



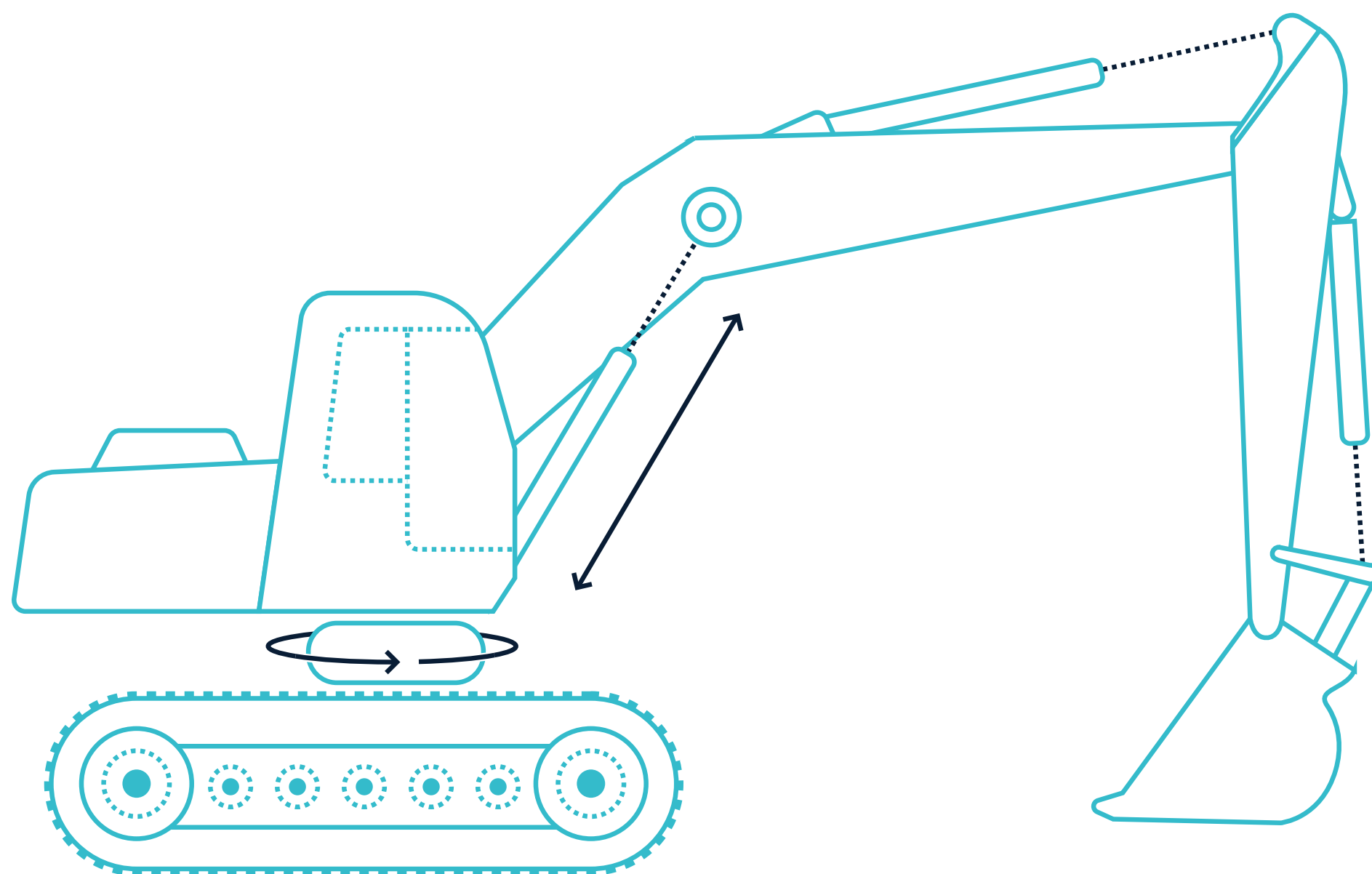
# Use Case

## Excavator - electrified

Pure-electric  
and hybrid

# / Excavator - electrified

Modification of only the high-consumption drives



Both for purely electric excavators and for hybridized versions:

## **Only selected drives were electrified**

Advantages:

