

E-Mobility

# “Pure Play”

Investor/Analyst Presentation

Eigenkapitalforum, Nov. 28, 2018

**V+LTABOX®**



# Highlights from nine months 2018

Continued top line growth +105%

EBIT margin soars to 7.0%

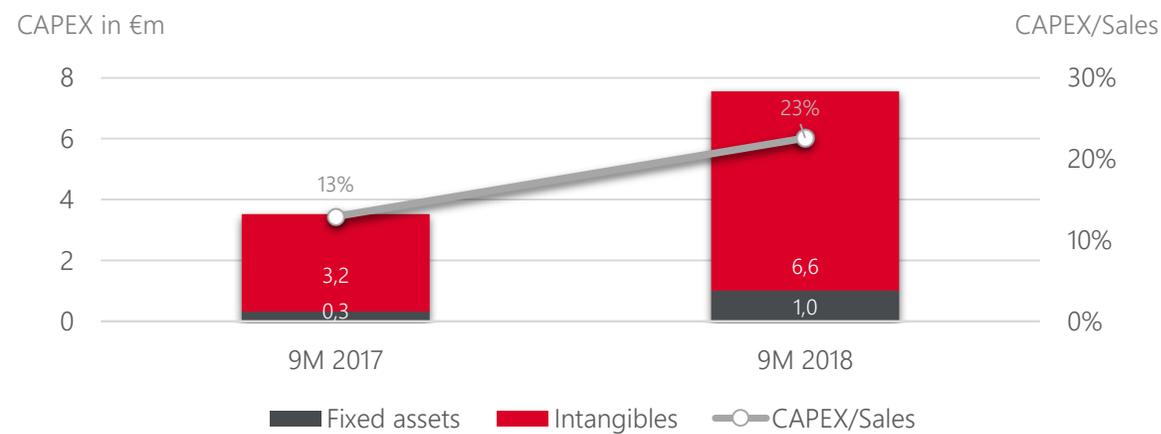
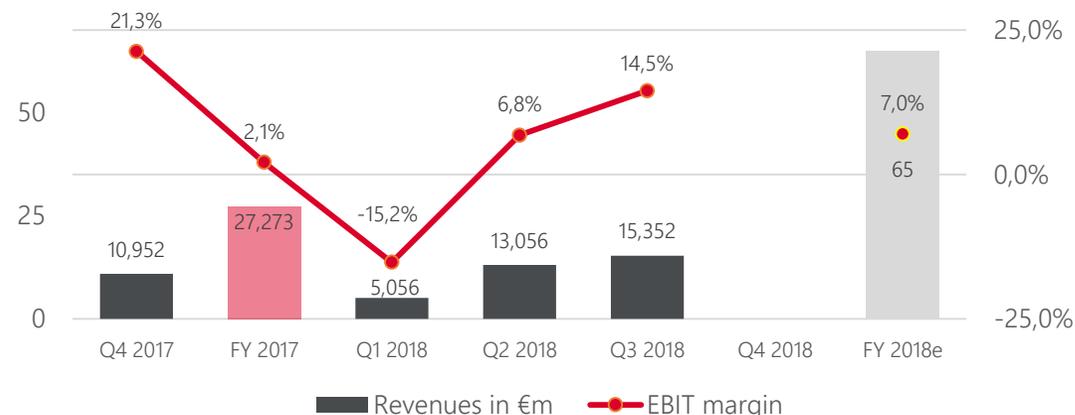
First time after-tax profit (€ 1.9m)

Main driver Intralogistics and Public Transportation in Q3 – First effects of the new Triathlon deal apparent

