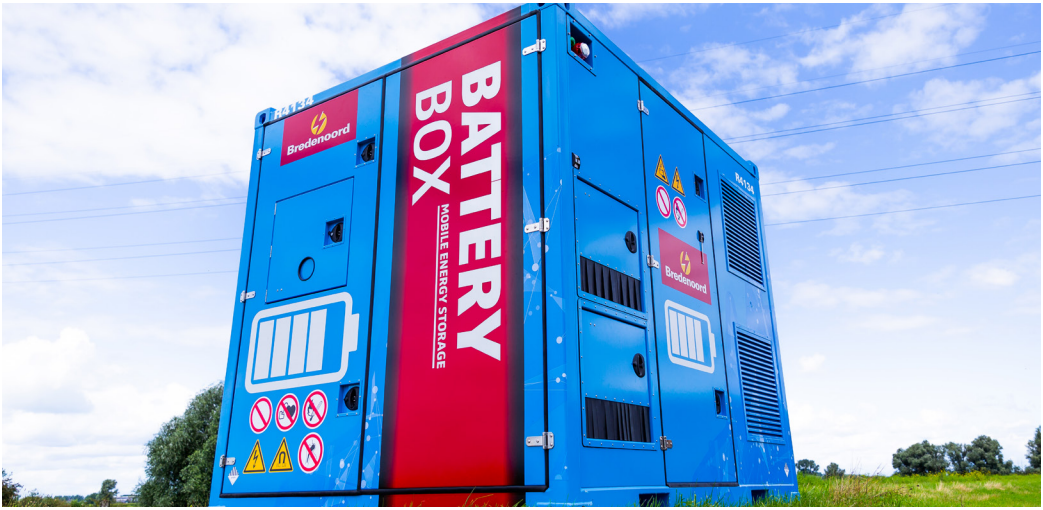
Powering a sustainable and strong transport and energy sector

The Netherlands is taking up position in the European and international battery value chain. Our country takes advantage of its technology-based economy and unique location with its highly developed infrastructure, unlocking the European market. International cooperation is key in this process, a natural thing in the open economy of The Netherlands.



Netherlands

Dutch Battery Strategy

Batteries are an indispensable key enabling technology in the energy transition and very important for Dutch society to fulfill its sustainability goals. At the same time, battery technology offers huge opportunities for the Dutch economy with its high-tech industry and knowledge base. The Dutch government recognizes the importance of batteries and is aiming to be prepared for the inevitable increase in the use of batteries in our society. Therefore, a national strategic approach on batteries has been put in place. The aim is to ensure that the increase in battery usage in our society is **safe, responsible and sustainable** and that the opportunities that arise from it are utilized. Eight out of twelve departments and several other government organizations collaborate in an integral and coherent approach, the Dutch battery strategy.

The governmental strategy is organized around the following pillars:

1. **Raw materials;** goals are availability of critical materials and responsible mining.
2. **Circular Economy;** goals are achieving circularity and retaining critical materials.
3. **Safety;** goals are safer batteries and safe use of batteries.
4. **Economic opportunities;** goals are innovation and growing the battery ecosystem.
5. **Energy system;** goal is to optimize the use of batteries to support the energy system.

Establishing global control points for The Netherlands in the battery value chain

Acknowledging the great opportunities for the Dutch economy and society, the government, has joined forces with businesses and research institutes to strengthen the national battery ecosystem. Under this strong public private partnership we have created an action agenda. Instead of trying to take on the entire battery value chain, we aim to position ourselves within the European and international value and focus on aspects that The Netherlands excels in. The establishment of control points is supported by a substantial investment through a National Growth Fund program on sustainable batteries.

Strengths and focal themes for The Netherlands in the international battery value chain:

1. **New battery materials and cells;** The Netherlands has an excellent track record on material science and is using its R&D capacity for developing safe and sustainable new battery materials and cells.
2. **Circularity;** a vital theme given the steep increase in demand for batteries and upcoming European requirements for new batteries to have minimum percentage of recycled content. On every aspect of circularity - from design to recycling - the Dutch battery ecosystem is growing in strength. The strong knowledge base on circularity, as well as the location of the Netherlands with its extensive multimodal network (major harbors, waterways, dense road and railway network), will be a major advantage in this.
3. **Equipment for cells, modules and packs;** Building on a strong heritage in developing complex (thin film) production equipment, the Dutch high-tech industry is working on becoming supplier of production equipment for the gigafactories of the future.
4. **Battery systems for heavy duty transport (including maritime);** The Netherlands does not have original manufacturers of passenger cars but is a major producer of heavy duty transport, such as trucks, buses and maritime applications. Manufacturers include DAF, VDL, Ebusco, Damen shipyards and more. We focus on design, development, production and testing of specialized battery systems for heavy duty transport. Battery systems that are smart, circular and scalable.
5. **Battery systems for grid support;** Dutch industry is developing batteries that are capable of providing long duration storage capacity which will provide sufficient grid capacity and adjustable power. This will allow a higher percentage of green energy in the Dutch energy mix and a stable electricity supply. A major advantage is that these batteries do not rely on critical raw materials.
6. **Data, safety and testing;** The Netherlands has an excellence in IT and data, as well as an extensive and highly reputed testing and validation capacity on electronics and batteries

Growing the Dutch Battery Value Chain

To foster the growth of the Dutch battery value chain a strong Public Private Partnership has been established. Together, the government, companies and knowledge institutes have set up the Battery Competence Cluster-NL (BCC-NL). The goal of the cluster is to:

- facilitate the growth of the Dutch battery value chain through: ecosystem development, community building and knowledge sharing
- Developing long-term roadmaps and collaboration projects
- positioning the Dutch battery value chain for more visibility
- Foster international cooperation, K2K, B2B, G2G

More information and contact

We are very interested in international cooperation at K2K and B2B level in the development of high performing and sustainable batteries and at G2G level to get aligned on policies and regulation that foster sustainable batteries. For more information and to get into contact, please visit the website of the Battery Competence Cluster-NL: https://batterycompetencecluster.nl/internationalcollaboration

This flyer is made as part of the Dutch Governmental Battery Strategy and is a cooperation between the Ministry of Infrastructure and Water Management and the Ministry of Economic Affairs and Climate

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