ACT

ROADTEST
LAYMAN REPORT

Assessing low-Carbon Transition

Aluminium

June 2022

1. CONTEXT OF THE ROAD TEST

ALUMINIUM SECTOR

Aluminium is the second most-used metal in the world in terms of metric tonnes produced after iron, hence the most used non-ferrous metal worldwide. According to the Aluminium International Institute, in 2018, **the aluminium industry was responsible for 2% of global GHG emissions** and generated about 1.1 billion tonnes of CO_2e. More than 90% of this footprint is from primary production processes, while primary aluminium made up around 70% of the metal demand in 2018. Primary aluminium production is highly energy-intensive, with electricity making up a large share of the energy consumed.

ACT ALUMINIUM METHODOLOGY

For the past seven years, ADEME and CDP have been working together on developing the 'Assessing low Carbon Transition' (ACT) initiative, a mechanism for assessing companies that have set climate commitments and want to take climate action in line with the Paris Agreement. The ACT methodologies use a holistic approach to assess a company's climate strategy and determine its readiness to transition to a low-carbon economy.

The ACT Aluminium Methodology is designed to assess a company's climate impacts across its value chain. Figure 1 presents the aluminium value chain in a simplified way and highlights the types of players covered by the methodology. All companies involved in producing aluminium or alumina are covered by the ACT Aluminium Methodology, except company purely involved in bauxite mining, anode production or manufacturing of finished products. The set of indicators and their weighting in the final score is adapted depending on the type of activity from the company.

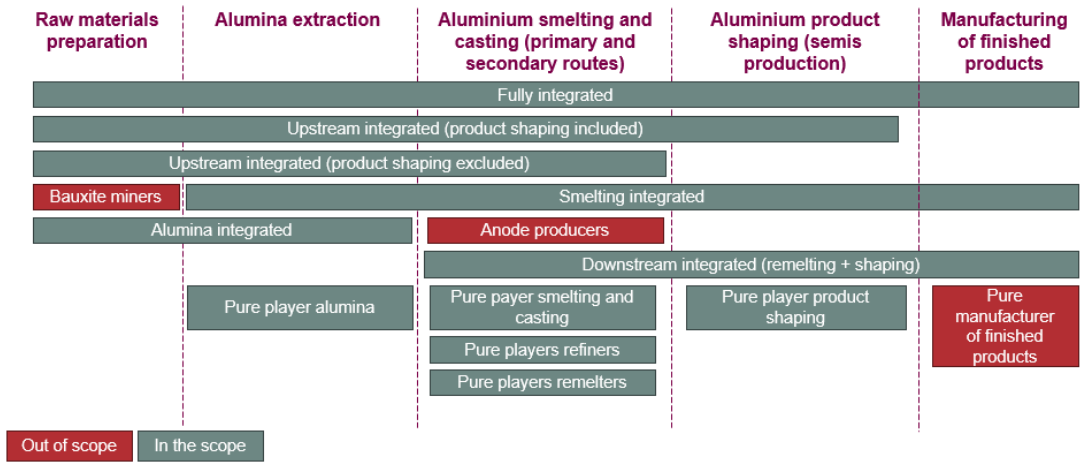


FIGURE 1: COMPANIES THAT CAN BE ASSESSED BY THE ACT ALUMINIUM METHODOLOGY

GOALS OF THE ROAD TEST

The project's objectives were:

- to road test the draft ACT Aluminium Methodology and accompanying tools;
- to provide recommendations to refine the methodology in order to ensure that it is relevant and robust for the sector.

The road test for the ACT Aluminium Methodology has been carried out, on behalf of ACT, by Solinnen and I Care & Consult.

ASSESSED COMPANIES

Constellium

EGA

JUPITER ALUMINUM

Aluminium Dunkerque

REAL ALLOY

+

5 companies assessed using publicly available data and data from the CRU Emissions Analysis tool[1]

[1]: More information on the CRU Emissions Analysis tool: https://www2.crugroup.com/EmissionsAnalysisTool

2. RESULTS OF THE COMPANY ASSESSMENTS

OVERALL RESULTS

10.1

The average performance score was 10.1, where 14.0 was the highest and 4.0 was the lowest. The best scores were obtained by companies which have set targets compatible with the IAI pathways and started implementing actions to reach these targets, such as increasing the share of low-carbon electricity generation and improving material efficiency through aluminium scrap recycling.

B

The average narrative score was B, indicating an overall good alignment with a low-carbon scenario, with a wide range of results on the 4 dimensions of this score. In general, assessed companies received a high reputation score, indicating the absence of environmental controversies or that companies faced with such controversies resolved them with due importance. Risk was a dimension that received lower scores in general.

+

The average trend score was rated positive (+) for the aluminium sector. This indicates companies are moving towards alignment with a low-carbon scenario and it is likely that this trend will be confirmed in the near future. However, this average score hides variation between companies. 7 of them obtained a positive (+) trend score, indicating they have already begun to incorporate climate issues in their management processes and are progressively developing programs, that will come to fruition in the near future.

