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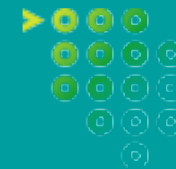
National Action Agenda for Battery Systems 2026

23 September 2026

Four decorative green arches of varying shades are positioned along the bottom edge of the slide.

Break-out session:

From Strategy to Action: Shaping the Future of the Dutch Battery Ecosystem



Justin van Hamburg

Ministry of Infrastructure and Water Management

Introduction: Policy relevance of the Action Agenda



Mustafa Amhaouch

Director BBC-NL

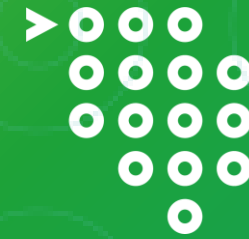
The new National Action Agenda Battery Systems



Stef Haarler

Ministry of Economic Affairs

Move forward



**Battery
Competence
Cluster - NL**

Justin van Hamburg

Ministry of Infrastructure and Water Management

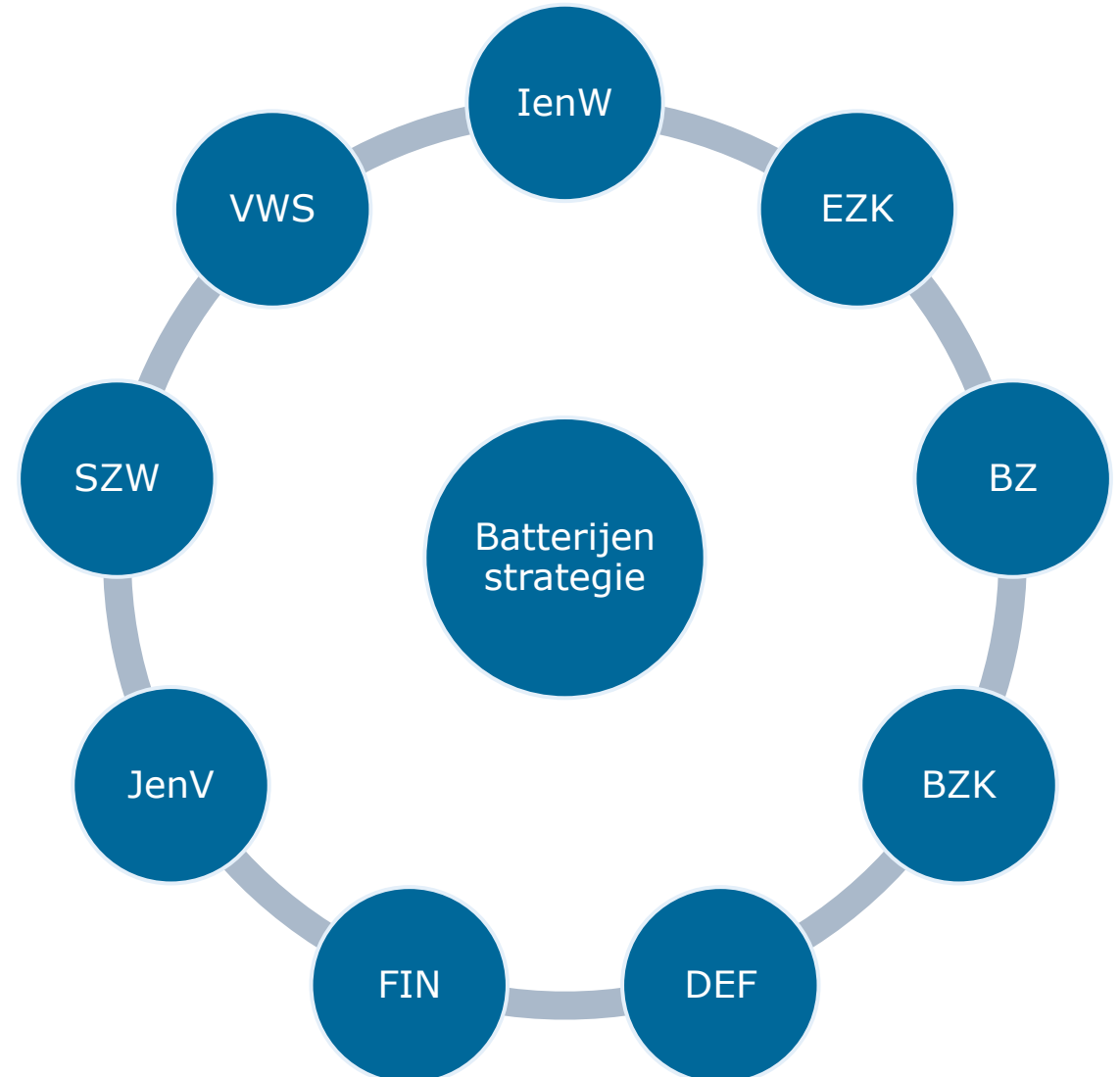
Introduction

Policy relevance of the Action Agenda



Dutch Interdepartmental Battery Strategy

- › Started in 2020 seen importance for mobility and energy transition.
- › Interdepartmental collaboration between 9 ministeries and other governmental organisations
- › Goal of the strategy: “With the battery strategy we want to ensure **availability** of batteries for our societal goals and work towards a **safe, responsible** and **sustainable** growth of batteries in society, while utilizing the **opportunities** it creates.”





National Battery Strategy: 5 pillars

Resilience:

- Foster availability of critical materials & batteries, increase strategic autonomy

Sustainability and Circularity:

- Sustainable value chain & increasing access to critical materials.

Safety:

- Ensure a safe use of batteries in society, supporting the development of knowledge on risks and safety

Economic opportunities:

- Foster innovation to come to safer and better batteries, supporting a strong and healthy battery ecosystem in the Netherlands

Applications for societal goals

- Optimising the application of batteries in the energy and mobility system and defense

ACTIEAGENDA BATTERIJ- SYSTEMEN



Holland High Tech
Global Challenges, Smart Solutions

