



**ACCELERATE[®]
CLIMATE
TRANSITION**

ACT AUTOMOTIVE

Low-carbon transition assessment methodology



Version 2.0 – June 2024

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1. INTRODUCTION

The 2015 United Nations Climate Change Conference (COP21) in Paris reinforced the global commitment to act on climate change with the political agreement to limit warming to well-below 2°C and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels. The 'Accelerate Climate Transition' (ACT) Initiative measures a company's alignment with a future low-carbon world. The goal is to drive action by companies and encourage businesses to move to a 1.5°C compatible pathway in terms of their climate strategy, business model, investments, operations and greenhouse gas (GHG) emissions management. The general approach of ACT is based on the Sectoral Decarbonization Approach (SDA) developed by the Science-Based Targets initiative (SBTi) in order to compare a company's alignment with a 1.5°C world, the application of which is described in the ACT Framework (1).

The transport sector represents about one quarter of all GHG emissions from fossil fuels (2), and poses great challenges in terms of climate mitigation. In 2022, around 5.8 GtCO₂ was emitted from passenger and freight road transportation, which is 74% of the nearly 8t GtCO₂ arising from all transportation modes. Automobile transportation has become the dominant mode of personal transportation, and its consequent importance to decarbonization scenarios is the reason the automotive manufacturing (Automotive) sector has been considered by the ACT initiative from the beginning. The ACT Auto methodology focuses on light-duty vehicles (LDVs), which includes passenger vehicles and light commercial vehicles. LDVs were responsible in 2022 for 60% of road transport CO₂ emissions, while heavy-duty vehicles (HDVs) caused the remaining 40%.

In terms of assessment, despite complex multi-tiered industrial supply chains, there is a clearly defined main activity with corresponding GHG emissions data. This makes the auto sector suitable for analysis using the SDA and allows the ACT assessment to focus on quantitative indicators. However, qualitative indicators are also considered due to the sector's complexity, its economic importance, and the significance of these aspects when considering the alignment of the auto industry with a low-carbon future.

The first version of the ACT Auto methodology put strong emphasis on the GHG emissions from the use phase of vehicles, arising from fuel combustion. The updated version maintains this focus however also puts increased emphasis on the upstream embedded GHG emissions from materials used in vehicles manufacture. This is motivated by the ongoing electrification of the global LDV fleet: for electric vehicles, life cycle analyses show that embedded GHG emissions can be higher than in-use GHG emissions cumulated over the vehicle's lifetime (3).

The methodology considers factors such as: current vehicle production, locked-in GHG emissions from sold vehicles, production technology changes (notably vehicles running with alternatives to fossil fuels), and future investments in low-carbon technologies. Such data feeds simplified assessment models that aim to quantify the implications of, for example, technology choices for future GHG emissions. Qualitative topics also considered relevant include new business models, supplier, customer, and policy engagement, and the overall decarbonisation strategy.

2. PRINCIPLES

The selection of principles to be used for the methodology development and implementation is explained in the general Framework. Table 1 recaps the adopted principles that were adhered to when developing the methodology.

[Table 1 : Principles for implementation](#)

RELEVANCE - Select the most relevant information (core business and stakeholders) to assess low-carbon transition.

VERIFIABILITY - The data required for the assessment shall be verified or verifiable.

CONSERVATIVENESS - Whenever the use of assumptions is required, the assumption shall err on the side of achieving well-below 2°C maximum global warming and pursuing efforts to limit the temperature increase to 1.5°C (compared to pre-industrial levels).

CONSISTENCY - Whenever time series data is used, it should be comparable over time.

LONG-TERM ORIENTATION - Enables the evaluation of the long-term performance of a company while simultaneously providing insights into short- and medium-term outcomes in alignment with the long-term.

3. SCOPE

3.1 SCOPE OF THE DOCUMENT

This document presents the ACT assessment methodology for the automotive manufacturing (automotive) sector. It includes the rationales, definitions, indicators and guidance for the sector-specific aspects of performance, narrative and trend scorings.

It was developed in compliance with the ACT Guidelines for the development of sector methodologies (4), which describe the governance and process of this development, as well as the required content for such documents.

It is intended to be used in conjunction with the ACT Framework (1), which describes the aspects of the methodology that are not sector-specific.

3.2 SCOPE OF THE SECTOR

The automotive sector corresponds to Manufacturing - Transportation equipment - Automobiles in the CDP Activity Classification System (CDP-ACS). The sector's activities are classified under the code and description "2910 – Manufacture of motor vehicles" in the ISIC classification and under the code and description "29.10 – Manufacture of motor vehicles" in the NACE classification.

Companies that can be assessed by the ACT Auto methodology are automotive manufacturers that assemble vehicle parts and sell ready-to-use vehicles. Original equipment manufacturers (OEMs) from the automotive sector that produce parts and equipments for vehicles but do not assemble vehicles themselves cannot be assessed by the ACT Auto methodology.

The ACT Auto methodology focuses on the manufacturing of light duty vehicles (LDVs). Various definitions slightly differing from each other are found in literature, mainly explained by the fact that countries do not use the exact same criteria and metrics¹. The International Energy Agency (IEA) defines LDVs as passenger vehicles and light commercial vehicles exhibiting a gross vehicle weight lower than 3.5 tonnes (2). This definition is the one used in this methodology, mainly because various benchmarks considered in some performance indicators are based on IEA data.

- ◆ Heavy duty vehicles (HDVs) are not considered in the ACT Auto methodology, which is mainly explained by the following reasons:
- ◆ The HDV market is structured "on demand", making it harder to assess using a set of fine-tuned performance indicators, compared to the LDV market.

Decarbonisation levers are not the same for LDV and HDV manufacturing. As an illustration, the Net Zero Roadmap from the IEA expects electric vehicles to represent 67% of LDVs and 37% of HDVs sales by 2030. Electric vehicles are clearly identified as the predominant solution to decarbonise LDV global fleet GHG

¹ The ICCT has highlighted the variations of LDV definition in major countries regarding the automotive market: China, Europe, India, and the United States of America. See p.15 of [Electric vehicles market monitor for light-duty vehicles - China, Europe, United States, and India – 2022](#)

emissions. Fuel cell vehicles running on hydrogen are also expected to be deployed at a much larger scale for HDV compared to LDV in upcoming years, illustrated by a 60% of fuel cell HDVs in 2022 compared to 2021 (5).

Focusing on LDVs still addresses around 60% of global GHG emissions related to road transport, or 44% of global GHG emissions related to all transportation modes. LDVs were responsible for two-thirds of road transport energy consumption in 2022 and this share is expected to stay close to 60% by 2030 (2).

DEFINITION OF LOW-CARBON VEHICLES (LCV) IN ACT AUTO METHODOLOGY

The notion of low-carbon vehicle is used in various performance indicators of this methodology, hence the need to propose a clear definition. The approach is based on the EU taxonomy, which defines LCV as follows:

Until 31 December 2025: vehicles that have tailpipe CO₂ emissions of less than 50 gCO₂/km. Practically, this includes:

- ◆ Some plug-in hybrid vehicles (PHEV), as long as their CO₂ emissions are below the specified threshold
- ◆ Battery electric vehicles (BEV)
- ◆ Fuel cell electric vehicles (FCEV)

From 1 January 2026: vehicles that have CO₂ emissions of 0 gCO₂/km (zero-emission vehicles). Practically, this includes:

- ◆ Battery electric vehicles (BEV)
- ◆ Fuel cell electric vehicles (FCEV)

The ACT Auto methodology only considers BEV and FCEV as LCV, and thus excludes PHEV, for the following reasons:

- ◆ It has been demonstrated by many studies that the official PHEV's tailpipe GHG emissions disclosed by companies are very often significantly lower than real-world usage values (6), (7). Consequently, some PHEV can officially meet the 50 gCO₂/km criterion set by the EU taxonomy, whereas real-world usage GHG emissions are higher.
- ◆ PHEV in-use GHG emissions highly depend on the driver behavior and driving.
- ◆ This choice aligns with the EU taxonomy criteria that will apply starting from January 2026. It is a way to anticipate evolving regulation by no more than a year and a half.

The definition of LCV in the ACT Auto methodology thus corresponds to the one of zero-emission vehicles.

4. BOUNDARIES

4.1 REPORTING BOUNDARIES

The ACT Auto methodology considers all material sources of GHG emissions for the automotive manufacturing sector. This mainly includes GHG emissions from companies' own operations, from the production of materials used in vehicles structure, and from the use of sold vehicles (tailpipe emissions). Figure 1 provides typical distribution of GHG emissions for automotive manufacturers.

The main focus of the analysis is on²:

- A) Upstream scope 3 emissions associated with materials used in vehicles' construction (category 1 – Purchased goods and services).

Depending on the type of vehicles that are produced, these GHG emissions can make-up to 50% of an automotive manufacturers' total GHG emissions. These GHG emissions are primarily from the purchase of materials/components for the manufacture of vehicles such as steel, aluminium, plastics, glass, and batteries for electric vehicles (EVs). It is expected that the share of these upstream emissions will increase as companies switch their production from internal combustion engine vehicles (ICEVs) to EVs.

- B) Downstream scope 3 emissions arising from the use phase of the sold vehicles (category 11 – Use of sold products).

These GHG emissions represent up to 80% of automotive manufacturers' total GHG emissions for ICEVs, and up to 55% for EVs. For EVs, this proportion is highly dependent on the GHG emissions intensity of the electricity used to charge the vehicle.

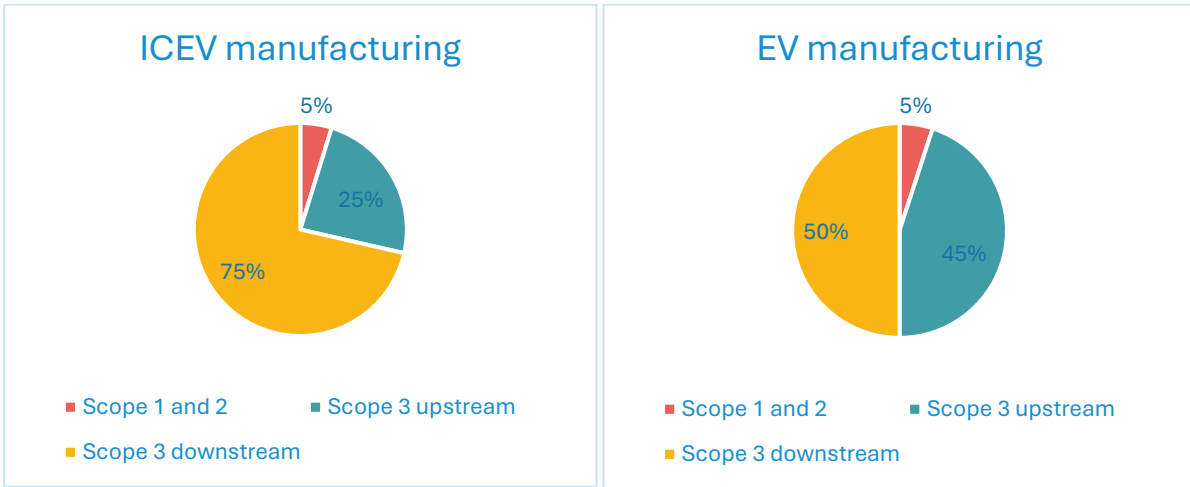
- C) Scope 1 and 2 emissions are included in the analysis since they relate to direct operations from assessed companies.

These GHG emissions are however given a low weighting in the performance assessment, as they typically account for no more than 5-10% of automotive manufacturers' total GHG emissions.

Note: some automotive manufacturers might integrate some steps of battery production into their production of electric vehicles. In such cases, GHG emissions related to these steps shall in practice be accounted for in scope 1 and 2 emissions. To simplify the assessment of indicators using GHG emissions reduction pathways and stick to the boundaries of emissions of benchmark pathways, GHG emissions associated with production of battery for electric vehicles shall always be considered as scope 3 upstream ones for an ACT Auto assessment.

² 2022 CDP data from automotive manufacturers has been used to estimate typical GHG emissions breakdown between scope 1, 2, and 3 emissions.

Figure 1: Typical GHG emissions profile for automotive manufacturers. Data from (8)



For the indicators relying on GHG emissions reduction pathways, the following sources of GHG emissions only are considered:

Table 2: Boundaries of emissions considered in indicators based on GHG emissions reduction pathways

GHG EMISSIONS	INDICATORS
Indirect GHG emissions from products used / Scope 3 upstream (category 1)	AU 1.2 / AU 4.1
Direct GHG emissions and indirect GHG emissions from imported energy / Scope 1 and 2	AU 1.1 / AU 2.1
Indirect GHG emissions associated with the use of products / Scope 3 downstream (category 11) ³	AU 1.3 / AU 4.2 / AU 4.3

Avoided GHG emissions and carbon offset are not taken into account for ACT assessment of quantitative performance indicators (9).

EMISSIONS FROM THE USE OF SOLD VEHICLES: WELL-TO-WHEEL (WTW) VS. TANK-TO-WHEEL (TTW)

When speaking about automotive manufacturers’ downstream emissions associated with the use of sold vehicles, it is important to make the distinction between:

³ See next section regarding the consideration of well-to-wheel vs. tank-to-wheel emissions in the ACT Auto methodology

- ◆ Well-to-tank (WTT) emissions, arising from the production, transportation, transformation and distribution of the fuel used to power the vehicle.
- ◆ Tank-to-wheel (TTW) emissions, resulting from the use of the vehicle while fuel is consumed.
- ◆ Well-to-wheel (WTW) emissions, which are the sum of WTT and TTW emissions mentioned above.

Focusing on a TTW approach allows for analysis of “tailpipe” emissions, i.e. emissions resulting from the fuel combustion during the vehicles’s use-phase.. Considering a WTW approach brings additional information regarding all steps required to carry the fuel to the vehicle, starting from the fuel production.

While the previous version of the ACT Auto methodology put emphasis on considering WTW emissions, such an approach is not applicable to this updated methodology. This is due to the fact that the only 1.5°C aligned GHG emissions reduction pathway identified, is the Net-Zero Emissions by 2050 (NZE) Scenario from the IEA, which relies on TTW emissions.

Using pathways relying on TTW emissions still allows for assessment of the main decarbonisation challenge for the automotive manufacturing sector since:

- ◆ Automotive manufacturers have direct influence over the tailpipe emissions of the vehicles they sell, since they decide on their technology/powertrain type. Conversely, their influence on upstream steps related to production, transportation, transformation and distribution of fuels is more diluted.
- ◆ TTW emissions typically represent 75% of WTW emissions of conventional fuels such as gasoline, diesel, and natural gas⁴. As mentioned above, the combustion of fossil fuels currently represents by far the largest source of emissions in the sector.

Actions of automotive manufacturers aiming at lowering WTT emissions (for instance contributing to the generation of low-carbon sources of energy and related fuels) are captured in some performance indicators that do not rely on GHG emissions reduction pathways, such as indicator *9.2 Changes to business models*.

4.2 RATIONALE

Decarbonization of the transport sector is one of the major transitions in any low-carbon scenario. In its NZE Roadmap, the IEA anticipates that road transport-related global CO₂ emissions will decrease from 5.87 Gt in 2022 to 4.09 Gt in 2030 – about 4% yearly decrease. The majority of global passenger travel is by road (passenger cars or buses), road transport being estimated to contribute to around 75% to global passenger transport⁵. These emit higher average CO₂ per passenger-kilometre than competing ground-transport technologies, such as railway travel. With vehicle-ownership and travel expected to increase, the future technology pathway of the automotive manufacturing sector becomes paramount for enabling a low-carbon transition.

Most of the GHG emissions in the value chain of the automotive sector happen during the use phase of ICEVs which consume fossil fuels. About 80% of ICEVs’ lifetime GHG emissions are tailpipe emissions occurring during the use phase (3), and ICEVs still represented more than three quarters of LDVs sales in 2022 (10).

⁴ Based on data from Table A.9 of (54)

⁵ Combining 2022 estimations by mode, road and air traffic from IEA – WEO2023, rail traffic from WorldBank, sea traffic not found (but not expected to be significant compared to other modes).

The main focus of the ACT Auto methodology will therefore be on how automotive manufacturers intend to reduce these GHG emissions, particularly considering locked-in GHG emissions that will result from the use of sold ICEVs.

In the meanwhile, the global LDV fleet electrification has confirmed in the last years and it is expected that electric vehicles share in global sales will continue to increase. The 2023 updated NZE Roadmap from the IEA foresees an increase of electric vehicles (including hybrid ones) in global LDV sales from 13% in 2022 to 67% in 2030 - i.e. a 5 times increase in only 8 years – and to 100% in 2035 (2). GHG emissions arising from production of materials used in vehicles' are thus expected to increase, mainly because of the battery for electric vehicles which manufacturing is highly emissive. The ACT Auto methodology thus gives high importance to the sectoral upstream emissions associated with purchased materials.

Besides the reduction of GHG emissions from vehicles use through technological means, the transition of the transport sector will also imply a rethinking of the way vehicles are used in society. Vehicle companies are challenged to present their views on the intensification of vehicle-usage, and how they see their role evolving in scenarios that imply a different use-case of vehicles, such as a move away from private ownership to vehicle-sharing. The optimization of vehicle use as a result of these shifts is something automotive manufacturers will have to engage in. For example, if these trends mean that vehicle sales move away from private to cooperative, there are good business opportunities in focusing specifically on this sales avenue.

5. CONSTRUCTION OF THE DATA INFRASTRUCTURE

5.1 DATA SOURCES

In order to carry out a company level assessment, many data points need to be gathered from various sources. Principally, ACT relies on the voluntary provision of data by the participating companies. External data sources are also consulted where this would streamline the process, ensure fairness, and provide additional value for checking, validation and preparation of the assessment narrative.

The ACT assessment uses the data sources listed in Table 3.

[Table 3: ACT assessment data sources](#)

DATA SOURCE	MAIN USE
Company data request	Primary data source for most indicators
Contextual and financial information database sources (e.g. online and press news, RepRisk, LobbyMap)	Contextual and financial information on the company and events related to the company that could impact the ACT assessment
IPCC (2006)	Fuel emission factors and related figures (11)
IPCC Working Group III Assessment (2022)	Technology level data (12)

Where indicators refer to third-party data sources as the default option, reporting companies may provide their own data if they can provide a justification for doing so along with information about its verification status, any assumptions used and the calculation methodology.

5.2 COMPANY DATA REQUEST

The data included in Table 4 are requested from companies to conduct an ACT assessment. This description is high-level, for further details please refer to section 6.4.

[Table 4: Data requested for an ACT Auto assessment](#)

DATA REQUESTED TO THE COMPANY

GHG emissions (on scopes defined in modules 1, 2 & 4 in quantitative indicators) linked to:

- ◆ Embedded materials in vehicles’ structure, either purchased or produced by the company
- ◆ Manufacturing process of the vehicles
- ◆ In-use phase of the vehicles

Activity data (number of vehicles that are produced)

GHG emissions reduction targets for the relevant scopes of emissions (emissions intensity), as well as milestones and past targets

CAPEX investments in low-carbon technologies

R&D investments in low-carbon technologies

Low-carbon Patenting Activity

Environmental policy and details regarding governance

Management incentives

Scenario testing

List of environmental/CSR contract clauses in purchasing & suppliers’ selection process

List of initiatives implemented to influence suppliers to reduce their GHG emissions, green purchase policy or track record, supplier code of conduct

Client policy

List of initiatives implemented to influence client behaviour to reduce their GHG emissions

Company policy on engagement with associations, alliances, coalitions or thinktanks

Position of the company on significant climate policies (public statements, etc.)

List and turnover or invested capital (or other financial KPI) of activities in new businesses related to low-carbon business models

Current position and action plan of the company towards the identified low-carbon business models

5.3 PERFORMANCE INDICATORS

The performance indicators have been conceived following the main principles described in Table 5.

[Table 5 : Performance indicators](#)

AUTO			
MODULE	PAST	PRESENT	FUTURE
1. TARGETS		AU 1.5. Achievement of past and current targets	AU 1.1. Alignment of scope 1+2 emissions reduction targets
			AU 1.2. Scope 3 upstream emissions reduction targets
			AU 1.3. Alignment of scope 3 downstream emissions reduction targets
			AU 1.4. Time horizons of targets
2. MATERIAL INVESTMENT	AU 2.1. Trend in past scope 1+2 emissions intensity		
		AU 2.2. Share of low-carbon CAPEX investments	
3. INTANGIBLE INVESTMENT	AU 3.1. R&D spending on low-carbon technologies		
	AU 3.2. Company low-carbon patenting activity		
4. SOLD PRODUCT PERFORMANCE	AU 4.1. Trend in past scope 3 upstream emissions intensity		AU 4.3. Locked-in emissions from sold products
	AU 4.2. Trend in past scope 3 downstream emissions intensity		
	AU 4.5. Low-carbon vehicles efficiency performance		

	AU 4.4. Share of low-carbon vehicles		
5. MANAGEMENT		AU 5.1. Oversight of climate change issues	AU 5.3. Low-carbon transition plan
		AU 5.2. Climate change oversight capability	AU 5.5. Climate change scenario testing
		AU 5.4. Climate change management incentives	
6. SUPPLIER ENGAGEMENT	AU 6.2. Activities to influence suppliers to reduce their GHG emissions	AU 6.1. Strategy to influence suppliers to reduce their GHG emissions	
7. CLIENT ENGAGEMENT	AU 7.2. Activities to influence clients to reduce their GHG emissions	AU 7.1. Strategy to influence clients to reduce their GHG emissions	
8. POLICY ENGAGEMENT		AU 8.1. Company policy on engagement with trade associations, alliances, coalitions or thinktanks	
		AU 8.2. Associations, alliances, coalitions or thinktanks supported do not have climate-negative activities or positions	
		AU 8.3. Position on significant climate policies	
		AU 8.4. Collaboration with local public authorities	
9. BUSINESS MODEL	AU 9.1. Revenue from low-carbon products and/or services		
	AU 9.2 Changes to business models		

ACT methodologies use maturity matrices which are scaled on five levels, from “Basic” (lowest level) to “Low-carbon aligned” (highest level). Each level is associated with a score, as highlighted in Table 6. Some performance indicators are based on maturity matrices with a single question (or “subdimension”), whereas other indicators are based on multi-subdimension matrices. In the latter case, each subdimension is associated with a weighting which is taken into account to calculate the overall indicator score. Most matrices in the methodology make use of the full five-level matrix structure, although some may only use 2, 3 or 4 of the available maturity levels.

Table 6: ACT maturity levels

Evaluation level	Basic	Standard	Advanced	Next practice	Low-carbon aligned
Score	0	0.25	0.5	0.75	1

MODULE 1: TARGETS

Module 1, “Targets”, assesses the company’s commitments to reduce GHG emissions, as these are the north star for navigating the low-carbon transition. Targets provide a goal with which the company can align its strategy, business decisions, capital expenditure (CAPEX) and research and development (R&D) to deliver GHG emissions reductions. Targets should be science-based, both long-term and near-term, and cover all relevant scopes of GHG emissions.

Note: As mentioned in section 4.1. Carbon offsets are not allowed for quantitative assessment within ACT methodologies. In practice, this means that a target (especially a “net-zero” one) cannot be assessed if it is unclear how the company relies on offsets. See ACT website ([FAQ section](#)) for more information (9).

• AU 1.1 ALIGNMENT OF SCOPE 1+2 EMISSIONS REDUCTION TARGETS

DESCRIPTION & REQUIREMENTS

AU 1.1 ALIGNMENT OF SCOPE 1+2 EMISSIONS REDUCTION TARGETS

SHORT DESCRIPTION OF INDICATOR

A measure of the alignment of the company’s near- and long-term scope 1 and 2 emissions intensity reduction targets with its decarbonization pathway. The indicator will compare the trend of the company’s target pathway to the trend of the company’s benchmark pathway and thus identify the gap between both pathways in the target year. This is expressed as the company’s commitment gap.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Targets information for each relevant scope 1 and 2 emissions source (Target year, emission reduction between reporting year and target year, coverage) – see boundaries of emissions in section 4.1
- ◆ (Optional) – Base year, GHG emissions at base year

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C4.1a (absolute targets)
- ◆ C4.1b (intensity targets)

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 7.53.1 (absolute targets)
- ◆ 7.53.2 (intensity targets)

External sources of data used for the analysis of this indicator are:

- ◆ Low-carbon pathways (1.5°C aligned) – See section 6.1 for a detailed explanation about sources and low-carbon scenarios that have been identified.

- ◆ SDA – specific benchmark pathway definition (13)

The benchmark indicators involved are the following :

Target type	Parameter	Intensity metric	Methodological sources
Scope 1+2 emissions	El _B	gCO2/vehicle sold	See section 6.1

HOW THE ASSESSMENT WILL BE DONE

The analysis has two dimensions.

- ◆ Dimension 1 assesses the alignment of the company’s near-term targets. Any target where the target year ≤ reporting year + 10 can be included in this dimension.
- ◆ Dimension 2 assesses the alignment of a company’s long-term targets. Any target for which the target year > reporting year + 10 can be included in this dimension.
- ◆ The scoring rationale and calculation are the same for both dimensions.

The analysis is based on a trend ratio between the company’s scope 1+2 emissions target and the company benchmark. Trends are computed between the reporting year and the longest time horizon of the target.

The company’s target pathway is the decarbonization over time, defined by the company’s scope 1+2 emissions reduction target. To compute it, a straight line is drawn between the starting point of the analysis and the company’s target endpoint.

The company benchmark pathway is the company-specific scope 1+2 emissions low-carbon benchmark pathway. See section 6.1 for details on the computation of this pathway.

The company achieves the maximum score if the company’s target pathway and the company benchmark pathway are aligned (commitment gap = 0) and if the targets cover most of the company’s scope 1+2 emissions in the reporting year.

CALCULATION OF SCORE:

1) Trend ratio

The score is calculated by dividing the company's GHG emissions intensity reduction trend by the specific benchmark GHG emissions intensity reduction trend between the reporting year and the target year through the trend ratio:

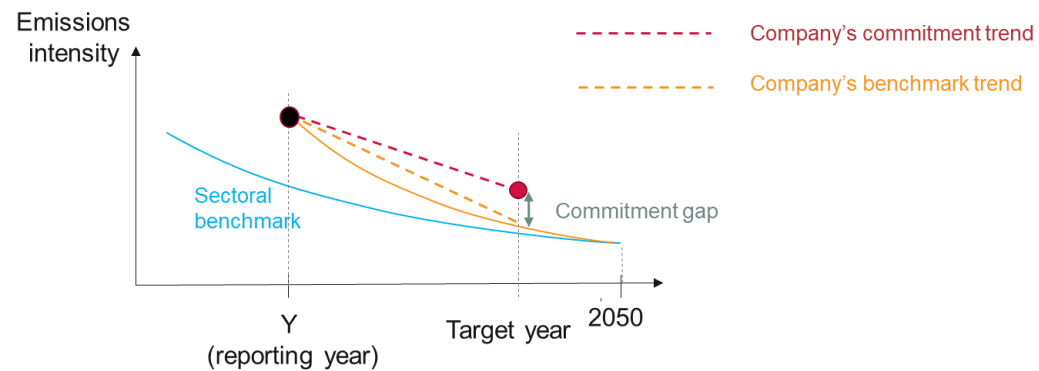
$$\text{Trend ratio} = \frac{\text{Company's target trend}}{\text{Benchmark pathway trend}} = \frac{EI_C(TY) - EI_C(RY)}{EI_B(TY) - EI_C(RY)}$$

Where:

- ◆ $EI_C(TY)$ is the company scope 1+2 emissions intensity at target year
- ◆ $EI_C(RY)$ is the company scope 1+2 emissions intensity at reporting year
- ◆ $EI_B(TY)$ is the company's benchmark scope 1+2 emissions intensity at target year

The commitment gap of the company is equal to (1- trend ratio). Thus, when the company's target pathway is aligned on the company's benchmark, the trend ratio is equal to 1 and the commitment gap is 0 (see Figure 2).

Figure 2: Trend ratio and commitment gap



2) Final Score

The final score assigned to the indicator is calculated as follows:

Conditions	Score
<p><i>Company's target trend > 0</i></p> <p>Increase in company GHG emissions intensity</p>	0%
<p><i>Company's target trend ≤ 0</i></p> <p>$0 \leq \text{trend ratio} \leq 1$</p> <p>Decrease in company GHG emissions intensity but company's commitment does not go beyond the company's benchmark ambition</p>	$\text{Trend ratio} \times 100\%$
<p><i>Company's target trend < 0 and $EI_C(RY) \geq EI_B(2050)$</i></p> <p>$\text{trend ratio} > 1$</p> <p>Decrease in company GHG emissions intensity and company's commitment equals or exceeds the company's benchmark ambition</p>	100%
<p><i>Company's target trend ≤ 0 and $EI_C(RY) \leq EI_B(2050)$</i></p> <p>No increase in company GHG emissions intensity and company's emissions intensity is already below the company's benchmark ambition for 2050</p>	100%

Targets that do not cover > 95% of direct emissions are not preferred in the calculations. If only such targets are available, then the score will be adjusted downwards in proportion with % coverage. If the target coverage of total company GHG emissions at reporting year (C_{RY}) represents less than 95%, the final score is equal to:

Final Score = Score x Target coverage of total company GHG emissions (C_{RY})

If the company has set several targets, the consolidation of the scores assigned to each target will be based on the share of GHG emissions covered by the targets.

The final score for each dimension is given as the average score for all targets assessed within the timescale for each dimension.

AGGREGATE SCORE: DIMENSION 1: 50%, DIMENSION 2: 50%

RATIONALE

AU 1.1 ALIGNMENT OF SCOPE 1+2 EMISSIONS REDUCTION TARGETS

RATIONALE OF THE INDICATOR

RELEVANCE OF THE INDICATOR:

Scope 1+2 emissions reduction targets are included in this ACT methodology for the following reasons:

- ◆ Targets are an indicator of corporate commitment to reduce GHG emissions, and are a meaningful metric of the company's internal planning towards the transition.
- ◆ Targets are one of the few metrics that can predict a company's long-term plan beyond that which can be projected in the short-term, satisfying ACT's need for indicators that can provide information on the long-term future of a company.
- ◆ Scope 1 and 2 emissions make up a smaller proportion of an automotive manufacturer's total GHG emissions than scope 3 emissions. However, it is important for organisations to set targets for their operational GHG emissions, over which they have total control, to demonstrate their intentions to transition.

SCORING RATIONALE:

Targets are quantitatively interpreted and directly compared to a low-carbon benchmark built from the company's current level of GHG emissions at reporting year and converging toward the 2050 value of the sectoral benchmark relevant for this source. Comparing the trends gives a direct measure of the commitment gap of the company. It was chosen for its relative simplicity in interpretation and powerful message.