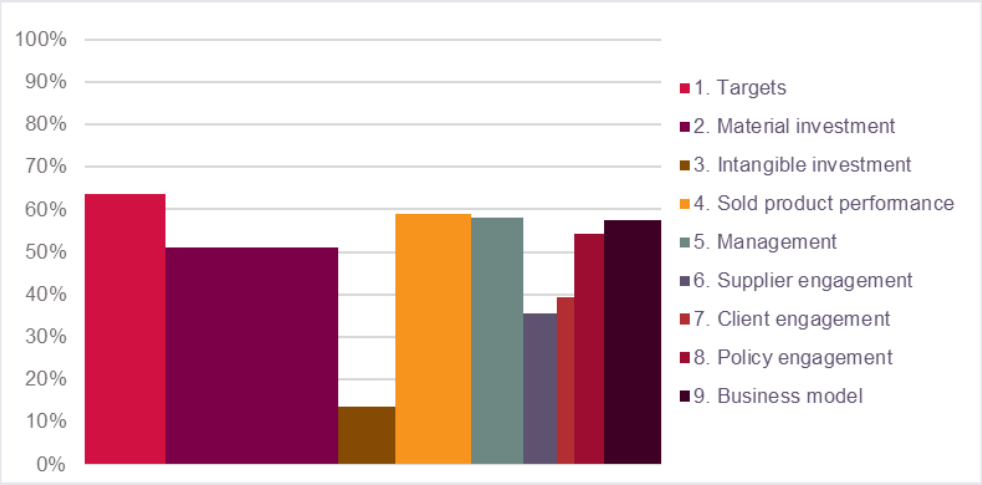


FIGURE 2: PERFORMANCE SCORE – ROAD TEST AVERAGE SCORE PER MODULE

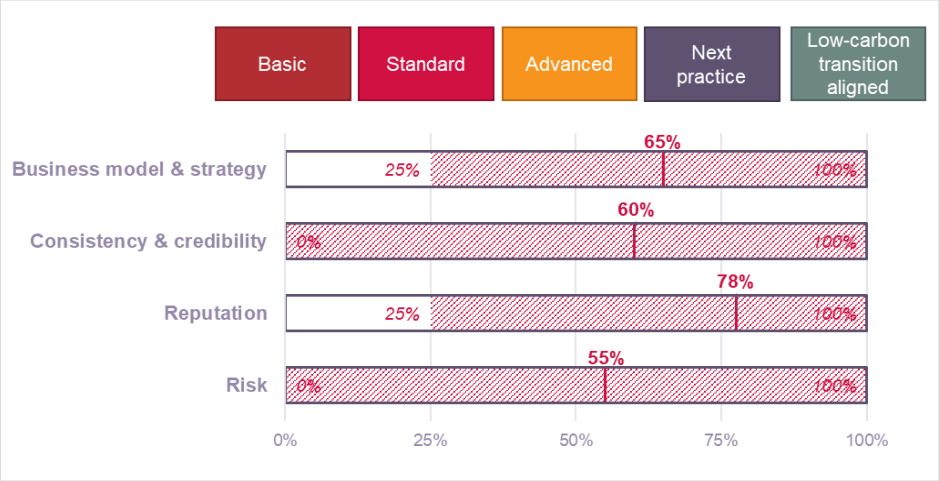
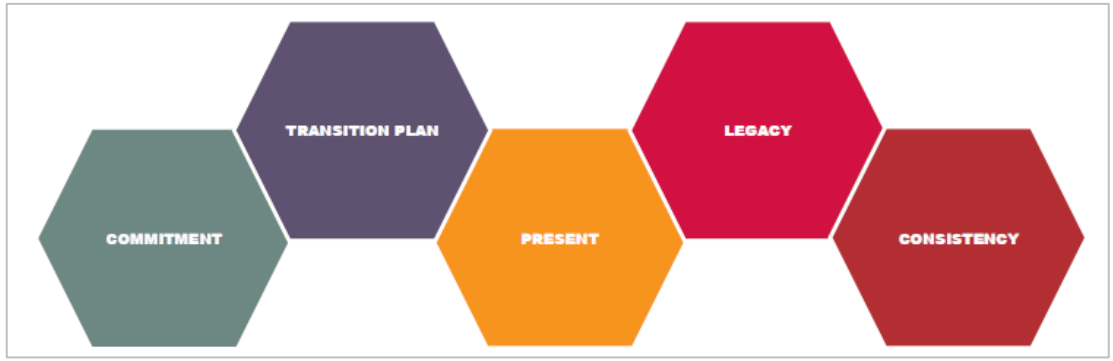


FIGURE 3: PERFORMANCE SCORE – ROAD TEST AVERAGE SCORE PER MODULE

OVERALL PROFILE OF THE 5 ACT DIMENSIONS

The ACT Framework's main goal is to evaluate past, present and (anticipated) future company performance to determine a company's maturity level with respect to its transition to a low-carbon economy. The ACT initiative focuses on five guiding questions to determine company performance. The overall profile of companies assessed during the road test is presented below. These insights do not apply uniformly to all participating companies and should not be interpreted as indicative of individual company performance.