➤ Background



Call to action

First Battery Systems Action Agenda in 2022

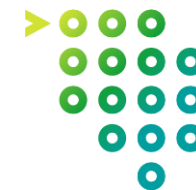
➤ Goals:

- Bring together the battery ecosystem
- Strengthen positions of Dutch companies and knowledge institutes
- Shared compass for public as well as private policy /action

➤ Accomplishments:

- NGF Materials Independence & Circular Batteries established
- Battery Competence Cluster – NL (BCC-NL) established

➤ Developments since Action Agenda 1.0



- ❖ Global market growing
 - (€200 B in 2024 → €450 B by 2030)
- ❖ 22 projects active in MICB programme
 - ❖ 2022 – 2026: R&D development, focus on mid-TRL
 - ❖ 2026 – 2030: Mid- to high-TRL development, with increasing emphasis on demonstration and commercialization
- ❖ Few dropouts and steady growth: more than 450 companies active in battery ecosystem
- ❖ Right to play for the Netherlands:
 - Leading companies in next-gen battery materials
 - Important players in stationary energy storage
 - Active companies in battery lifetime extension and recycling
 - Strong knowledge and innovation infrastructure
 - Important OEMs and battery system suppliers



MANAGEMENTSAMENVATTING ACTIEAGENDA BATTERIJSYSTEMEN

EXPERTGROEP BATTERIJEN, SEPTEMBER 2022



EUROPESE
COMMISSIE

Brussel, 4.3.2026
COM(2026) 100 final
2026/0068 (COD)

Voorstel voor een

VERORDENING VAN HET EUROPEES PARLEMENT EN DE RAAD

tot vaststelling van een kader van maatregelen voor de versnelling van de industriële capaciteit en de decarbonisatie in strategische sectoren en tot wijziging van Verordeningen (EU) 2018/1724, (EU) 2024/1735 en (EU) 2024/3110

➤ Update of the Agenda



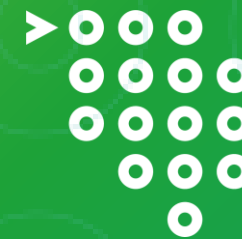
- **Triggered** by:
 - Rapid technological and market developments
 - Developments in the ecosystem
 - Geopolitical turbulence
- **Guided** by:
 - Evaluation report by Haskoning
 - The Wennink and Draghi reports
 - National Technology Strategy and Circular Economy Programme
 - Defence Strategy for Industry and Innovation 2025-2029
 - Industrial Accelerator Act by the EU