The indicator is split into two dimensions to account for the importance of a company having targets which are aligned not just in the long-term but also in the near-term. The Science Based Targets initiative's Net Zero Standard requires companies to set both near-term and long-term science-based targets which are in line with 1.5-degree pathways. The justification for having both near- and long-term targets is explained in the Net Zero Standard: "Near-term targets galvanize the action required for significant GHG emissions reductions to be achieved by around 2030. Near-term GHG emissions reductions are critical to not exceeding the global GHG emissions budget and are not interchangeable with long-term targets. [...] Long-term targets drive economy-wide alignment and long-term business planning to reach the level of global GHG emissions reductions needed to meet climate goals based on science." (14) The recent report by the United Nations Secretary-General's High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities (HLEG) also recommends setting both near-term and long-term targets (15).

- **AU 1.2 SCOPE 3 UPSTREAM EMISSIONS REDUCTION TARGETS**

DESCRIPTION & REQUIREMENTS**AU 1.2 SCOPE 3 UPSTREAM EMISSIONS REDUCTION TARGETS****SHORT DESCRIPTION OF INDICATOR**

This indicator assesses if the company has set scope 3 upstream emissions intensity reduction targets. Both emissions coverage and timelines of targets are considered to evaluate how the company is committing to reduce its scope 3 upstream emissions.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Targets information for scope 3 upstream emissions (target year, coverage) – see boundaries of emissions in section 4.1
- ◆ (Optional) – Base year

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C4.1
- ◆ C4.1b

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 7.53.1 (absolute targets)
- ◆ 7.53.2 (intensity targets)

HOW THE ASSESSMENT WILL BE DONE

A maturity matrix will be used to assess whether or not companies have set upstream emission reduction targets. This approach has been chosen as target-setting for this part of the value chain is currently not at a mature stage. In order for the 1.5°C pathways for material emissions identified in this methodology to be used effectively, it would require the company to have set separate targets for each of its materials. If the assessor is able to make a qualitative assessment of the ambition of the targets, this can be reflected in the narrative scoring.

Question	Basic	Standard	Advanced	Next practice	Low carbon aligned	Weighting
<i>Associated score</i>	0%	25%	50%	75%	100%	
<i>Emissions coverage of targets</i>	The company has not set a target for these emissions.		The company has set at least one target that covers a proportion (at least 50%) of its relevant scope 3 upstream emissions.		The company has set at least one target that covers at least 95% of its relevant scope 3 upstream emissions.	80%
<i>Timeline of targets</i>	The company has not set a target for these emissions.		The company has only set either a long-term or near-term target.		The company has set both near- and long-term targets.	20%

The relevant emissions for this indicator are the upstream scope 3 emissions from the production of materials used in vehicle manufacture (see boundaries of emissions in section 4.1). The definitions of near- and long-term are the same as defined in indicator 1.1.

RATIONALE

AU 1.2 SCOPE 3 UPSTREAM EMISSIONS REDUCTION TARGETS

RATIONALE OF THE INDICATOR

RELEVANCE OF THE INDICATOR:

Scope 3 upstream emissions reduction targets are included in this ACT methodology for the following reasons:

- ◆ Targets are an indicator of corporate commitment to reduce GHG emissions, and are a meaningful metric of the company's internal planning towards the transition.
- ◆ Targets are one of the few metrics that can predict a company's long-term plan beyond that which can be projected in the short-term, satisfying ACT's need for indicators that can provide information on the long-term future of a company.
- ◆ Under an ambitious EV adoption scenario, the share of upstream scope 3 emissions is projected to increase to 35% in 2030 and 60% in 2040, therefore having reduction targets in place will only become more important.

SCORING RATIONALE:

This indicator differs from indicators 1.1 Alignment of scope 1+2 emissions reduction targets and 1.3 Alignment of scope 3 downstream emissions reduction targets. This comes from the challenges associated with the assessment of target ambition when it comes to upstream emissions related to purchased materials. It is not currently expected that companies set individual targets for relevant materials identified in this methodology (see indicator 4.1 Trend in past scope 3 upstream emissions). Consequently, it does not appear feasible to properly assess the alignment of scope 3 upstream emissions reduction targets at this time.

Assessing emissions coverage ensures that the company has identified the hotspots it needs to work on in order to significantly reduce its scope 3 upstream emissions. Timeline of targets is also considered to incentivise companies to take action in near-term while also developing a long term vision and strategy, similarly to the scoring system of indicators 1.1 and 1.3 mentioned above.

- **AU 1.3 ALIGNMENT OF SCOPE 3 DOWNSTREAM EMISSIONS REDUCTION TARGETS**

DESCRIPTION & REQUIREMENTS

AU 1.3 ALIGNMENT OF SCOPE 3 DOWNSTREAM EMISSIONS REDUCTION TARGETS

SHORT DESCRIPTION OF INDICATOR

A measure of the alignment of the company's near- and long-term scope 3 downstream emissions intensity reduction targets with its decarbonization pathway. The indicator will compare the trend of the company's targeted pathway to the trend of the company's benchmark and thus identify the gap between both pathways at the target year, expressed as the company's commitment gap.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Targets information for scope 3 downstream emissions (target year, emission reduction between reporting year and target year, coverage) – see boundaries of emissions in section 4.1

→ (Optional) – Base year, GHG emissions at base year

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C4.1
- ◆ C4.1b

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 7.53.1 (absolute targets)
- ◆ 7.53.2 (intensity targets)

External sources of data used for the analysis of this indicator are:

- ◆ Low-carbon pathways (1.5°C aligned) – See section 6.1 for a detailed explanation about sources and low-carbon scenarios that have been identified.
- ◆ SDA – specific benchmark pathway definition

The benchmark indicators involved are:

Target type	Parameter	Intensity metric	Methodological sources
Scope 3 (Downstream)	El _B	gCO2/p.km	See section 6.1

HOW THE ASSESSMENT WILL BE DONE

Same calculation as indicator 1.1 Alignment of scope 1+2 emissions reduction targets.

RATIONALE

AU 1.3 ALIGNMENT OF SCOPE 3 DOWNSTREAM EMISSIONS REDUCTION TARGETS

RATIONALE OF THE INDICATOR

RELEVANCE OF THE INDICATOR:

Downstream scope 3 emissions reduction targets are included in this ACT methodology for the following reasons:

- ◆ Targets are an indicator of corporate commitment to reduce GHG emissions, and are a meaningful metric of the company's internal planning towards the transition.
- ◆ Targets are one of the few metrics that can predict a company's long-term plan beyond that which can be projected in the short-term, satisfying ACT's need for indicators that can provide information on the long-term future of a company.
- ◆ Downstream scope 3 emissions represent the majority of GHG emissions in an automotive manufacturers value chain. Therefore having a target to reduce these GHG emissions is critical.

SCORING RATIONALE:

As per indicator 1.1 Alignment of scope 1+2 emissions reduction targets.

• AU 1.4 TIME HORIZON OF TARGETS

DESCRIPTION & REQUIREMENTS

AU 1.4 TIME HORIZON OF TARGETS

SHORT

DESCRIPTION OF INDICATOR

A measure of the time horizons of company targets. The ideal set of targets is forward looking enough to include a long-time horizon that includes the majority of a company's asset lifetimes, but also includes short-term targets that incentivize action in the present.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Per target: Target year, and scopes or GHG emissions sources covered by the target. Please include all company targets (target with the longest time horizon **and** all intermediate targets).

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C4.1a (absolute targets)
- ◆ C4.1b (intensity targets)

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 7.53.1 (absolute targets)
- ◆ 7.53.2 (intensity targets)

HOW THE ASSESSMENT WILL BE DONE

The analysis has two dimensions:

- ◆ A comparison of: (a) the longest time horizon of the company's targets, and (b) the long-term point fixed by ACT assessment methodology.
- ◆ The company has interval targets that ensure both short and long-term targets are in place to incentivize short-term action and communicate long-term commitments.

AGGREGATE SCORE: DIMENSION 1: 50%, DIMENSION 2: 50%

DIMENSION 1 - TARGET ENDPOINT

The company’s target endpoint (T_e) is compared to the long-term point (LT), which is fixed at 2050 minus the reporting year, aligned with low-carbon scenario.

$$LT = 2050 - \text{reporting year}$$

The company’s target endpoint (T_e) is equal to the longest time horizon among the company’s targets, minus the reporting year:

$$T_e = \text{Longest target time horizon} - \text{reporting year}$$

The analysis compares T_e to LT. This analysis measures the horizon gap:

$$\text{Horizon gap} = LT - T_e$$

The company’s target endpoint is scored according to the following scoring table:

HORIZON GAP		SCORE
$T_e > LT$	50%	
$33\% * LT < T_e < LT$	$75\% * T_e/LT - 25\%$	
$T_e \leq 33\% * LT$	0%	

Where a company has set a net-zero target year before 2050 the company also achieves the full 50%

DIMENSION 2 - INTERMEDIATE HORIZONS

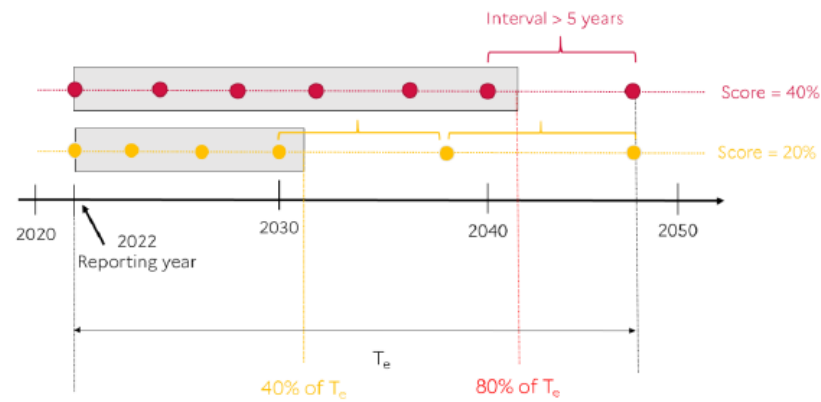
All company targets and their endpoints are calculated and plotted. The ideal scoring company does not have intervals between target endpoints larger than 5 years from the reporting year. Measurements are done in five-year intervals between the reporting year and LT.

The company's targets are compared to the following scoring table:

INTERMEDIATE TARGET GAP LENGTH	SCORE
All the gaps during T_e are equal or less than 5 years	50%
All the gaps until 80% of T_e are equal or less than 5 years	40%
All the gaps until 60% of T_e are equal or less than 5 years	30%
All the gaps until 40% of T_e are equal or less than 5 years	20%
All the gaps until 20% of T_e are equal or less than 5 years	10%
All the gaps of 5 years or less do not reach 20% of T_e or there is no such gaps disclosed by the company	0%

An example is illustrated in Figure 3.

Figure 3: Examples of horizons of intermediate targets set by the company and corresponding scores on dimension 2



AGGREGATE SCORE: DIMENSION 1: 50%, DIMENSION 2: 50%

FOR ALL CALCULATIONS:

Targets that do not cover > 95% of direct emissions are not preferred in the calculations. If only such targets are available, then the score will be adjusted downwards in proportion with % coverage. If the target coverage of total company GHG emissions at reporting year (C_{RY}) represents less than 95%, the final score is equal to:

$$\text{Final Score} = \text{Score} \times \text{Target coverage of total company GHG emissions } (C_{RY})$$

If the company has set several targets, the consolidation of the scores assigned to each target will be based on the share of GHG emissions covered by the targets.

RATIONALE

AU 1.4 TIME HORIZON OF TARGETS

RATIONALE OF THE INDICATOR

RELEVANCE OF THE INDICATOR:

The time horizon of targets is included in this ACT methodology for the following reasons:

- ◆ The target endpoint is an indicator of how forward-looking the company's transition strategy is.
- ◆ Aside from communicating long-term commitments, short-term action needs to be incentivized. This is why short time intervals between targets are needed. A 5-year interval is seen as a suitable interval to ensure company is taking enough action, holding itself accountable by measuring progress every 5 years.

• **AU 1.5 ACHIEVEMENT OF PAST AND CURRENT TARGETS**

DESCRIPTION & REQUIREMENTS

AU 1.5 ACHIEVEMENT OF PAST AND CURRENT TARGETS

SHORT DESCRIPTION OF INDICATOR

A measure of the company's historic target achievements and current progress towards active GHG emissions reduction targets. All the scopes of the company are considered. The ambition of the target is qualitatively assessed and is not included in the performance indicators.

**DATA
REQUIREMENTS**

The relevant data for this indicator are:

For each target set in the past 10 years:

- ◆ Base year
- ◆ Start year
- ◆ Target year
- ◆ Percentage of reduction target from base year in absolute GHG emissions
- ◆ Percentage of absolute GHG emissions reduction target achieved
- ◆ Percentage of reduction target from base year in GHG emissions intensity
- ◆ Percentage of GHG emissions intensity reduction target achieved
- ◆ Percentage of scope 1+2+3 emissions covered by the targets (see boundaries of GHG emissions in section 4.1)

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C4.1a (absolute targets)
- ◆ C4.1b (intensity targets)

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 7.53.1 (absolute targets)
- ◆ 7.53.2 (intensity targets)

**HOW THE
ASSESSMENT
WILL BE DONE**

For the performance score, this indicator is assessed on two dimensions, whereby companies achieve the maximum score if:

DIMENSION 1 – PAST TARGETS:

The company has achieved all previous GHG emissions reduction targets with a target year in the past 10 years. If all past targets are indeed achieved, the highest score is obtained. If not, the achievement ratio a is computed as follows:

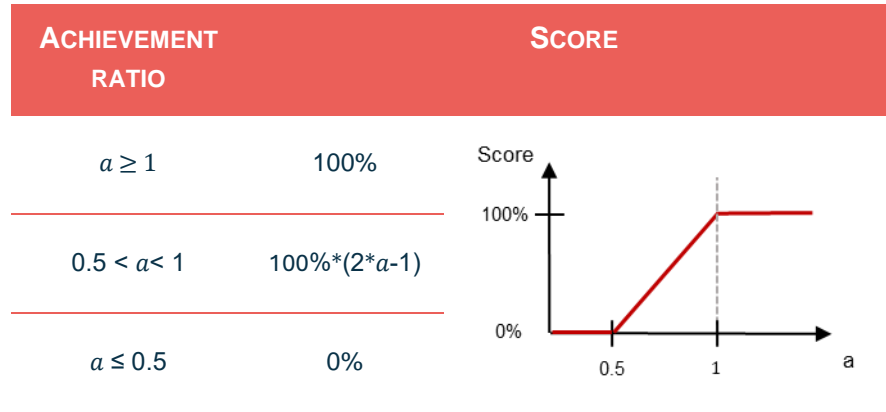
$$a = \frac{E(BY) - E(TY)}{E(BY) - T(TY)} \geq 0.5$$

Where:

- ◆ $E(BY)$ is the level of GHG emissions of the company in the base year
- ◆ $T(TY)$ is the target the company set (a given level of GHG emissions at a given horizon year, now past)
- ◆ $E(TY)$ is the effective level of GHG emissions reached by the company in the target year

A threshold is set for scoring at 0.5: if the company achieved less than 50% of the historic target, it will receive a zero score.

If the company has several past targets over the last 10 years, the ratio a shall be computed for each target, and the average of all a ratio shall be used for scoring.



DIMENSION 2 – RUNNING TARGETS:

Assesses whether the company is currently on track to meet a current GHG emissions reduction target. The assessment is based on the progress ratio p :

$$p = \frac{a}{\%time}$$

a being defined in dimension 1 and the past time ratio $\%time$ defined as follows:

$$\%time = \frac{RY - BY}{TY - BY}$$

Where

- ◆ BY is the target's base year
- ◆ RY is the reporting year
- ◆ TY is the year of horizon of the target

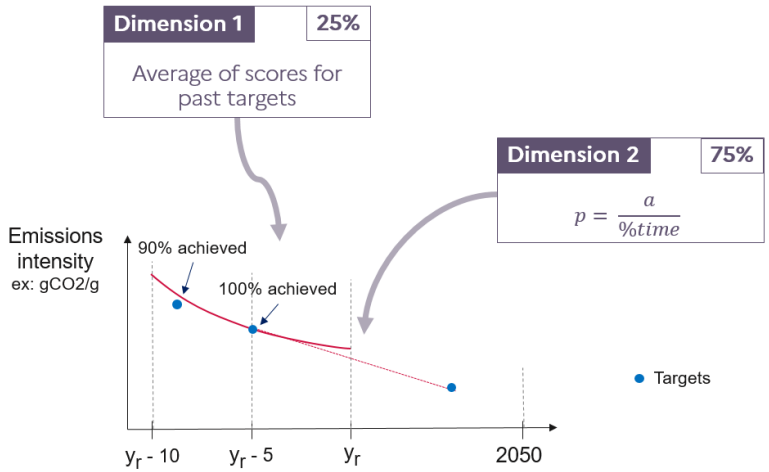
The highest score is attained if $p \geq 1$. A percentage score is assigned for any value between 0 and 1.

PROGRESS RATIO	SCORE
$p \geq 1$	100%
$p < 1$	p (%)

For this second dimension, target year must be at least one year after reporting year, and target start year must be at least one year before reporting year.

AGGREGATE SCORE - DIMENSION 1: 25%, DIMENSION 2: 75%

Figure 4: Calculation of the achievement of previous target indicator



FOR ALL CALCULATIONS:

- ◆ Companies which do not have targets with target years in the past but only with target years in the future are not assessed on dimension 1, but only on dimension 2. Their score for this indicator is based on Dimension 2.
- ◆ Targets should cover >95% of the company's GHG emissions scope. However, if it is not the case, no penalty is applied since indicators assessing ambition of targets already penalize partial coverage of GHG emissions..
- ◆ If the company has multiple targets in different scopes that can be assessed according to the above criteria, then the score is an average score based on the progress ratios of all targets assessed.

The performance score does not assess the ambition level of previous targets, and therefore dimension 1 has a low weight in the final performance score. This information is also qualitatively assessed in the narrative analysis, which will consider the following dimensions:

- ◆ Achievement level: To what degree has the company achieved its previously set GHG emissions reduction targets.
- ◆ Progress level: To what degree is the company on track to meet its currently active GHG emissions reduction targets.
- ◆ Ambition level: What level of ambition do the previously achieved GHG emissions reduction targets represent.

RATIONALE

AU 1.5 ACHIEVEMENT OF PAST AND CURRENT TARGETS

RATIONALE OF THE INDICATOR

RELEVANCE OF THE INDICATOR:

The historic target ambition and company performance is included in this ACT methodology for the following reasons:

- ◆ The ACT assessment looks only to the past to the extent where it can inform the future. This indicator is future-relevant because it provides information on the organizational capability to set and meet GHG emissions reduction targets. Dimension 1 of this indicator gives credibility to any company commitments to a science-based reduction pathway when the company shows it has succeeded in achieving its past targets.
- ◆ Dimension 2 of this indicator adds additional value to the assessment by showing if the company is on track to achieve current targets.

SCORING RATIONALE:

Previous target achievement is not straightforward to interpret quantitatively. Therefore, the performance score doesn't take into account past target ambition and leaves it to the narrative assessment for a meaningful judgement on the ambition level of past targets.

- ◆ Dimension 1 of the performance score will penalize companies who have not met past targets in the past 10 years, as this means the company has lower credibility when setting ambitious science-based targets.
- ◆ Dimension 2 uses a simple ratio, which reflects how well or not the company is currently on track to reach its existing GHG emissions reduction target. The maximum score is obtained when the percentage of the targeted reduction achieved is equal to or higher than the time elapsed since the target base year. This results in a progress ratio of 1 or above. No score is awarded if the percentage of reduction achieved is less than half the percentage of time elapsed. Consequently, staying on track with the original target throughout its timeline is rewarded.

MODULE 2: MATERIAL INVESTMENT

Module 2, “Material investment”, assesses actions to reduce scope 1 and 2 emissions from the company’s assets and operations. Comparing the company’s trend in past and projected scope 1 and 2 emissions intensity with its 1.5°C pathway provides a good measure of its transition progress. Comparing capital expenditure (CAPEX) allocated to low-carbon technologies against the total CAPEX provides an indication of future GHG emissions reductions.

- **AU 2.1 TREND IN PAST SCOPE 1+2 EMISSIONS INTENSITY**

DESCRIPTION & REQUIREMENTS **AU 2.1 TREND IN PAST SCOPE 1+2 EMISSIONS INTENSITY**

SHORT DESCRIPTION OF INDICATOR

A measure of the alignment of the past trend of the company’s scope 1 and 2 emissions intensity with the low-carbon benchmark pathway. The indicator will compare the gradient of this trend over a 5-year period to the reporting year (reporting year minus 5 years) with the low-carbon benchmark pathway trend over a 5-year period after the reporting year.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Scope 1 and 2 emissions intensity and activity at reporting year (RY) and reporting year minus five years (RY-5) – see boundaries of emissions in section 4.1
- OR
- ◆ Total scope 1 and 2 emissions and activity (automotive manufacturing process) at RY and RY-5.

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C6.1
- ◆ C6.3
- ◆ C6.10
- ◆ C-TO8.5

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 7.35
- ◆ 7.45
- ◆ 7.6

External sources of data used for the analysis of this indicator are:

- ◆ Low-carbon pathways (1.5°C aligned) – See section 6.1 for a detailed explanation about sources and low-carbon scenarios that have been identified.
- ◆ SDA – specific benchmark pathway definition (13)

The benchmark indicators involved are the following :

GHG emissions scope	Parameter	Intensity metric	Methodological sources
Scope 1+2 emissions	El _B	gCO2/vehicle sold	See section 6.1

HOW THE ASSESSMENT WILL BE DONE

The analysis is based on the comparison between the company's recent (RY-5) GHG emissions intensity trend gradient (CR'_{S12}) and the company's decarbonization pathway trend gradient (CB'_{S12}) in the short-term (RY+5). The GHG emissions intensity of the company at the reporting year ($El_C(RY)$) and the sectoral benchmark value of GHG emissions intensity in 2050 ($El_B(2050)$) are also taken into consideration to calculate the company's score.

CR'_{S12} is the gradient of the linear trend-line of the company's recent scope 1+2 emissions intensity over time (CR_{S12}).

CB'_{S12} is the gradient of the linear trend-line of the company benchmark pathway for GHG emissions intensity (CB_{S12}). See section 6.1.2 for details on the computation of the company specific decarbonization pathway.

The difference between CR'_{S12} and CB'_{S12} will be measured by their ratio (r_{S12}). This is the scope 1+2 emissions Transition ratio, which is calculated by the following equation, with the apostrophe symbol (') used to denote gradients:

$$r_{S12} = \frac{CR'_{S12}}{CB'_{S12}}$$

Four different cases are to be taken into consideration, as illustrated in Table 7:

- Case #1: CR'_{S12} is positive → Score = 0 (whatever the r_{S12} and $El_C(RY)$ values)
- Case #2: CR'_{S12} is negative and $0 < r_{S12} < 1$ and $El_C(RY)$ is higher than $El_B(2050)$ → Score = r_{S12} (expressed as a percentage)
- Case #3: CR'_{S12} is negative and $r_{S12} \geq 1$ and $El_C(RY)$ is higher than $El_B(2050)$ → Score = 100 %
- Case #4: CR'_{S12} is negative and $El_C(RY)$ is lower than $El_B(2050)$ → Score = 100 % (whatever the r_{S12} value)

Table 7: Illustrative graphs for trend in past GHG emissions intensity scoring

Case #1	Case #2
<p>$CR'_{S12} > 0$ Whatever the r_{S12} value Whatever the $EI_C(RY)$ value</p>	<p>$CR'_{S12} < 0$ $0 < r_{S12} < 1$ $EI_C(RY) > EI_B(2050)$</p>
<p>Score = 0</p>	<p>Score = r_{S12} (%)</p>
Case #3	Case #4
<p>$CR'_{S12} < 0$ $r_{S12} \geq 1$ $EI_C(RY) > EI_B(2050)$</p>	<p>$CR'_{S12} < 0$ $EI_C(RY) < EI_B(2050)$ whatever the r_{S12} value</p>
<p>Score = 100 %</p>	<p>Score = 100 %</p>

RATIONALE**EU 2.1 TREND IN PAST SCOPE 1+2 EMISSIONS INTENSITY****RATIONALE OF THE INDICATOR****RELEVANCE OF THE INDICATOR:**

Trend in past scope 1+2 emissions intensity indicator is included in this ACT methodology for the following reasons:

- ◆ Trend in past emissions intensity shows the speed at which the company has been reducing its GHG emissions intensity over the recent past. Comparing this to the decarbonization pathway gives an indication of the speed of the change that needs to be made within the company to bring it onto a low-carbon pathway.
- ◆ While ACT aims to be as future-oriented as possible, it does not want to rely solely on projections, in a way that would make the analysis too vulnerable to the uncertainty of those projections. Therefore, this measure, along with projected GHG emissions intensity and absolute GHG emissions, forms part of a holistic view of company GHG emissions performance in the past, present, and future.
- ◆ This indicator is future-relevant by providing information on the organizational capability to deliver GHG emissions reductions that are aligned with the benchmark.
- ◆ Scope 1 and 2 emissions typically represent 5% to 10% of overall automotive manufacturers' GHG emissions (8). Even though the share is low it is important that companies continuously work on decarbonising their own operations, on which they have the biggest influence.

• AU 2.2 SHARE OF LOW-CARBON CAPEX**DESCRIPTION & REQUIREMENTS****AU 2.2 SHARE OF LOW-CARBON CAPEX****SHORT DESCRIPTION OF INDICATOR**

An analysis of the share of CAPEX invested in low-carbon technologies for the next 3 years. The indicator scores the gap between the company's planned low-carbon CAPEX share and its decarbonization pathway.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Share of CAPEX in low-carbon technologies (out of total CAPEX, M\$/M\$) planned for the next 3 years

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C3.5b

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 5.4.2

**HOW THE
ASSESSMENT
WILL BE DONE**

The assessment will assign a maturity score based on the company's share of planned low-carbon CAPEX, expressed in a maturity matrix. The share will be calculated as the average share of low-carbon CAPEX for RY+1 to RY+3.

A company that is placed in the 'Low-carbon aligned' category will receive the maximum score. Companies who are at lower levels will receive a partial score.

Question	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Subscore
<i>Associated score</i>	0%	25%	50%	75%	100%	
<i>What is the share of CAPEX invested in Low-Carbon & Mitigation technologies (% of CAPEX)?</i>	Below 20%	Between 21% and 40%	Between 41% and 60%	Between 61% and 80%	Above 80%	100%

This maturity matrix is indicative but does not show all possible options that can result in a particular score. Companies responses will be scrutinized by the analyst and then placed on the level in the matrix where the analyst deems it most appropriate.

DEFINING LOW-CARBON TECHNOLOGIES

The list of low-carbon technologies for the Auto sector includes (but is not limited to) the following:

- ◆ Manufacture of low-carbon technologies for transport
- ◆ Low-carbon light duty vehicles
- ◆ Other vehicles with zero tail pipe GHG emissions (heavy duty vehicles, trains etc.)
- ◆ Purchase, financing, renting, leasing and operation of low-carbon vehicles
- ◆ Manufacture of equipment for the production and use of hydrogen**
- ◆ Infrastructure enabling low-carbon road transport and public transport
- ◆ Electric charging points
- ◆ Hydrogen fuelling stations
- ◆ Electric Road Systems
- ◆ Electricity grid connection upgrades
- ◆ Manufacture of biogas and biofuels for use in transport*
- ◆ Manufacture of batteries
- ◆ Storage of electricity
- ◆ Storage of hydrogen**

The categories of low-carbon technologies have been taken from the EU taxonomy. If the technology described by the company is not listed below, then the analyst must check further external sources to determine whether it is a relevant low-carbon technology. A low-carbon technology must be widely considered to contribute substantially to climate change mitigation and do no significant harm to other environmental topics.

* Note – sustainable biomass It is essential to ensure the sustainability of biomass to avoid deforestation and to promote best practices in forest management and biomass use. Biofuels are considered sustainable by the ACT Auto Methodology if they meet one or more of the following criteria:

1. Biofuels that enable biomass-based energy production systems to demonstrate at least 80% of GHG emissions savings compared to fossil fuel alternatives (based on the criteria defined in the EU taxonomy for sustainable activities (16) following the methodology outlined in the directive 2018/2001 (also called 'RED II') (17). The following list is made up of biofuels for biomass-based energy production systems from Annex VI in RED II meeting this criterion:

- a. Wood chips from sustainable forest residues (as defined in 3.) or from industry residues with a transport distance to the company's site of below 2,500 km;
- b. Woodchips from short rotation coppice (poplar – fertilised or not fertilized) with a transport distance to the company's site of below 500 km if used to produce electricity or below 2,500 km if used to produce heat;

c. Wood briquette and pellet categories below which have been manufactured using electricity and heat from a combined heat and power (CHP) plant fed with pre-dried woodchips:

- Wood briquettes or pellets from sustainable forest residues (as defined in 3.);
- Wood briquettes or pellets from wood industry residues;
- Wood briquettes or pellets from short rotation coppice (eucalyptus) with a transport distance to the company's site of below 10,000 km (only if used to produce heat); Wood briquettes or pellets from short rotation coppice (poplar – fertilised) with a transport distance to the company's site of below 500 km if used to produce electricity or below 10,000 km if used to produce heat;

2. Biofuels derived from wood industry waste. This includes sawdust, cutter shavings black liquor, brown liquor, fibre sludge, lignin waste and tall oil (17).

3. Biofuels derived from sustainable forestry residues. This includes treetops, branches, pre-commercial thinning, leaves and needles, except coarse wood debris (which include snags, standing dead trees and high stumps) and low stumps. The latter two are not accepted as sustainable based on the latest study from the JRC (18).

4. Biofuels certified under a scheme that ensures their sustainability. Ideally, certification schemes should be members of the International Social and Environmental Accreditation and Labelling (ISEAL), as these standards undergo rigorous checks including multistakeholder engagement, and as such tend to be the strongest (19). Some examples of such certification schemes are: REDcert Sustainable Biomass Program (SBP) and International Sustainability and Carbon Certification (ISCC). Other examples, including those that are not ISEAL members, can be found on pp. 12-13 of the CDP Technical Note: Biofuels (19).

** Note – Hydrogen. Hydrogen-related activities are only considered low-carbon if the hydrogen produced, used or stored fulfills the criteria included in the EU taxonomy: hydrogen must have life-cycle emissions lower than 3 tCO₂e/tH₂

RATIONALE

AU 2.2 SHARE OF LOW-CARBON CAPEX

RATIONALE OF THE INDICATOR

Planned investments in low-carbon CAPEX are included in this ACT methodology for the following reasons:

- ◆ Planned low-carbon CAPEX is an indicator of corporate commitment to a low-carbon transition, and is a meaningful metric of the company's internal planning towards the transition.
- ◆ Low-carbon technologies CAPEX share is an early indicator of the switch for automotive manufacturers from highly emissive internal combustion engine vehicles to low-carbon vehicles and other relevant activities contributing to the sectoral transition.