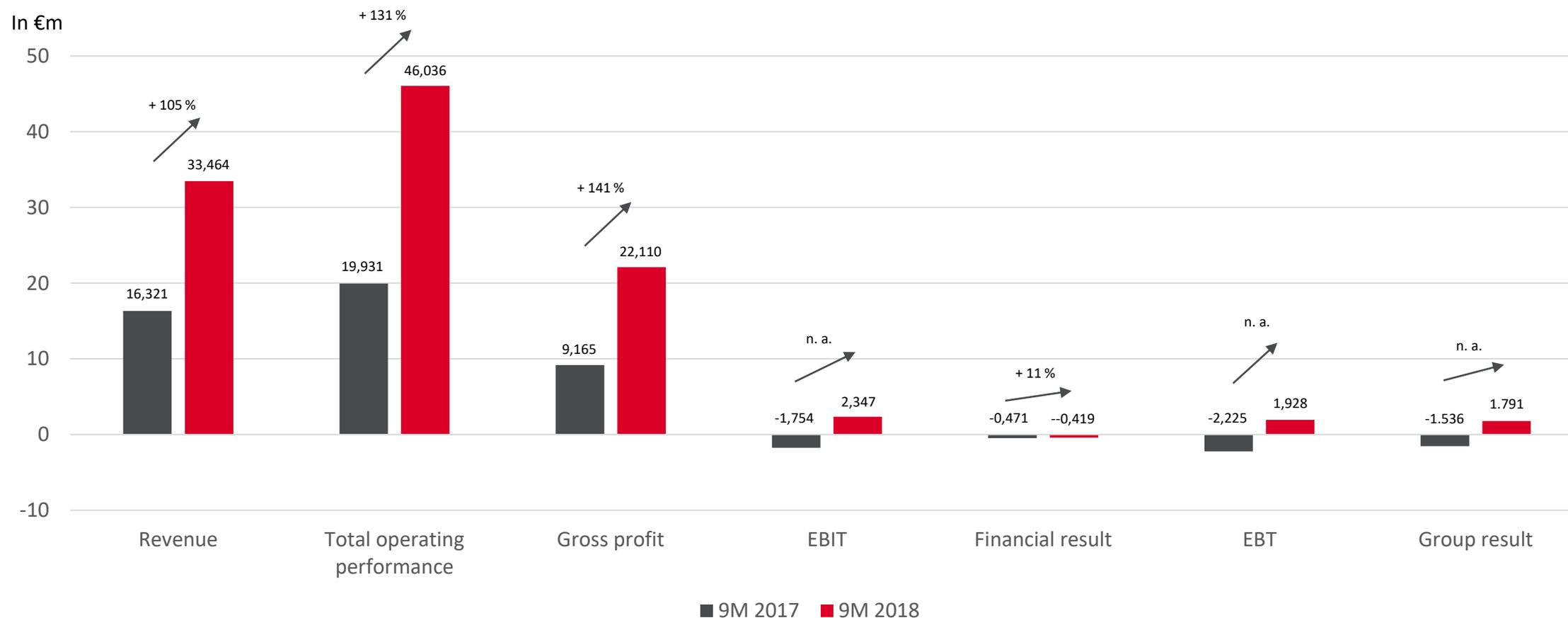
CAPEX € 7.6m / Liquid funds € 55.8m

Equity ratio remains high at 89.1%

Revenue and profitability outlook confirmed for FY 2018 (Rev.: € 65-70m, EBIT margin 7%)



# Strong Top Line Growth – First Time After-Tax Profit



# New R&D Capabilities: Acquisition of Concurrent

Concurrent Design is an engineering services provider located in Austin, Texas with proven and long-standing expertise in R&D

More than **20** highly skilled  
**employees**,  
mostly engineers, software developers &  
project managers

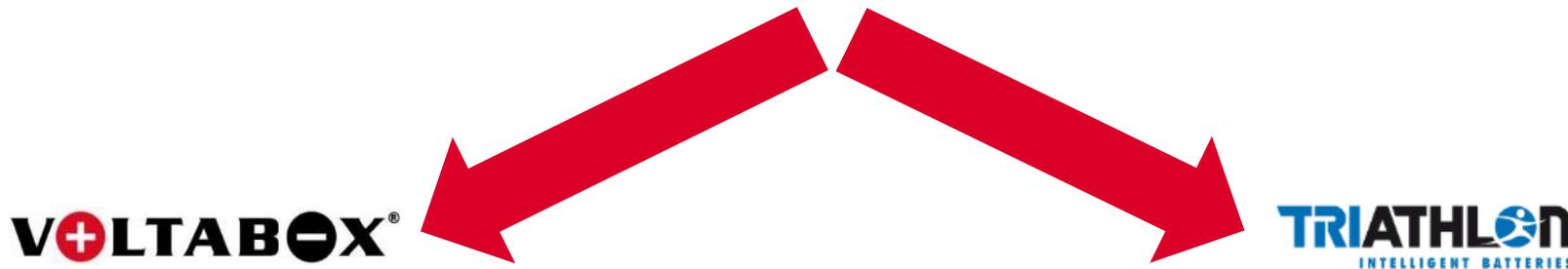
Expertise from more than **1,700**  
successfully completed **projects**

**Multiple** boost of  
**velocity** for **Voltabox**  
by additional resources



# Former Partnership with Triathlon

Since 2014, Triathlon has been Voltabox's exclusive partner with regard to the intralogistic market



- Development / Series production of Lithium-Ion battery modules

- Assembling of Voltabox modules to systems (housing, electronics, cable harness, interface to forklift) in small batches / high mix
- Selling via Triathlon network to end customers
- Sales network used to distribute lead-acid batteries to the market
  - Fast deliveries in batches (10, 20....50)
  - No continuous deliveries

# New Agreement with Triathlon

*The Intralogistics market accepts more and more Lithium-Ion technology over lead-acid.*

*OEMs and big customers don't want a vendor as additional trade level.*

June  
2018

## New agreement was signed!

- Direct access of Voltabox to the intralogistics market
- Triathlon remains customer for Lithium-Ion modules
- Europe: Triathlon builds Voltabox's systems (CAPEX saved)
- Voltabox got rights for Triathlon's know-how (own development not necessary)