➤ Collaborative work on National Action Agenda for Battery Systems 2026





Mustafa Amhaouch
Director BCC-NL



**Battery
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The new National Action Agenda Battery Systems

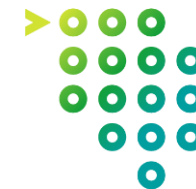
➤ Key Goals

Call to acceleration

- ❖ Accelerate the Dutch battery ecosystem from innovation to **industrialization** and **market deployment**
- ❖ Strengthen **competitiveness** and **earning capacity** in high-value battery value-chain segments
- ❖ Enhance **strategic autonomy** and **security of supply** for batteries, materials, and critical technologies
- ❖ Establish the Netherlands as a **key European player** in selected battery technologies, systems, and manufacturing capabilities
- ❖ Leverage **public-private collaboration** between industry, knowledge institutions, and government to accelerate impact



➤ National Action Agenda for Battery Systems 2026



➤ 7 Action Lines – Joint course for acceleration



Accelerate market access and deployment

Towards commercial deployment through launching customers, risk-sharing, financing & frameworks



Scale innovation to industrial production

Scale materials, components and production technologies to competitive industrial production



Develop a digital and safe system layer

Strengthen BMS, data, interoperability, safety, testing and certification



Develop a high-value circular value chain

Prioritize lifetime extension, repair and remanufacturing, second-life use and high-value material recovery



Strengthen shared infrastructure and financing

Build shared infrastructure, supported by Business Intelligence and financing



Strengthen talent and implementation capacity

Build technical skills through education, lifelong learning & hands-on training

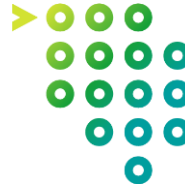


Embed the Netherlands in European value chains

Connect to European innovation, investment & market opportunities



Heavy Duty & Dual-Use applications



ACTIONS

- Reduce TCO & investment risk
- Develop national standards
- Scale BMS technologies
- Build a circular value chain
- Accelerate industrialisation & market entry
- Align civil & defence requirements
- Build a European dual-use battery ecosystem
- Increase participation in EU programmes

MOONSHOTS 2030

Strong European position in Heavy-Duty electrification

Strong Dutch position in batteries for heavy-duty, off-road, maritime, drones and dual-use applications

High-value, smart and circular battery systems

Smart design combining dual-use, digital lifecycle management and circularity

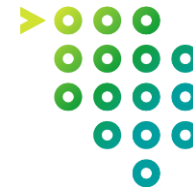
Strong Dutch Heavy-Duty battery value chain

Leading European position in packs, system integration, charging and circularity

2035



Stationary applications



ACTIONS

- Set national storage targets
- Reduce policy & tariff uncertainty
- Remove double grid tariffs
- Accelerate permitting
- Develop standards & interoperability
- Create a launching market
- Enable circularity & second life
- Build a validation & scale-up ecosystem
- Strengthen European collaboration
- Invest in skills & capacity

MOONSHOTS 2030

European testbed for integrated energy storage

Large-scale demonstration and validation of SDES, LDES, EMS and VPP solutions

Leading position in LDES & market deployment

Advance LDES to commercial deployment and establish the Netherlands as a launching market

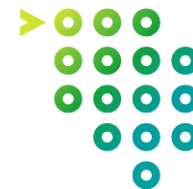
Strategic position in the storage value chain

Strong global position in SDES and LDES technologies, software, testing and production

2035



Next-gen components & materials



ACTIONS

- Accelerate R&D for longer cycle life
- Invest in next-generation technologies
- Strengthen industry–research collaboration
- Harmonise testing & validation
- Scale up material production
- Enable market access
- Increase circularity
- Mobilise financing
- Develop harmonised European frameworks

MOONSHOTS 2030

Internationally competitive Dutch battery components

At least three battery components scaled to 0.5–1 GWh/year, with Dutch-owned core tech and IP