Although this indicator may be based on a specific ratio in other ACT methodologies, no benchmarks are available for this sector. Therefore, thresholds have been defined accordingly.

MODULE 3: INTANGIBLE INVESTMENT

It is not enough for the company to only invest in its tangible or material assets. Module 3, “Intangible investment”, assesses the company’s investments in intangible assets such as research and development (R&D), low-carbon and mitigation technologies, training and patent development. Companies in many sectors state that the development of new technologies is essential for them to transition, and these indicators give an indication of the level of commitment to new technologies and work practices.

- **AU 3.1 R&D SPENDING ON LOW-CARBON TECHNOLOGIES**

DESCRIPTION & REQUIREMENTS

AU 3.1 R&D SPENDING ON LOW-CARBON TECHNOLOGIES

SHORT DESCRIPTION OF INDICATOR

A measure of the ratio of R&D costs/investments in low-carbon technologies. The indicator scores the ratio between the company’s R&D investment in low-carbon technologies and total R&D investment.

DATA REQUIREMENTS

Relevant and external sources of data used for the assessment of this indicator:

- ◆ R&D costs/investment in low-carbon technologies of the company.
- ◆ Total R&D costs/investment of the company

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C-TO9.6a/C-TS9.6a

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 5.5.8

HOW THE ASSESSMENT WILL BE DONE

R&D INVESTMENT SHARE

The assessment is based on the ratio of the company’s ‘R&D expenditure on low-carbon technologies over the last 3 years’ to the company’s ‘total expenditure in R&D over the last 3 years’.

DEFINING ‘LOW-CARBON TECHNOLOGIES’:

Low-carbon technologies (technology avenues compatible with a 1.5°C scenario):

As per indicator AU 2.2 Share of low-carbon CAPEX.

DEFINING “NON-MATURE R&D”

The Technology Readiness Level (TRL) should be used to assess the maturity of a technology. Higher scoring levels for this indicator exclude research in technologies that are already considered mature in terms of market penetration. This is to incentivise a focus on those less mature technologies that have a higher need for R&D investment, in order to break through technical barriers and reduce the levelized costs of deploying these technologies.

Technologies are considered “non-mature” if the TRL < 8 (see Table 8 below).

Table 8: Categorization of mature and non mature technologies

TECHNOLOGY READINESS LEVEL (TRL) FROM IEA	IEA EXPLAINING ACRONYMS	TECHNOLOGIES MATURITY
1	Initial idea: basic principles have been defined	Non mature technologies
2	Application formulated: concept and application of solution have been formulated	
3	Concept needs validation: solution needs to be prototyped and applied	
4	Early prototype: prototype proven in test conditions	
5	Large prototype: components proven in conditions to be deployed	
6	Full prototype at scale: prototype proven at scale in conditions to be deployed	
7	Pre-commercial demonstration: solution working in expected conditions	
8	First-of-a-kind commercial: commercial demonstration, full-scale deployment in final form	Mature technologies
9	Commercial operation in relevant environment: solution is commercially available, needs evolutionary improvement to stay competitive	
10	Integration at scale: solution is commercial but needs further integration efforts	
11	Proof of stability: predictable growth	

FINAL SCORE

The ratio will be compared to the maturity matrix developed to guide the scoring and a greater number of points will be allocated for companies indicating a higher level of maturity, which means a higher share in R&D costs/investments in these technologies.

Question	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Subscore
<i>Associated score</i>	<i>0%</i>	<i>25%</i>	<i>50%</i>	<i>75%</i>	<i>100%</i>	
<i>What is the share of R&D costs/investments in low-carbon technologies compared to the total R&D costs/investments?</i>	The share of low-carbon R&D is below 20% of total R&D investments	The share of low-carbon R&D is between 21% and 40% of total R&D investments	The share of low-carbon R&D is between 41% and 60% of total R&D investments	The share of low-carbon R&D is between 61% and 80% of total R&D investments	The share of low-carbon R&D is above 80% of total R&D investments.	50%
<i>What is the share of R&D costs in non-mature technologies within the total R&D in low-carbon technologies?</i>	Below 20%	Between 21% and 35%	Between 36 % and 50%	Between 51% and 65%	Above 65%	50%

RATIONALE

AU 3.1 R&D SPENDING ON LOW-CARBON TECHNOLOGIES

RATIONALE OF THE INDICATOR

RELEVANCE OF THE INDICATOR:

R&D in low-carbon technologies is included in this ACT methodology for the following reasons:

- ◆ This sector is heavily reliant on the development of low-carbon solutions to replace its current high emitting vehicles and associated infrastructure. The key technologies for the sector's transition are now scaling having progressed through research and development in the lab and in the real world.
- ◆ R&D is a key proactive action to develop these technologies and demonstrates commitment by companies.
- ◆ R&D is also one of the main tools to reduce the costs of a technology in order to increase its market penetration.
- ◆ Aside from technology, companies can also invest R&D on operational practices to optimize the carbon reductions where they have direct responsibility.

Expenditure over the 3 last years is used for the indicator to account for the fact that expenditure for major R&D projects may not be linear over time and between years.

Although this indicator may be based on a specific external benchmark in other ACT methodologies, no benchmark is available for this sector. Therefore, thresholds have been used instead.

- **AU 3.2 COMPANY LOW-CARBON PATENTING ACTIVITY**

DESCRIPTION & REQUIREMENTS

AU 3.2 COMPANY LOW-CARBON PATENTING ACTIVITY

SHORT DESCRIPTION OF INDICATOR

A measure of the company patenting activity related to low-carbon technologies. The indicator identifies the ratio between the company's patenting activity dedicated to climate change mitigation technologies over the last 5 years, and the company's total patenting activity over the same span of time, and compares this against a maturity matrix.

DATA REQUIREMENTS

Relevant and external sources of data used for the assessment of this indicator:

- ◆ Patenting activity in low-carbon technologies of the company over the last 5 years.
- ◆ Total patenting activity of the company over the last 5 years

CDP 2023 Questionnaire mapping to this indicator:

- ◆ None

CDP 2024 Questionnaire mapping to this indicator:

- ◆ None

HOW THE ASSESSMENT WILL BE DONE

PAST LOW-CARBON PATENTS ACTIVITY RATIO

The assessment is based on the ratio of the company's patenting activity dedicated to low-carbon technologies over the last 5 years to the company's total patenting activity over the same span of time.

If the company is developing open-source patents or makes them publicly available, this should be positively reflected in the narrative score.

DEFINING ‘LOW-CARBON TECHNOLOGIES’:

The indicator focuses on patents that mitigate climate change. The European Patent Office (EPO) and the US Patent and Trademark Office (USPTO) have developed a dedicated patent classification scheme (Cooperative Patent Classification - CPC) which details patents for climate change mitigation technologies (CCMTs) (20). The patent categories which are relevant to the automotive manufacturing sector are:

- ◆ Y02P – CCMTs related to the production or processing of goods
- ◆ Y02T – CCMTs related to transportation
- ◆ Y04S 30/00 – CCMTs related to systems supporting specific end-user applications in the sector of transportation

In general, patents identified should fall into one of the above categories. However, if in doubt, the analyst may refer to the general list of low-carbon technologies for the automotive manufacturing sector identified by the ACT initiative shown below (21) (22) (23).

If the technology described by the company is not listed below, then the analyst must check further external sources to determine whether it is a relevant low-carbon technology. A low-carbon technology must be widely considered to contribute substantially to climate change mitigation.

Low-carbon technologies (technology avenues compatible with a 1.5°C scenario):

As per indicator AU 2.2 Share of low-carbon CAPEX.

FINAL SCORE

The ratio will be compared to the maturity matrix developed to guide the scoring and a greater number of points will be allocated for companies indicating a higher level of maturity, which means a higher share of low-carbon patenting activity.

Question	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Subscore
<i>Associated score</i>	0%	25%	50%	75%	100%	
<i>What is the share of patents in low-carbon technologies compared to the total patent activity over the last 5 years?</i>	The share of low-carbon patents is below 20% of total patents	The share of low-carbon patents is between 21% and 40% of total patents	The share of low-carbon patents is between 41% and 60% of total patents	The share of low-carbon patents is between 61% and 80% of total patents	The share of low-carbon patents is above 80% of total patents	100%

RATIONALE

AU 3.2 COMPANY LOW-CARBON PATENTING ACTIVITY

RATIONALE OF THE INDICATOR

RELEVANCE OF THE INDICATOR:

The indicator on patenting activity is complementary to indicator 3.1, R&D spending on low-carbon technologies, as it encourages R&D spending and subsequent technological advances or breakthroughs.

It is included in this ACT methodology for the following reasons:

- ◆ Low-carbon patenting activity is an important indicator of a company's ability to transition and develop new low-carbon business models in an era of emissions reductions and growing need for transportation. (24).
- ◆ Patent data are commensurable because patents are based on an objective standard (25)
- ◆ Patent data measure the intermediate outputs of an inventive process, where R&D data expenditures measure the input (25)
- ◆ Patent data can be disaggregated into specific technological fields (25)

RELEVANCE OF THE INDICATOR'S 5-YEAR TIME HORIZON

Patents applications are typically disclosed 18 months after their filing date (25). To avoid the effects of this "publication lag" and smooth the ratio used for the assessment, the indicator monitors the last 5 years of the company's patenting activity.

MODULE 4: SOLD PRODUCT PERFORMANCE

Module 4, “Sold product performance”, assesses action to reduce GHG emissions from the company’s value chain, contributing to the overall decarbonisation of its products and/or services. Mirroring module 2, past GHG emissions intensity trends are analysed, focusing on GHG emissions arising from the materials used in vehicles on one hand, and resulting from vehicles use on the other hand. The assessment of locked-in GHG emissions from the use of sold vehicles shows the amount by which the company is likely to exceed its related carbon budget. This module also captures the much needed efforts to phase out internal combustion engine vehicles, thanks to the share of low-carbon vehicles sales. Finally, another important sectoral topic is addressed with the energy efficiency performance of low-carbon vehicles.

• AU 4.1 TREND IN PAST SCOPE 3 UPSTREAM EMISSIONS INTENSITY

DESCRIPTION & REQUIREMENT

AU 4.1 TREND IN PAST SCOPE 3 UPSTREAM EMISSIONS INTENSITY

SHORT DESCRIPTION OF INDICATOR

A measure of the alignment of the past trend of the company’s scope 3 upstream emissions intensity, with the decarbonization pathway for each material. The indicator will compare the gradient of this trend over a 5-year period to the reporting year (reporting year minus 5 years) with the decarbonization pathway trend over a 5-year period after the reporting year.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Scope 3 upstream emissions intensity at reporting year (RY) and reporting year minus five years (RY-5) – see list of materials considered below
OR
- ◆ Scope 3 upstream emissions and purchases volume at RY and RY-5 for purchased materials – see list of materials considered below.

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C6.5

CDP 2024 Questionnaire mapping to this indicator:

- ◆ C7.8

External sources of data used for the analysis of this indicator are:

- ◆ Low-carbon pathways (1.5°C aligned) – See section 6.1 for a detailed explanation about sources and low-carbon scenarios that have been identified.
- ◆ SDA – specific benchmark pathway definition

The benchmark indicators involved are:

Target type	Parameter	Intensity metric	Methodological sources
Scope 3 (Upstream)	EI_B	Aluminium, glass, plastics, steel: tCO ₂ /tmaterial Batteries: kgCO ₂ /kWh	See section 6.1

HOW THE ASSESSMENT WILL BE DONE

The analysis is based on the comparison between the company’s recent (RY-5 to RY) GHG emissions intensity trend gradient for each material and the company’s decarbonisation pathway trend gradient for that material in the short-term (RY to RY+5).

This indicator uses the same computation as indicator 2.1. Each material is individually assessed and worth 20% of the indicator's total score. The five scores are summed to provide the final indicator score.

RATIONALE

AU 4.1 TREND IN PAST SCOPE 3 UPSTREAM EMISSIONS INTENSITY

RATIONALE OF THE INDICATOR

RELEVANCE OF THE INDICATOR:

Trend in past scope 3 upstream emissions intensity is included in this ACT methodology for the following reasons:

- ◆ Approximately one-fifth of the life-cycle GHG emissions from autos come from material production, while four-fifths are from other GHG emissions, including use-phase. Under an ambitious EV adoption scenario, the share of GHG emissions from material production is projected to increase to 35% in 2030 and 60% in 2040. This is firstly due to the reduced in-use GHG emissions from EVs, which will only continue to decline as renewables expand their share of the grid’s energy mix.
- ◆ Secondly, it is due to the increased GHG emissions from producing materials for EVs compared with ICEVs, especially batteries. Consequently, to avoid overshoot of its carbon budget, it will be critical for the Autos manufacturing sector to work with their suppliers and partners to reduce the GHG emissions embedded in purchased materials.

SCORING RATIONALE:

While ‘gap’ type scoring is preferred where possible for any indicator, this indicator only looks at past GHG emissions and would therefore require a different baseline to generate a gap analysis. Thus, instead of a gap analysis, a trend analysis is conducted to compare the current data of the company to past data and any resulting improvements. An advantage of the trend analysis is that it does not require the use of a business-as-usual pathway to anchor the data points and aid interpretation; trends can be compared directly and a score can be directly correlated to the resulting ratio.

• **AU 4.2 TREND IN PAST SCOPE 3 DOWNSTREAM EMISSIONS INTENSITY**

DESCRIPTION & REQUIREMENTS

AU 4.2 TREND IN PAST SCOPE 3 DOWNSTREAM EMISSIONS INTENSITY

SHORT DESCRIPTION OF INDICATOR

A measure of the alignment of the past trend of the company’s scope 3 downstream emissions intensity, with the low-carbon benchmark pathway. The indicator will compare the gradient of this trend over a 5-year period to the reporting year (reporting year minus 5 years) with the low-carbon benchmark pathway trend over a 5-year period after the reporting year.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Scope 3 downstream emissions intensity (gCO₂/km) at reporting year (RY) and reporting year minus five years (RY-5) – see boundaries of emissions in section 4.1
- OR
- ◆ Total scope 3 downstream emissions (from vehicle use), and traveling distance of company’s fleet at RY and RY-5.

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C6.5
- ◆ C6.5a
- ◆ C-TO7.8

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 7.50
- ◆ 7.8
- ◆ 7.8.1

External sources of data used for the analysis of this indicator are:

- ◆ Low-carbon pathways (1.5°C aligned) – See section 6.1 for a detailed explanation about sources and low-carbon scenarios that have been identified.
- ◆ SDA – specific benchmark pathway definition (13)

The benchmark indicators involved are the following :

GHG emissions scope	Parameter	Intensity metric	Methodological sources
Scope 3 (downstream) – Vehicles in-use GHG emissions	EI_B	gCO2/.km	See section 6.1

HOW THE ASSESSMENT WILL BE DONE

The analysis is based on the comparison between the company’s vehicles use recent (RY-5 to RY) GHG emissions intensity trend gradient and the company’s vehicles use decarbonization pathway trend gradient in the short-term (RY to RY+5).

This indicator uses the same computation as indicator 2.1 - Trend in past scope 1+2 emissions intensity

RATIONALE

AU 4.2 TREND IN PAST SCOPE 3 DOWNSTREAM EMISSIONS INTENSITY

RATIONALE OF THE INDICATOR

RELEVANCE OF THE INDICATOR:

Trend in past scope 3 downstream emissions intensity is included in this ACT methodology for the following reasons:

- ◆ The trend shows the speed at which the company has been reducing its GHG emissions intensity over the recent past. Comparing this to the future low-carbon transition pathway gives an indication of the scale of the change that needs to be made within the company to bring it onto a low-carbon pathway.
- ◆ While ACT aims to be future-oriented, it nevertheless does not want to rely solely on projections of the future, in a way that would make the analysis too vulnerable to the uncertainty of those projections. Therefore, this measure, along with projected GHG emissions intensity and absolute GHG emissions, forms part of a holistic view of company GHG emissions performance in the past, present, and future.

SCORING RATIONALE:

While 'gap' type scoring is preferred where possible for any indicator, this indicator only looks at past GHG emissions and would therefore require a different baseline in order to generate a gap analysis. Thus, instead of a gap analysis, a trend analysis is conducted to compare current data of the company to the past data and improvements that have been made since the past data. An advantage of this trend analysis is that trends can be compared directly and a score can be directly correlated to the resulting ratio.

• AU 4.3 LOCKED-IN EMISSIONS FROM SOLD PRODUCTS

DESCRIPTION & REQUIREMENT S

AU 4.3 LOCKED-IN EMISSIONS FROM SOLD PRODUCTS

SHORT DESCRIPTION OF INDICATOR

A measure of the alignment of the cumulative scope 3 downstream emissions, with its carbon budget calculated from its low-carbon benchmark pathway and projected sales, over a 5-year period from the reporting year (RY).

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Forecast vehicles sales (from RY to RY+5) - if such forecast is not available, sales from RY-5 to RY should be used to calculate a proxy, keeping the same trend in sales growth.
- ◆ Forecast sales weighted scope 3 downstream (from vehicle use) emissions intensity (gCO₂/km) (from RY to RY+5) - if such forecast is not available, emissions intensity from RY-5 to RY should be used to calculate a proxy, keeping the same trend in emissions intensity decrease.

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C 6.5
- ◆ C-TO8.8

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 7.50
- ◆ 7.8
- ◆ 7.8.1

External sources of data used for the analysis of this indicator are:

- ◆ Low-carbon pathways (1.5°C aligned) – See section 6.1 for a detailed explanation about sources and low-carbon scenarios that have been identified.
- ◆ SDA – specific benchmark pathway definition (13)

The benchmark indicators involved are the following :

GHG emissions scope	Parameter	Intensity metric	Methodological sources
Scope 3 (downstream) – Vehicles in-use GHG emissions	EI_B	gCO2/km	See section 6.1

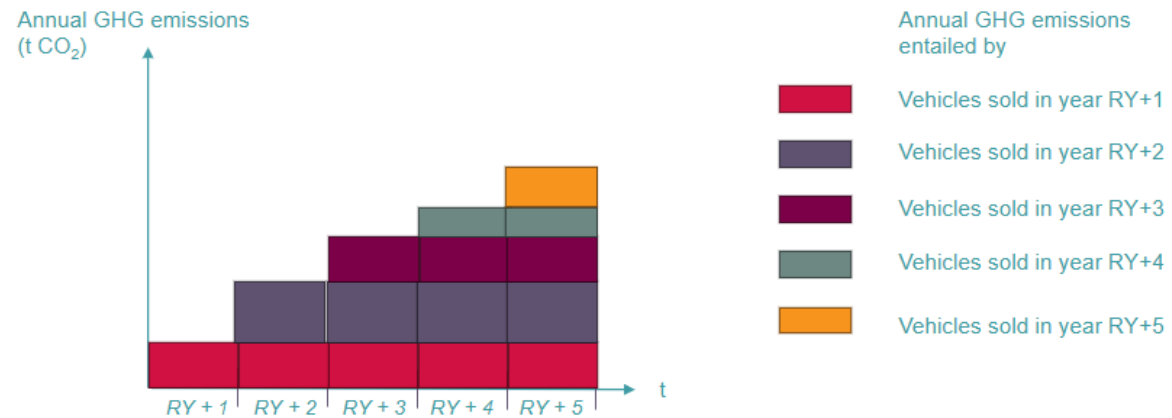
HOW THE ASSESSMENT WILL BE DONE

The analysis is based on the ratio between the company's locked-in GHG emissions from the use of sold vehicles over the short-term (L.5years) and the company's carbon budget (B.5years). Yearly locked-in emissions are calculated as the emissions intensity associated with the use of vehicles (gCO2/km) multiplied by the average annual travel of vehicles (km) (26) multiplied by the number of vehicles sold in a year.

L.5years is calculated as the total cumulative in-use GHG emissions implied by sales from RY+1 up until RY+5, as illustrated in Figure 5.

B.5years is calculated as the company's vehicles carbon budget over the 5 years after the reporting year. The total carbon budget of the company's product is calculated based on the company's downstream emissions benchmark.

Figure 5: Illustration of company's locked-in GHG emissions from the use of sold vehicles calculation



2 assumptions are made:

- ◆ GHG emissions intensity linked to the use of sold vehicles will not vary over the 5-year timespan.
- ◆ All vehicles operate throughout the 5-year timespan (no loss).

The “locked-in ratio” r_{LB} is calculated as follow:

$$r_{LB} = \frac{L.5years}{B.5years}$$

CALCULATION OF THE SCORE

Locked in ratio r_{LB}	Score	Scheme
$r_{LB} \leq 1$ the company stays within its carbon budget	1	
$1 < r_{LB} < 1,1$ the company exceeds its carbon budget	$\frac{1,1 - r_{LB}}{10\%}$	
$r_{LB} \geq 1,1$ the company strongly exceeds its carbon budget	0	

RATIONALE

AU 4.3 LOCKED-IN EMISSIONS FROM SOLD PRODUCTS

RATIONALE OF THE INDICATOR

RELEVANCE OF THE INDICATOR

Locked-in emissions from sold products is included in this ACT methodology for the following reasons:

- ◆ Absolute GHG emissions over time is the most relevant measure of GHG emissions performance for assessing a company’s contribution to global warming. Analyzing a company’s locked-in GHG emissions alongside science-based budgets also introduces the means to scrutinize the potential cost of inaction over the short-medium term
- ◆ Examining absolute GHG emissions, along with recent and short-term GHG emissions intensity trends, forms part of a holistic view of company GHG emissions performance in the past, present and future.

SCORING RATIONALE

By estimating sales 5 years after the reporting year, this indicator attempts to explore the divergence between the forecasted pathway and the low-carbon benchmark pathway. Applying this forecast provides a useful indication of how the company's GHG emissions intensity relates to absolute GHG emissions. A time horizon of 5 years is a good compromise between a forward-looking indicator and the accuracy of the forecast/estimate.

- **AU 4.4 SHARE OF LOW-CARBON VEHICLES**

DESCRIPTION & REQUIREMENTS

AU 4.4 SHARE OF LOW-CARBON VEHICLES

SHORT

DESCRIPTION OF INDICATOR

A measure of the company's sales in the last five years and expected growth in the next three years of low-carbon vehicles, as compared with the expectations required in the sector under a 1.5°C scenario.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Share of low-carbon vehicle sales (out of total vehicles sales) from RY-5 to RY
- ◆ Projected share of low-carbon vehicle sales for RY to RY+3

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C-TO9.3
- ◆ C4.2b

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 7.54.2
- ◆ 7.75

External sources of data used for the analysis of this indicator are (see section 6.2 for more details):

- ◆ IEA – NZE Roadmap (2023): global share of electric vehicle sales

**HOW THE
ASSESSMENT
WILL BE DONE**

The analysis is split into two dimensions.

- ◆ Dimension 1 is a gap analysis which compares the company's share of total sales from low-carbon vehicles with the sector benchmark for low-carbon vehicle share. The assessment of dimension 1 is based on the ratio between the company's share of low-carbon vehicle sales (CS_{LCV}) in the reporting year and the five years that precede it, and the sector benchmark over the same period.
- ◆ Dimension 2 is a trend analysis based on the comparison between the gradient of the company's projected share of low-carbon vehicles from RY to RY+3 and the gradient of the company's share of low-carbon vehicles benchmark (SDA-like calculation)

DIMENSION 1:

The assessment for dimension 1 is based on the ratio between the company's low-carbon vehicle share (CS_{LCV}) for the reporting year and the five years preceding and the sector benchmark (SB_{LCV}) for the same period.

$$LCV \text{ Ratio} = \frac{CS_{LCV}}{SB_{LCV}}$$

SCORE:

The score for this dimension is taken as the average of the scores for each year between reporting year and reporting year -5. For each year, the score is equal to:

- ◆ The LCV ratio if the ratio is lower than 1
- ◆ 1 if the LCV ratio is higher than 1 (the company share of low-carbon vehicles is higher than the benchmark).

DIMENSION 2:

The assessment for dimension 2 uses a trend comparison. The ratio of the gradients of the company sales and the company benchmark is calculated for the period RY to RY+3.

- ◆ CS'_{LCV} is the gradient of the linear trend-line of the company's projected low-carbon vehicle share from RY to RY+3.
- ◆ CB'_{LCV} is the gradient of the linear trend-line of the company benchmark pathway for low-carbon vehicle share over the same period.

The difference between the two gradients is measured by their ratio.

$$Trend \text{ ratio} = \frac{CS'_{LCV}}{CB'_{LCV}}$$

An approach based on the sectoral decarbonisation approach (SDA) is used to generate the benchmark by taking the company's reporting year value for low-carbon vehicle share and converging to the 2035 value (at which point low-carbon vehicles account for 100% of sales in the scenario). Further details about the SDA allocation method are available in section 6.1.

SCORE:

In the trend comparison, if the trend ratio is 1 or greater, the company's growth rate is equal to or greater than the benchmark and the company receives the maximum score of 100%. If the ratio is lower than 1, the company growth rate is lower than the benchmark and a score is assigned as a percentage value equal to the value of the ratio. If the company has already achieved 100% low-carbon vehicle share and is projected to stay at this level, the company scores 100%.

AGGREGATE SCORE: DIMENSION 1: 50%, DIMENSION 2: 50%

RATIONALE

AU 4.4 SHARE OF LOW-CARBON VEHICLES

RATIONALE OF THE INDICATOR

Share of low-carbon vehicles is included in this ACT methodology for the following reasons:

- ◆ GHG emissions intensity pathways in the sector cannot be met without a change in drivetrain technology, and sales are the direct 'output measure' that indicates how this change is incorporated in the business model.
- ◆ The IEA's NZE scenario and other 1.5°C aligned pathways for the sector, all include a significant increase in the share of low-carbon vehicle sales in the coming years. A company's commitment to new technologies is therefore a strong indication of its commitment to a 1.5°C future.

SCORING RATIONALE:

A hybrid approach was chosen for this indicator to allow an assessment of both the progress the company has already made towards decarbonising its sales and the ambition of the company's plans for future sales. The use of gap and trend scoring allows for both absolute performance against the benchmark and relative progress towards alignment with the benchmark to be assessed.

• **AU 4.5 LOW-CARBON VEHICLES EFFICIENCY PERFORMANCE**

DESCRIPTION & REQUIREMENTS

AU 4.5 Low-CARBON VEHICLES EFFICIENCY PERFORMANCE

SHORT DESCRIPTION OF THE INDICATOR

The indicator assesses the average energy efficiency performance of battery electric vehicles (BEVs) sold by the company at reporting year, and the trend of this performance over the previous three years.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Sales-weighted average yearly energy efficiency of BEVs from reporting year (RY) to reporting year minus three years (RY-3)
- ◆ CDP 2023 Questionnaire mapping to this indicator: None

HOW THE ASSESSMENT WILL BE DONE

CDP 2024 Questionnaire mapping to this indicator:

- ◆ None

External sources of data used for the analysis of this indicator are (see section 6.2 for more details):

- ◆ Vehicle Certification Agency’s car fuel and GHG emissions information (Euro Standard 6) – Energy efficiency performance of BEVs

The assessment will assign a maturity score based on the energy efficiency performance of BEVs sold by the company at reporting year and on the trend of the efficiency performance of BEVs sold from RY-3 to RY.

Question	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Weighting
<i>Associated score</i>	0%	25%	50%	75%	100%	
<i>What is the sales-weighted average energy efficiency of BEV sold in reporting year?</i>	Less than 3.4 miles per kWh	Between 3.4 and 3.6 miles per kWh	Between 3.6 and 3.8 miles per kWh	Between 3.8 and 4.1 miles per kWh	More than 4.1 miles per kWh	80%
<i>What is the trend over time of this energy efficiency?</i>	Average efficiency of low-carbon vehicles produced is not changing significantly (increasing by less than 1% on average annually) (RY-3 to RY)		Average efficiency of low-carbon vehicles produced is increasing by at least 1% on average annually (RY-3 to RY)		Average efficiency of low-carbon vehicles produced is increasing by at least 3% on average annually (RY-3 to RY)	20%

RATIONALE

AU 4.5 LOW-CARBON VEHICLES EFFICIENCY PERFORMANCE

RATIONALE OF THE INDICATOR

RELEVANCE OF THE INDICATOR

The ACT Auto methodology considers both battery electric vehicles (BEVs) and fuel cell electric vehicles (FCEVs) as low-carbon vehicles.

Various recent studies highlight the impact of the size and weight of BEVs on their energy efficiency performance. The global trend towards heavier vehicles negates some of the environmental benefits from fleet electrification. The Global Fuel Economy Initiative mentions that small BEVs (1-1.2 tons) are about 30% more efficient than large ones (more than 2 tons). (10)

Energy efficiency performance of FCEVs is not assessed in this indicator for the following reasons:

- ◆ Performance expressed in the unit used for BEVs (miles per kWh) is not available, hindering an homogeneous way of assessing the two types of low-carbon vehicles
- ◆ FCEVs currently represent a non material share of vehicles sold, around 16,000 (27) compared to the estimated 82 million LDVs sold globally in 2022 (28).
- ◆ It is not expected that FCEVs will account for more than 1% of global LDVs sales by 2030 (2).

SCORING RATIONALE

The scale used to assess BEVs energy efficiency performance is built on values from the Vehicle Certification Agency. The agency provides vehicle fuel and GHG emissions information, based on data collected following the Euro 6 standard. More than 80 models of BEVs are considered, the energy efficiency performance of these vehicles ranges from 2.2 to 4.8 miles per kWh. The thresholds to define each maturity levels for this indicator have been calculated as follows⁶:

- ◆ The first quartile defines the threshold to score Standard
- ◆ The median defines the threshold to score Advanced
- ◆ The third quartile defines the threshold to score Next-practice
- ◆ The ninth decile defines the threshold to score Low-carbon aligned

Using this statistical distribution allows for a more precise assessment and ensures that companies' score reflect their performance. Even if built on static values (using a database released in 2023), it appears reasonable that a company must exhibit an average BEV energy efficiency performance corresponding to the upper 10% of current market, to be considered as contributing to sectoral efforts required associated with a 1.5°C aligned climate ambition.

⁶ Similar values (less than 10% gap) were obtained using the Electric Vehicle Database: <https://ev-database.org/>

MODULE 5: MANAGEMENT

Module 5, “Management”, assesses whether the company has the expertise, strategy, incentives (both linked to climate change management and objectives linked to fossil fuels use) and plans in place to manage its low-carbon transition. It assesses the quality of the transition plan and the scenario analysis used to develop it.