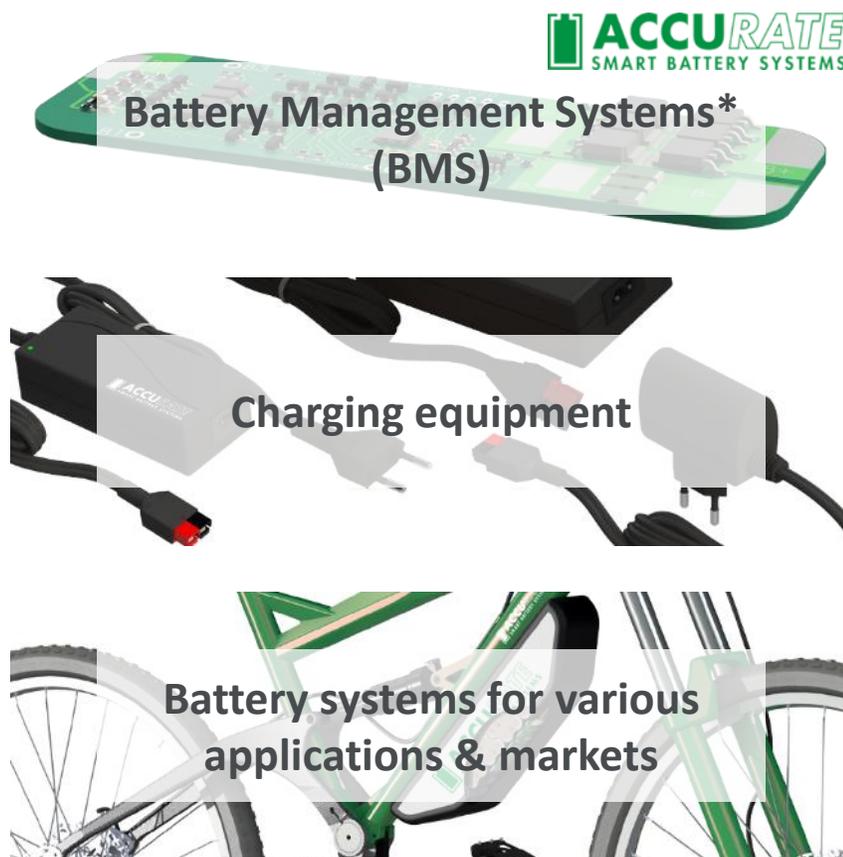
### In return...

- Investment grant to Triathlon to increase capacity
- License for intellectual property
- Extended payment terms for H2/2018

### Consequences

- P&L 2018 burdened by € 2m
- Increase of inventory at Triathlon (by € 5m to € 10m)
- Increase in inventory of finished goods and work in progress at Voltabox (ca. € 7.2 in Q3/18) to ensure fast delivery times

# Horizontal Expansion: Acquisition of ACCURATE



Voltabox acquired ACCURATE Smart Battery Solutions GmbH in August 2018 for an amount of € 5m. The company and its portfolio will be a cornerstone for the expansion of the segment Voltaforce.

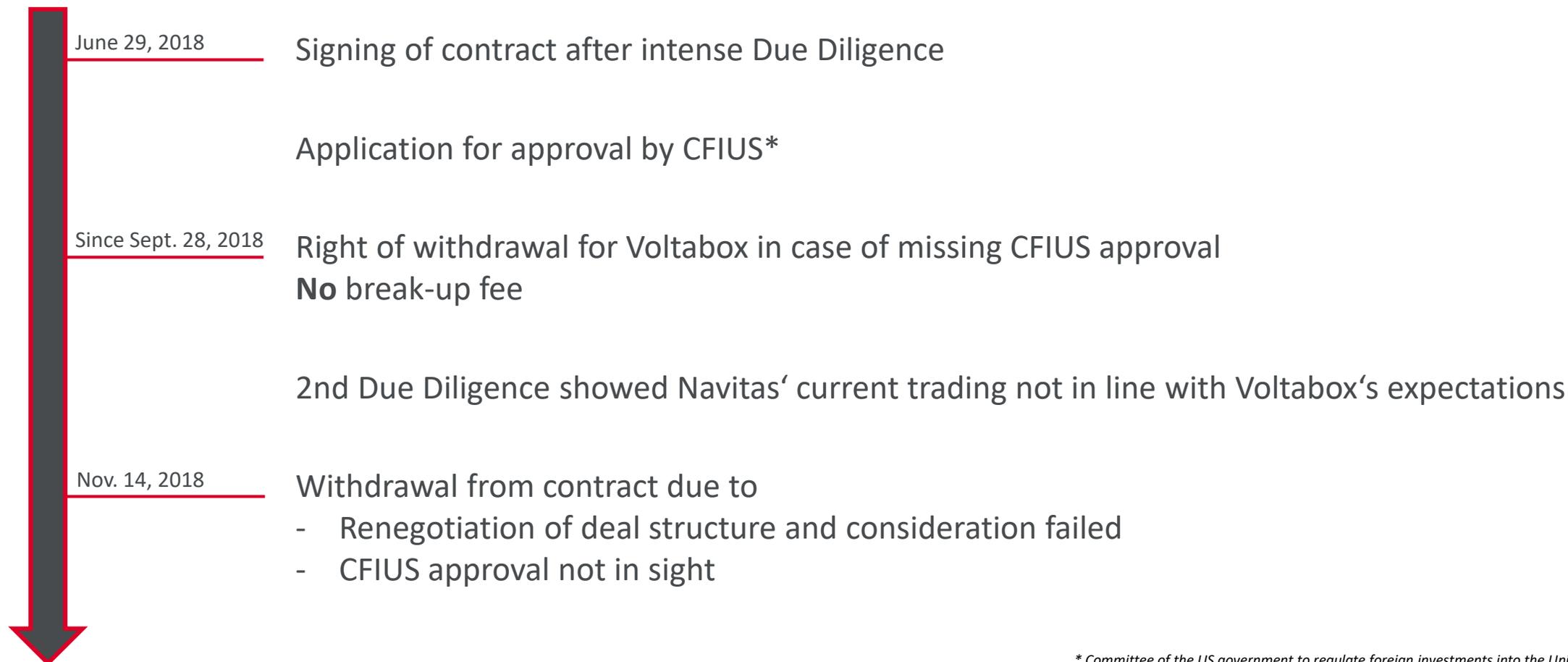
Development and production of **high-quality battery systems** for several **volume markets**

ACCURATE will form the **centre of the Voltaforce-segment** and hereby focus on **high-margin mass market applications** such as pedelecs, E-scooters, gardening, medical technology etc.

