating circumstances.

Using the understanding of where the business units are today and the targets they need to aim for, a roadmap was developed to guide the desired emissions reduction trajectory, understand key intervention areas and identify where ongoing focus is required to recognize new technologies or opportunities for value chain engagement. Areas of opportunity across different business units were also highlighted, which provides a basis for future collaboration across the group.

The Energy group and Ayala Land have completed their net-zero roadmaps and developed an ambitious set of near- and long-term GHG emissions reduction targets that are aligned with science. Globe, BPI and Manila Water are all working on finalizing their GHG emissions footprint and understanding their net-zero roadmap development, which should be completed by mid-2023. In the second half of the year, Ayala will be able to leverage the progress made by the individual business units to complete the roadmap for achieving net-zero GHG emissions by 2050.



The Energy group is actively growing its renewable energy portfolio with new developments across South East Asia such as the 252 MW Quang Binh Windfarm in Vietnam.



The Energy group has recently committed to setting the following near-term targets aligned with science:

Energy group targets ⁶	by 2030	by 2040
Reduce scope 1 emissions from own electricity generation by:	73.6% per MWh	94.5% per MWh
Reduce scope 1 and 3 emissions from own generation and retail electricity by:	73.8% per MWh	99% per MWh
Reduce scope 1 emissions not related to electricity generation and all scope 2 emissions by:	42% per MWh	90% per MWh
Reduce scope 3 emissions ⁷ of all own and joint operations by:	51.6% per MWh	97% per MWh

As the Energy group transitions, Ayala will assume a more competitive position that reflects shifting consumer preferences for low-carbon electricity.

Similarly, Ayala Land has set near-term science-based targets and committed to reducing scope 1, 2 and 3 emissions 42% by 2030 from a 2021 base year. Ayala Land's long-term target is reducing scope 1, 2 and 3 emissions 90% by 2050 from a 2021 base year.

Ayala's current defined set of climate-related targets include a commitment to:

-  **Reduce absolute scope 1, 2 and 3 emissions to net zero by 2050 from a 2021 base year**
-  **Establish interim targets aligned with a 1.5°C pathway**





Next steps

In the 2021 Annual Report, Ayala outlined its goals as part of the TCFD Roadmap. Progress is reported on the next page.

Ayala will update TCFD disclosures in line with the evolution of business and of climate science. In 2023, Ayala will conduct a thorough review of practices against the TCFD recommendations and develop an updated implementation plan to reach full alignment in the coming years.

⁶ From a 2021 base year

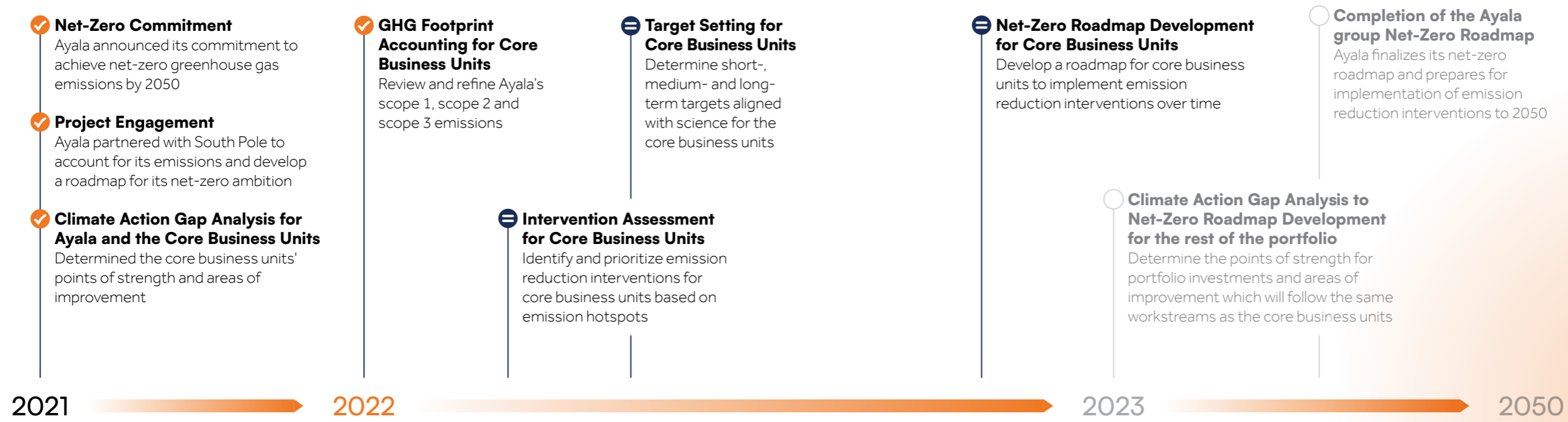
⁷ Including purchased goods and services, fuel and energy related emissions not already covered, upstream transportation and distribution, waste, employee commuting, upstream leased assets and fuel and energy emissions from joint ventures.

