

# Super B company presentation

Super B, a Koolen Industries company

UIC Workshop on Energy Efficiency  
February, 2019 Rotterdam



Company  
Super B

Customer  
Challenges

Product  
Portfolio



# Super B develops and produces lithium batteries ranging from small starter batteries for motorcycles to energy storage for recreational vehicles, industries applications or residential storage.

## Super B at a glance

- ✓ Provider of Lithium-Iron phosphate modules and systems for a variety of applications
- ✓ Strong IP with various patents/patents pending and license across various applications and chemistries
- ✓ Over 10 years expert employees with extensive battery and technology expertise and close cooperation with Technical University of Twente for R&D
- ✓ Steady, top-line growth with own development and production
- ✓ Strong foothold in existing customer base of over 500 customers all over the world

**MORE POWER, LESS WEIGHT**

**LONG LIFETIME**

**STABILITY AND RELIABILITY**

**LOW SELF-DISCHARGE**

**FAST CHARGING**

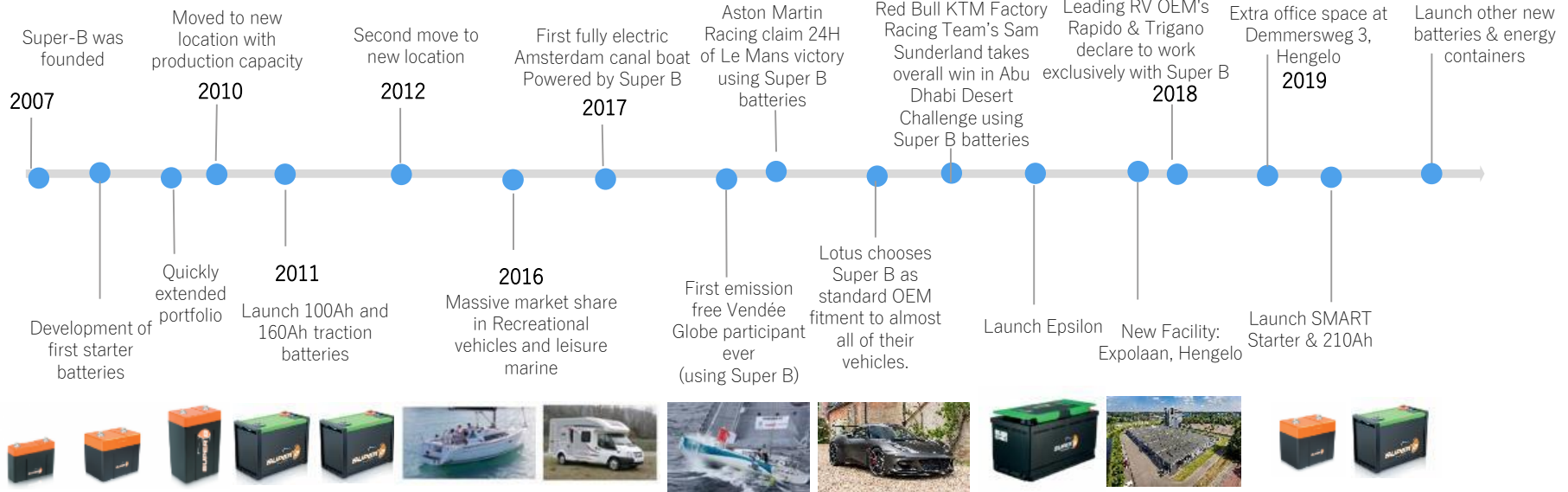
## Focused market approach



## Manufacturing facilities in Hengelo, The Netherlands



# The Super B life cycle





Company  
Super B

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An aerial night photograph of a large industrial facility, likely a refinery or petrochemical plant. The scene is illuminated by warm yellow and orange lights from the facility's infrastructure. Numerous large, cylindrical storage tanks are visible, some with blue roofs and others with metallic finishes. A complex network of pipes and walkways crisscrosses the site. In the background, a large ship is docked at a pier, its lights reflecting on the dark water. The sky is a deep blue, suggesting twilight or early night.

The role of  
Infrastructure  
Managers in  
traction energy  
transition

Local and  
System  
solutions

# Challenges

Reduce the use of diesel traction

## Solutions

- Hybrid trains      Long history (Steam, diesel, electric combinations)
- All Electric      Traction
  - Charge stations
  - Battery Exchange
  - Combinations
- Energy Control      Sensoring
  - Cloud Connection
  - Smart Energy Management







Company  
Super B

Product  
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# Product portfolio

- Super B's core competence is high quality Advanced Energy Storage, served with Lithium Iron Phosphate (LFP) technology, the safest and most durable Lithium Ion technology.
  - Super B has a standard portfolio (for distribution), custom batteries (for OEMs) and accessories.
  - The portfolio ranges from small motorcycle starter batteries to large 800V energy battery systems.

## *Starter batteries*

5200P, 7800P, 10P, 15P, 20P, 25P



## *Traction batteries*

100E, 160E



Epsilon



Capacity: 30Wh - 2000Wh per battery, and system designs >1MWh.

# Product portfolio

- Container sized solutions
  - 200 kWh – 2000 kWh
  - 100 KW – 3000 KW



- All systems
  - Local energy & hardware management
  - Cloud energy & hardware management



# Technical Roadmap Super B Product Portfolio expansion 2019

Focused expansion and improvement  
of product portfolio:

- New Cell introductions 210E & 180E
- New traction module SB12V105Ah
- Improved Battery Interface Modules
- Energy Storage 1 kWh – 2 MWh
- Smart management for hardware and energy



# Super B's high-performing products are already in use in a wide range of applications and solutions (1/1)

## Transport



Fire & rescue

**inomatic**  
wir entwickeln voranprung



Maritime

   
**BENETEAU JEANNEAU**



Electrical  
vehicle  
installations

**TBV**  
Kühlfahrzeuge



Starter  
batteries



Recreational  
Vehicles

 **LE VOYAGEUR**



Canal  
boat

**LOVERS**  
canal cruises



# Super B's high-performing products are already in use in a wide range of applications and solutions (2/2)

## Industrial



Service vehicles

*Street cleaning equipment manufacturer*



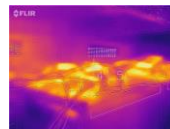
Material handling

*Access equipment manufacturer*

## Energy storage



UPS for data centers



**EAT•N**



Tugboat/ferries

*Utility boat manufacturer*

# Thank you