**Wide performance spectrum** of battery packs to complex Lithium-Ion Systems incl. self-developed BMS – ACCURATE is a **pivotal puzzle piece** in terms of providing a **full-service offer for electrification** of new target markets

\* Only available as an integrated system component/ not to be sold separately.

# Withdrawal of Navitas acquisition



*\* Committee of the US government to regulate foreign investments into the United States.*

# New Growth Strategy for North America

Withdrawal based on entrepreneurial responsibility

Focus now on management of growth (order backlog about € 1bn)



## New battery system for Navitas-like applications available in few months

- Immediate **access to brand new prismatic LFP cells** (Lithium Iron Phosphate) thanks to our close relationships to cell manufacturers
- Use of these cells for the **development of a system tailormade for the North American market.**



## Use of available production capacity and build-up of an own US sales network

- Using Voltabox’s available production capacity for prismatic cells (yet: NMC) > low investment
- **Formation of a US nationwide sales network** for the intralogistics market within the next 6 months

# 2018/2019 – Expectations unchanged

2018e

Due to postponed CFIUS approval, internal expectations of additional Navitas related sales were reduced step by step over time.

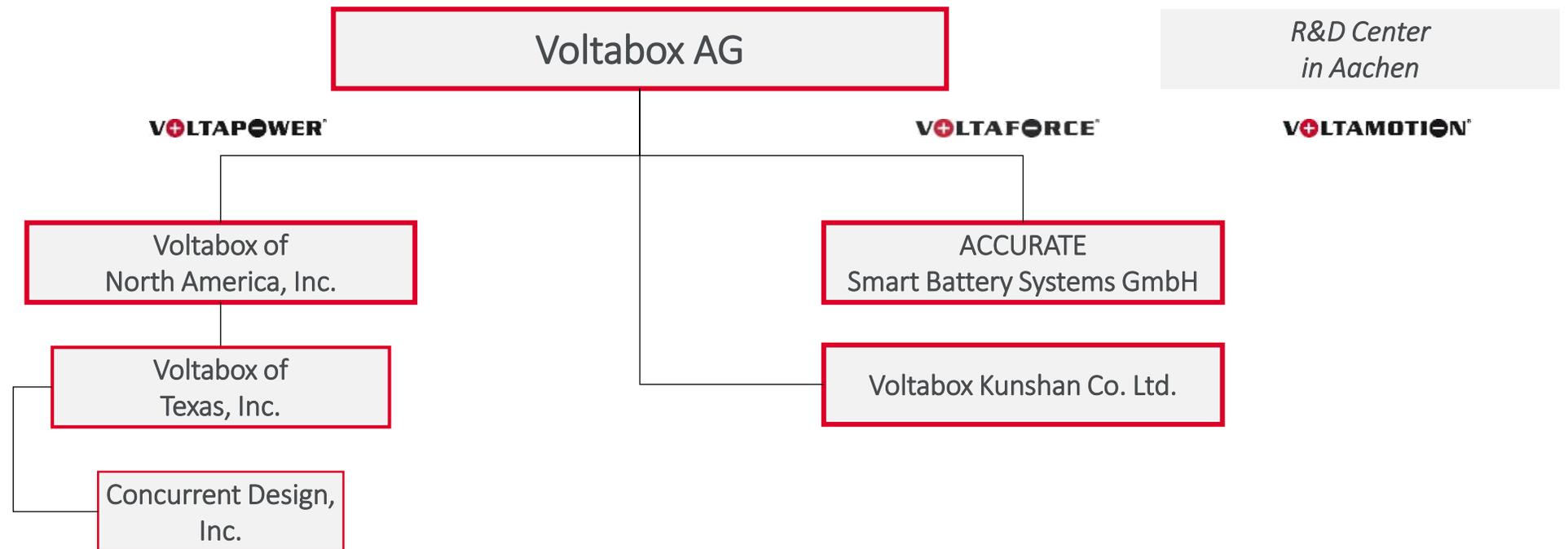
Voltabox business running better than expected.

2019e

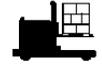
Sales in US intralogistics market expected for H2/2019