Established niche-to-scale market adoption

Battery innovations scale from niche markets to defense, Heavy Duty, aviation and automotive

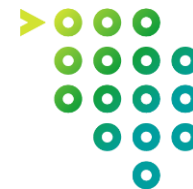
Dutch battery materials qualified for EVs

At least one Dutch material or cell concept fully qualified and applied in EV battery production

2035



Production equipment



ACTIONS

- Strengthen market alignment
- Accelerate national collaboration
- Scale internationally
- Build flexible production infrastructure
- Develop ultra-efficient production equipment
- Develop flexible production & assembly solutions

MOONSHOTS 2030

Strong Dutch position in flexible battery production

Modular, AI-driven production with >50% energy savings, ≥30% lower TCO and faster scale-up

Flexible high-mix pack & module production

Flexible AI-driven assembly with in-line quality control and cell-level traceability

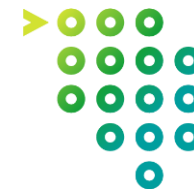
Strong European impact in production equipment

Dutch equipment enabling energy- and material-efficient production used by international cell makers

2035



Circular value chain: life extension, repurposing & recycling



ACTIONS

- Automate safe battery pre-treatment
- Enable circular business cases
- Harmonise diagnostics & certification
- Improve feedstock visibility
- Secure access to battery feedstock
- Accelerate high-value material recovery
- Support early-stage scale-up

MOONSHOTS 2030

Circular hub for high-value battery recycling

Efficient recovery of strategic CRMs, integrated with European refining and battery value chains

Lifetime extension as the preferred circular pathway

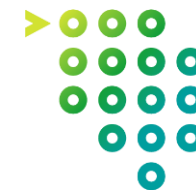
Infrastructure for diagnostics & lifetime extension and a viable repurposed battery market

International position in high-value battery recycling

High-quality recovery of critical raw materials, contributing to Europe's supply of battery-grade materials

2035

➤ Strategic overarching areas



Facility

Shared infrastructure for development, testing, validation and industrialisation



Data, Safety & Validation

Reliable data, harmonized safety and validation for trustworthy battery systems



Business Intelligence

Market, technology and value-chain intelligence to guide strategic decisions and investments



Digital Battery Passport

Interoperable battery data enabling traceability, compliance and circular value creation



Battery Cell Production

Flexible ~1 GWh cell production from design and prototyping to industrial scale for strategic and commercial applications



Human Capital

Skills, education and practical training for a growing and future-proof battery industry



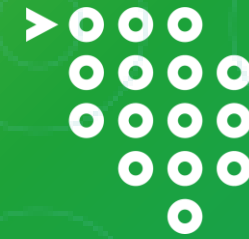
European & International Cooperation

Connect Dutch strengths to European and global technology, markets, investment and value chains



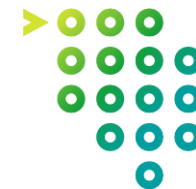
Stef Haarler
Ministry of Economic Affairs

Move forward



**Battery
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➤ How do we move forward?



- ❖ The Action Agenda as a compass for further policies...
 - ❖ Such as the Industry Policy with focus
- ❖ ... and funding
 - ❖ Innovation schemes (NGF, PPS-I, ...)
 - ❖ Bilateral innovation
 - ❖ National Investment Bank
 - ❖ MICB Phase 2 – 2028
- ❖ From agenda to implementation:
 - ❖ In the coming month BCC-NL will work with the ministries to create an implementation plan to turn the actions into concrete, market-driven initiatives.



➤ NGF Material Independence & Circular Batteries Phase 2

Nationaal
Groeifonds

- ❖ Material Independence & Circular Batteries (MICB):
 - ❖ Phase 1 (2024 – 2027): € 157,90 million
 - ❖ Phase 2 (2028 – 2031): € 134 million, reservation
- ❖ Phase 2 proposal application March '27
- ❖ Important input for proposal:
 - ❖ Mid term review phase 1 – Dialogic
 - ❖ Action Agenda and thematic tables
- ❖ If granted, funds will be available from early 2028, for the Ministry of Economic Affairs & Climate policy

Reserved:
€134
million

Granted:
€157,90
million





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