- **AU 5.1 OVERSIGHT OF CLIMATE CHANGE ISSUES**

DESCRIPTION & REQUIREMENTS AU 5.1 OVERSIGHT OF CLIMATE CHANGE ISSUES

SHORT DESCRIPTION OF INDICATOR

The company discloses that responsibility for climate change mitigation within the company lies at the highest level of decision-making within the company structure.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Environmental policy and details regarding governance
- ◆ The reporter shall provide details on where is the highest level of direct responsibility for climate change within the organization

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C1.1
- ◆ C1.1a
- ◆ C1.2

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 4.1.1
- ◆ 4.1.2
- ◆ 4.3.1

External sources of data may also be used for the analysis of this indicator.

HOW THE ASSESSMENT WILL BE DONE

The benchmark case is that climate change is managed within the highest decision-making structure within the company.

The position at which climate change is managed within the company structure is determined from the company data submission and accompanying evidence. For small companies, or for cases in which the corporate structure does not match the structure of the maturity matrix, the analyst should assign a score based on the company’s specific hierarchy (i.e., if responsibility for climate change mitigation lies at the highest level of decision-

making within the organization, award “Low-carbon aligned”. If responsibility lies one level below the highest level, award “Next practice”, etc.). The maturity matrix used for the assessment is the following:

Question	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Weighting
<i>Associated score</i>	<i>0%</i>	<i>25%</i>	<i>50%</i>	<i>75%</i>	<i>100%</i>	
What is the position of the employee/committee with highest responsibility for climate change mitigation issues?	No one in charge of climate change issues	Level 4 (see guidance)*	Level 3 (see guidance)*	Level 2 (see guidance)*	Level 1 (see guidance)*	100%

→ Further guidance for each level of seniority is given below:

- ◆ Level 1
 - Highest level of accountability or decision-making within the organization, with responsibility for overall organizational or corporate strategic direction.
 - Examples: Board, sub-set of the Board, Chief Executive Officer (CEO)
- ◆ Level 2
 - Person/committee that is one step down the corporate structure from the highest level of decision-making (i.e. reports to or is accountable to Level 1). Inputs into organizational strategy but does not make decisions on it. May have responsibility and accountability for business unit strategy formation and implementation of one or more business units.
 - Examples: Vice President, Director, other C-Suite officer (e.g., Chief Financial Officer (CFO), Chief Procurement Officer (CPO), Chief Risk Officer (CRO), Chief Operating Officer (COO), Chief Sustainability Officer (CSO), etc.), other committee appointed by the Board
- ◆ Level 3
 - Person/committee that is two steps down the corporate structure from the highest level of decision-making. May have responsibility and accountability for business unit strategy formation and implementation for one business unit.
 - Examples: Manager, Senior Manager

- ◆ Level 4
 - Person/committee that is three or more steps down the corporate structure from the highest level of decision-making. No responsibility or accountability for business unit strategy development.
 - Examples: Officer, Senior Officer

RATIONALE **AU 5.1 OVERSIGHT OF CLIMATE CHANGE ISSUES**

RATIONALE OF THE INDICATOR

Successful change within companies, such as the transition to a low-carbon economy, requires strategic oversight and buy-in from the highest levels of decision-making within the company. Evidence of how climate change is addressed within the top decision-making structures is a proxy for how seriously the company takes climate change, and how well integrated it is at a strategic level. High-level ownership also increases the likelihood of effective action to address low-carbon transition.

Changes in strategic direction are necessarily future-oriented, which fits with this principle of the ACT initiative. Managing oversight of climate change is considered as a good practice.

● **AU 5.2 CLIMATE CHANGE OVERSIGHT CAPABILITY**

DESCRIPTION & REQUIREMENTS **AU 5.2 CLIMATE CHANGE OVERSIGHT CAPABILITY**

SHORT DESCRIPTION OF INDICATOR

Company board or executive management has expertise on the science and economics of climate change, including an understanding of policy, technology and consumption drivers that can disrupt current business. This expertise is used by the individual or committee to inform high-level decision-making within the company.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Environmental policy and details regarding governance
- ◆ The reporter shall identify the position of the individual or name of the committee with this responsibility and outline their expertise regarding climate change and the low-carbon transition

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C1.1

- ◆ C1.1a
- ◆ C1.1d
- ◆ C1.2

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 4.2
- ◆ 4.4

External sources of data may also be used for the analysis of this indicator.

HOW THE ASSESSMENT WILL BE DONE

The presence of expertise on topics relevant to climate change and the low-carbon transition at the level of the individual or committee with overall responsibility for it within the company is assessed. The presence of expertise is the condition that must be fulfilled for points to be awarded in the scoring.

The analyst determines if the company has expertise as evidenced through a named expert biography outlining capabilities. A cross check is performed against 5.1 on the highest responsibility for climate change, the expertise should exist at the level identified. To be awarded Low-carbon aligned, the company must provide examples of how the individual or committee’s expertise has informed strategic investment planning and/or decision-making processes.

The maturity matrix used for the assessment is the following:

Question	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Weighting
Associated score	0%	25%	50%	75%	100%	
<i>Does the individual or committee with oversight of climate change issues (as reported in indicator 5.1) have relevant climate change- and low-carbon transition-related expertise*?</i>	The employee/committee does not meet any of the characteristics of climate change- and low-carbon transition-related expertise*.	The employee/committee meets 1 of the characteristics of climate change- and low-carbon transition-related expertise*.	The employee/committee meets 2 of the characteristics of climate change- and low-carbon transition-related expertise*.	The employee/committee meets 3 or more of the characteristics of climate change- and low-carbon transition-related expertise*.	The employee/committee meets 3 or more of the characteristics of climate change- and low-carbon transition-related expertise*. Expertise systematically informs strategic investment planning/decision-making processes.	100%

- ◆ “Characteristics of climate change- and low-carbon transition-related expertise” include:
- ◆ Academic/professional qualification related to climate change and the low-carbon transition, including an understanding of the impacts and risks, and the solutions to implement (e.g., Bachelors, Masters, Doctorate, professional certification, diploma, etc.)
- ◆ A purely energy-related background with no relationship to climate change and the low-carbon transition is not enough to qualify as expertise.
- ◆ Recent (i.e., within last 10 years) professional experience related to climate change and the low-carbon transition (e.g., previous employment in climate change/low-carbon transition-related role, or with a climate change/low-carbon transition-related organisation, etc.)
- ◆ Recent (i.e., within last 10 years)/active membership of organisation(s) driving corporate knowledge and action on climate change and the low-carbon transition (e.g., World Business Council For Sustainable Development, Solar Energy Industry Association, etc.)
- ◆ Technical knowledge related to climate change and the low-carbon transition, evidenced through recently (i.e., within last 10 years) published outputs written by the individual/committee (e.g., statements, reports, etc.)

RATIONALE

AU 5.2 CLIMATE CHANGE OVERSIGHT CAPABILITY

RATIONALE OF THE INDICATOR

Effective management of the low-carbon transition requires specific expertise related to climate change and its impacts, and their likely direct and indirect effects on the business. Presence of this capability within or closely related to the decision-making bodies that will implement low-carbon transition both indicates company commitment to that transition and increases the chances of success.

Even if companies are managing climate change at the Board level or equivalent level, a lack of expertise could be a barrier to successful management of low-carbon transition.

• **AU 5.3 LOW-CARBON TRANSITION PLAN**

DESCRIPTION & REQUIREMENTS

AU 5.3 Low-carbon transition plan

SHORT DESCRIPTION OF INDICATOR

The company has a plan on how to transition the company to a business model compatible with a low-carbon economy.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Environmental policy and details regarding governance

→ The reporter should provide a description of the transition plan including the following details:

- ◆ Whether the transition plan exists in a documented form and whether that document is public
- ◆ How the results of scenario testing influenced the transition plan
- ◆ Timescale for implementation of the transition plan
- ◆ Who has responsibility for its implementation (at the strategic, not operational, level)
- ◆ How successful implementation of the plan will be measured and monitored. (Should include details of any linked targets, GHG emissions reduction or energy efficiency targets, or KPIs.)

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C3.1
- ◆ C3.3
- ◆ C3.4

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 5.2
- ◆ 5.3
- ◆ 5.3.1
- ◆ 5.3.2

HOW THE ASSESSMENT WILL BE DONE

From the 2021 CDP Transition Plans discussion paper: “A climate transition plan is a time-bound action plan that clearly outlines how an organization will achieve its strategy to pivot its existing assets, operations, and entire business model towards a trajectory that aligns with the latest and most ambitious climate science recommendations, i.e., halving GHG emissions by 2030 and reaching net-zero by 2050 at the latest, thereby limiting global warming to 1.5°C.” (29). Other initiatives have also developed their own similar definitions (IFRS - International Financial Reporting Standards, TCFD - Task Force on Climate-Related Financial Disclosures, EFRAG - European Financial Reporting Advisory Group, TPT – UK Transition Plan Task Force, GFANZ – Glasgow Financial Alliance for Net Zero).

The analyst evaluates the description and evidence of the low-carbon transition plan for the presence of best practice elements and consistency with the other reported management indicators. The company description and evidence are compared to the maturity matrix developed to guide the scoring and a greater number of points are allocated for elements indicating a higher level of maturity.

Among the best practice elements identified to date are:

- ◆ The plan includes financial projections
- ◆ The plan should include cost estimates or other assessments of financial viability as part of its preparation
- ◆ The description of the major changes to the business is comprehensive, consistent, aligned with other indicators

- ◆ Quantitative estimates of how the business will change in the future are included
- ◆ Costs associated with the plan (e.g. write-downs, site remediation, contract penalties, regulatory costs) are included
- ◆ Potential “shocks” or stressors (sudden adverse changes) have been taken into consideration
- ◆ Relevant region-specific considerations are included
- ◆ The plan’s measure of success is SMART – contains targets or commitments with timescales to implement them, is time-constrained or the actions anticipated are time-constrained
- ◆ The plan’s measure of success is quantitative
- ◆ The description of relevant testing/analysis that influenced the transition plan is included
- ◆ The plan is consistent with reporting against other ACT indicators
- ◆ The scope should cover entire business, and is specific to that business
- ◆ The plan should cover the short, medium and long terms. From now or the near future <5 years, until at least 2035 and preferably beyond (2050)
- ◆ The plan contains details of actions the company realistically expects to implement (and these actions are relevant and realistic)
- ◆ The plan is approved at the strategic level within the organisation
- ◆ Discussions about the potential impacts of a low-carbon transition on the current business have been included
- ◆ The company has a publicly-acknowledged well-below 2°C (or beyond) science-based target (SBT)
- ◆ The company has been carrying out a diagnosis of climate change impacts and identified related physical risks

The maturity matrix used for the assessment is the following:

Subdimension	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Weighting
<i>Associated score</i>	0%	25%	50%	75%	100%	
<i>Measure of success</i>	No measure of success		At least one measure of success which is fully SMART* and contains both qualitative and quantitative elements.		More than one measure of success. All measures of success are fully SMART*, contain both qualitative and quantitative elements, and are aligned with a low-carbon scenario.	10%

<p><i>Financial content in plan</i></p>	<p>No financial content</p>	<p>Financial projections, cost estimates or other estimates of financial viability are described but not quantified.</p>	<p>Financial projections, cost estimates or other estimates of financial viability are quantified in some detail.</p>	<p>Quantitative estimations of how the business will change in the future are included. Costs associated with the plan (e.g., write-downs, site remediation, contract penalties, regulatory costs) are included.</p>	<p>Description of the major financial changes to the business over all timescales is comprehensive and aligned with other indicators. The transition plan is integrated into the overall business strategy of the organization and linked to the profit and loss statement.</p>	<p>10%</p>
<p><i>Short-term actions (recent past up to reporting year + 5 years)</i></p>	<p>Contains no discussion of short-term actions.</p>		<p>Contains examples of short-term actions the company expects to implement.</p>		<p>Contains detailed descriptions of relevant and achievable short-term actions the company expects to implement to make the transition a reality.</p>	<p>10%</p>
<p><i>Long-term actions and vision (from reporting year + 5 years onwards)</i></p>	<p>Contains no discussion of long-term actions or vision.</p>		<p>Contains descriptions of long-term actions the company expects to implement to make the transition a reality.</p>		<p>Contains descriptions of long-term actions the company expects to implement to make the transition a reality. Contains a vision of what the far-future company</p>	<p>10%</p>

					could look like in terms of physical assets and business model.	
<i>Scope</i>	Scope of transition plan is not defined.	Transition plan applies only to specific business units/operations (representing less than 50% of company's GHG emissions).	Transition plan applies only to specific business units/operations (representing more than 50% of company's GHG emissions).	Transition plan applies to all business units/operations.	Transition plan applies to all business units/operations and the rest of the value chain (upstream and downstream). Any exclusions from the plan must not be material to the organization in terms of GHG emissions.	10%
<i>Implementation of results of scenario testing</i>	The results of the company's scenario testing (as assessed in Indicator 5.5 – Scenario testing) have not informed the development of the company's transition plan.				The results of the company's scenario testing (as assessed in Indicator 5.5 – Scenario testing) have informed the development of the company's transition plan.	10%
<i>Transition plan timescale†</i>	Covers only short term, from reporting year until (RY + 3 years)	Covers only short and medium term, from reporting year until (RY + 4 to 10 years)	Covers short, medium and long term, from reporting year until (RY + 11 to 20 years)	Covers short, medium and long term, from reporting year until (RY + 21 years to 2049)	Covers short, medium and long term, from reporting year until 2050 or beyond	10%

<i>Review and update process</i>	No transition plan review and update process is in place.	Commitment to review and update transition plan, but no defined timescale or process.	Commitment to review and update transition plan, with either a defined timescale or process.	Commitment to review and update transition plan less often than every 5 years, with a defined process.	Commitment to review and update transition plan at least every 5 years for continuous relevancy and efficacy, with a defined process.	10%
<i>Progress reporting process</i>	No transition plan progress reporting process is in place.	Commitment to report progress against the transition plan and any material changes, but no defined timescale or stakeholder feedback process (e.g., shareholders and AGMs).	Commitment to report progress against the transition plan and any material changes, with either a defined timescale or stakeholder feedback process (e.g., shareholders and AGMs).	Commitment to report progress against the transition plan and any material changes less often than annually, with a defined stakeholder feedback process (e.g., shareholders and AGMs).	Commitment to report progress against the transition plan and any material changes annually, with a defined stakeholder feedback process (e.g., shareholders and AGMs).	10%
<i>The role of a carbon price in the plan</i>	No carbon price is considered.	Internal studies have been conducted regarding a carbon price, but this has not been used to guide decisions.	A carbon price is used only qualitatively by the company.	A carbon price is embedded in cost calculations as a financial indicator.	The carbon price value is aligned with a low-carbon scenario [†] and is integrated into the financial scenario used for making key business decisions.	10%

- ◆ A measure of success is considered “fully SMART” if it meets each of the following SMART elements (30):
- ◆ Specific: the measure of success is explicit, with no room for misinterpretation.
- ◆ Measurable: the measure of success is measurable, and it will be clear when it has been achieved.
- ◆ Achievable: the measure of success is stretching and ambitious, but not so much that it is unachievable.
- ◆ Relevant: the measure of success contributes to the organisation’s overall objectives, and complements other measures of success.

- ◆ Time-bound: the measure of success has a set deadline.
- ◆ Companies aiming to achieve their low-carbon transition (e.g., reach net-zero GHG emissions) any year before 2050 and maintain or improve this low-carbon state beyond this specified year, should score Low-carbon aligned.
- ◆ Refer for instance to International Energy Agency (IEA), World Energy Outlook 2023, Annex B, p 297 (31). CO₂ prices are displayed by world regions, predicted values in 2030 and 2050.

RATIONALE

AU 5.3 Low-CARBON TRANSITION PLAN

RATIONALE OF THE INDICATOR

All the sectors will require substantial changes to their business to align to a low-carbon economy, over the short, medium and long term, whether it is voluntarily following a strategy to do so or is forced to change by regulations and structural changes to the market. It is better for the success of its business and of its transition that these changes occur in a planned and controlled manner.

• **AU 5.4 CLIMATE CHANGE MANAGEMENT INCENTIVES**

DESCRIPTION & REQUIREMENTS

AU 5.4 CLIMATE CHANGE MANAGEMENT INCENTIVES

SHORT DESCRIPTION OF INDICATOR

The Board's compensation committee has included metrics for the reduction of GHG emissions in the annual and/or long-term compensation plans of senior executives. The company provides financial incentives for the management of climate change issues as defined by a series of relevant indicators.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Management incentives
- ◆ The reporter shall report whether the company provides incentives for the management of climate change issues, including the attainment of targets
- ◆ The reporter shall provide details on the incentives provided for the management of climate change issues
- ◆ The reporter shall provide details on the activities that are usually rewarded by incentives in the company

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C1.3
- ◆ C1.3a

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 4.5
- ◆ 4.5.1

HOW THE ASSESSMENT WILL BE DONE

The analyst verifies if the company has compensation incentives set for senior executive compensation and/or bonuses. Such incentives should directly and routinely reward specific, measurable reductions of tons of carbon emitted by the company in the preceding year and/or the future attainment of GHG emissions reduction targets, or other metrics related to the company’s low-carbon transition plan. For small companies, or for cases in which the corporate structure does not match the structure of the maturity matrix, the analyst should assign a score based on the company’s specific hierarchy (i.e., if climate change management incentives are awarded to the highest level of decision-making within the organization, award “Low-carbon aligned”. If incentives are available one level below the highest level, award “Next practice”, etc.).

Note: the wording of the “What is the type of incentive” is based on the Executive Compensation Guidebook for Climate Transition developed by Willis Towers Watson, in partnership with the Climate Governance Initiative, a project in collaboration with the World Economic Forum (32).

Question	Subdimension	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Weighting
<i>Associated score</i>		0%	25%	50%	75%	100%	
<i>Who is entitled to benefit?</i>	<i>Who is entitled to benefit?</i>	Any other answer	Level 4 (see guidance)*	Level 3 (see guidance)*	Level 2 (see guidance)*	Level 1 (see guidance)*	50%
<i>What is the type of incentive?</i>	<i>Type of incentive</i>	No incentives	The company has introduced climate metrics (key performance indicators (KPIs)), including metrics related to GHG emissions reductions, within annual bonuses (or other short-term incentive plans).		The company has introduced climate metrics (key performance indicators (KPIs)), including metrics related to GHG emissions reductions, within its long-	The company has introduced climate metrics, (key performance indicators (KPIs)), including metrics related to GHG emissions reductions, within its long-term incentive plan (likely to include equity in the	50%

		term incentive plan (likely to include equity in the company).	company). This plan aligns with the timescale and content of the company's transition plan and GHG emissions reduction targets.	
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- * Further guidance for each level of seniority is given below:
 - ◆ Level 1
 - Highest level of accountability or decision-making within the organization, with responsibility for overall organizational or corporate strategic direction.
 - Examples: Board, sub-set of the Board, Chief Executive Officer (CEO)
 - ◆ Level 2
 - Person/committee that is one step in the corporate structure from the highest level of decision-making of the organization (i.e. reports to or is accountable to Level 1). Inputs into organizational strategy but does not make decisions on it. May have responsibility and accountability for business unit strategy formation and implementation of one or more business units.
 - Examples: Vice President, Director, other C-Suite officer (e.g., Chief Financial Officer (CFO), Chief Procurement Officer (CPO), Chief Risk Officer (CRO), Chief Operating Officer (COO), Chief Sustainability Officer (CSO), etc.), other committee appointed by the Board
 - ◆ Level 3
 - Person/committee that is two steps in the corporate structure from the highest level of decision-making of the organization. May have responsibility and accountability for business unit strategy formation and implementation for one business unit.
 - Examples: Manager, Senior Manager
 - ◆ Level 4
 - Person/committee that is three or more steps in the corporate structure from the highest level of decision-making of the organization. No responsibility or accountability for business unit strategy development.
 - Examples: Officer, Senior Officer

RATIONALE **AU 5.4 CLIMATE CHANGE MANAGEMENT INCENTIVES**

RATIONALE OF THE INDICATOR

Executive compensation should be aligned with overall business strategy and priorities. As well as commitments to action the company should ensure that incentives, especially at the executive level, are in place to reward progress towards low-carbon transition. This will improve the likelihood of successful low-carbon transition.

Monetary incentives at the executive level are an indication of commitment to successful implementation of a strategy for low-carbon transition.

• AU 5.5 CLIMATE CHANGE SCENARIO TESTING

DESCRIPTION & REQUIREMENTS**AU 5.5 CLIMATE CHANGE SCENARIO TESTING****SHORT DESCRIPTION OF INDICATOR**

Testing or analysis relevant to determining the impact of transition to a low-carbon economy on the current and projected business model and/or business strategy has been completed, with the results reported to the board or c-suite, the business strategy revised where necessary, and the results publicly reported.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ The reporter shall provide the details and supporting documents on the organization's climate change scenario testing

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C2.3a
- ◆ C3.2
- ◆ C3.2a
- ◆ C3.2b

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 3.1.1
- ◆ 5.1
- ◆ 5.1.1
- ◆ 5.1.2

HOW THE ASSESSMENT WILL BE DONE

The analyst evaluates the description and evidence of the low-carbon economy scenario testing for the presence of best-practice elements and consistency with the other reported management indicators. The company description and evidence are compared to the maturity matrix developed to guide the scoring and a greater number of points is allocated for elements indicating a higher level of maturity.

Best-practice elements to be identified in the test/analysis include:

- ◆ full coverage of the company's boundaries
- ◆ timescale from present to long-term (typically from RY+10 up to 2050)
- ◆ results are expressed in value-at-risk or other financial terms
- ◆ multivariate: a range of different changes in conditions are considered together
- ◆ changes in conditions are specific to a low-carbon climate scenario
- ◆ climate change conditions are combined with other likely future changes in operating conditions over the timescale chosen

Question	Subdimension	Basic	Standard	Advanced	Next practice	Low carbon aligned	Weighting
	<i>Associated score</i>	0%	25%	50%	75%	100%	
<i>What is the scope of the scenario testing?</i>	<i>Scope</i>	Scope of scenario testing is not defined.	Scenario testing applies only to specific business units / operations (representing less than 50% of company's GHG emissions).	Scenario testing applies only to specific business units / operations (representing more than 50% of company's GHG emissions).	Scenario testing applies to all business units / operations,	Scenario testing applies to all business units / operations and the rest of the value chain (upstream and downstream). Any exclusions from the plan must not be material to the organization in terms of GHG emissions.	25%
<i>What is the timescale of the scenario testing?</i>	<i>Timescale</i>	Covers only short term, from reporting year until (RY + 3 years).	Covers only short and medium term, from reporting year until (RY + 4 to 10 years).	Covers short, medium and long term, from reporting year until (RY + 11 to 20 years).	Covers short, medium and long term, from reporting year until (RY + 21 years to 2049).	Covers short, medium and long term, from reporting year until 2050 or beyond.	20%
<i>Does the company assess the materiality of</i>	<i>Climate-related risks/opportunities*</i>	The materiality of climate-related risks/opportunities	The materiality of 1 category of climate-related	The materiality of 2 categories of climate-related	The materiality of 3 categories of climate-related	The materiality of 4 categories of climate-related	10%

<i>climate-related risks/opportunities*?</i>		es* is not assessed.	risks/opportunities* is assessed.	risks/opportunities* is assessed.	risks/opportunities* is assessed.	risks/opportunities* is assessed.	
<i>How many scenarios are considered?</i>	<i>Scenarios</i>	No scenarios are considered.	Considers 1 scenario.	Considers 2 scenarios.		Considers 3 or more scenarios, including a low-carbon economy scenario.	10%
<i>What parameters/assumptions are considered?</i>	<i>Parameters/assumptions considered</i>	Considers 1-2 different parameters/assumptions.		Considers 3-4 parameters/assumptions together (multivariate)		Considers 5 or more parameters/assumptions together, related to changing climate conditions in combination with changes in operating conditions.	15%
<i>Are the results† expressed in qualitative/quantitative/financial terms?</i>	<i>Results†</i>	No results available	Expressed only in qualitative terms	Expressed in qualitative and quantitative terms	Expressed in qualitative, quantitative and financial terms	Expressed in qualitative, quantitative and financial terms and results are translated into value-at-risk	10%
<i>Is a carbon price considered?</i>	<i>Carbon price</i>	No carbon price is considered.		A carbon price is used as one of the main parameters/assumptions		The carbon price used is aligned with the parameters/assumptions of a low-carbon economy scenario‡	10%

- ◆ Climate-related risk categories (33):
- ◆ Market and Technology shifts
- ◆ Reputation
- ◆ Policy and Legal
- ◆ Physical Risks
- ◆ Results of scenario analysis should be presented as business impacts which can include (33):
- ◆ Earnings – what conclusions does the organization draw about the impact on earnings and how does it express that impact (e.g., as EBITDA (earnings before interest, taxes, depreciation and amortization), EBITDA margins, EBITDA contribution, dividends)?
- ◆ Costs – what conclusions does the organization draw about the implications for its operating/production costs and their development over time?
- ◆ Revenues – what conclusions does the organization draw about the implications for the revenues from its key commodities/ products/ services and their development over time?
- ◆ Assets – what are the implications for asset values of various scenarios?
- ◆ Capital Allocation/ investments – what are the implications for capex and other investments?
- ◆ Timing – what conclusions does the organization draw about the development of costs, revenues and earnings across time (e.g., 5/10/20 year)?
- ◆ Refer for instance to the International Energy Agency (IEA), World Energy Outlook 2019, Annex B, p 758 (34). CO₂ prices are displayed by world regions, with predicted values in 2030 and 2050.

RATIONALE

AU 5.5 CLIMATE CHANGE SCENARIO TESTING

RATIONALE OF THE INDICATOR

There are a variety of ways of analysing the potential impacts of climate-related changes on the business, whether these are slow and gradual developments or one-off “shocks”. Investors are increasingly calling for techniques such as the use of an internal price on carbon, scenario analysis and stress testing to be implemented to enable companies to calculate the value-at-risk that such changes could pose to the business. As this practice is emergent at this time there is currently no comprehensive survey or guidance on specific techniques or tools recommended for the sector. The ACT methodology thus provides a broad definition of types of testing and analysis which can be relevant to this information requirement, to identify both current and best practices and consider them in the analysis.

Scenario stress testing is an important management tool for preparing for low-carbon transition. For businesses likely to be strongly affected by climate change impacts (both direct and indirect), it has even greater importance.

MODULE 6: SUPPLIER ENGAGEMENT

Module 6, “Supplier engagement”, assesses the company’s efforts to decarbonise its supply chain. This module assesses the company’s strategy to engage with its suppliers to reduce GHG emissions. It then assesses existing activities, initiatives and partnerships, launched by the company to influence and support suppliers to reduce GHG emissions.

Note: one indicator in module 4 of the ACT Auto methodology (4.1 – Trend in past scope 3 upstream emissions intensity) already relates to engagement with suppliers. Modules 4 and 6 consider complementary information, as explained below:

A vehicle manufacturer company will be scored against indicator 4.1 – Trend in past scope 3 upstream emissions intensity (see section 6.3). This relates to the GHG emissions intensity from purchased materials. When the company is scored against module 6, the analyst should identify *other* ways in which the company engages with its suppliers beyond just purchasing low-carbon materials. For example, engaging with suppliers to encourage them to report their GHG emissions, set their own science-based targets, reduce their own GHG emissions, etc.

• AU 6.1 STRATEGY TO INFLUENCE SUPPLIERS TO REDUCE THEIR GHG EMISSIONS

DESCRIPTION & REQUIREMENTS

AU 6.1 STRATEGY TO INFLUENCE SUPPLIERS TO REDUCE THEIR GHG EMISSIONS

SHORT DESCRIPTION OF INDICATOR

This indicator assesses the strategic policy and the process which are formalized and implemented into business decision making-processes to influence, enable or otherwise shift suppliers’ choices and behaviours in order to reduce its GHG emissions.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Methods of supplier engagement, strategy for prioritizing supplier engagement and measures of success
- ◆ Proportion of total procurement spend and/or supplier-related scope 3 emissions covered by the strategy
- ◆ Data on suppliers’ GHG emissions and climate change strategies
- ◆ Key procurement templates (e.g., New supplier contracts, Supplier Code of Conduct, RFI/RFPs (request for information / proposal), Supplier self-assessments, Performance cards

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C12.1a
- ◆ C12.2
- ◆ C12.2a

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 5.11.1
- ◆ 5.11.2
- ◆ 5.11.5
- ◆ 5.11.6
- ◆ 5.11.7

HOW THE ASSESSMENT WILL BE DONE

The assessment will assign a maturity score based on the company’s formalized, written strategy regarding its engagement with its suppliers, expressed in a maturity matrix.

A company that is placed in the ‘Low-carbon aligned’ category will receive the maximum score. A company which is at a lower level will receive a partial score, with 0 points awarded for having no engagement at all.