Upcoming (additional) big orders in Europe expected for 2019

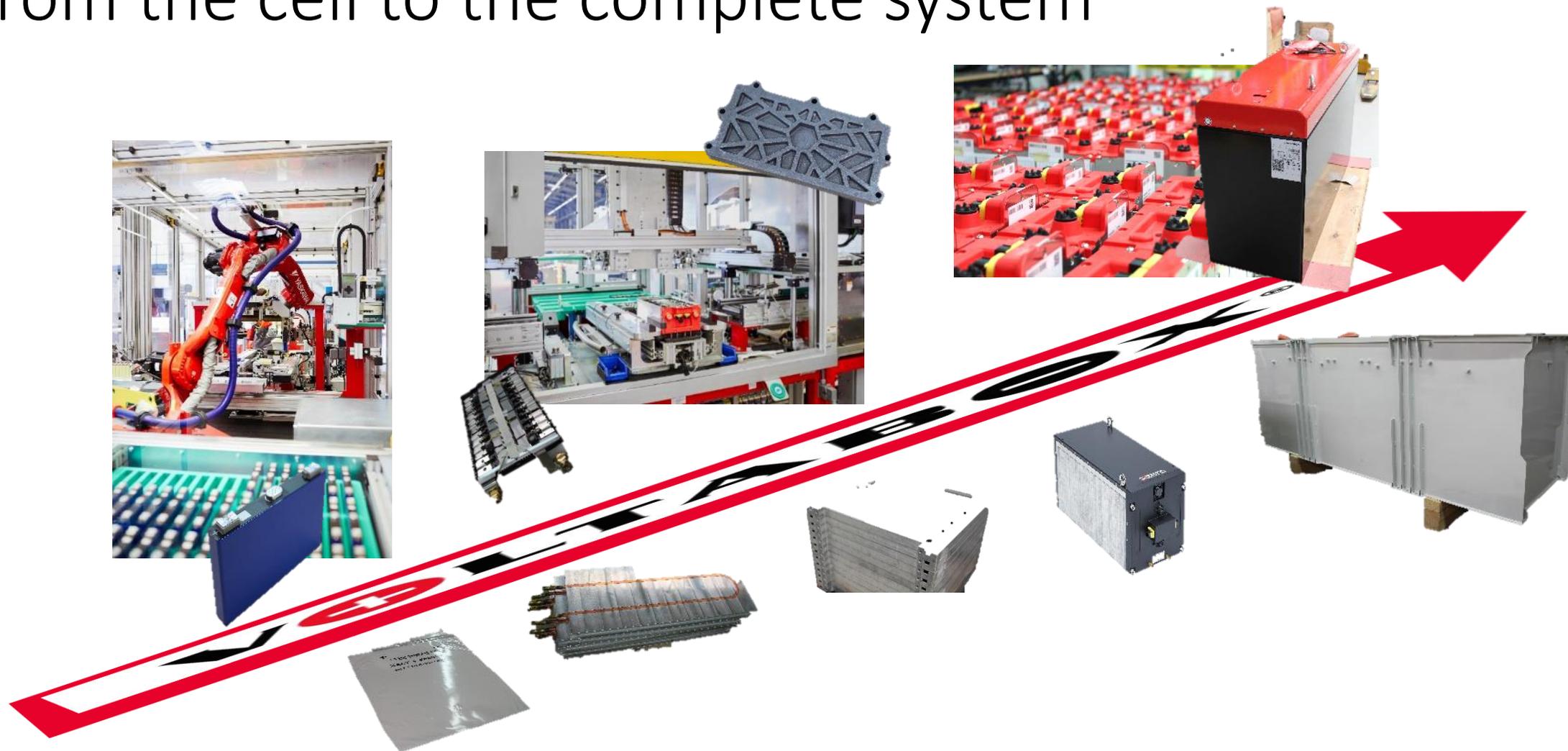
# Evolving Group Structure for an International Footprint



## Electrification Specialist in High-Performing Applications

<p>Public transport buses Q2/2014</p> 			<p>Agriculture vehicles Q4/2017</p> 		
<p>Forklifts Q1/2015</p> 			<p>Construction vehicles Q2/2018</p> 		
<p>AGVs Q4/2016</p> 			<p>Motorcycles Q3/2017</p> 		
<p>Mining vehicles Q2/2016</p> 			<p>Mass Markets Q4/2018</p> 		

# From the cell to the complete system

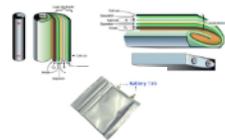


# E-Mobility Pure Play

## Structural representation of a battery system



- Separator
- Anode
- Cathode
- Electrolyte
- Cell Housing
- Insulation Strips



- Cylindrical cells
  - Prismatical cells
  - Pouch cells
- in different Li-Ion chemistries
- LFP
  - NMC
  - LTO
  - (NCA)



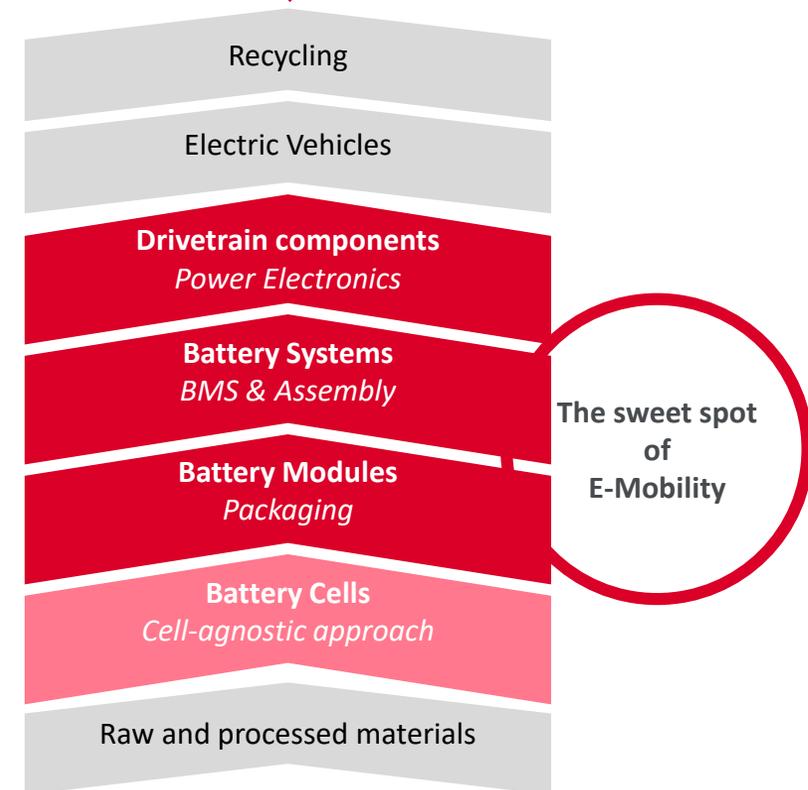
- Module cases with integrated
- Cooling Devices
- BMS Slave Circuit Board
- Sensors
- Wiring Loom
- Lids
- Sealings
- Rupture Discs