	2022 Goals	Status
 Governance	<ul style="list-style-type: none"> Report the results of the ongoing climate scenario analysis to the management and RMRPT Committee and explain its potential financial implications to the group. ✓ Conduct an ESG workshop for the Board as a result of their ESG self-assessment activity. ✓ 	
 Strategy	<ul style="list-style-type: none"> Undertake climate-related scenario analysis to identify and understand material climate-related risks and opportunities. ✓ Continue collaboration between Ayala and its business units to monitor climate-related risks and opportunities. ⊖ Collaborate with the Corporate Strategy and Finance groups to integrate climate-related risks and opportunities in business operations, strategy and financial planning. ⊖ 	
 Risk Management	<ul style="list-style-type: none"> Refine and integrate climate-related risk management into current risk management framework. ✓ Focus on climate-related risks in the annual risk assessment exercise. ✓ Engage and guide the ERM Council in the implementation of ESG and climate-related risk management process. ✓ Transition to COSO ERM framework for identifying and assessing ESG risks. ⊖ 	
 Metrics and Targets	<ul style="list-style-type: none"> Conduct scope 3 screening in preparation for setting science-based targets. ⊖ Develop net-zero roadmaps for Ayala Land, BPI, Globe and the Energy group. ⊖ Progress initiatives around biodiversity, including working with the Board on understanding the Taskforce on Nature-related Financial Disclosures (TNFD). ⊖ 	

Status of Progress

 Completed  Ongoing

Net-Zero Strategy Roadmap



Net Zero

Core Business Units	Peer Benchmarking	GHG Inventory	Intervention Assessment	Target Setting	Progress
AyalaLand	✓	✓	✓	✓	✓ Completed roadmap
BPI	✓	✓	⚖	⚖	⚖ To complete roadmap by mid-2023
Globe	✓	✓	⚖	⚖	⚖ To complete roadmap by mid-2023
The Energy group <small>ACEIC and ACEN</small>	✓	✓	✓	✓	✓ Completed roadmap

Ayala refined its business strategies in response to changing climate-issue related consumer behavior and stakeholder expectations and developed its Climate Ambition to meet net-zero commitments. Established to guide emissions reduction, understand intervention areas, identify new technologies and highlight opportunities across the value chain, the Net-Zero Roadmap also identifies points for collaboration for the business units to achieve their shared climate ambition. Ayala is on track to complete its Net-Zero GHG Roadmap by 2023 and business units are also making headway in their own climate ambition process:

- **Ayala Land and the Energy group** completed their Climate Ambition roadmap
- **Globe and BPI** working on GHG footprint validation

As the business units continue to make progress, Ayala is on track to complete the group's roadmap, which will guide efforts towards net-zero GHG emissions by 2050.

SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

2 out of 3 SBTi signatories from the Philippines are from the Ayala group