Question	Subdimension	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Weighting
Associated score		0%	25%	50%	75%	100%	
What is the scope of the supplier engagement strategy?	<i>Scope</i>	No strategy applied to any suppliers.	Strategy applied to up to 30% of total procurement spend OR up to 30% of supplier-related scope 3 emissions.	Strategy applied to 31-60% of total procurement spend OR 31-60% of supplier-related scope 3 emissions.	Strategy applied to 61-90% of total procurement spend OR 61-90% of supplier-related scope 3 emissions.	Strategy applied to over 90% of total procurement spend OR over 90% of supplier-related scope 3 emissions.	30%
To what extent are GHG emissions reduction requirements integrated in engagement with suppliers?	<i>GHG emissions reduction requirements</i>	No GHG emissions reduction requirement included in key procurement templates.*	Unquantified GHG emissions reduction requirement included in key procurement templates.*	Quantified GHG emissions reduction requirement included in key procurement templates* but the supplier is not required to report progress to the company.	Quantified GHG emissions reduction target included in key procurement templates* and the supplier is required to report progress to the company.	Quantified, science-based GHG emissions reduction target (that is aligned with the sector/industry pathway) included in key procurement templates* and the supplier is required to report progress to the company.	20%

<p>To what extent are other low-carbon transition-related requirements/recommendations[†] integrated in engagement with suppliers?</p>	<p><i>Other low-carbon transition-related requirements/recommendations</i></p>	<p>No other low-carbon transition-related requirements/recommendations[†] included in key procurement templates.*</p>		<p>1 or more other low-carbon transition-related requirements/recommendations[†] included in key procurement templates.*</p>	<p>5%</p>
<p>To what extent are suppliers required to publicly report on their GHG emissions and other low-carbon transition-related requirements/recommendations?</p>	<p><i>Reporting</i></p>	<p>No requirement included in key procurement templates* for suppliers to publicly report on their GHG emissions or other low-carbon transition-related requirements/recommendations</p>	<p>Requirement included in key procurement templates* for suppliers to publicly report on their GHG emissions but not any other low-carbon transition-related requirements/recommendations</p>	<p>Requirement included in key procurement templates* for suppliers to publicly report on their GHG emissions and other low-carbon transition-related requirements/recommendations.</p>	<p>5%</p>
<p>Are GHG emissions reduction/reporting requirements included in selection of new suppliers, renewal of contract with existing suppliers, neither or both?</p>	<p><i>New suppliers/existing suppliers</i></p>	<p>Requirements included in NEITHER the selection of new suppliers NOR renewal of contracts with existing suppliers.</p>	<p>Requirements included in EITHER the selection of new suppliers OR renewal of contracts with existing suppliers.</p>	<p>Requirements included in BOTH the selection of new suppliers AND renewal of contracts with existing suppliers.</p>	<p>5%</p>

<p>How does the company respond to supplier non-compliance with GHG emissions reduction requirements?</p>	<p><i>Non-compliance</i></p>	<p>No response to supplier non-compliance.</p>		<p>Company retains/suspends/sanctions and engages non-compliant suppliers, but does not exclude those that fail to show significant improvement after the period of engagement.</p>	<p>.</p>	<p>Company retains/suspends/sanctions and engages non-compliant suppliers, and permanently excludes those that fail to show significant improvement after the period of engagement.</p>	<p>5%</p>
<p>What action levers[‡] are embedded in the company's strategy to engage suppliers?</p>	<p><i>Action levers[‡] embedded in strategy</i></p>	<p>No action levers[‡] embedded in strategy.</p>	<p>Strategy includes action lever(s) from one of the three engagement types (Information collection, Engagement & Incentivisation, Innovation & collaboration) used.[‡]</p>	<p>Strategy includes action levers from two of the three engagement types (Information collection, Engagement & Incentivisation, Innovation & collaboration) used.[‡]</p>	<p>Strategy includes action levers from all of the three engagement types (Information collection, Engagement & Incentivisation, Innovation & collaboration) used.[‡]</p>	<p>Strategy includes action levers from all of the three engagement types (Information collection, Engagement & Incentivisation, Innovation & collaboration) used.[‡]</p> <p>Strategy includes regular audits of the supplier by the company or a representative.</p>	<p>30%</p>

* "Key procurement templates" include but are not limited to (35):

- ◆ New supplier contracts
- ◆ Supplier Code of Conduct
- ◆ RFI/RFPs
- ◆ Supplier self-assessments
- ◆ Performance cards

† “Other low-carbon transition-related requirements/recommendations” refers to key aspects of a supplier’s low-carbon transition, beyond GHG emissions reductions and targets, that companies can engage them on. These may not be specific requirements, but can be general/high-level recommendations. These aspects can include performance indicators from any ACT performance modules, such as:

- ◆ Intangible investment
 - For example, the company recommends that its suppliers increase their R&D spend in low-carbon technologies.
- ◆ Management
 - For example, the company requires its suppliers to conduct climate change scenario testing.
- ◆ Policy engagement
 - For example, the company only selects suppliers not opposed to relevant climate policies.
- ◆ Business model
 - For example, the company engages with its suppliers to develop new, low-carbon business models.
- ◆ Any other relevant low-carbon transition-related requirement/recommendation (e.g., ACT assessment, setting a Science Based Target, etc)

‡ Action levers must be embedded in a strategy document, and not be presented as examples of past/present actions/initiatives (such examples should be scored in indicator 6.2). “Action levers” include, but are not limited to, the following examples, which are grouped into three engagement types (sources: 2023 CDP climate change questionnaire C12.1a (36) (37)):

- ◆ Information collection (understanding supplier behaviour)
 - Collect GHG emissions data at least annually from suppliers
 - Collect targets information at least annually from suppliers
 - Collect climate-related risk and opportunity information at least annually from suppliers
 - Collect climate transition plan information at least annually from suppliers
 - Collect other climate-related information at least annually from suppliers
- ◆ Engagement & incentivization (changing supplier behaviour)
 - Run an engagement campaign to educate suppliers about climate change
 - Provide training, support, and best practices on how to make credible renewable energy usage claims
 - Provide training, support, and best practices on how to set science-based targets
 - Directly work with suppliers on climate-related topics, such as defining common GHG emissions reduction plans (i.e., both companies commit to reduce X tCO₂e together)
 - Climate change performance is featured in supplier awards scheme
 - Offer financial incentives for suppliers who contribute to reducing the company’s operational GHG emissions (Scopes 1 & 2)
 - Offer financial incentives for suppliers who contribute to reducing the company’s downstream GHG emissions (Scope 3)

- Offer financial incentives for suppliers who contribute to reducing the company's upstream GHG emissions (Scope 3)
- Offer financial incentives for suppliers who increase the share of renewable energy in their total energy mix
- Offer financial incentives for suppliers who develop/adopt a climate transition plan
- Facilitate adoption of a unified climate transition approach with suppliers
- ◆ Innovation & collaboration (changing markets)
 - Run a campaign to encourage innovation to reduce climate impacts on products and services
 - Invest jointly with suppliers in R&D of relevant low-carbon technologies

RATIONALE

AU 6.1 STRATEGY TO INFLUENCE SUPPLIERS TO REDUCE THEIR GHG EMISSIONS

RATIONALE OF THE INDICATOR

RELEVANCE OF THE INDICATOR:

Supplier engagement is included in this ACT methodology for the following reasons:

- ◆ It might have a significant impact in terms of GHG emissions. Achieving decarbonization of the whole supply chain is key to achieving climate goals in most companies
- ◆ Engaging suppliers through contract clauses and sales incentives is necessary to bring them on board.

SCORING THE INDICATOR:

Because of data availability and complexity, a direct measure of the outcome of such engagement is not feasible at this time. It is often challenging to quantify the GHG emissions reduction potential and outcome of collaborative activities with the supply chain. Therefore, the approach of a maturity matrix allows the analyst to consider multiple dimensions of supplier engagement and assess them together to calculate a single score for Supplier Engagement.

• **AU 6.2 ACTIVITIES TO INFLUENCE SUPPLIERS TO REDUCE THEIR GHG EMISSIONS**

DESCRIPTION & REQUIREMENTS

AU 6.2 ACTIVITIES TO INFLUENCE SUPPLIERS TO REDUCE THEIR GHG EMISSIONS

SHORT DESCRIPTION OF INDICATOR

This indicator assesses the extent to which the company implements activities and initiatives that help, influence or otherwise enable suppliers to reduce their GHG emissions. The indicator aims to be a holistic measure of these activities and initiatives, with evidence of implementation and outcomes in the value chain across all products/services.

**DATA
REQUIREMENTS**

The relevant data for this indicator are:

- ◆ List of initiatives implemented to influence suppliers to reduce their GHG emissions, green purchase policy or track record, supplier code of conduct

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C12.1a
- ◆ C12.2
- ◆ C12.2a

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 5.11.1
- ◆ 5.11.2
- ◆ 5.11.5
- ◆ 5.11.6
- ◆ 5.11.7

**HOW THE
ASSESSMENT
WILL BE DONE**

The assessment will assign a maturity score based on the company’s demonstration of recent and current activities and initiatives with its suppliers, expressed in a maturity matrix.

A company that is placed in the ‘Low-carbon aligned’ category will receive the maximum score. A company which is at a lower level will receive a partial score, with 0 points awarded for having no engagement at all.

This maturity matrix is indicative but does not show all possible options that can result in a particular score. The company’s responses will be scrutinized by the analyst and then placed on the level in the matrix where the analyst deems it most appropriate.

Question	Subdimension	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Weighting
Associated score		0%	25%	50%	75%	100%	
What action levers* does the company use in practice to	<i>Action levers* used in practice</i>	No evidence of action levers* used in practice.	Evidence of company using action lever(s) from ONE of the	Evidence of company using action levers from TWO of the	Evidence of company using action levers from ALL of the	Evidence of company using action levers from ALL of the	30%

engage suppliers?			three engagement types (Information collection, Engagement & Incentivisation, Innovation & collaboration) used.*	three engagement types (Information collection, Engagement & Incentivisation, Innovation & collaboration) used.*	three engagement types (Information collection, Engagement & Incentivisation, Innovation & collaboration) used.*	three engagement types (Information collection, Engagement & Incentivisation, Innovation & collaboration) used.* Regular audits of the supplier by the company or a representative.	
What is the scope of the recent and current activities in supplier engagement?	Scope	No suppliers engaged.	Suppliers engaged represent up to 30% of total procurement spend OR up to 30% of supplier-related scope 3 emissions.	Suppliers engaged represent 31-60% of total procurement spend OR 31-60% of supplier-related scope 3 emissions.	Suppliers engaged represent 61-90% of total procurement spend OR 61-90% of supplier-related scope 3 emissions.	Suppliers engaged represent over 90% of total procurement spend OR over 90% of supplier-related scope 3 emissions.	40%
How impactful has the company's supplier engagement been?	Impact of engagement [†]	No evidence of impact [†] of action levers used.	Some action levers used have qualitative evidence of impact [†] .	Almost all action levers used have qualitative evidence of impact [†] .	Some action levers used have quantitative evidence of impact [†] .	Almost all action levers used have qualitative and quantitative evidence of impact [†] .	30%

* Action levers: as per indicator 6.1 Strategy to influence suppliers to reduce their GHG emissions

† The metric used to measure impact depends on the action lever the metric refers to. Examples of “evidence of impact” might include, but are not limited to:

- ◆ Qualitative example: Feedback from suppliers saying that they appreciate and will use this new knowledge to start their journey on the low-carbon transition
- ◆ Quantitative example: Engaged suppliers have reduced their annual GHG emissions by X%
- ◆ Quantitative example: The percentage of engaged suppliers setting science-based targets has increased annually by X%
- ◆ Quantitative example: The percentage of engaged suppliers conducting scenario testing has increased annually by X%

RATIONALE

AU 6.2 ACTIVITIES TO INFLUENCE SUPPLIERS TO REDUCE THEIR GHG EMISSIONS

RATIONALE OF THE INDICATOR

RELEVANCE OF THE INDICATOR:

Activities to influence suppliers are included in this ACT methodology for the following reasons:

- ◆ It might have a significant impact in terms of GHG emissions. Achieving decarbonization of the whole supply chain is key to achieving climate goals in most companies
- ◆ Engaging suppliers through contract clauses and sales incentives is necessary to bring them on board.

SCORING THE INDICATOR:

Because of data availability and complexity, a direct measure of the outcome of such engagement is not feasible at this time. It is often challenging to quantify the GHG emissions reduction potential and outcome of collaborative activities with the supply chain. Therefore, the approach of a maturity matrix allows the analyst to consider multiple dimensions of supplier engagement and assess them together towards a single score for all the activities related to Supplier Engagement.

MODULE 7: CLIENT ENGAGEMENT

Module 7, “Client engagement”, assesses the company’s engagement efforts to influence client behaviour to reduce its GHG emissions. This module assesses the company’s strategy to engage with its clients or customers to reduce GHG emissions. It then assesses existing activities, initiatives and partnerships, launched by the company to influence clients to reduce GHG emissions.

Note: some indicators in module 4 of the ACT Auto methodology (4.2 – Trend in past scope 3 downstream emissions intensity and 4.3 Locked-in emissions from sold products) already relates to engagement with suppliers. Modules 4 and 7 consider complementary information, as explained below:

A vehicle manufacturer company will be scored against indicators 4.2 – Trend in past scope 3 downstream emissions intensity and 4.3 Locked-in emissions from sold products (see section 6.3). These relate to the GHG emissions intensity resulting from the use of sold vehicles. When the company is scored against module 7, the analyst should identify other ways in which the company engages with its clients beyond just lowering downstream GHG emissions. For example, engaging with clients to promote low-carbon vehicles sales.

- **AU 7.1 STRATEGY TO INFLUENCE CLIENTS TO REDUCE THEIR GHG EMISSIONS**

DESCRIPTION & REQUIREMENTS

AU 7.1 STRATEGY TO INFLUENCE CLIENTS TO REDUCE THEIR GHG EMISSIONS

SHORT DESCRIPTION OF INDICATOR

The company has a strategy, ideally governed by policy and integrated into business decision-making, to influence, enable, or otherwise shift client choices and behaviour in order to reduce their GHG emissions.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Strategy to influence clients GHG emissions
- ◆ % of clients covered by the strategy
- ◆ Data on clients’ choices and preferences towards reducing GHG emissions

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C12.1b

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 5.11.3

HOW THE ASSESSMENT WILL BE DONE

The assessment will assign a maturity score based on the company’s formalized, written strategy regarding its engagement with its customers, expressed in a maturity matrix.

A company that is placed in the ‘Low-carbon aligned’ category will receive the maximum score. A company which is at a lower level will receive a partial score, with 0 points awarded for having no engagement at all.

Question	Subdimension	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Weighting
Associated score		0%	25%	50%	75%	100%	
What is the scope of the client engagement strategy?	Scope	No strategy applied to any clients.	Strategy applied to up to 30% of revenues OR up to 30% of client-related scope 3 emissions.	Strategy applied to 31-60% of revenues OR 31-60% of client-related scope 3 emissions.	Strategy applied to 61-90% of revenues OR 61-90% of client-related scope 3 emissions.	Strategy applied to over 90% of revenues OR over 90% of client-related scope 3 emissions.	30%
To what extent are GHG emissions reduction/energy efficiency targets integrated in client engagement strategy?	GHG emissions reduction/energy efficiency targets	GHG emissions reduction/energy efficiency targets not included in client engagement strategy.		Unquantified GHG emissions reduction/energy efficiency target(s) included in client engagement strategy.		Quantified GHG emissions reduction/energy efficiency target(s) included in client engagement strategy.	30%
To what extent are other low-carbon transition-related recommendations* integrated in client engagement strategy?	Other low-carbon transition-related recommendations*	No other low-carbon transition-related recommendations* included in client engagement strategy.				1 or more other low-carbon transition-related recommendations* included in client engagement strategy.	10%

engagement strategy?							
What action levers[†] are embedded in the company's strategy to encourage clients to reduce their emissions?	<i>Action levers[†] embedded in strategy</i>	No action levers [†] embedded in strategy.	Strategy includes action lever(s) from one of the four engagement types (Education/information sharing; Collaboration & innovation; Compensation; Customer motivation via marketing and choice architecture) [†] .	Strategy includes action lever(s) from two of the four engagement types (Education/information sharing; Collaboration & innovation; Compensation, Customer motivation via marketing and choice architecture) [†] .	Strategy includes action lever(s) from three of the four engagement types (Education/information sharing; Collaboration & innovation; Customer motivation via marketing and choice architecture) [†] .	Strategy includes action lever(s) from all four of the four engagement types (Education/information sharing; Collaboration & innovation; Compensation, Customer motivation via marketing and choice architecture) [†] .	30%

* "Other low-carbon transition-related recommendations" refers to key aspects of a client's low-carbon transition, beyond GHG emissions reductions and targets, that companies can engage them on. These aspects can include performance indicators from any ACT performance modules, such as:

- ◆ Intangible investment
 - For example, the company recommends that its clients increase their R&D spend in low-carbon technologies.
- ◆ Management
 - For example, the company encourages its clients to conduct climate change scenario testing.
- ◆ Policy engagement
 - For example, the company encourages its clients to support relevant climate policies.

- ◆ Business model
 - For example, the company engages with its clients to develop new, low-carbon business models.
- ◆ Sales efforts:
 - Efforts put in place by the company to sell low-carbon vehicles beyond the limit (imposed by regulation) is reached

Note: sales efforts relate to all kinds of clients, which is not the case of the other listed recommendations (e.g. R&D spending might be relevant to business-to-business but not to business-to-client). Auto manufacturers can always work on sales efforts and score low-carbon aligned on the “Other low-carbon transition-related recommendations” question since it requires 1 or more recommendations.

† Action levers must be embedded in a strategy document, and not be presented as examples of past/present actions/initiatives (such examples should be scored in indicator 7.2). “Action levers” include but are not limited to the following individual action levers, which are grouped into four engagement types (sources: 2022 CDP climate change questionnaire C12.1a (36), (38):

- ◆ Education/information sharing
 - Run an engagement campaign to educate customers about the quantified climate change impacts of (using) your products, goods, and/or services
 - E.g., highlight that the low-carbon product answers to the purchasing rules of the client
 - E.g., promote the low-carbon product highlighting that their client could use it to answer the purchasing rules of their own clients (e.g., low-carbon aluminium to produce a vehicle door).
 - Share environmental information (e.g., quantified GHG emissions) about your products and relevant certification schemes (i.e., Energy STAR)
 - Provide documents and tools
- ◆ Collaboration & innovation
 - Run a campaign to encourage innovation to reduce climate change impacts
 - Organize multi-party working group with meetings taking place at least annually
- ◆ Compensation/demand-side response
 - Provide rebates for environmentally friendly actions
- ◆ Customer motivation via marketing and choice architecture (“nudging”)
 - Promote the sale of low-carbon vehicles over efficient ICE only
 - Design marketing campaigns/choice architecture aiming to indirectly encourage customers to reduce their GHG emissions

RATIONALE

AU 7.1 STRATEGY TO INFLUENCE CLIENTS TO REDUCE THEIR GHG EMISSIONS

RATIONALE OF THE INDICATOR

RELEVANCE OF THE INDICATOR:

Strategies to influence clients are included in this ACT methodology for the following reasons:

- ◆ Companies usually have some ability to influence the actions and performance of clients regarding climate thanks to their products or services.
- ◆ The downstream value chain can represent the largest source of GHG emissions for some companies and clients should be engaged through a proper, ambitious strategy.

SCORING THE INDICATOR:

Because of data availability and complexity, a direct measure of the outcome of such engagement is not very feasible at this time. It is often challenging to quantify the GHG emissions reduction potential and outcome of collaborative activities with the supply chain. Therefore, the approach of a maturity matrix allows the analyst to consider multiple dimensions of supplier engagement and assess them together towards a single score for a strategy related to Client Engagement.

• **AU 7.2 ACTIVITIES TO INFLUENCE CLIENTS TO REDUCE THEIR GHG EMISSIONS**

DESCRIPTION & REQUIREMENTS

AU 7.2 ACTIVITIES TO INFLUENCE CLIENTS TO REDUCE THEIR GHG EMISSIONS

SHORT DESCRIPTION OF INDICATOR

This indicator assesses the extent to which the company implements activities and initiatives that help, influence or otherwise enable clients to reduce their GHG emissions. The indicator aims to be a holistic measure of these activities and initiatives, with evidence of implementation and outcomes in the value chain across all products/services.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Activities to influence clients GHG emissions
- ◆ % of clients covered by the activities
- ◆ Data on clients' choices and preferences towards reducing GHG emissions

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C12.1b

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 5.11.3

HOW THE ASSESSMENT WILL BE DONE

The assessment will assign a maturity score based on the company’s demonstration of recent and current activities and initiatives with its clients, expressed in a maturity matrix.

A company that is placed in the ‘Low-carbon aligned’ category will receive the maximum score. A company which is at a lower level will receive a partial score, with 0 points awarded for having no engagement at all.

This maturity matrix is indicative but does not show all possible options that can result in a particular score. The company’s responses will be scrutinized by the analyst and then placed on the level in the matrix where the analyst deems it most appropriate.

Question	Subdimension	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Weighting
Associated score		0%	25%	50%	75%	100%	
What action levers* does the company use in practice to encourage clients to reduce their GHG emissions?	<i>Action levers* used in practice</i>	No evidence of action levers* used in practice.	Evidence of company responding only to customer demand for more low-carbon products without attempting to change the existing customer demand towards low-carbon alternatives.	Evidence of company using action lever(s) from ONE of the four engagement types (Education/information sharing; Collaboration & innovation; Compensation; Customer motivation via marketing and choice architecture).*	Evidence of company using action lever(s) from TWO of the four engagement types (Education/information sharing; Collaboration & innovation; Compensation; Customer motivation via marketing and choice architecture).*	Evidence of company using action lever(s) from AT LEAST THREE of the four engagement types (Education/information sharing; Collaboration & innovation; Compensation; Customer motivation via marketing and choice architecture).*	30%

<p>What is the scope of the recent and current activities in client engagement?</p>	<p>Scope</p>	<p>No clients engaged.</p>	<p>Clients engaged represent up to 30% of revenues OR up to 30% of client-related scope 3 emissions.</p>	<p>Clients engaged represent 31-60% of revenues OR 31-60% of client-related scope 3 emissions.</p>	<p>Clients engaged represent 61-90% of revenues OR 61-90% of client-related scope 3 emissions.</p>	<p>Clients engaged represent over 90% of revenues OR over 90% of client-related scope 3 emissions.</p>	<p>40%</p>
<p>How impactful has the company's client engagement been?</p>	<p>Impact of engagement[†]</p>	<p>No evidence of impact[†] of action levers used.</p>	<p>Some action levers used have qualitative evidence of impact[†].</p>	<p>Almost all action levers used have qualitative evidence of impact[†].</p>	<p>Some action levers used have quantitative evidence of impact[†].</p>	<p>Almost all action levers used have qualitative and quantitative evidence of impact[†].</p>	<p>30%</p>

* Action levers must be presented as examples of past/present actions/initiatives, and not be theoretical/embedded in a strategy document (such examples should be scored in indicator 7.1). “Action levers” include but are not limited to: as per indicator 7.1 *Strategy to influence clients to reduce their GHG emissions*.

† The metric used to measure impact depends on the action lever the metric refers to. Examples of “evidence of impact” might include, but are not limited to:

- ◆ Qualitative example: Feedback from clients saying that they appreciate and will use this new knowledge to start their journey on the low-carbon transition
- ◆ Quantitative example: Evidence that engaged clients have reduced their use-phase GHG emissions by X%

RATIONALE

AU 7.2 ACTIVITIES TO INFLUENCE CLIENTS TO REDUCE THEIR GHG EMISSIONS

RATIONALE OF THE INDICATOR

RELEVANCE OF THE INDICATOR:

Activities to influence clients are included in this ACT methodology for the following reasons:

-
- ◆ Companies usually have the ability to influence the actions and performance of clients regarding climate thanks to their products or services.
 - ◆ The downstream can represent the largest source of GHG emissions for some companies throughout the value chain and clients should be engaged through low-carbon solutions.

SCORING THE INDICATOR:

Because of data availability and complexity, a direct measure of the outcome of such engagement is not very feasible at this time. It is often challenging to quantify the GHG emissions reduction potential and outcome of collaborative activities with the supply chain. Therefore, the approach of a maturity matrix allows the analyst to consider multiple dimensions of supplier engagement and assess them together towards a single score for all the activities related to Client Engagement.

MODULE 8: POLICY ENGAGEMENT

Module 8, “Policy engagement”, assesses how the company influences the policy agenda, whether through membership of trade associations and lobbying organisations, support for/obstruction of climate policies, and engagement with local authorities.

• AU 8.1 COMPANY POLICY ON ENGAGEMENT WITH ASSOCIATIONS, ALLIANCES, COALITIONS OR THINKTANKS

DESCRIPTION & REQUIREMENTS

AU 8.1 COMPANY POLICY ON ENGAGEMENT WITH ASSOCIATIONS, ALLIANCES, COALITIONS OR THINKTANKS

SHORT

DESCRIPTION OF INDICATOR

The company has a policy on what action to take when associations, alliances, coalitions or thinktanks of which it is a member or to which it provides support are found to be opposing “climate-friendly” policies.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Public climate change policy positions
- ◆ Description of this policy (scope & boundaries, responsibilities, process to monitor and review)
- ◆ Associations, alliances, coalitions or thinktanks that are likely to take a position on climate change legislation
- ◆ External sources of data shall also be used for the analysis of this indicator (e.g. RepRisk database, InfluenceMap, press news, actions in standard development)

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C12.3b

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 4.11.2

HOW THE ASSESSMENT WILL BE DONE

The analyst will evaluate the description and evidence of the policy on associations, alliances, coalitions or thinktanks of which the company is a member or to which it provides support, for the presence of best practice elements and consistency with the other reported management indicators. The company description and evidence will be compared to the maturity matrix developed to guide the scoring and a greater number of points will be allocated for elements indicating a higher level of maturity.

Best practice elements to be identified in the test/analysis include:

- ◆ A publicly available policy is in place

- ◆ The scope of the policy covers the entire company and its activities, and all associations, alliances, coalitions or thinktanks of which it is a member or to which it provides support. (Consideration should be given as to whether these associations, alliances, coalitions and thinktanks in turn are members of or otherwise support other such organisations that have climate-negative activities or positions).
- ◆ The policy sets out what action is to be taken in the case of inconsistencies
- ◆ Action includes option to terminate membership of the associations, alliances, coalitions or thinktanks
- ◆ Action includes option of publicly opposing or actively countering the association, alliance, coalition or thinktank's position
- ◆ Responsibility for oversight of the policy lies at top level of the organization, and implementation lies at senior management level
- ◆ There is a process to monitor and review association, alliance, coalition and thinktank positions

Question	Subdimension	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Weighting
<i>Associated score</i>		<i>0%</i>	<i>25%</i>	<i>50%</i>	<i>75%</i>	<i>100%</i>	
What is the scope covered by the engagement policy? Is the policy publicly available?	<i>Transparency and scope</i>	Does not cover the entire company (including all of its subsidiaries and business areas, and all operational jurisdictions, i.e., entities within its reporting boundary) or all associations, alliances and coalitions of which it is a member. Is not publicly available.		Covers the entire company (including all of its subsidiaries and business areas, and all operational jurisdictions, i.e., entities within its reporting boundary), and all associations, alliances and coalitions of which it is a member. Is not publicly available.		Covers the entire company (including all of its subsidiaries and business areas, and all operational jurisdictions, i.e., entities within its reporting boundary), and all associations, alliances and coalitions of which it is a member. Is publicly available.	40%
Does the company	<i>Review process</i>	No process to monitor and	A process to monitor and	A process to monitor and	A process to monitor and	A process to monitor and review	40%

<p>have a review process of associations, alliances, coalitions or thinktanks of which it is a member or to which it provides support?</p>		<p>review association, alliance, coalition and thinktank climate policy positions exists.</p>	<p>review association, alliance, coalition and thinktank climate policy positions exists.</p> <p>The process is not necessarily implemented.</p>	<p>review association, alliance, coalition and thinktank climate policy positions exists.</p> <p>The process is implemented, but responsibility for oversight of the process lies below Level 1*, and implementation of the process lies below Level 3*.</p>	<p>review association, alliance, coalition and thinktank climate policy positions exists.</p> <p>Either responsibility for oversight of the process lies at Level 1*, or implementation of the process lies at Level 3 or above*.</p>	<p>association, alliance, coalition and thinktank climate policy positions exists.</p> <p>Responsibility for oversight of the process lies at Level 1*, and implementation of the process lies at Level 3 or above*.</p>	
<p>Does the company have an action plan addressing what action to take when associations, alliances, coalitions or thinktanks of which it is a member or to which it provides support are found to be opposing “climate-friendly” policies?†</p>	<p>Action plan</p>	<p>No action plan exists.</p>	<p>Action plan sets out which actions are to be taken when associations, alliances, coalitions or thinktanks are found to be opposing “climate-friendly” policies. Action plan does not include any of the actions listed†.</p>	<p>Action plan includes making public statements challenging associations, alliances, coalitions and thinktanks*. Does not include either of the other actions listed†.</p>	<p>Action plan includes engaging with associations, alliances, coalitions or thinktanks to change their position†. May include making public statements, but does not include withdrawing funding for/suspending or ending membership†.</p>	<p>Action plan includes withdrawing funding for/suspending or ending membership of the association, alliance, coalition or thinktank*. May include both other actions listed†.</p>	<p>20%</p>

* Further guidance for each level of seniority is given below:

- ◆ Level 1
 - Highest level of accountability or decision-making within the organization, with responsibility for overall organizational or corporate strategic direction.
 - Examples: Board, sub-set of the Board, Chief Executive Officer (CEO)
- ◆ Level 2
 - Person/committee that is one step in the corporate structure from the highest level of decision-making of the organization (i.e. reports to or is accountable to Level 1). Inputs into organizational strategy but does not make decisions on it. May have responsibility and accountability for business unit strategy formation and implementation of one or more business units.
 - Examples: Vice President, Director, other C-Suite officer (e.g., Chief Financial Officer (CFO), Chief Procurement Officer (CPO), Chief Risk Officer (CRO), Chief Operating Officer (COO), Chief Sustainability Officer (CSO), etc.), other committee appointed by the Board
- ◆ Level 3
 - Person/committee that is two steps in the corporate structure from the highest level of decision-making of the organization. May have responsibility and accountability for business unit strategy formation and implementation for one business unit.
 - Examples: Manager, Senior Manager
- ◆ Level 4
 - Person/committee that is three or more steps in the corporate structure from the highest level of decision-making of the organization. No responsibility or accountability for business unit strategy development.
 - Examples: Officer, Senior Officer

† Actions a company can take when associations, alliances, coalitions or thinktanks of which it is a member or to which it provides support are found to be opposing “climate-friendly” policies follow a hierarchy of severity, as follows (source: (39), (40)):

- ◆ Making public statements challenging associations, alliances, coalitions and thinktanks
 - For example, the company speaks out, publicly distancing itself from statements or lobbying against climate policy by associations, alliances, coalitions or thinktanks of which it is a member or to which it provides support. The company explains how these statements or lobbying are inconsistent with its own GHG emissions reduction goals and with its support for climate policy.
- ◆ Engaging with associations, alliances, coalitions or thinktanks to change their position.
 - For example, the company works to end lobbying against climate policy through transparent and time-bound engagement with those organizations.
- ◆ Withdrawing funding for/suspending or ending membership of the association, alliance, coalition or thinktank.

- For example, where attempts to change an association's position prove ineffective or insufficient, the company discontinues its membership or withdraws funding from the association.

RATIONALE

AU 8.1 COMPANY POLICY ON ENGAGEMENT WITH ASSOCIATIONS, ALLIANCES, COALITIONS OR THINKTANKS

RATIONALE OF THE INDICATOR

Associations, alliances, coalitions and thinktanks are a key instrument by which companies can indirectly influence policy on climate. thus, when associations, alliances, coalitions and thinktanks take positions, which are negative for climate, companies need to take action to ensure that this negative influence is countered or minimized.

This indicator is consistent with the ACT Framework and ACT Guidelines and common to the other sectoral methodologies.

• AU 8.2 ASSOCIATIONS, ALLIANCES, COALITIONS AND THINKTANKS SUPPORTED DO NOT HAVE CLIMATE-NEGATIVE ACTIVITIES OR POSITIONS

DESCRIPTION & REQUIREMENTS

AU 8.2 ASSOCIATIONS, ALLIANCES, COALITIONS AND THINKTANKS SUPPORTED DO NOT HAVE CLIMATE-NEGATIVE ACTIVITIES OR POSITIONS

SHORT

DESCRIPTION OF INDICATOR

The company is not on the Board of, providing funding beyond membership to, or otherwise supporting any associations, alliances, coalitions or thinktanks that have climate-negative activities or positions.