in various low and high voltage versions



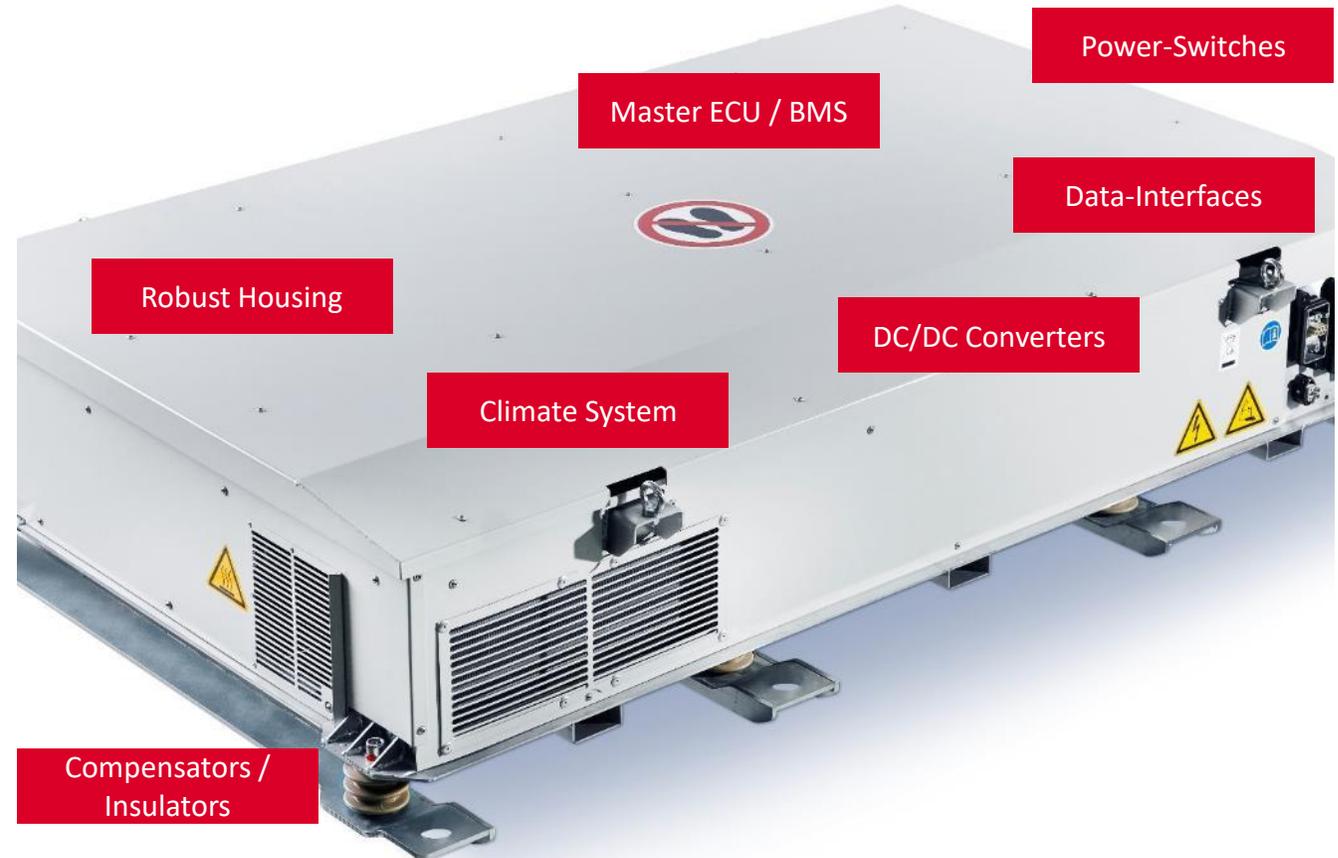
- Robust housing with integrated fixing points
- Master ECU
- Data interfaces
- Power switchers
- DC/DC converters
- Compensators
- Fuses / Resistors
- Climate systems
- (Chargers, cable rewinds)

## E-Mobility Value Chain



# Li-Ion Battery System Supplier for Industrial Applications

- **Many years of experience in development and production of electronic components**  
(via parent company paragon GmbH & Co. KGaA)
  - **Exceptional integration power**  
(*experience in automotive interfaces*)
  - **Mindset focus on applications**  
(*authentic added value solutions*)
  - **Superior realization processes**  
(*short time-to-market with modular kit*)