Commitment

All companies in the ACT Aluminium road test have defined targets. Only one company in the sample has developed targets for 2050, covering scopes 1+2+3. The others defined short-term targets (e.g. 2025) for scope 1+2 emissions.

Many of these short-term targets are compatible with the expected pathway of the sector, but this is often due to companies already relying on low-carbon electricity and therefore having a smaller effort to make than companies relying on fossil fuels.

Transition plan

Most of the assessed companies have developed low-carbon transition plans. However, they are currently focusing on only the most relevant aspects for them and still need to strengthen their low-carbon transition plans and expend its scope to cover all required aspects.

Various actions are planned throughout the aluminium value chain, such as sourcing low-carbon electricity and investing in low-carbon electricity generation; improving material efficiency and increasing the collection rate of post-consumer scrap; investing in low-carbon processes (e.g. inert anode, switch away from fossil fuels for alumina refining).and developing effective supplier and client engagement policies.

Present

Most of the companies assessed have developed a transition plan and have started implementing it. Currently, these plans often focus on the main sources of emissions and on implementing gradual improvements to existing practices.

Current R&D expenditure related to climate change is mostly focused on mature technologies and is much lower than what is needed. Contribution to additional low-carbon electricity generation assets by aluminium companies and provision of demand-side management services should also be increased, as aluminium is a major electricity consumer.

Legacy

Past performance varies a lot among the companies that have been assessed.

Companies scoring high on past-oriented indicators often have a lower emissions intensity than the industry average. They have started implementing a climate strategy in the past and can demonstrate improvements.

Others are just starting on their sustainability journey and are facing bigger challenges in transitioning to low-carbon activities.

Consistency

Overall, assessments have shown that climate strategies of most of the assessed companies were consistent and fairly reflected the level of maturity of the company.

However, some inconsistencies and gaps have been identified between companies' commitments and their transition plans. This has been reflected in the narrative score of each company.

3. CONCLUSION AND OUTLOOK

SUCCESS OF THE ROAD TEST

- **Ten assessments completed,** with a good coverage of the aluminium value chain.
- **Good engagement** from many of the companies involved in the road test, including, in many cases, valuable feedback on the data collection process and the methodology.
- Thanks to improvements made after the road test, **the ACT Aluminium methodology is more robust** and provides a fair reflection of a company's readiness to transition to a low-carbon economy.
- Global collection rate is fairly satisfactory, with only a few indicators for which data collection was limited by confidentiality issues.
- The current assessment methodology illustrates clearly to companies where the main gaps / areas for improvement are and encourages much greater transparency on climate performance, strategies and transition plans and will help to raise the bar for the sector as a whole.

LIMITATIONS OF THE ROAD TEST

- **Usability of the online tool:** making a more user friendly and more guided data collection tool and ACT assessment tool has been identified as an area for improvement.
- **Data confidentiality:** Several companies which were initially interested in participating to the road test did not join or withdrew from the process due to confidentiality issues. The methodology requires companies to disclose in full commercially sensitive information. This will likely be reflected in low scores for the given modules and potential reluctance from companies to participate in the assessment.
- **Representativity of the company sample:** Road test results should not be considered as representative of an average company from the aluminium sector, due to the low number of voluntary companies (5) and the fact that companies assessed based on public data are likely to be more mature than the average regarding climate change mitigation.

RECOMMENDATIONS TO EXTEND THE METHODOLOGY TO THE REST OF THE SECTOR

All inconsistencies or issues experienced by the analysts and companies during the road test have been gathered and integrated at the end of the road test after discussion with the Steering Committee and the Technical Working Group that helps developing the methodology. The following points summarise the key recommendations that have been addressed before releasing the 2.0 version of the ACT Aluminium methodology:

- **Providing more guidance in the data collection tool:** Lots of exchanges between analysts and assessed companies have been needed to carry out assessments. Most of them were about clarifying concepts and helping in interpretating the content of the data collection tool.
- **Carry on improving the online ACT assessment tool:** Having a more stable ACT assessment tool, and improving its consistency with the data collection tool would make the work of analysts simpler, helping them to focus on assisting companies and provide more added value.
- **Clarifications needed on some technical aspects:**
  - Clearer definition of activities to be included in the casting and internal scrap remelting segments
  - Inclusion of emissions from hydrogen and biofuels production in Module 2
  - Extending some indicators from Module 2 and Module 8 to all actors
  - Adapting the dynamic weighting system for Modules 6 and 7
  - Clarifying the concept of "decarbonisation of electricity generation