DATA

REQUIREMENTS

The relevant data for this indicator are:

- ◆ The reporter shall provide details of those associations, alliances, coalitions and thinktanks that are likely to take a position on climate change legislation
- ◆ The company should attach supporting documentation, if this exists, giving evidence

External sources of data shall also be used for the analysis of this indicator:

- ◆ RepRisk database,
- ◆ Climate Action 100+
- ◆ Ellen Macarthur Foundation
- ◆ Press news
- ◆ EP100 – Climate Group (www.theclimategroup.org/project/ep100)

- ◆ Low-carbon Technology Partnerships initiative (www.wbcasd.org/Programs/Climate-and-Energy/Climate/Low-Carbon-Technology-Partnerships-initiative)

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C12.3b
- ◆ C12.3c

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 4.11.2

HOW THE ASSESSMENT WILL BE DONE

The list of associations, alliances, coalitions and thinktanks declared in the CDP data and other external sources relating to the company is assessed against a list of associations, alliances, coalitions and thinktanks that have climate-negative activities or positions (InfluenceMap is usually used for this (41)). (Consideration should be given as to whether these associations, alliances, coalitions and thinktanks in turn are members of or otherwise support other such organisations that have climate-negative activities or positions.) Such activities or positions could include lobbying against climate policies and practices. The results will be compared to any policy described in 8.1 (“Company policy on engagement with associations, alliances, coalitions or thinktanks”).

Question	Subdimension	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Weighting
		0%	25%	50%	75%	100%	
Does the company support associations, alliances, coalitions or thinktanks that have climate negative activities/positions?	<i>Membership/funding</i>	The company is on the board or provides funding beyond membership to associations, alliances, coalitions and/or thinktanks that have climate – negative activities or positions		The company is not on the board or providing funding beyond membership of any associations, alliances, coalitions or thinktanks that have climate-negative activities or positions. Company may be a member.		The company is not a member of or providing funding for any associations, alliances, coalitions or thinktanks that have climate-negative activities or positions	100%

RATIONALE

AU 8.2 ASSOCIATIONS, ALLIANCES, COALITIONS AND THINKTANKS SUPPORTED DO NOT HAVE CLIMATE-NEGATIVE ACTIVITIES OR POSITIONS

RATIONALE OF THE INDICATOR

Associations, alliances, coalitions and thinktanks are key instruments by which companies can indirectly influence policy on climate. Thus, participating in associations, alliances, coalitions and thinktanks which actively lobby against climate-positive legislation is a negative indicator and likely to obstruct low-carbon transition.

• **AU 8.3 POSITION ON SIGNIFICANT CLIMATE POLICIES**

DESCRIPTION & REQUIREMENTS

AU 8.3 POSITION ON SIGNIFICANT CLIMATE POLICIES

SHORT DESCRIPTION OF INDICATOR

The company is not opposed to any significant climate relevant policy and/or supports climate-friendly policies.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ The company should attach supporting documentation, if this exists, giving evidence on the position of the company on significant climate policies (public statements, etc.).
- ◆ The company shall disclose details of the issues on which it has been directly engaging with policy makers and its proposed legislative solution.

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C12.3a

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 4.11.1

External sources of data shall also be used for the analysis of this indicator (e.g. RepRisk database, press news, actions in standard development)

HOW THE ASSESSMENT WILL BE DONE

The analyst evaluates the description and evidence on company position on relevant climate policies for the presence of best practice elements, negative indicators and consistency with the other reported management indicators. The company description and evidence will be compared to the maturity matrix developed to guide the scoring and a greater number of points will be allocated for elements indicating a higher level of maturity.

Question	Subdimension	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Weighting
<i>Associated score</i>		<i>0%</i>	<i>25%</i>	<i>50%</i>	<i>75%</i>	<i>100%</i>	
What is the position of the company on significant climate policies?	<i>Climate policy support</i>	Direct opposition to climate policies (including where third-party claims are found).	No reported direct opposition to climate policies.	Publicly supports significant climate policies.	Publicly supports significant climate policies. Publicly commits to international low-carbon commitments, such as the Paris Agreement.	Publicly supports significant climate policies. Publicly commits to international low-carbon commitments, such as the Paris Agreement. Actively participates in/leads sectoral/cross-sectoral initiatives against climate change*.	60%
Does the company have a monitoring and review process to ensure that its	<i>Monitoring and review process</i>	No monitoring and review process to ensure that the company's	A monitoring and review process to ensure that the company's	A monitoring and review process to ensure that the company's	A monitoring and review process to ensure that the company's	A monitoring and review process to ensure that the company's	40%

<i>policy positions are consistent with the goals of the Paris Agreement?</i>	policy positions are consistent with the goals of the Paris Agreement exists.	policy positions are consistent with the goals of the Paris Agreement exists.	policy positions are consistent with the goals of the Paris Agreement exists.	policy positions are consistent with the goals of the Paris Agreement exists.	policy positions are consistent with the goals of the Paris Agreement exists.
		The process is not necessarily implemented.	The process is implemented, but oversight of the process lies below Level 1 [†] , and implementation of the process lies below Level 3 [†] .	Either oversight of the process lies at Level 1 [†] , or implementation of the process lies at or above Level 3 [†] .	Oversight of the process lies at Level 1 [†] , and implementation of the process lies at or above Level 3 [†] .

* Examples of sectoral/cross-sectoral initiatives against climate change might include, but are not limited to:

- ◆ Science Based Targets initiative (SBTi)
- ◆ Leadership Group for Industry Transition (LeadIT)
- ◆ Mission Possible Partnership (MPP)

† Further guidance for each level of seniority is given below:

- ◆ Level 1
 - Highest level of accountability or decision-making within the organization, with responsibility for overall organizational or corporate strategic direction.
 - Examples: Board, sub-set of the Board, Chief Executive Officer (CEO)
- ◆ Level 2
 - Person/committee that is one step in the corporate structure from the highest level of decision-making of the organization (i.e. reports to or is accountable to Level 1). Inputs into organizational strategy but does not make decisions on it. May have responsibility and accountability for business unit strategy formation and implementation of one or more business units.

- Examples: Vice President, Director, other C-Suite officer (e.g., Chief Financial Officer (CFO), Chief Procurement Officer (CPO), Chief Risk Officer (CRO), Chief Operating Officer (COO), Chief Sustainability Officer (CSO), etc.), other committee appointed by the Board
- ◆ Level 3
 - Person/committee that is two steps in the corporate structure from the highest level of decision-making of the organization. May have responsibility and accountability for business unit strategy formation and implementation for one business unit.
 - Examples: Manager, Senior Manager
- ◆ Level 4
 - Person/committee that is three or more steps in the corporate structure from the highest level of decision-making of the organization. No responsibility or accountability for business unit strategy development.
 - Examples: Officer, Senior Officer

RATIONALE

AU 8.3 POSITION ON SIGNIFICANT CLIMATE POLICIES

RATIONALE OF THE INDICATOR

Policy and regulation that acts to promote transition to a low-carbon economy is key to the success of the transition. Companies should not oppose effective and well-designed regulations in these areas but should support them.

• **AU 8.4 COLLABORATION WITH LOCAL PUBLIC AUTHORITIES**

DESCRIPTION & REQUIREMENTS

AU 8.4 COLLABORATION WITH LOCAL PUBLIC AUTHORITIES

SHORT DESCRIPTION OF INDICATOR

This indicator evaluates the extent to which the company collaborates with local public authorities to achieve local GHG emissions reductions. While indicator 8.3 “Position on significant climate policies” relates to national and international policies, this indicator assesses the company’s engagement with sub-national public authorities, both in terms of climate-related policy engagement and the establishment of climate-related partnerships.

DATA REQUIREMENTS

The relevant data for this indicator are:

- ◆ Participation in meetings/collaborations with public authorities/local actors
- ◆ Contracts with public authorities/local actors

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C12.3
- ◆ C12.3a

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 4.11
- ◆ 4.11.1

**HOW THE
ASSESSMENT
WILL BE DONE**

The analyst evaluates the description and evidence of the company's collaboration with local authorities for the presence of best-practice elements. Collaboration generally falls into two main categories, policy engagement and collective action/partnerships. Policy engagement could range from dialogue between the company and local authority around the development of new climate-related policies, to participation in local pilot programs to test these policies, to large-scale support for and implementation of these policies. Collective action/partnerships could range from participation in working groups, roundtables, ongoing initiatives, events and/or platforms for local authorities and companies to advance specific issues related to climate change/GHG emissions reduction, to large-scale public-private partnerships (PPPs) with a climate change/GHG emissions reduction focus.

In general, a partnership can only be classed as such if it goes beyond a mere contract between the public authority and the company. It must be a collaboration that works to improve the current system/process and displays additionality (the collaboration reduces GHG emissions beyond business as usual, meaning the reductions would not have happened had the collaboration not been implemented). For example, a contract between a transport operator and a public authority would not be enough to be classed as a partnership by itself, whereas a partnership to reduce local GHG emissions by increasing the share of electric/hybrid/hydrogen buses and promoting greater uptake of public transport within the local area would be sufficient.

While the thematic areas of these collaborations will vary depending on the sector assessed, they should generally fall into one or more of four broad categories:

- ◆ Electrification and energy (including demand management and grid flexibility)
- ◆ Transport
- ◆ Circular economy
- ◆ Buildings

In each case, the level of maturity will depend on the level of commitment from the company, and whether there is evidence that the collaboration has been successful in achieving local GHG emissions reductions.

The company description and evidence are compared to the maturity matrix developed to guide the scoring and a greater number of points are allocated for elements indicating a higher level of maturity.

Question	Basic	Standard	Advanced	Next practice	Low-carbon aligned	Weighting
Associated score	0%	25%	50%	75%	100%	
<i>Does the company collaborate with and support local authorities to achieve local GHG emissions reductions?</i>	<p>No evidence that the company is collaborating with and supporting local authorities to achieve local GHG emissions reductions, other than respecting its contractual obligations, if any.</p> <p>Or</p> <p>Third-party claims are found showing that the company is not complying with local climate policies</p>	<p>The company engages in dialogue with local authority/authorities to design future climate-related policies/partnerships</p>	<p>The company actively participates in small-scale pilot/short-term/one-off programs with local authority/authorities to test/implement climate-related policies/partnerships.</p>	<p>The company is a significant partner* (alongside local authority/authorities and other stakeholders) in the implementation of long-term, climate-related policies/partnerships.</p> <p>The company has measured and disclosed a GHG emissions reduction as a result of the policy/partnership being implemented.</p>	<p>The company is a significant partner* (alongside local authority/authorities and other stakeholders) in the implementation of long-term, climate-related policies/partnerships.</p> <p>The company has measured and disclosed a GHG emissions reduction as a result of the policy/partnership being implemented.</p> <p>The company has a policy to increase such collaboration in more of its operational jurisdictions, and is taking concrete steps towards this (e.g., engaging in dialogue, participating in pilot programs, implementing policies/partnerships with local authorities).[†]</p>	100%

* A company can be classed as a “significant partner” if the policy/partnership would not exist, or be significantly smaller/less successful, without the company’s involvement. The company must be one of the few largest or most invested stakeholders in the policy/partnership.

† Analysts should take into account the size of the company assessed. For example, companies operating in a single jurisdiction are not expected to be involved in collaboration with public authorities outside of that jurisdiction, and could still score Low-carbon aligned if they met each of the other criteria (for example, if they had demonstrated GHG emissions reductions as a result of the policy/partnership being implemented, and had a policy to become involved in more collaboration within their operational jurisdiction).

RATIONALE**AU 8.4 COLLABORATION WITH LOCAL PUBLIC AUTHORITIES****RATIONALE OF
THE INDICATOR**

Collaboration with local authorities can be a key instrument by which companies can indirectly influence policy on climate on their territory. Thus, participating actively in local dialogues shows leadership in climate actions and can significantly help climate policies enforcement.

MODULE 9: BUSINESS MODEL

A company may need to transition and/or replace its existing business model(s) to remain profitable in a low-carbon economy. The company's future business model(s) should enable it to decouple financial results from GHG emissions, in order to meet the constraints of a low-carbon transition while continuing to generate value. This can be done by developing new, low-carbon business models outside the core business of the company, while decarbonizing or terminating existing, high-carbon business models. This should lead to the company's revenue being generated entirely from low-carbon products and services, according to the ACT definition of "low carbon" for a particular sector.

This module aims to identify both:

- ◆ the "big picture" view of the company's low-carbon transition, by assessing its overall share of revenue from low-carbon products and services and the trend in share over time (indicator 9.1);
- ◆ the detail of the specific changes it is making to its business: introducing/expanding new, low-carbon business models; and decarbonizing/terminating its existing, high-carbon business models (indicator 9.2).

It is recognised that transition to a low-carbon economy, with the associated change in business models, will take place over a number of years. The analysis will thus seek to identify and reward projects at an early stage as well as more mature business models.

While each sector methodology contains a list of low-carbon business models and activities that are considered relevant to the assessment, the following definitions provide further guidance to analysts:

DEFINING "LOW-CARBON BUSINESS MODEL"

A business model is a plan for performing activities that transform inputs (labour, capital, equipment, land, buildings, materials, and information) into outputs (products and services) that provide added value to customers and create value for the company. It includes sources of revenue, the intended customer base, and details of financing.

A *low-carbon* business model is one that is based primarily around a set of inputs, activities and/or outputs which are considered to contribute substantially to climate change mitigation.⁷ There are two main categories of business model that can be classed as low-carbon:

- ◆ *Aligned/transitional* business models. These are either widely recognised as low-carbon solutions (for instance, by recognised taxonomies of sustainable activities), or have GHG emissions that are substantially lower than the sector or industry average, do not hamper the development and deployment of low-carbon alternatives, do not lead to a lock-in of assets incompatible with the objective of climate change mitigation, considering the economic lifetime of those assets, and do no significant harm to the environment.

⁷ Definitions are partially based on the EU Taxonomy regulation: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020R0852>

- E.g., manufacturing low-carbon vehicles
- ◆ *Enabling/contribution* business models. These are business models that enable other activities/companies/sectors to make a substantial contribution to climate change mitigation, provided that the enabling business models do not lead to a lock-in of assets incompatible with the objective of climate change mitigation, considering the economic lifetime of those assets.
 - E.g., producing batteries for renewable energy storage; building transmission & distribution infrastructure to enable the shift to renewable generation; providing sustainability services to the buildings sector, reducing energy demand, etc.

CATEGORIES OF LOW-CARBON BUSINESS MODEL AND LOW-CARBON BUSINESS ACTIVITY

The relevant categories of low-carbon business model and low-carbon business activity for the sector will be listed here. The minimum requirement for points to be awarded is that some level of exploration of one or more of these relevant business areas has started. This could include participation in collaborations, pilot projects, or research funding. These business models have been defined in line with the EU Taxonomy for Sustainable Activities. The importance of each business model for global net-zero transition has been included, where the importance is listed as “dependent on vehicle type”, the analyst should align the importance with the equivalent vehicle type in the “low-carbon vehicle manufacturing” section below.

Low-carbon vehicle manufacturing

- ◆ Manufacture of battery electric light duty vehicles (high importance)
- ◆ Manufacture of hydrogen fuel cell light duty vehicles (low importance)
- ◆ Manufacture of other (non LDV) low-carbon vehicles (e.g. buses, trains, e-scooters etc. with zero tailpipe GHG emissions) (high importance)

Other low-carbon technology manufacturing

- ◆ Development of battery technology/infrastructure (high importance)
- ◆ Development of hydrogen production/transport/storage infrastructure/technology (low importance)

Enabling low-carbon road transport

- ◆ Development of electric vehicle charging infrastructure (high importance)
- ◆ Development of hydrogen refuelling infrastructure/technology (low importance)
- ◆ Development of electric road systems (medium importance)

Reducing barriers to the uptake of low-carbon vehicles

- ◆ Low-carbon vehicle leasing models (Importance dependent on vehicle type)
- ◆ Financing for consumers to purchase low-carbon vehicles (Importance dependent on vehicle type)

DEFINING “LOW-CARBON BUSINESS ACTIVITY”

A business activity is anything a company does in order to carry out its business model, i.e., as part of the process of transforming inputs into outputs.

A low-carbon business activity is one which is considered to contribute substantially to climate change mitigation (following the definition in the section above, “Defining ‘low-carbon business model’”). A list of relevant low-carbon business activities is listed within each sector methodology.

This is particularly relevant in indicator 9.2, dimension 2 (“Actions to decarbonise activities within existing business models”), since this dimension assesses the specific actions the company introduces in order to decarbonise the activities that make up its existing business model.

Examples of low-carbon business activities for this sector include:

Alternative fuels to contribute to the decarbonisation of ice vehicles

- ◆ Development of biofuel technology/infrastructure (medium importance)
- ◆ Development of e-fuel technology/infrastructure (low importance)

Facilitating shared mobility

- ◆ Vehicle sharing schemes (high importance)
- ◆ Carpooling or vehicle-ride services (high importance)
- ◆ Vehicles-as-a-service offerings (high importance)

Activities to increase circularity

- ◆ Modular vehicle design (medium importance)
- ◆ End of life management to increase recyclability (medium importance)
- ◆ Component-as-a-service including battery leasing models (medium importance)
- ◆ Reuse and remanufacturing at scale (medium importance)

Decarbonisation of vehicle production processes

- ◆ Electrification of process equipment (low importance)
- ◆ Installation of renewable energy technologies to power processes (low importance)

DEFINING “HIGH-CARBON BUSINESS MODEL”

Indicator 9.2, dimensions 2 and 3 require companies to decarbonise or commit to phasing out their existing, high-carbon business models. A high-carbon business model is one which is not based primarily around a set of inputs, activities and/or outputs which are considered to contribute substantially to climate change mitigation. As such in this sector, the primary high-carbon business model is the production and sale of internal combustion engine

DEFINING “LOW-CARBON PRODUCTS AND SERVICES”

A low-carbon product or service is the output of a low-carbon business model (following the definition in the section above, “Defining ‘low-carbon business model’”). Low carbon products / services are provided by an economic activity that contributes substantially to climate change mitigation, as defined in the European taxonomy.

- ◆ For example, in the automotive manufacturing sector, a low-carbon product could be a battery electric vehicle while a low-carbon service could be the provision of electric vehicle charging facilities.

CALCULATION OF THE SCORE

- ◆ Indicator 9.1: The analyst uses the maturity matrix to calculate the company score for indicator 1.
- ◆ Indicator 9.2: The analyst identifies all relevant business model changes the company is making and scores them against the maturity matrix in the relevant dimension.
 - For example, if the company has introduced multiple new, low-carbon business models within the last 5 years, these should all be scored individually in dimension 1. If the company is also expanding another low-carbon business model, which it started more than 5 years ago, this should also be scored in dimension 1. If the company is taking action to decarbonise several of the main activities that form its existing, high-carbon business model, these should all be scored individually in dimension 2. Finally, if the company has committed to phasing out its existing, high-carbon business model(s), this should be scored in dimension 3.
- ◆ The final score for indicator 9.2 is calculated based on the highest scoring example from each dimension.
 - For example, if the analyst identifies three examples of business models for dimension 1, two examples of decarbonisation actions for dimension 2, and one commitment to phase out a high-carbon business model for dimension 3, then the highest-scoring examples from each of these dimensions should be taken and contribute towards the final score for the indicator.
- ◆ The weightings for the indicator 9.2 dimensions are as follows:
 - Dimension 1: 50%
 - Dimension 2: 10%
 - Dimension 3: 40%
- ◆ There are two routes to calculating the indicator weightings:
 1. The company scores 80% or above in indicator 9.1. In this case, the indicator weightings are as follows:
 - Indicator 9.1: 70%
 - Indicator 9.2: 30%
 2. The company scores below 80% in indicator 9.1. In this case, the indicator weightings are as follows:
 - Indicator 9.1: 50%
 - Indicator 9.2: 50%

SCORING RATIONALE

- ◆ The rationale for adjusting the weighting of indicator 9.1 and indicator 9.2 based on the company's score in indicator 9.1, is that companies which already have a high share of low-carbon products and services (i.e., which score 80% or above in indicator 1) have less need to be developing new, low-carbon business models and decarbonising or phasing out existing ones, than companies with a low share of low-carbon products and services. As such, indicator 9.1 is weighted highly for companies with a high share of low-carbon products and services, while both indicators are weighted equally for companies with a lower share of low-carbon products and services.
- ◆ The rationale for the indicator 9.2 dimensions weightings is that the module is designed to assess the company's transition into new, low-carbon business models outside of its core business model, in order to diversify its activities and stay profitable in a low-carbon economy. For this reason, dimension 1, "Creation/expansion of low-carbon business models", has the highest weighting between the indicator 9.2 dimensions (50%). It is also recognised that companies must not only branch out into new, low-carbon business models, but must also take action to decarbonise their existing, core activities, hence the inclusion of dimension 2, "Actions to decarbonise activities within existing business models". However, since company progress on decarbonisation is already partially taken into account in various other ACT performance indicators (such as trend in past and future GHG emissions intensity, low-carbon investment, etc.), this dimension is given a low weighting (10%). Finally, the necessary shift towards low-carbon business models must in many cases be accompanied by a commitment to terminate or phase out a company's existing, high-carbon business models that may not easily be decarbonised. For this reason, dimension 3 has a relatively high weighting (40%).

• AU 9.1 REVENUE FROM LOW-CARBON PRODUCTS AND/OR SERVICES

DESCRIPTION & REQUIREMENTS

AU 9.1 REVENUE FROM LOW-CARBON PRODUCTS AND/OR SERVICES

SHORT DESCRIPTION OF THE INDICATOR

This indicator assesses the company's overall share of revenue from low-carbon products and services, as well as whether this share is increasing over time.

DATA REQUIREMENTS

The questions comprising the information request that are relevant to this indicator are (from RY-3 to RY):

- ◆ Revenue from low-carbon products and services, and total revenues, for each year
- ◆ Description of the types of products and services the company considers to be low-carbon

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C4.5
- ◆ C4.5a

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 7.74
- ◆ 7.74.1

The analyst should check that the company’s definition of low-carbon products and services is aligned with the ACT definition for the particular sector. If it does not align, then the analyst must decide how to adjust the figure.

Public sources of data used for the analysis of this indicator include, but are not limited to:

- ◆ Company financial statements showing breakdown of revenue by business segment.

HOW THE ASSESSMENT WILL BE DONE

The analyst should identify the share of the company’s total revenue from low-carbon products and/or services in the reporting year (see the section “Defining ‘low-carbon products and services’”). They should then identify the share three years before the reporting year (RY-3) in order to calculate the annual average change in share during this time period.

The sources of information used to identify the share of low-carbon revenue in RY and RY-3 should be directly comparable (e.g., all CDP data or all financial statement data).

For the second subdimension “Trend over time”, if no actual figures are identified by the analyst, but there is clear evidence that the company is increasing its share of low-carbon products and/or services (e.g., if the company states this qualitatively), then “Advanced” should be awarded.

	Basic	Standard	Advanced	Next practice	Low-carbon aligned	
Associated score	0%	25%	50%	75%	100%	Weighting
Share of revenue from low-carbon products and/or services* in reporting year	≤ 25% of the company’s revenue is from low-carbon products and/or services	26 to 50% of the company’s revenue is from low-carbon products and/or services	51 to 75% of the company’s revenue is from low-carbon products and/or services	76 to 95% of the company’s revenue is from low-carbon products and/or services	> 95% of the company’s revenue is from low-carbon products and/or services	70%
Trend over time (RY-3 to RY)	Share of the company’s revenue from low-carbon products and services is decreasing by at least 1% on average annually (RY-3 to RY)	-	Share of the company’s revenue from low-carbon products and services is not changing significantly (increasing or decreasing by less than 1% on average annually) (RY-3 to RY)	-	Share of the company’s revenue from low-carbon products and services is increasing by at least 1% on average annually (RY-3 to RY)	30%

See the section “Definition of low-carbon products and services” in the module 9 introduction.

AU 9.1 REVENUE FROM LOW-CARBON PRODUCTS AND/OR SERVICES

RATIONALE

RATIONALE OF THE INDICATOR

See module 9 introduction.

• AU 9.2 CHANGES TO BUSINESS MODELS

DESCRIPTION & REQUIREMENTS

AU 9.1 CHANGES TO BUSINESS MODELS

SHORT DESCRIPTION OF THE INDICATOR

This indicator assesses the specific changes the company is making to its business in order to achieve its low-carbon transition. These changes include introducing and expanding new, low-carbon business models, and decarbonizing or terminating existing, high-carbon business models.

DATA REQUIREMENTS

The questions comprising the information request that are relevant to this indicator are:

- ◆ For each business model: description, size (as a percentage of total FTE, revenue, or relevant activity-based metric of size), and growth potential and timelines
- ◆ For each decarbonisation action: description, growth potential and timelines, life cycle phases impacted
- ◆ For high-carbon business models: commitments to terminate/phase out existing, termination/phase-out date, percentage of existing model to be terminated/phased out

CDP 2023 Questionnaire mapping to this indicator:

- ◆ C2.4
- ◆ C2.4a
- ◆ C4.3
- ◆ C4.3a
- ◆ C4.3b

CDP 2024 Questionnaire mapping to this indicator:

- ◆ 3.6

- ◆ 3.6.1
- ◆ 7.55
- ◆ 7.55.1
- ◆ 7.55.2

Public sources of data used for the analysis of this indicator include, but are not limited to:

- ◆ Company financial/sustainability reports
- ◆ Company low-carbon transition plan
- ◆ External sources to determine the importance of each business model for the global low-carbon transition. For example:
- ◆ [IEA's Net Zero Emissions by 2050 Scenario](#);
- ◆ [Protecting People and Planet | Systems Change Lab](#);
- ◆ Sector decarbonisation reports identifying the key action levers for a sector to decarbonise.

**HOW THE
ASSESSMENT WILL BE
DONE**

The assessment is based on three dimensions. The analyst scores each of the company's decarbonisation initiatives (including creation/expansion of low-carbon business models, actions to decarbonise activities within existing business models, and termination/phase-out of existing high-carbon business models) against the relevant dimension. The section "Calculation of the score" explains how the final score for the indicator is calculated.

DIMENSION 1 – CREATION/EXPANSION OF LOW-CARBON BUSINESS MODELS (50%)

This dimension assesses the size and scheduled growth of new (started *within* five years before the reporting year) and existing (started *before* five years before the reporting year) low-carbon business models, as well as the business models' relative importance for the global low-carbon transition. The weighting of the subdimensions within the maturity matrix depend on whether the business model in question is new or existing – new business models are scored on the first subdimension ("Size of business model (if started *within* RY-5)") with a 40% weighting, with the second subdimension ("Size of business model (if started before RY-5)") given a 0% weighting. For existing business models, this weighting is reversed. The rationale for having distinct subdimensions for new and existing low-carbon business models is that newer business models are not expected to be as large as existing ones, meaning the thresholds differ between the subdimensions.

Since ACT's focus is on company-level decarbonisation, "creation/expansion of low-carbon business models" may include acquiring existing low-carbon assets or business divisions from another entity, as well as organically growing a new, low-carbon business model within the company.

	Basic	Advanced	Low-carbon aligned	
Associated score	0%	50%	100%	Weighting
Size of business model (if started <i>within</i> RY-5)	Business model represents <1% of total FTE, revenue, or relevant activity-based metric of size	Business model represents 1 to 5% of total FTE, revenue, or relevant activity-based metric of size	Business model represents >5% of total FTE, revenue, or relevant activity-based metric of size	40% (if BM was started <i>within</i> RY-5) or 0% (if BM was started <i>before</i> RY-5)
Size of business model (if started <i>before</i> RY-5)	Business model represents 0 to <5% of total FTE, revenue, or relevant activity-based metric of size	Business model represents 5 to 20% of total FTE, revenue, or relevant activity-based metric of size	Business model represents >20% of total FTE, revenue, or relevant activity-based metric of size	0% (if BM was started <i>within</i> RY-5) or 40% (if BM was started <i>before</i> RY-5)
Scheduled growth of business model	Business model not scheduled to grow (based on total FTE, revenue, or relevant activity-based metric of size)	Business model scheduled to grow (based on total FTE, revenue, or relevant activity-based metric of size)	Business model scheduled to at least double in size within RY+5 (based on total FTE, revenue, or relevant activity-based metric of size)	30%
Importance of business model for global low-carbon transition*	The business model is of low importance to the global low-carbon transition	The business model is of medium importance to the global low-carbon transition	The business model is of high importance to the global low-carbon transition	30%

DIMENSION 2 – ACTIONS TO DECARBONISE ACTIVITIES WITHIN EXISTING BUSINESS MODELS (10%)

This dimension relates to changes (actions) the company is making to decarbonise the activities which make up its existing business model (which may be high- or low-carbon) in order to make the overall business model lower-carbon.

	Basic	Standard	Advanced	Next practice	Low-carbon aligned	
Associated score	0%	25%	50%	75%	100%	Weighting
What percentage of the activity does this decarbonisation action apply to?*	Decarbonisation action applies to ≤ 25% of the activity being considered	Decarbonisation action applies to 26 to 50% of the activity being considered	Decarbonisation action applies to 51 to 75% of the activity being considered	Decarbonisation action applies to 76 to 95% of the activity being considered	Decarbonisation action applies to > 95% of the activity being considered	25%
Scheduled growth of decarbonisation action	Decarbonisation action is not scheduled to grow (based on total FTE, spend, or relevant activity-based metric of size)	-	Decarbonisation action is scheduled to grow (based on total FTE, spend, or relevant activity-based metric of size)	-	Decarbonisation action is scheduled to at least double in size within RY+5 (based on total FTE, spend, or relevant activity-based metric of size)	25%
Relevance of the decarbonisation action†	Action does not impact any of the most relevant activities/life-cycle phases of the business model being considered in terms of GHG emissions	-	Action impacts a relevant activity/life-cycle phase of the business model being considered in terms of GHG emissions	-	Action clearly targets and impacts the most relevant activity(ies)/life-cycle phase(s) of the business model being considered in terms of GHG emissions	25%
Importance of business model decarbonisation for global low-carbon transition‡	The business model decarbonisation is of low importance to the global low-carbon transition	-	The business model decarbonisation is of medium importance to the global low-carbon transition	-	The business model decarbonisation is of high importance to the global low-carbon transition	25%

* Example:

- ◆ What proportion of vehicle sales are covered by battery leasing models?