# Modular Development & Production Approach\*



NMC 24V standard



NMC 24V air-cooled



NMC 24V water-cooled



NMC 48V standard



NMC 48V air-cooled



NMC 48V water-cooled



NMC 103V water-cooled



NMC 36V standard



NMC 40V standard



NMC 40V water-cooled



LTO 48V standard



LTO 83V standard



LTO 83V long



LFP 24V standard



NMC 48V Pouch



2x8 LFP round cell module



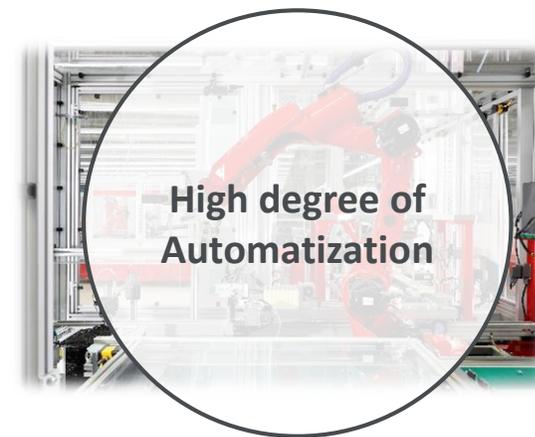
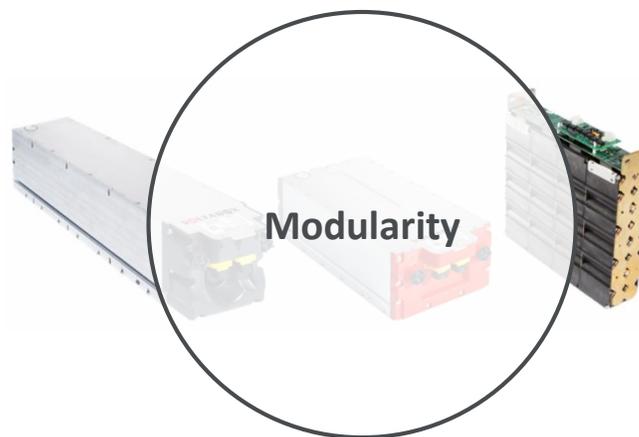
3x8 LFP round cell module



4x9 LFP round cell module

\* Excerpt from product portfolio.

# USPs of Voltabox



# Financial Highlights 9M 2018

**↗ € 33.5 million** <sup>↗ 105 %</sup>

Revenues (previous year: € 16.3 m)

**↗ 193 employees\*** <sup>↗ 95 %</sup>

(December 31, 2017: 99)

**Continuous Growth while  
Demonstrating Economies-of-Scale-Effects**

**↗ € 4.9 million**

EBITDA (previous year: € -0.3 m)

**↗ € 2.3 million**

EBIT (previous year: € -1.8 m)

*\* Excluding 27 temporary employees, as of September 30, 2018..*

# Cash Flow Statement

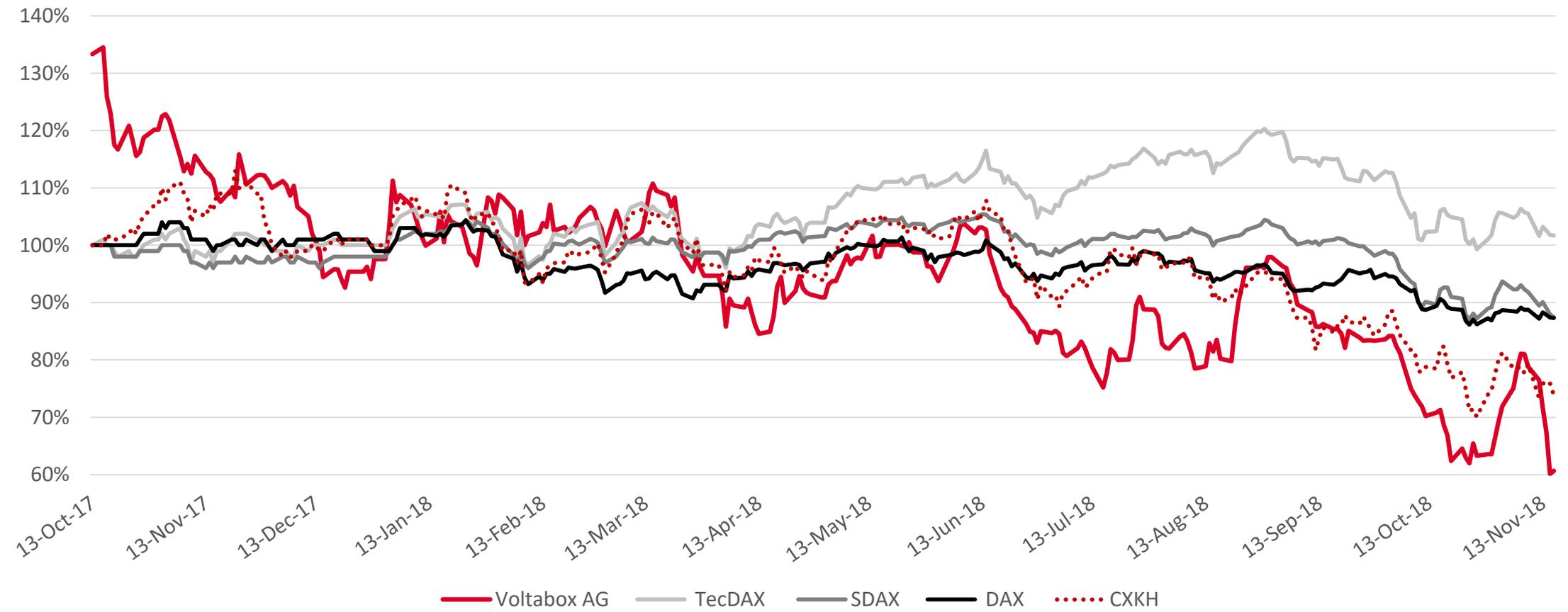
- Significant increase in trade receivables owing to very good business development in the Voltapower segment and sales financing support for main Voltabox partner (limited to 2018)
- Significant increase in inventories due to expansion of business activities
- Increase in trade payables and other liabilities
- Increased amortization of noncurrent fixed assets

