Introduction to Brainport Eindhoven

Brainport Development - economic development agency of Brainport Eindhoven

Rutger van Poppel, Project Manager Battery
What does Brainport Development do?

WHY: Maintain and strengthen the Brainport ecosystem. Together with partners from knowledge institutions, government and industry, we are working on a well-functioning ecosystem, where innovation takes place through collaboration.

HOW: As an independent organization, we use our organizational strength and network knowledge to connect people and opportunities.

WHAT:

• Development strategy for and with the region
• Branding
• Lobby
• Development of projects and programs
• Individual business consulting funding/connection/encouragement
One of the Cornerstones of Dutch Economy

Amsterdam Airport
(trade, services, legal, finance, tourism, arts)

Rotterdam Seaport
(logistics, oil/chemicals, commodities)

Brainport Eindhoven
(high-tech, electronics, design)
International dependence on battery supply chain

Audi Hit With 10% Price Increase On LG Batteries Due To High Demand

October 22nd, 2018 by Kyle Field

Volkswagen's battery supply may be in trouble

There are concerns at Volkswagen that a supply contract with Samsung SDI worth around 50 billion euros could be called off. The Koreans are said to have originally agreed to supply battery cells with a total capacity of just over 20 GWh to VW.

However, the deal now appears to have got down to a mere 5 GWh, reports Bloomberg, citing insiders. According to the news agency, Volkswagen and Samsung SDI have different ideas about the production volume and schedule, which is why Samsung’s delivery commitment could ultimately fall to a volume of less than 5 GWh.

Europees batterijproject krijgt 3,2 miljard euro van EU-landen

De Europese Commissie wil op het gebied van batterijen minder afhankelijk zijn van Azië en steekt 8 miljard euro in een pan-Europees-batterijproject.
Huge investments in the battery value chain in Europe

PSA launch the ACC battery cell joint venture

The project benefits from the financial support of the French and German authorities to the tune of 1.3 billion euros and has received the approval of the European institutions through an IPCEI project. The whole project will represent an investment of more than 5 billion euros.

Germany to fund research facility for EV battery technology

Anja Karliczek said her ministry would invest 500 million euros ($568 million) to support research into both existing and next-generation EV battery cell technology.

“The German car industry shouldn’t depend on Asian suppliers,” Karliczek told a business conference in Berlin. “This is not only a question of independence, but also a question of keeping the German economy competitive.”
Dutch market for heavy-duty vehicles

Over 40 others...
The Dutch Battery Value Chain

- Fragmented and few battery suppliers

Materials and Cell/Modules

Battery (manufacturing) Systems

Battery packaging

Vehicle Integration and Services

Repurpose and Recycling

- Siemens PLM Software
- +40
Future batteries

World leading high-tech ecosystem for future battery solutions
Proven track record

World leading position in nano- and micro-electronics
STRONG COLLABORATION BETWEEN OEMs AND SUPPLIERS

- ASML
- DAF
- FEI Company
- Océ
- Philips Healthcare
- VDL

**OEMs**
- 6

**1st TIER SUPPLIERS**
- 14

**2nd & 3rd TIER SUPPLIERS**
- 320

**BRAINPORT <40 km Eindhoven:**
- 80%

- Participating in ≥2 chains:
  - Bosch Rexroth
  - GIS Europe
  - KMWE
  - Norma
  - Optiwa
  - Prodrive
  - VDL ETG
  - Frencken
  - GL Group
  - Neways
  - NTS Group
  - Pezy
  - SKF
  - Wilvo

**BRAINPORT <40 km Eindhoven:**
- 71%

**BRAINPORT <40 km Eindhoven:**
- 34%

- Netherlands (rest) 38%
- Belgium 12%
- Germany 7%
- USA 4%
- ROW 5%
De kracht van samenwerking

Strategic Brainport

Government

Business

Knowledge institutions

Projects

Strategy

Hightech

Manufacturing industry

Design

Innovation by cooperation

Multi Helix Collaboration

Herstel van High Tech

Parenting companies

Fast growing companies

Startups

Manufacturing

Design

Projects and Programmes

Sectors and industries

Government

Business

Knowledge institutions

Innovation by cooperation
Battery Knowledge charges Circulair economy

- CO2 Footprint
- EU Behoeften
- Invloed / Flexibiliteit
- Competenties
- Werkgelegenheid
- Economische onafhankelijkheid

Note: Logo’s are used as example of potential participants
Master Scriptie Supply Chain Management

Door het in kaart brengen van toekomstige batterijstromen, een roadmap ontwikkelen waarmee we betere keuzes kunnen maken over de voorbewerkingsstappen van batterij recycling die in NL plaats moeten vinden

- Onderzoeksvragen
  - Welke batterijstromen ontstaan er in 2025 en 2030?
  - Wat zijn de huidige processtappen in de keten die in NL plaatsvinden en waar zitten de knelpunten gegeven de toekomstige batterijstromen?
  - Welke processtappen kunnen we in Nederland in eigen beheer nemen zodat de keten wordt geoptimaliseerd?
Wat willen we bereiken?

- Inzicht in toekomstige batterijstromen
- Onderbouwing van keuzes in recyclingstappen die op korte termijn in NL plaats moeten vinden en welke (tot zekere termijn) niet in NL plaats hoeven te vinden
- Selectie van optimale locaties voor deze recyclingactiviteiten
Q&A

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