† Example:

- ◆ For a company that primarily manufactures ICE vehicles, battery leasing models would score advanced as GHG emissions from materials are a significant part of the average autos manufacturer's total GHG emissions but the most relevant life-cycle phase is the downstream in-use emissions from its sold vehicles. However, if a significant majority of the company's sales are from electric vehicles to the extent that materials have become the main source of GHG emissions for the company then it can score "low-carbon aligned"

‡ How to determine whether the change the company is making to its activities is of high, medium, or low importance to the global low-carbon transition: using the sources highlighted in introduction to the indicator.

DIMENSION 3 – TERMINATION/PHASE-OUT OF EXISTING HIGH-CARBON BUSINESS MODELS (40%)

This dimension relates to commitments the company has to terminating/phasing out one or several of its existing, high-carbon business models.

Since ACT's focus is on company-level decarbonisation, "termination/phase-out of high-carbon business models" may include selling high-emitting assets or business divisions from a company's portfolio to other entities. However, decommissioning assets and closing down business divisions are preferred forms of divestment since they are more likely to drive GHG emissions reductions in the real world. If a company's commitment to terminate/phase out its existing, high-carbon business model(s) relies exclusively on selling high-emitting assets or business divisions, this should be reflected negatively in the Narrative section of the assessment (Business model and strategy criterion).

- ◆ For example, if a vehicle manufacturer has committed to phasing out production of ICE vehicles by 2035, this is relevant to consider. Or if an electric utility has committed to phasing out fossil fuels from its generation mix.

	Basic	Standard	Advanced	Next practice	Low-carbon aligned	
Associated score	0%	25%	50%	75%	100%	Weighting
Commitment to terminate/phase out existing, high-carbon business model	The company has a commitment to terminate/phase out ≤ 25% of its existing, high-	The company has a commitment to terminate/phase out 26 to 50% of its existing, high-	The company has a commitment to terminate/phase out 51 to 75% of its existing, high-	The company has a commitment to terminate/phase out 76 to 95% of its existing, high-	The company has a commitment to terminate/phase out > 95% of its existing, high-	70%

	carbon business model(s) (based on FTE, revenue, or relevant activity-based metric of size) or The company has no commitment	carbon business model(s) (based on FTE, revenue, or relevant activity-based metric of size)	carbon business model(s) (based on FTE, revenue, or relevant activity-based metric of size)	carbon business model(s) (based on FTE, revenue, or relevant activity-based metric of size)	carbon business model(s) (based on FTE, revenue, or relevant activity-based metric of size) or The company has already terminated/phase d out the entirety of its existing, high-carbon business model(s)	
Termination/ phase-out date	The company's commitment has a phase-out date from RY+21 onwards or The company has no commitment	The company's commitment has a phase-out date between RY+16 and RY+20	The company's commitment has a phase-out date between RY+11 and RY+15	The company's commitment has a phase-out date between RY+6 and RY+10	The company's commitment has a phase-out date between RY and RY+5 or The company has already terminated/phase d out the entirety of its existing, high-carbon business model(s)	30%

RATIONALE

AU 9.2 CHANGES TO BUSINESS MODEL

RATIONALE OF THE INDICATOR

See module 9 introduction.

6. ASSESSMENT

6.1 SECTOR BENCHMARK

Through a literature review, various sectoral low-carbon pathways have been identified for the automotive manufacturing sector. As explained in section 4, the ACT Automotive methodology focuses on the GHG emissions that arise from the following sources: materials used in vehicles structure, manufacturing process of vehicles, use-phase of vehicles. Other sources of GHG emissions related to companies' activities are not taken into account for performance indicators based on GHG emissions reduction pathways.

Scenarios from which the low-carbon pathways have been identified are listed in section 6.1. The pathways are expressed in:

- ◆ tons of CO₂ / ton material (aluminium, glass, plastics, steel) and kilograms of CO₂ / kilowatt-hour (battery) for materials used for vehicles
- ◆ kilograms of CO₂ / vehicle for vehicles manufacturing
- ◆ grams of CO₂ / kilometres for the use of vehicles

6.1.1 DESCRIPTION OF THE BENCHMARK

Low-carbon scenarios, aligned with a 1.5°C level of ambition that have been identified (as per May 2024) are listed in this section. The ACT Auto methodology v2.0 only considers low-carbon pathways that are 1.5°C aligned for the following reasons:

- ◆ There are a number of 1.5°C scenarios available.
- ◆ The ACT principle of Conservativeness as well as the precautionary principle it is right that the most ambitious temperature scenarios are used.
- ◆ Transport is currently the third most emissive sector behind electricity and industry, with almost 8 GtCO₂ emitted in 2022. Road is by far the main contributor to transport CO₂ emissions with 5.9 Gt (75%). Light duty vehicles are responsible for 60% of these road transport GHG emissions. High climate ambition is required to tackle these significant GHG emissions.
- ◆ Global road traffic is expected to increase substantially in coming decades: the NZE Roadmap from IEA predicts a switch from 26.5 thousands billion passengers.kilometres in 2022 to 41.6 thousands billion in 2050 (almost 60% increase). This makes last point even more important.

Pathways for materials used in vehicles structure (scope 3 upstream emissions)

Scenario name	Author	Regional breakdown
Decarbonization Potentials for Automotive Supply Chains (3) – based on Net-Zero Emissions by 2050 Scenario	Justus Poschmann, Vanessa Bach, Matthias Finkbeiner	No

Pathways are available for five families of materials, covering a large majority of emissions resulting from the production of all materials used in vehicles' structure: aluminium, batteries (for electric vehicles), glass, plastics, steel. The following elements are considered by the authors to define their emissions reduction pathways⁸:

- ◆ Aluminium: primary and secondary production routes. The pathway is based on a life-cycle assessment (LCA) approach, considering the following aluminium value chain steps: anode production, alumina refining, and electrolysis process.
- ◆ Batteries: various lithium-ion battery (LIB) technologies with different compositions of active cathode materials: nickel manganese cobalt oxide (NMC), lithium manganese oxide (LMO), nickel cobalt aluminum oxide (NCA), lithium iron phosphate (LFP), etc. The automotive sector currently mainly relies on LIBs.
- ◆ Glass: various national/regional average emissions intensities (US, Europe, China, etc.). The production route is unique, emissions highly depends on energy used
- ◆ Plastics: a LCA approach is used based on plastics that are the most used by the automotive manufacturing industry: polypropylene (PP), polyethylene terephthalate (PET), polyvinyl chloride (PVC), polyurethane (PUR), high-density polyethylene (HDPE). Emissions arising from raw materials production (coming from petrochemistry and biochemistry), from the manufacture of the plastics, and from their recycling are taken into account.
- ◆ Steel: most widely used processes are taken into account —basic oxygen furnace (BF/BOF), electric arc furnace (EAF), direct-reduced iron (DRI), DRI, smelt reduction (SR).

Pathways for manufacturing process of vehicles (scope 1 and 2 emissions)

Scenario name	Author	Regional breakdown
Net-Zero Emissions by 2050 Scenario (31)	Accelerate Climate Transition (ACT)	No

The SBTi has defined in the past its GHG emissions reduction pathways for “manufacturing of passenger light-duty vehicles (scope 1 & 2)”. The two proposed pathways rely on data from the 2017 Energy Technology Perspective (ETP) from the IEA, based on 2°C Scenario (2DS) and the Beyond 2°C Scenario (B2DS). None of these scenarios is aligned with a 1.5°C climate ambition and the SBTi has not released any updated pathways yet (as per June 2024).

Since no 1.5°C aligned pathway is currently available regarding the scope 1+2 emissions of automotive manufacturers, the ACT initiative has designed its own pathway using the following steps:

- ◆ An average scope 1+2 emissions intensity has been defined, using data collected through CDP Climate Questionnaires, for automotive manufacturers (keystone players from the sector) assessed by the WBA in its Climate and Energy Benchmark⁹. The base year of the pathway is 2015.

⁸ See more details in section 4.1 of the paper used as a source for these pathways. Complementary information can also be found in the ACT Aluminium, Glass, and Iron & Steel methodologies.

⁹ More information about the C&E Benchmark applied to the automotive manufacturing sector available on the WBA's website.

- ◆ The decarbonisation trend of the power sector from the 2023 Net-Zero Roadmap from the IEA is applied, up to 2050.

Pathways for use-phase of vehicles (scope 3 downstream emissions)

Scenario name	Author	GHG emissions boundaries	Regional breakdown
1.5 Degrees scenario (42)	Transition Pathway Initiative (TPI)	Tank to wheel (TTW)	No

To date, only the 1.5 Degrees Scenario from the TPI has been identified to get 1.5°C aligned GHG emissions reduction pathways for the use of vehicles. It builds on the IEA’s Net Zero by 2050 scenario and other sources from the IEA and the Global Fuel Economy Initiative (GFEI). This 1.5 Degrees Scenario reflects expected emissions intensity for new vehicles that are/will be sold, without considering the contribution of existing fleet. More details about how this scenario has been designed are available in TPI’s note on their methodology for automobile manufacturers (42).

It is worthwhile noting that 1.5°C aligned pathways based on well-to-wheel (WTW) emissions – see section 4.1 – have not been found. If WTW emissions based pathways are identified by users, they can be used for an ACT Auto assessment, as long as the climate ambition is high enough, i.e. 1.5°C aligned.

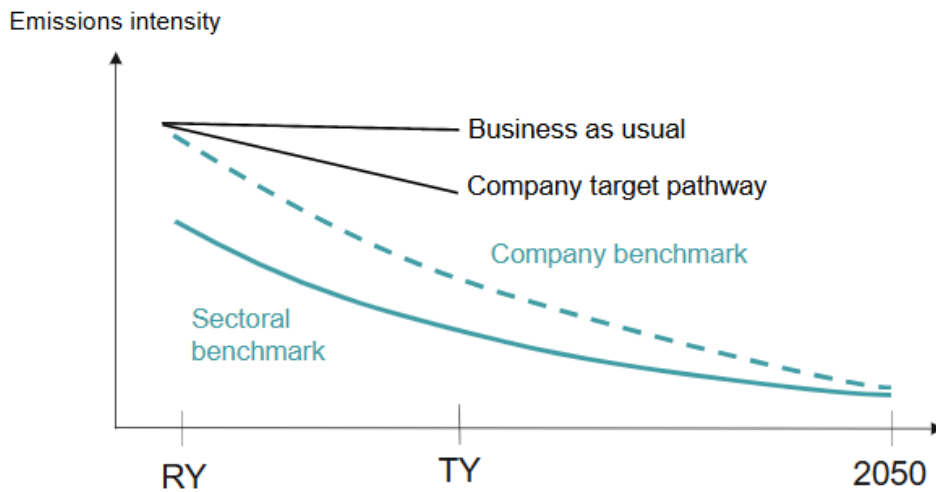
Results from an assessment using the ACT Auto methodology shall clearly mention which pathways have been used and the rationale leading to this choice. Any other scenario that is relevant and ambitious enough (i.e. aligned with a 1.5°C level of ambition) and not identified in the list above (e.g. released after this methodology) can be used for an assessment.

6.1.2 MECHANISMS TO COMPUTE THE COMPANY BENCHMARK

The mechanism to derive the company specific pathway, from the sectoral low-carbon pathway, is based on the principles of the Sectoral Decarbonization Approach (SDA) allocation method, developed by the Science Based Targets initiative (13).

The SDA uses a convergence mechanism, which takes the company’s GHG emissions intensity in the reporting year (RY) and converges it to the sector’s GHG emissions intensity in 2050 at a rate that ensures that the corresponding sectoral carbon budget is not exceeded. Figure 6 illustrates the convergence mechanism and compares the company’s target pathway with its benchmark/specific pathway as obtained with the SDA allocation method.

Figure 6: Convergence mechanism illustration



Thus, companies starting from a lower intensity will have a shallower decarbonization pathway than companies starting from a higher intensity. In this way, past action or inaction to reduce intensity is taken into consideration.

6.2 OTHER QUANTITATIVE BENCHMARKS USED FOR INDICATORS

BENCHMARK FOR THE SHARE OF LOW-CARBON VEHICLES

Data from the Net-Zero Roadmap released in 2023 by IEA has been used to define the low-carbon vehicles share benchmark against which companies are assessed in indicator 4.4 *Share of low-carbon vehicles*. This roadmap mentions that plug-in hybrid vehicles (PHEVs), battery electric vehicles (BEVs) and fuel cell electric vehicles (FCEVs) are expected to represent 67% of light-duty vehicles global fleet by 2030, while this value was 13% in 2022.

While the ACT Auto methodology acknowledges only BEVs and FCEVs as low-carbon vehicles (LCVs), IEA values mentioned above are considered to define the share of low-carbon vehicles benchmark. Indeed, to stick to the conservativeness principle, it makes more sense to consider PHEVs in this benchmark rather than subtracting their contribution (which would mean lowering the benchmark ambition). Expected sectoral values of LCVs sales are provided in Table 9 – a linear progression is assumed between 2022 and 2030 and between 2030 and 2035.

Table 9: Low-carbon vehicle sales share benchmark

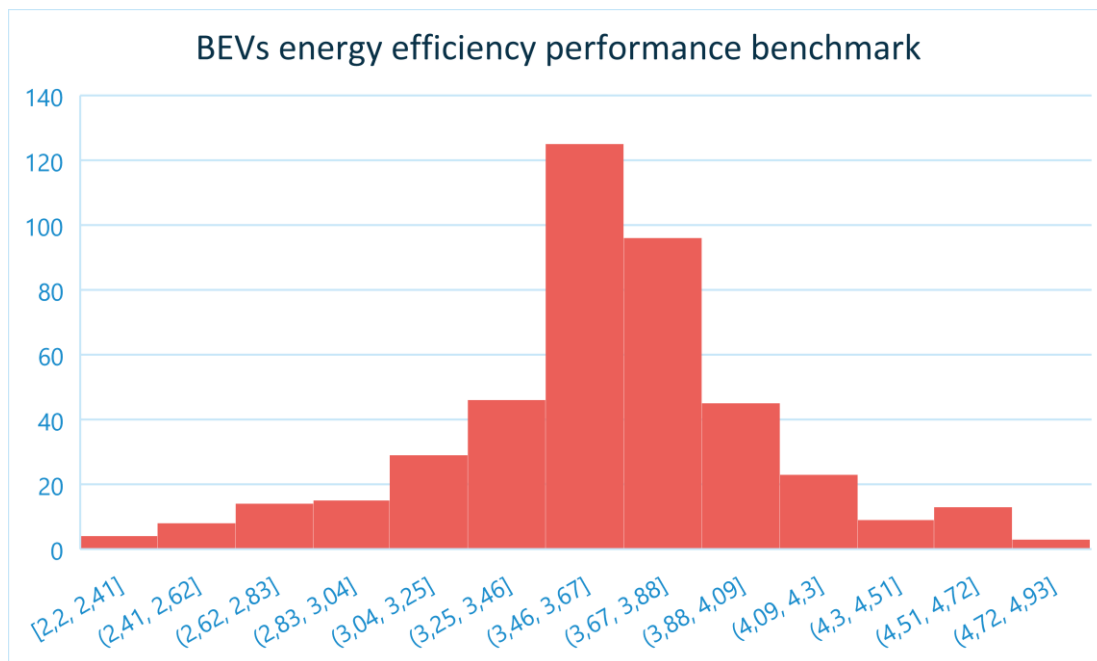
2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
13%	20%	27%	33%	40%	47%	54%	60%	67%	74%	80%	87%	93%	100%

For the second dimension of indicator 4.4, the analyst uses the above benchmark and the company’s reported share of low-carbon vehicle sales in the reporting year to create a company-specific benchmark. The convergence mechanism as outlined in 6.1 should be used to converge towards the 2035 value.

BENCHMARK FOR THE LOW-CARBON VEHICLES ENERGY EFFICIENCY PERFORMANCE

In order to assess the energy efficiency performance of battery electric vehicles (BEVs) sold by companies, databases gathering information about current models have been used. The Vehicle Certification Agency, which is an Executive Agency of the United Kingdom's Department for Transport, provides such data following the Euro 6 standard requirements. This vehicles sample information has been used to define the BEVs' energy efficiency performance scale against which companies are assessed in indicator 4.5 *Low-carbon energy efficiency performance* – see Figure 7 below.

Figure 7: Statistical distribution of BEVs energy efficiency performance (miles per kWh) – From (43)



BENCHMARK FOR THE CAPEX LOW-CARBON TECHNOLOGIES

There is no science-based benchmark identified as of June 2024 for the share of CAPEX dedicated to low-carbon technologies for the automotive manufacturing sector and so indicator 2.4 *Share of low-carbon CAPEX* is based on a qualitative assessment which is also used in other ACT sectoral methodologies.

BENCHMARK FOR THE R&D INVESTMENTS IN LOW-CARBON TECHNOLOGIES

There is no science-based benchmark identified as of June 2024 for the share of R&D investments in low-carbon technologies for the automotive manufacturing sector and so indicator 3.1 *R&D spending on low-carbon technologies* is based on a qualitative assessment which is also used in other ACT sectoral methodologies.

BENCHMARK FOR THE COMPANY PATENTING ACTIVITY IN LOW-CARBON & MITIGATION TECHNOLOGIES

The European Patent Office (EPO) and the US Patent and Trademark Office (USPTO) have developed a dedicated patent classification scheme (Cooperative Patent Classification - CPC) which details patents for

climate change mitigation or technologies (EPO, 2017). The following categories are considered for this ACT methodology

- ◆ Y02E – Reduction of greenhouse gas emissions, related to energy generation, transmission or distribution
 - Y02E 50/00 - Technologies for the production of fuel of non-fossil origin
 - Y02E 60/00 - Enabling technologies; Technologies with a potential or indirect contribution to GHG emissions mitigation
- ◆ Y02P – CCMTs relating to production in energy intensive industries
 - Y02P 70/00 - Climate change mitigation technologies in the production process for final industrial or consumer products
 - Y02P 80/00 - Climate change mitigation technologies for sector-wide applications
 - Y02P 90/00 - Enabling technologies with a potential contribution to greenhouse gas [GHG] emissions mitigation
- ◆ Y02T – CCMTs related to transportation
 - Y02T 10/00 - Road transport of goods or passengers
 - Y02T 90/00 - Enabling technologies or technologies with a potential or indirect contribution to GHG emissions mitigation

6.3 WEIGHTINGS

The performance weighting scheme for automotive manufacturers is presented in Table 10 below:

[Table 10: Performance weighting scheme for ACT Auto](#)

MODULE	AU	INDICATOR NAME	MODULE WEIGHT	INDICATOR WEIGHT
Targets	1.1	Alignment of scope 1+2 emissions reduction targets	15%	1%
	1.2	Scope 3 upstream emissions reduction targets		3%
	1.3	Alignment of scope 3 downstream emissions reduction targets		6%
	1.4	Time horizons of targets		3%
	1.5	Achievement of past and current targets		2%
Material investments	2.1	Trend in past scope 1+2 emissions intensity	7%	2%
	2.2	Share of low-carbon CapEx		5%
Intangible investment	3.1	R&D spending on low-carbon technologies	5%	2.5%
	3.2	Company low-carbon patenting activity		2.5%
Sold product performance	4.1	Trend in past scope 3 upstream emissions intensity	33%	5%
	4.2	Trend in past scope 3 downstream emissions intensity		5%
	4.3	Locked-in emissions from sold products		9%
	4.4	Share of low-carbon vehicles		12%
	4.5	Low-carbon vehicles efficiency performance		2%
Management	5.1	Oversight of climate change issues	10%	2%
	5.2	Climate change oversight capability		1%
	5.3	Low carbon transition plan		3%
	5.4	Climate change management incentives		1%

	5.5	Climate change scenario testing		3%
Supplier engagement	6.1	Strategy to influence suppliers to reduce their GHG emissions	5%	2.5%
	6.2	Activities to influence suppliers to reduce their GHG emissions		2.5%
Client engagement	7.1	Strategy to influence clients to reduce their GHG emissions	10%	5%
	7.2	Activities to influence clients to reduce their GHG emissions		5%
Policy engagement	8.1	Company policy on engagement with trade associations	5%	1%
	8.2	Trade associations supported do not have climate-negative activities or positions		2%
	8.3	Position on significant climate policies		1%
	8.4	Collaboration with local public authorities		1%
Business model	9.1	Revenue from low-carbon products and/or services	10%	5% or 7%
	9.2	Changes to business models		5% or 3%

The weighting scheme applies independently to the type of vehicles sold by the company.

RATIONALE FOR WEIGHTINGS

The selection of weightings for both the modules and the individual indicators was guided by a set of principles in the ACT framework (1).

PRINCIPLE	EXPLANATION
Value of information	The value of the information that an indicator gives about the outlook for a company's low-carbon transition is the primary principle for the choice of the weighting.
Impact of variation	A high impact of variation in an indicator means that a poor performance for this indicator has a large impact on the likely success of the company's low-carbon transition, and this makes it more relevant for the assessment.
Future orientation	Indicators that measure the future, or a proxy for the future, are more relevant for the ACT assessment than past & present indicators, which serve only to inform about the likelihood and credibility of the transition.
Data quality sensitivity	Indicators that are highly sensitive to likely data quality variations are not recommended for highly weighted indicators, unless there is no other way to measure a particular dimension of the transition.

The weightings have been designed for each type of company covered by the ACT Auto methodology in order to reflect the strategic stakes which are different from one company to another.

TARGETS: 15%

The targets module has a medium weighting of 15%. Most of this (10%) is on the three indicators related to the ambition of targets set by the company. The most heavily weighted indicator (6%) is *Alignment of scope 3 downstream emissions reduction targets*, since the use-phase of vehicles is the most significant source of GHG emissions for the sector. To also highlight the importance of GHG emissions arising from the production of materials in vehicles structure, *Scope 3 upstream emissions reduction targets* receives a weight of 3%. Finally,

Alignment of scope 1+2 emissions reduction targets has a low weight (1%) since GHG emissions resulting from direct operations are not a significant source of GHG emissions, however it still is crucial for companies to commit to reduce the impact of their own operations. Targets are future oriented and are a valuable proxy for assessing the company's long-term GHG emissions pathway.

The *Time horizon of targets* and *Achievement of past and current targets* indicators have a medium/low weighting of 3% and 2% respectively. The Time horizon of targets is encouraging near term and interim targets to ensure companies are not only relying on long term ones. Finally, the Achievement of past and current targets indicator measures the company's past performance setting and achieving targets, which provides more contextual information on the company's ability to meet ambitious future targets.

MATERIAL INVESTMENT: 7%

This is the primary module that assesses the decarbonisation of the company's direct operations. The *Trend in past scope 1+2 emissions intensity* is an indication of the 'adjustment' that the company will have to make to align with its low-carbon pathway. Due to the low-share of GHG emissions arising from automotive manufacturers' own operations, this indicator receives a low weighting of 2%.

The CAPEX allocated to low-carbon technologies is an important signal for understanding the future alignment of the company with a low carbon pathway. While the main solutions have already been identified to enable the sector to transition, significant investments are needed to build the required infrastructure to facilitate the global switch to low-carbon vehicles. As such, the indicator *Share of low-carbon CAPEX* has a medium weighting of 5%.

INTANGIBLE INVESTMENT: 5%

R&D spending on low-carbon technologies and low-carbon patenting activity are both important aspects of the company's low-carbon transition, and thus the module is weighted at 5%. To enable the transition, the automotive sector relies on the development of low-carbon solutions to replace the current high emitting global fleet of vehicles. R&D and patenting are some of the main proactive actions the company can take to develop these technologies. R&D is also one of the main tools to reduce the costs of a technology in order to increase its market penetration. Aside from technology, the company can also invest in R&D on operational practices to minimise the carbon impact where it has direct responsibility. Patent data measure the intermediate outputs of an inventive process, whereas R&D data expenditures measure the input.

The indicators *R&D spending on low-carbon technologies* and *Company low-carbon patenting activity* both have a medium weighting of 2.5%.

SOLD PRODUCT PERFORMANCE: 33%

This is the primary module that assesses companies' upstream and downstream scope 3 emissions performance. Since typically 90% of automotive manufacturers' GHG emissions arise from their value chain, the Sold product performance module receives a high weighting of 33%.

The most heavily weighted indicator (12%) is *Share of low-carbon vehicles*, reflecting the sectoral priority to phase out internal combustion engine vehicles (ICEV) sales. Indeed, these vehicles typically have a 15-18 years lifetime during which they will emit GHG while being used. The *Locked-in emissions from sold products* indicator is also heavily weighted at 9%, reflecting the ability of companies to stay within their carbon budget over the next 5 years.

The indicators *Trend in past scope 3 upstream emissions intensity* and *Trend in past scope 3 downstream emissions intensity* are equivalent to the *Trend in past scope 1+2 emissions intensity* indicators in Module 2. They assess the company's past decarbonisation performance against the company pathway, considering the most significant sources of GHG emissions for the sector, i.e. use of sold vehicles and materials used in vehicle manufacture. They both carry a medium weight of 5%.

Finally, the *Low-carbon vehicles efficiency performance* indicator assesses the average efficiency of battery electric vehicles (BEV) and fuel cell electric vehicles (FCEV) sold by the company, since it has been demonstrated that the design and weight of these vehicles highly impact their performance. Considering that this is a secondary priority for the sector – the phase out of ICEV being the main priority – this indicator receives a low weighting of 2%.

MANAGEMENT: 10%

Management is a multi-faceted module. It incorporates many smaller indicators that together create a narrative of the company's management and strategic approach to the low-carbon transition. As such, it has a medium weighting of 10%.

Based on the principle of future orientation, the main elements of the overall 10% weighting are the *Low-carbon transition plan* and *Climate change scenario testing*, which are both given a weighting of 3%. Both indicators provide valuable insights into how the company will manage its transition, given its unique constraints and opportunities.

The indicator *Oversight of climate change issues* is weighted at 2%, while *Climate change oversight capability* and *Climate change management incentives* are both weighted at 1%. These indicators provide more information on how the company is managed and whether transition related decisions are made at the highest levels of management. They are contextual indicators, the outcome of which can strengthen or undermine the company's ability to carry out the transition plan and meet ambitious science-based targets.

SUPPLIER ENGAGEMENT: 5%

In order to decarbonize the whole economy, it is essential that all stakeholders are involved. It is important that automotive manufacturers engage with their suppliers to reduce the GHG emissions arising from the materials used for vehicles. This is true for all vehicle types which require materials from heavy industries such as steel, aluminium, glass, and plastics. Electric vehicles (EV) currently rely on batteries the production of which is also heavily emissive, putting more and more significance on the collaboration between automotive manufacturers and their suppliers while the global switch from ICE vehicles to EV occurs.

Supplier engagement module is weighted at 5%. The two indicators within the module are equally weighted, since having an engagement strategy and carrying out practical engagement activities are seen as equally important elements to assess.

CLIENT ENGAGEMENT: 10%

Even though the shift to EV has clearly been initiated in the last years, the large majority of new sold vehicles still run on fossil fuels. About three quarters of the sectoral GHG emissions are related to the use-phase of vehicles (fuel consumption). It is thus of utmost importance that automotive manufacturers develop a portfolio allowing their clients to opt for low-carbon vehicles and related solutions. This explains why Client engagement module receives double the weight of Supplier engagement module.

Client engagement module is weighted at 10%. The two indicators within the module are equally weighted, since having an engagement strategy and carrying out practical engagement activities are seen as equally important elements to assess.

POLICY ENGAGEMENT: 5%

Policy engagement indicators are contextual aspects which tell a narrative about the company's stance on climate change and how the company expresses it in their engagement with policymakers and trade associations. As such, the module has a low weighting of 5%.

BUSINESS MODEL: 10%

This module has a medium weighting of 10% to reflect its importance as a way to assess the company's likelihood of remaining profitable in a low-carbon economy. The company's future business model(s) should enable it to decouple financial results from GHG emissions, in order to meet the constraints of a low-carbon transition while continuing to generate value. This can be done by developing new, low-carbon business models outside the core business of the company, while decarbonizing or terminating existing, high-carbon business models.

The weighting breakdown between the two indicators is detailed in module 9 – Calculation of the score (see section 5.3).

6.4 DATA REQUEST

Table 11 introduces the list of information that will be requested from companies through a questionnaire, and the corresponding indicators.

[Table 11: Data request per indicator](#)

MODULE	INDICATORS	DATA REQUEST
1 - Targets	1.1	Base year, base year GHG emissions intensity or absolute GHG emissions and base year activity
	1.2	Reporting year, reporting year GHG emissions intensity or absolute GHG emissions and reporting year activity
	1.3	Target year, targeted GHG emissions reduction, target year activity Scope and coverage of GHG emissions covered by targets
	1.4	Targets year (end and intermediate dates) Targets GHG emissions coverage, scope of GHG emissions
	1.5	Base year Reporting year Target year Reduction percentage from base year to reporting year in absolute GHG emissions or GHG emissions intensity
2 - Material investment	2.1	Vehicles manufacturing GHG emissions intensity and activity (from RY-5 to RY)
	2.2	Average share of CAPEX in low-carbon technologies (out of total CAPEX) for the next 3 years
3 - Intangible investment	3.1	R&D costs/investments (total and in low-carbon technologies) of the company over the last 3 years.
	3.2	Patenting activity (total and in low-carbon technologies) of the company over the last 5 years
4 - Sold Product Performance	4.1	Purchased materials (aluminium, battery, glass, plastics, steel) GHG emissions intensity and activity (from RY-5 to RY)
	4.2	GHG emissions intensity from the use of sold vehicles and activity (from RY-5 to RY)
	4.3	GHG emissions intensity from the use of sold vehicles and activity (from RY to RY+5)

		Forecast vehicles sales (from RY to RY+5)
	4.4	Share of low-carbon vehicle sales (from RY-5 to RY) Projected share of low-carbon vehicle sales (from RY to RY+3)
	4.5	Sales-weighted average yearly power consumption of BEVs (from RY-3 to RY)
5- Management	5.1	Environmental policy and details regarding governance
	5.2	
	5.3	Transition plan, including: scope 1+2nd timeline of the plan, financial content, actions planned in near- and long-terms, measure of success, review and update process, progress reporting process, role of scenario testing and carbon price
	5.4	Management incentives
	5.5	Scenario testing: scope, timescale, scenarios used, hypotheses/assumptions that are considered, materiality of climate-related risks/opportunities, outputs and role of a carbon price
6 - Suppliers engagement	6.1	Methods of supplier engagement, strategy for prioritizing supplier engagements and measures of success Number of suppliers engaged and proportion of total spend (or share of GHG emissions as a proxy) Data on suppliers' GHG emissions and climate change strategies
	6.2	List of initiatives and activities implemented to influence suppliers to reduce their GHG emissions, green purchase policy or track record, supplier code of conduct
7 - Client engagement	7.1	Strategy to influence clients GHG emissions % of clients covered by the strategy Data on clients' choices and preferences for reducing GHG emissions
	7.2	Strategy to influence clients GHG emissions % of clients covered by the activities Data on clients' choices and preferences for reducing GHG emissions
8- Policy engagement	8.1	Public climate change policy positions Description of this policy (scope & boundaries, responsibilities, process to monitor and review) Trade associations that are likely to take a position on climate change legislation
	8.2	Company policy on engagement with associations, alliances, coalitions or thinktanks
	8.3	Position of the company on significant climate policies (public statements, etc.).
	8.4	Elements related to engagement with local public authorities
9 - Business Model	9.1	Revenue from low-carbon products and services each year from RY-3 to RY, total revenue for the same years, and description of the types of products and services the company considers to be low-carbon For each business model: description, size (as a percentage of total FTE, revenue, or relevant activity-based metric of size), and growth potential and timelines
	9.2	For each decarbonisation action: description, growth potential and timelines, life cycle phases impacted For high-carbon business models: commitments to terminate/phase out existing activities, termination/phase-out date, percentage of existing model to be terminated/phased out

7. RATING

The ACT rating shall comprise:

- A performance score
- A narrative score
- A trend score

These pieces of information shall be represented within the ACT rating as follows:

- a. **PERFORMANCE SCORE** as a number from 0 (lowest) to 20 (highest)
- b. **NARRATIVE SCORE** as a letter from E (lowest) to A (highest)
- c. **TREND SCORE** as either “+” for improving, “-” for worsening, or “=” for stable.

