



Sector Study Batteries France & Germany

***A Qualitative Study of the French and German
Advanced Battery Ecosystems***

and

The Opportunities for the Dutch Battery Industry

--- Executive Summary ---

*Commissioned by:
The Netherlands Enterprise Agency (RVO)
Embassy of the Kingdom of the Netherlands in France & Germany
Netherlands Business Support Office Lyon*

01.2023

TABLE OF CONTENT

1. Executive Summary	3
2. Introduction	4
3. Scope of Work & Methodology	5
4. Description of the Advanced Battery Market in Europe including Roadmaps	6
5. Global Competitor Analysis	21
6. France	22
A. Ecosystem of the French Battery Sector	22
B. Strengths and Weaknesses of the French Battery Sector	24
C. Battery-related Initiatives in France	25
D. Relevant Events, Fairs, and Exhibitions in France and Europe	26
7. Germany	27
A. Ecosystem of the German Battery Sector	27
B. Strengths and Weaknesses of the German Battery Sector	29
C. Battery-related Initiatives in Germany	30
D. Relevant Events, Fairs, and Exhibitions for the Battery Sector in Germany	31
8. Recycling: A Quantitative View of the European Market, focus on France and Germany	33
9. Beyond France and Germany: relevant opportunities and battery projects	37
10. Recommendations for successful international business development	38
11. Conclusion	42
Annexes	43

This Sector Study was prepared with the greatest possible care on the basis of the terms of reference dated 24.10.2022. No rights can be derived from the content and completeness. RVO and The Netherlands official representations have exclusive copyright and are the only organizations that are allowed to copy and distribute the Sector Study.

1. Executive Summary

This market study has been executed under the supervision of the embassies of the Kingdom of the Netherlands in France and Germany. It is strictly private and confidential. The report provides insights into the French and German advanced battery industries and gives an overview of the opportunities in both France and Germany for the Dutch Battery Sector. The report creates a better understanding of the opportunities for the Dutch Battery Industry to facilitate and enhance the energy and mobility transition. The insights provided will further improve the cooperation possibilities between France and the Netherlands as well as Germany and the Netherlands in the field of advanced batteries, their components, the production equipment, and the associated technologies.

The market study has two objectives. Firstly, assess the opportunities for Dutch cell component companies and equipment suppliers to integrate into the cell production lines. Secondly, to identify opportunities to collaborate on material identification and battery recycling. The geographical scope of the exercise was limited to France and Germany. The report contains analyses based on public information, subject-matter-expert interviews, desk research, feedback, and input from battery expert groups from France and Germany. In the period between November 14, 2022 and January 26, 2023 we have conducted 33 high-quality interviews: 20 in France, and 13 in Germany.

Our research has indicated that the Dutch Battery Industry certainly does have a right to play in an international environment. We have identified the following five recommendations to prepare for a successful international entrance. Firstly, primary focus should be given to **next-gen technologies** that are in a conceptual and technology development phase. Secondly, the creation of a **formal structure** to officially represent the Dutch Battery Industry is essential for international recognition and networking. Adequate resources need to be allocated and a membership structure will help to underline the strengths of the Dutch Battery Industry abroad. Thirdly, **OEMs and European gigafactories** will be the best basis to enter the international stage and enhance awareness of the capabilities of the Dutch Battery Industry. Fourthly, entrance opportunities are available in adjacent markets such as the **heavy-duty segment**. These markets have different product needs and are not driven by the quest for high volumes as in the automotive industry. The Dutch market already contains important players in these fields. Finally, we conclude that **recycling** is a topic that does not get the amount of attention as cell manufacturing today. Recycled materials however do play a vital role in achieving European sustainability targets and in the long-term future of EVs. Developing a leading position, and national control over this value stream by means of the creation of a recycling facility will help to further enhance the Dutch Battery Industry internationally.

Our study has identified key players to contact within the French and German ecosystems. We have highlighted the main clusters to connect with abroad. These **cluster organizations** play an important role to get a foot in the door in these markets. Additionally, the personal interviews have generated interesting leads for further exploration, such as Blue Solutions in France.

To summarize, France and Germany are attractive markets to help further develop the Dutch Battery Industry as they hold key OEMs. Current technology does not provide long-term opportunities but might help international development and create business relationships. The battery business is a global business and we strongly advise building connections with **other countries** too. We have integrated practical examples from the USA, Belgium, Sweden, and Hungary. The latter two might prove to be hidden champions as they already actively develop their business, thereby focusing on European gigafactories such as Northvolt and OEM-initiated plants such as the BMW plant in Hungary. Further research regarding international opportunities will help to create focus. Moreover, recycling-related activities have been explored quantitatively, but do require a qualitative approach too.

This Study has been executed under the supervision of the embassies of the Kingdom of the Netherlands in France and Germany. The report provides insights into the French and German advanced battery industry and gives an overview of the opportunities in both France and Germany for the Dutch Battery Sector in the short- and long-term. The report creates a better understanding of the opportunities for the Dutch Battery Industry to facilitate and enhance the energy and mobility transition. The insights provided will further improve the cooperation possibilities between France and the Netherlands as well as Germany and the Netherlands in the field of advanced batteries, their components, the production equipment, and the associated technologies.

This study primarily focuses on (1) identifying the opportunities for Dutch cell component companies and equipment suppliers to integrate into the cell production lines, and (2) identifying the opportunities to collaborate on material identification and battery recycling.

The report contains analyses based on public information, subject-matter-expert interviews, desk research, feedback, and input from battery expert groups from France and Germany, such as the Battery Competence Cluster in the Netherlands and its counterparts abroad. Given the restricted time frame and limited resources, combined with the broad range of activities covered in this study, the reliance on publicly available information is high. The results should be treated with due care. The information included in this report provides directional guidance and creates useful insights for the Dutch Battery Industry Sector, its market players, and other relevant stakeholders.

Axa Novi has not executed an independent validation of the aforementioned data, and thus does not undertake any responsibility or liability. No guarantees or assurance (explicit or implicit) concerning accuracy or completeness of the data will be given.

This report is strictly private and confidential. Neither Axa Novi, nor one of its business associates, accept any liability (including for negligence) for use of this report for any other than the stated purpose and it may not be provided to anyone else. We remain at your disposal for any questions related to the final report and/or the methodology used.

Yours faithfully,



Bart Timmermans - Axa Novi

Business Associates for France: Jean-Gilles Chomet, Eric Zumbrunn

Business Associate for Germany: Horst Zang