Free  
Cashflow:  
€ -46.4m  
(Previous year:  
€ -9.6m)



\* 9M 2018

# Performance of Voltabox Share (VBX)



# Cash Flow Analysis I

Group Key Figures	9m results 2018*
Operating Cash Flow	€ -30.1m
Free Cash Flow	€ -46.4m
<i>Net Working Capital</i>	€ -34.2m
<i>thereof Receivables</i>	€ -23.7m ( <i>huge sales increase in 2018, Triathlon 2018-terms**</i> )
<i>Inventories (see following page)</i>	€ -13.5m
<i>Liabilities</i>	€ 3.0m
<b>+ CAPEX</b>	€ -7.6m
<b>+ M&amp;A</b>	€ -8.7m

\* From 01.01.2018 to 30.09.2018.  
 \*\* One-time effect.

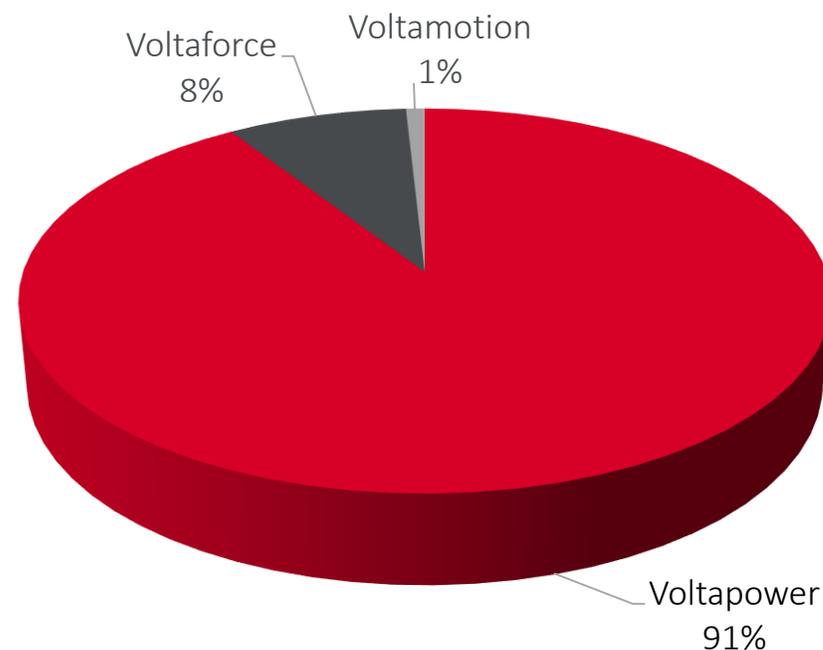
# Cash Flow Analysis II

Thereof	Inventories increased from 01.01.2018 to 30.09.2018	€ 13.460m
Voltabox	Increased inventories (mainly cells € 5.0m, orders from Komatsu/Kiepe € 0.894m)  Building inventory of finished goods for intralogistics (€ 6.4m)	€ 12.521m
Accurate	First consolidation after acquisition, small sales contribution	€ 0.939m
	<b>One-time effect</b>	<b>€ 13.460m</b>

# 60-Months Order Backlog (Q2 2018 – Q2 2023)

- Total 60-months order backlog amounts to more than € 1bn\*.
- Thereof approx. 74% signed orders and framework agreements (weighted with 100%)
  - Estimated order backlog is weighted according to the expected lifetime and the probability of occurrence
  - Serves as base for planning
  - Evaluation system in place since inception in 2011

60-months order backlog with 100% weighting as of H1/2018



\* As of Jun. 30, 2018

# Forecast 2018\*

**↗ € 65-70 m**

Revenues 2018 (e)

**↗ ca. 7 %**

EBIT Margin 2018 (e)\*

**\*Considering € 2m add. expenses from rearrangement of intralogistics partner agreement**

*\* Updated in H1/2018 interim report.*

# Summary

## Economies of scale driving profitability

Operating leverage

- Intralogistic remains central growth driver – Positive development of direct sales in upcoming year expected

## Robust order backlog

About € 1bn. (60 months)

- Thereof € 740m weighted with 100% (signed orders and framework agreements)

## Entry into North American Intralogistics market

Fast rejoinder to withdrawal of acquisition

- Initial steps in building up a sales network successfully done

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