In some situations, trend scoring may reveal itself to be unfeasible depending on data availability. In this case, it should be replaced with a “?”.

The highest rating is thus represented as “20A=” (as highlighted in Table 12), the lowest as “0E=” and the midpoint as “10C=”.

Table 12: Highest score for each ACT score type

<p>THE HIGHEST AVAILABLE</p> <p>ACT RATING IS</p> <p>20 A =</p>	<p>A performance rating of 20: the company received maximum scores against all the methodology indicators.</p>
	<p>An assessment rating of A: the information reported by the company and available from public sources is consistent and shows that the company is well aligned to transition to the low-carbon economy</p>
	<p>A trend rating of +: the information provided shows the company will be better placed to transition to the low-carbon economy in future.</p>

Each company assessed using an ACT methodology receives not only an ACT rating but a commentary on its performance across the three aspects of the rating. This gives a nuanced picture of the company’s strengths and weaknesses. Detailed information on the ACT rating is available in the ACT Framework document (1).

7.1 PERFORMANCE SCORING

Performance scoring shall be performed in compliance with the ACT Framework (1). The list of performance modules and indicators and their respective weightings (which vary depending on the profile and activities of the assessed company) is provided in section 5.3.

7.2 NARRATIVE SCORING

Narrative scoring shall be performed in accordance with the ACT Framework (1). The ACT Framework provides a detailed methodology and maturity matrix for completing the Narrative scoring process.

The main challenge facing the automotive manufacturing sector's low-carbon transition is the phase-out of internal combustion engine (ICE) vehicles, as their use is responsible for the majority of the sector's emissions.

Analysts should focus on companies' commitments to phase out the sale of ICE vehicles and their intention to provide low-carbon vehicle options to their clients.

Companies' commitments should be placed in perspective by comparing them to low-carbon scenarios. For instance, the 2023 IEA Net-Zero Roadmap states that no ICE vehicles will be sold after 2035 (6). Similarly, the Zero Emissions Vehicles Declaration, launched during COP21, requires signatories to phase out the sale of ICE vehicles by 2035 in leading markets, or by 2040 elsewhere (45). Companies can illustrate their commitment by signing this declaration, among other means.

Modules 2, 3, 4 and 9 cover the majority of the sector-specific elements. Therefore these modules should be considered as particularly important for the narrative analysis and scoring for the ACT Auto methodology

With this information, the analyst can take a holistic view on the company's actions to perform deep decarbonization of its processes and of the sectoral value chain, as well as assess the consistency of actions taken with respect to all performance modules.

No other sector-specific issues impacting the narrative scoring for this sector have been identified to date.

7.3 TREND SCORING

Scoring shall be performed in compliance with the ACT Framework (1).

To apply the trend scoring methodology presented in the ACT Framework, the analyst should identify the trends based on the data points and/or indicators that indicate the future direction of change within the company.

Table 13 highlights which indicators/data points contain valuable information about future direction.

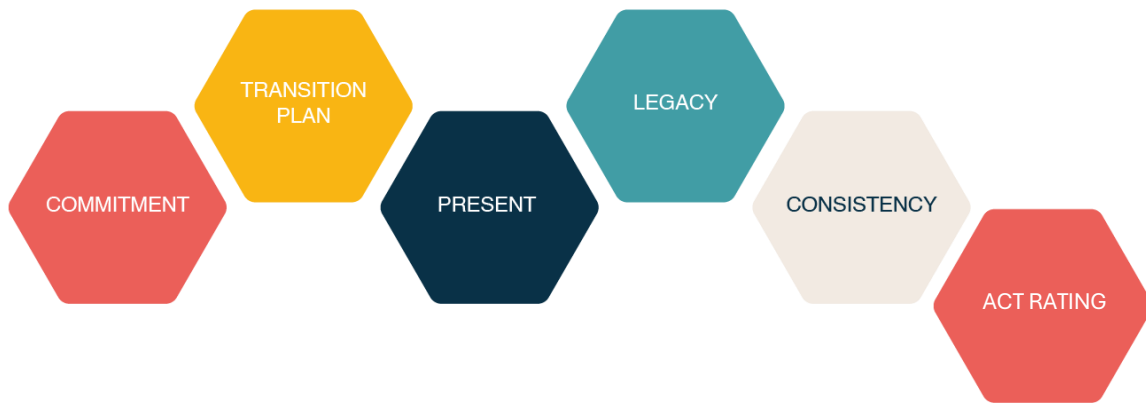
[Table 13: Relevant performance indicators for trends identification](#)

MODULE	INDICATOR
TARGETS	AU1.1 Alignment of scope 1+2 emissions reduction targets
	AU 1.2 Scope 3 upstream emissions reduction targets
	AU 1.3 Alignment of scope 3 downstream emissions reduction targets
	AU 1.4 Time horizon of targets
MATERIAL INVESTMENTS	AU 2.2 Share of low-carbon CAPEX investments
SOLD PRODUCT PERFORMANCE	AU 4.3 Locked-in emissions from sold products
	AU 4.4 Share of low-carbon vehicles
MANAGEMENT	AU 5.3 Low-carbon transition plan
	AU 5.5 Climate change scenario testing
SUPPLIER ENGAGEMENT	AU 6.1 Strategy to influence suppliers to reduce their GHG emissions
CLIENT ENGAGEMENT	AU 7.1 Strategy to influence clients to reduce their GHG emissions
BUSINESS MODEL	AU 9.2 Change to business models

8. ALIGNED STATE

Figure 8 below presents the response of a low-carbon aligned company of the sector to the 5 questions of ACT:

- a. What is the company planning to do? [Commitment]
- b. How is the company planning to get there? [Transition Plan]
- c. What is the company doing at present? [Present]
- d. What has the company done in the recent past? [Legacy]
- e. How do all of these plans and actions fit together? [Consistency]



<h2>1</h2> <p>The company has science-based GHG emissions reduction targets for its own operations, materials used in sold vehicles structure, and use phase of sold vehicles. All targets cover both near and long terms.</p>	<h2>2</h2> <p>The company's strategic planning details sales targets for low-carbon vehicles until where they become the dominant technology sold. The company participates in sectoral efforts to deploy the infrastructure required by low-carbon vehicles.</p>	<h2>3</h2> <p>Current investment strategy in new production capacity and R&D place clear focus on low-carbon drivetrain technologies and related research.</p>	<h2>4</h2> <p>The company has reduced the GHG emissions intensity of its sold vehicles over the last five years aligning with the requirements of the low-carbon scenario. The company has successfully increased the share of its sales from low-carbon vehicles.</p>	<h2>5</h2> <p>The company's targets, transition plan, present past actions show a commitment to achieving the goals of low-carbon transition. The company does not lobby against vehicle GHG emissions regulations and in fact supports more stringent standards and improved GHG emissions measurement.</p>
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Figure 8: Aligned state for automotive manufacturers

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10. GLOSSARY

ACT The ACT Initiative, founded by ADEME in partnership with CDP in 2015 is now hosted by WBA. It has been the pioneer international initiative creating a business climate accountability framework with sectoral methodologies to assess their strategies and transition plans. Formally launched at COP21, the ACT initiative has published various sector specific methodologies over years. Covering now, assessment methodologies of transition plan and adaptation plan to climate change effects, and support to transition planning, ACT has been renamed Accelerate Climate Transition Initiative in 2024 ([ACT website](#)).

ACTION GAP Concerning GHG emissions performance and reduction, the action gap is the difference between what a given company has done in the past plus what it is doing now, and what must be done. For example, companies with large action gaps have done relatively little in the past, and their current actions point to the continuation of past practices.

ACTIVITY DATA Activity data is quantitative or numeric data on the activity of the company which results in GHG emissions or removals taking place during a given period of time ([UNFCCC definitions](#)).

ADEME Agence de la Transition Ecologique; The French Agency for Ecological Transition ([ADEME webpage](#)).

ALIGNMENT An ACT assessment generates a rating that is intended to provide a metric of the alignment of a company with its 1.5°C pathway. The wider goal is to provide companies specific feedback on their general alignment with a 1.5°C pathway over the short and long term.

ANALYST Person undertaking and scoring the ACT assessment.

ASSESS Under the ACT Initiative, to evaluate and determine the low-carbon alignment of a given company. The ACT assessment and rating are based on a range of indicators. Indicators may be reported directly by companies or collected, calculated, modelled or otherwise derived from different data sources supplied by the company. The ACT Initiative measures 3 gaps (Commitment, Horizon and Action gaps – defined in this glossary) in the GHG emissions performance of companies. This model closely follows the assessment framework. It starts with the future, with the goals companies want to achieve, followed by their plans, current actions and past actions.

ASSET	A resource owned by a company which has value because of its ability to generate revenues, cash, profits through time. Tangible assets include 1) fixed assets, such as machinery and buildings, and 2) current assets, such as inventory. Intangible assets are nonphysical such as patents, trademarks, copyrights, goodwill and brand value.
BARRIER	A circumstance or obstacle preventing progress (e.g. lacking information on supplier GHG emissions and hotspots can be a barrier to companies managing and reducing their upstream indirect emissions).
BASE YEAR	According to the GHG Protocol and ISO14064-1, a base year is “a historic datum (a specific year or an average over multiple years) against which a company’s GHG emissions are tracked over time”. Setting a base year is an essential GHG accounting step that a company must take to be able to observe trends in its GHG emissions information (GHG Protocol Corporate Standard).
BENCHMARK	A standard, pathway or point of reference against which things may be compared. In the case of pathways for sector methodologies, a sector benchmark is a low-carbon pathway for the sector average value for GHG emissions intensity indicator(s) driving the sector performance. A company’s benchmark is a company specific pathway that starts at the company performance for the reporting year and converges towards the sector benchmark in 2050 (or other relevant date), based on a principle of convergence or contraction of GHG emissions intensity.
BOARD	Also the “Board of Directors” or “Executive Board”; the group of persons appointed with joint responsibility for directing and overseeing the affairs of a company.
BUSINESS MODEL	A company’s core strategy for generating value. It includes sources of revenue, the intended client base, products, and details of financing. Under ACT, evidence of the existing and new business models shall be taken from a range of specific financial and other metrics relevant to the sector and an assessment made on its alignment with the low-carbon transition.
BUSINESS-AS-USUAL	An assumption that activity and GHG emissions remain the same into the future. The business-as-usual pathway assumes constant activity and GHG emissions from the initial year onwards. In general, the initial year – which is the first year of the pathway/series – is the reporting year (targets indicators) or the reporting year minus 5 years (certain performance indicators).
CAPITAL EXPENDITURE	Money spent by a company on acquiring or maintaining fixed assets, such as land, buildings, and equipment.

CARBON CAPTURE AND STORAGE (CCS)	The process of trapping carbon dioxide produced by burning fossil fuels or other chemical or biological processes and storing it in such a way that it cannot contribute to climate warming.
CARBON OFFSETS	Carbon offsets are the purchase by a company of avoided GHG emissions or GHG suppressions , from actors elsewhere in the economy where the marginal cost of decarbonization proves to be lower.
CDP	CDP is an international, not-for-profit organization providing the only global system for organisations, cities, states and regions to measure, disclose, manage and share vital environmental information. CDP works with market forces, including 746 institutional investors with assets of over US\$136 trillion, to motivate companies to disclose their impacts on the environment and natural resources and take action to reduce them. More than 23,000 companies worldwide disclosed environmental information through CDP in 2023. CDP holds the largest collection globally of primary climate change, water and forest risk commodities information and puts these insights at the heart of strategic business, investment and policy decisions (CDP website).
CLIMATE CHANGE	A change in climate, attributed directly or indirectly to human activity, caused by the alteration of the composition of the atmosphere and that is, in addition to natural climate variability, observed over comparable time periods (UNFCCC).
COMMITMENT GAP	In relation to GHG emissions performance, the difference between what a company needs to do and what it says it will do.
COMPANY	A commercial business.
COMPANY TARGET PATHWAY	The GHG emissions intensity performance pathway that the company has committed to follow from an initial year until a future year, for which it has set a performance target.
CONFIDENTIAL INFORMATION	Any non-public information pertaining to a company's business.
CONSERVATIVENESS	A principle of the ACT project; whenever the use of assumptions is required, the assumption shall err on the side of achieving well-below 2°C maximum global warming and pursuing efforts to limit the temperature increase to 1.5°C.
CONSISTENCY	A principle of the ACT project; whenever time series data is used, it should be comparable over time. In addition to internal consistency of the indicators reported by the company, data reported against indicators shall be consistent with other information about the company and its business model and strategy found elsewhere. The analyst shall

	consider specific, pre-determined data points and check that these give a consistent measure of performance when measured together.
COP21	The 2015 United Nations Climate Change Conference, held in Paris, France from 30 November to 12 December 2015 (COP21 webpage).
DATA	Facts and statistics collected together for reference and analysis (e.g. the data points requested from companies for assessment under the ACT project indicators).
DECARBONIZATION	A complete or near-complete reduction of GHG emissions over time (e.g. decarbonization in the automotive manufacturing sector through an increased share of low-carbon vehicles sales, as well as decreasing GHG emissions intensity related to purchased materials for vehicles' structure).
DECARBONIZATION PATHWAY	Benchmark pathway (See 'Benchmark')
EMISSIONS	<p>The GHG Protocol defines <i>direct</i> GHG emissions as emissions from sources that are owned or controlled by the reporting entity, and <i>indirect</i> GHG emissions as emissions that are a consequence of the activities of the reporting entity, but occur at sources owned or controlled by another entity (GHG Protocol).</p> <p>In this methodology, "GHG emissions" refers to greenhouse gas emissions. Note that "GHG" is not mentioned in some cases, e.g. while speaking about tailpipe emissions from vehicles.</p>
FLEET	A group of vehicles (e.g. all the automobiles manufactured by an automotive manufacturing company and currently in use by private individuals).
FOSSIL FUEL	A fossil based fuel such as coal, oil or gas, formed in the geological past from the remains of living organisms.
GREENHOUSE GAS (GHG)	Carbon dioxide (CO ₂), methane (CH ₄), nitrous oxide (N ₂ O) and three groups of fluorinated gases (sulfur hexafluoride (SF ₆), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs) are the major anthropogenic GHGs and are regulated under the Kyoto Protocol. Nitrogen trifluoride (NF ₃) is now considered a potent contributor to climate change and is therefore mandated to be included in national inventories under the United Nations Framework Convention on Climate Change (UNFCCC).
GUIDANCE	Documentation defining standards or expectations that are part of a rule or requirement (e.g. CDP reporting guidance for companies).

HORIZON GAP	In relation to emissions performance, the difference between the average lifetime of vehicles sold (particularly internal combustion engine vehicles) and the time-horizon of a company's commitments. Companies with small-time horizons do not look far enough into the future to properly ensure the transition of their assets and business models.
INCENTIVE	Something, for example money, that motivates or encourages an individual or organisation to do something (e.g. a monetary incentive for company board members to set emissions reduction targets).
INDICATOR	An ACT indicator is a quantitative or qualitative piece of information that can provide insight on a company's current and future ability to reduce its carbon intensity.
INTENSITY (EMISSIONS)	The average emissions rate of a given pollutant from a given source relative to the level of activity; for example, kilograms of carbon dioxide released per vehicle produced.
INTERVENTION	Methods available to companies to influence and manage emissions in their value chain, both upstream and downstream, which are out of their direct control (e.g. a retail company may use consumer education as an intervention to influence consumer product choices in a way that reduces emissions from the use of sold products).
LIFETIME	The duration of something's existence or usefulness (e.g. a vehicle).
LOW-CARBON BENCHMARK PATHWAY	Benchmark pathway (See 'Benchmark')
LOW-CARBON ELECTRICITY	Generated electricity where the average carbon intensity does not exceed 100 gCO ₂ e/kWh on a life-cycle basis.
LOW-CARBON SCENARIO (OR PATHWAY)	A low-carbon scenario (or pathway) is a well-below 2°C or a 1.5°C scenario or a scenario with higher decarbonization ambition.
LOW-CARBON SOLUTION	A way to contribute to the low-carbon transition (e.g. energy, technology, process, product, service, etc.)
LOW-CARBON TRANSITION	The low-carbon transition is the transition of the economy a low-carbon state.

LOW-CARBON VEHICLE	<p>The ACT Auto methodology v2.0 considers vehicles as low-carbon (LCV) when tailpipe emissions are nul, meaning that no GHG emissions results from the use of the vehicle. This includes:</p> <ul style="list-style-type: none"> ◆ Battery electric vehicles (BEV) ◆ Fuel cell electric vehicles (FCEV)
MATURITY MATRIX	<p>A maturity matrix is essentially a “checklist”, the purpose of which is to evaluate how well advanced or “mature” a particular process, program or technology is according to specific definitions.</p>
MATURITY PROGRESSION	<p>An analysis tool used in the ACT project that allows both the maturity and development over time to be considered with regards to how effective or advanced a particular intervention is.</p>
MITIGATION (EMISSIONS)	<p>The action of reducing the severity of something (e.g. climate change mitigation through absolute GHG emissions reductions)</p>
MODEL	<p>A program designed to simulate what might or what did happen in a situation (e.g. climate models are systems of differential equations based on the basic laws of physics, fluid motion, and chemistry that are applied through a 3-dimensional grid simulation of the planet Earth).</p>
PATHWAY (EMISSIONS)	<p>A way of achieving a specified result; a course of action (e.g. an emissions reduction pathway).</p>
PERFORMANCE	<p>Outcomes and results. ACT methodologies attempt to assess performance using a variety of indicators.</p>
PLAN	<p>A detailed proposal for doing or achieving something.</p>
POINT	<p>A mark or unit of scoring awarded for success or performance.</p>
PRIMARY ENERGY	<p>Primary energy is an energy form found in nature that has not been subjected to any conversion or transformation process. It is energy contained in raw fuels, and other forms of energy received as input to a system. Primary energy can be non-renewable or renewable.</p>
PROGRESS RATIO	<p>An indicator of target progress, calculated by normalizing the target time percentage completeness by the target emissions or renewable energy percentage completeness.</p>

RELEVANT / RELEVANCE	In relation to information, the most appropriate information (core business and stakeholders) to assess low-carbon transition.
RENEWABLE ENERGY	Energy from a source that is not depleted when used, such as wind or solar power.
REPORTING YEAR	Year under consideration.
RESEARCH AND DEVELOPMENT (R&D)	A general term for activities in connection with innovation; in industry; for example, this could be considered work directed towards the innovation, introduction, and improvement of products and processes.
SCENARIO	A plausible representation of future climate that has been constructed for explicit use in investigating the potential impacts of anthropogenic climate change. Climate scenarios often make use of climate projections (descriptions of the modelled response of the climate system to scenarios of greenhouse gas and aerosol concentrations), by manipulating model outputs and combining them with observed climate data. (44)
SCENARIO ANALYSIS	A process of analysing possible future events by considering alternative possible outcomes.
SCIENCE-BASED TARGET	To meet the challenges that climate change presents, the world's leading climate scientists and governments agree that it is essential to limit the increase in the global average temperature at below 2°C and ideally 1.5°C . Companies making this commitment, working toward this goal and setting an emissions reduction target that is aligned with climate science can have their targets verified by the Science-Based Targets Initiative .
SCOPE 1 EMISSIONS	All direct GHG emissions (GHG Protocol Corporate Standard).
DIRECT GHG EMISSIONS AND REMOVALS	Category 1 from ISO 14064-1:2018: <i>Direct GHG emissions and removals occur from GHG sources or sinks inside organizational boundaries and that are owned or controlled by the [reporting] organization. Those sources can be stationary (e.g. heaters, electricity generators, industrial process) or mobile (e.g. vehicles).</i>
SCOPE 2 EMISSIONS	Indirect GHG emissions from consumption of purchased electricity, heat or steam (GHG Protocol Corporate Standard).
INDIRECT GHG EMISSIONS FROM IMPORTED ENERGY	Category 2 from ISO 14064-1:2018: <i>GHG emissions due to the fuel combustion associated with the production of final energy and utilities, such as electricity, heat, steam, cooling and compressed air [imported by the reported company]. It excludes all upstream emissions (from cradle to power plant gate) associated with fuel, emissions due to the</i>

construction of the power plant, and emissions allocated to transport and distribution losses.

SCOPE 3 EMISSIONS

INDIRECT GHG EMISSIONS

Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g. T&D losses) not covered in Scope 2, outsourced activities, waste disposal, etc. ([GHG Protocol Corporate Standard](#)). Scope 3 also encompasses the emissions related to the use of sold-products.

ISO 14064-1:2018: *GHG emission that is a consequence of an organization's operations and activities, but that arises from GHG sources that are not owned or controlled by the [reporting] organization. These emissions occur generally in the upstream and/or downstream chain.*

Category 3 : indirect GHG emissions from transportation

Category 4: Indirect GHG emissions from products used by an organization

Category 5: Indirect GHG emissions associated with the use of products from the organization

Category 6: Indirect GHG emissions from other sources

SECTOR

A classification of companies with similar business activities, e.g. automotive manufacturers, power producers, retailers, etc.

SECTORAL DECARBONIZATION APPROACH (SDA)

To help businesses set targets compatible with 2-degree climate change scenarios, the [Sectoral Decarbonization Approach](#) (SDA) was developed. The SDA takes a sector-level approach and employs scientific insight to determine the least-cost pathways of mitigation, and converges all companies in a sector towards a shared GHG emissions target in 2050.

SHORT-TERM

Occurring in or relating to a relatively short period of time in the future.

STRATEGY

A plan of action designed to achieve a long-term or overall aim. In business, this is the means by which a company sets out to achieve its desired objectives; long-term business planning.

STRESS TEST

A test designed to assess how well a system functions when subjected to greater than normal amounts of stress or pressure (e.g. a financial stress test to see if an oil & gas company can withstand a low oil price).

TARGET

A quantifiable goal (e.g. to reduce GHG emissions).

-
- ◆ The following are examples of absolute targets:
 - metric tonnes CO₂e or % reduction from base year
 - metric tonnes CO₂e or % reduction in supply chain relative to base year
 - ◆ The following are examples of intensity targets:
 - metric tonnes CO₂e or % reduction per vehicle produced by the company, relative to base year
 - metric tonnes CO₂e or % reduction per passenger.kilometer run over the lifetime of vehicles' produced by the company, relative to base year
-

TANK-TO-WHEEL EMISSIONS (TTW) GHG emissions occurring during the combustion of fuel during the use of a vehicle.

TECHNOLOGY The application of scientific knowledge for practical purposes, especially in industry (e.g. low-carbon vehicles, batteries for electric vehicles, hydrogen storing systems, etc.).

TRADE ASSOCIATION Trade associations (sometimes also referred to as industry associations or industry bodies) are an association of people or companies in a particular business or trade, organized to promote their common interests. Their relevance in this context is that they present an “industry voice” to governments to influence their policy development. The majority of organizations are members of multiple trade associations, many of which take a position on climate change and actively engage with policymakers on the development of policy and legislation on behalf of their members. It is acknowledged that in many cases companies are passive members of trade associations and therefore do not actively take part in their work on climate change ([CDP climate change guidance](#)).

TRANSPORT To take or carry (people or goods) from one place to another by means of a vehicle, aircraft, or ship.

TRANSITION The process or a period of changing from one state or condition to another (e.g. from an economic system and society largely dependent on fossil fuel-based energy, to one that depends only on low-carbon energy).

TRANSITION PLAN Aspect of an undertaking's overall strategy that lays out a set of targets, actions, and accountability mechanisms to align an organization's business activities with a pathway for net zero GHG emissions that delivers real economy emissions reductions toward limiting climate change to 1.5°C by the end of 21st century.

TREND A general direction in which something (e.g., GHG emissions) is developing or changing.

VERIFIABLE / VERIFIABILITY	To prove the truth of, as by evidence or testimony; confirm; substantiate. Under the ACT project, the data required for the assessment shall be verified or verifiable.
WELL-TO-TANK EMISSIONS (WTT)	Well-to-Tank emissions are based on attributional life-cycle analysis studies of fossil-derived fuels (e.g. gasoline, diesel, compressed and liquefied natural gas), biofuels and electricity (based on time- and scenario-specific estimated average grid carbon intensity).
WELL-TO-WHEEL EMISSIONS (WTW)	Sum of tank-to-Wheel (TTW) and Well-to-Tank (WTT) emissions.
WORLD BENCHMARKING ALLIANCE	<p>Founded in 2018, the World Benchmarking Alliance is a non-profit organisation holding 2,000 of the world's most influential companies accountable for their part in achieving the Sustainable Development Goals. It does this by publishing free and publicly available benchmarks on their performance and showing what good corporate practice looks like. The benchmarks provide companies with a clear roadmap of what commitments and changes they must make to put our planet, society and economy on a more sustainable and resilient path. They also equip everyone – from governments and financial institutions to civil society organisations and individuals – with the insights that they need to collectively incentivise leading companies to keep going and pressure the laggards to catch up.</p> <p>For more information, visit www.worldbenchmarkingalliance.org</p>
WEIGHTING	Relative importance given to each performance modules and indicators, in order to reflect the more important/significant aspects and the decarbonisation potential of different actions.

11. APPENDIX

11.1 METHODOLOGY DEVELOPMENT AND UPDATE HISTORY

The ACT Auto methodology was developed by ADEME and CDP, with inputs and feedback of a Technical Working Group (TWG), which met five times over the course of the development phase in 2018. As described in the ACT Guidelines (4), pilot companies volunteered to 'roadtest' the methodology to ensure it was well designed and ready for use. TWG members and pilot companies are listed in Table 14. The first version of the ACT Auto methodology (v1.1) was released in March 2019. An updated version (v1.2) was released in November 2020.

[Table 14: List of companies involved as TWG member and/or pilot during roadtest](#)

ORGANISATION	INVOLVEMENT
Terra Alpha	TWG member
HSBC	TWG member
International Council on Clean Transportation (ICCT)	TWG member
BMW	Pilot company / TWG member
General Motors	Pilot company / TWG member
Honda	Pilot company / TWG member
Renault	Pilot company / TWG member
Stellantis	Pilot company / TWG member
Toyota	Pilot company / TWG member

The ACT Auto methodology is updated in this 2024 version 2.0. Led by the World Benchmarking Alliance (WBA) with input from ADEME and CDP, the update happened between May 2023 and June 2024 and included the following steps:

- ◆ Weekly meetings involving ADEME, CDP and WBA;
- ◆ Bilateral calls with external stakeholders;
- ◆ A two week public consultation in June 2023.

[Table 15: List of external stakeholders involved in the methodology revision process](#)

STAKEHOLDER	ORGANISATION TYPE	INVOLVEMENT
Carbon Tracker	NGO	Working Group consulted during revision process + answered public consultation
Renault	Company	Working Group consulted during revision process
Subaru	Company	Answered public consultation
Toyota	Company	Answered public consultation
4 anonymous	/	Answered public consultation

11.2 UPDATES IN ACT AUTO METHODOLOGY v2.0

Table 16 lists the main changes to the ACT Auto methodology arising from the update from v1.2 to v2.0.

[Table 16: Updates to ACT Auto v2.0](#)

SECTION	SUB SECTION	CHANGES COMPARED TO ACT AUTO v1.2
Introduction	/	Description of updated methodology
Scope	/	Updated presentation of sectoral scope (consideration of light-duty vehicles only) Updated definition of low-carbon vehicles, as considered by ACT
Boundaries	/	Updated reporting boundaries which now includes scope 3 upstream emissions related to purchased products/materials. addition of a sub-section related to WTW and TTW emissions (use of vehicles)
Construction of the data infrastructure	Module 1	Three indicators are dedicated to target ambition alignment, considering scope 3 upstream, scope 1+2, and scope 3 downstream emissions. The assessment of target ambition now considers both near and long-term targets.
	Module 2	Addition of indicator 2.2 dedicated to low-carbon CAPEX share
	Module 3	Modification of scoring rules for indicator 3.1 dedicated to low-carbon R&D spending. Addition of indicator 3.2 dedicated to low-carbon patenting activity

	Module 4	Addition of indicator 4.1 dedicated to past trend of GHG emissions intensity for purchased materials Addition of indicator 4.5 dedicated to low-carbon vehicles energy efficiency Deletion of "Conventional ICE vehicle efficiency performance" indicator
	Module 5	Inclusion of the updated module as published by the ACT initiative in 2022
	Module 6	Inclusion of the updated module as published by the ACT initiative in 2022
	Module 7	Inclusion of the updated module as published by the ACT initiative in 2022
	Module 8	Inclusion of the updated module as published by the ACT initiative in 2022
	Module 9	Inclusion of the updated module as published by the ACT initiative in 2023
Assessment	Sector benchmark	Up-to-date and relevant low-carbon scenarios / sectoral pathways have been identified from literature. Only 1.5°C aligned pathways are considered
	Other quantitative benchmarks used for indicators	Addition of benchmarks related to low-carbon sales share (built on IEA - 2023 NZE Roadmap) and low-carbon energy efficiency performance (built on database from Vehicle Certification Agency)
	Weightings	Update of the performance weighting schemes according to added, amended, and deleted performance modules and indicators
	Data request	Updates according to added, amended, and deleted performance modules and indicators
Rating	Narrative scoring	Updates according to added, amended, and deleted performance modules and indicators
	Trend scoring	Updates according to added, amended, and deleted performance modules and indicators
ACT aligned state	/	Updates according to added, amended, and deleted performance modules and indicators
Glossary	/	Addition or update of useful definitions, deletion of some that are not relevant anymore