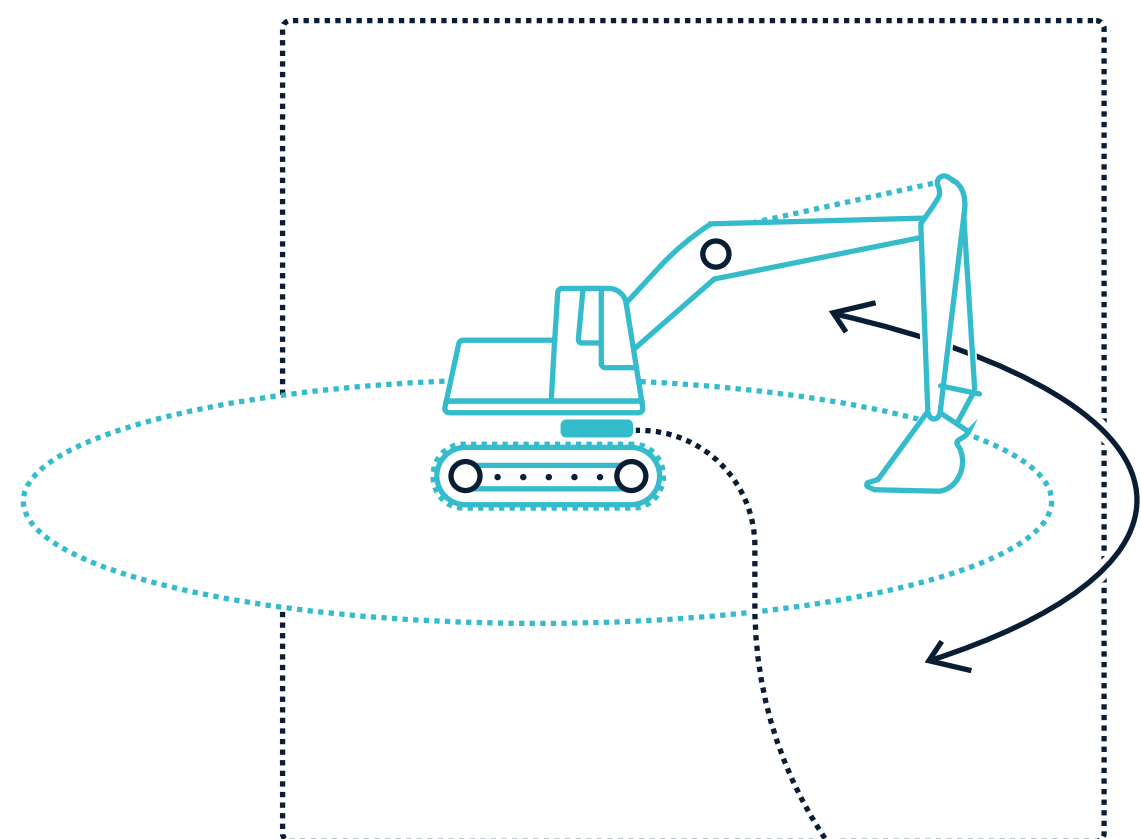
- Up to 60% fuel or electricity savings
- Functional improvement and/or simpler operation
- Reduced maintenance costs

Greatest savings potential with swivel and lifting movement.

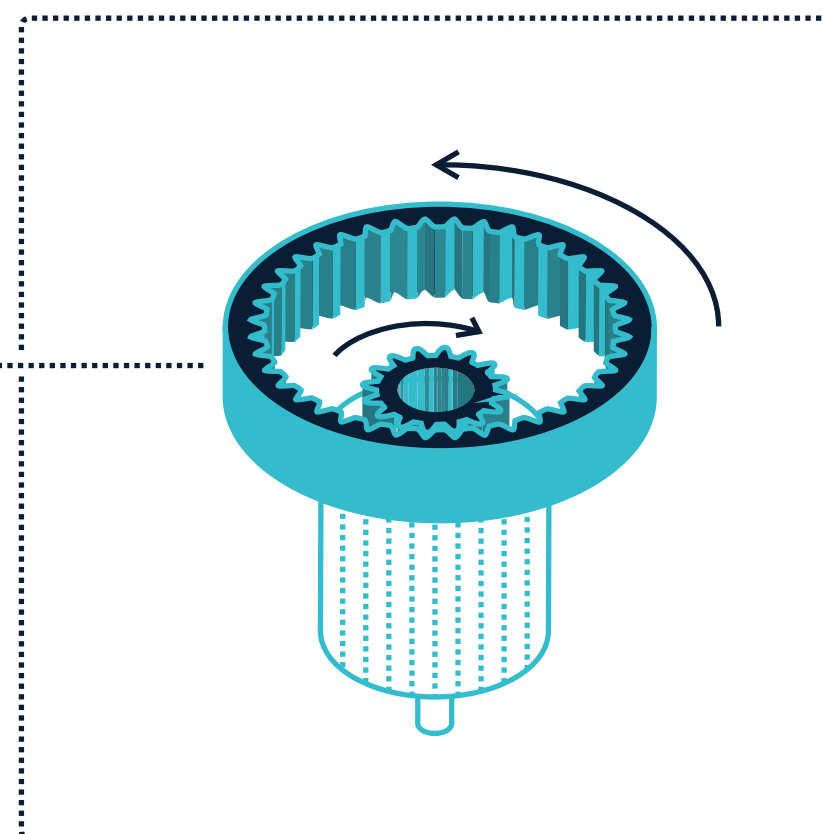
The other hydraulic movements and also the chain drive remain supplied with a power-reduced central hydraulic system.

# / Excavator - electrified

## Electromechanical swivel movement



SWING OPERATION



### Electromechanical swivel movement

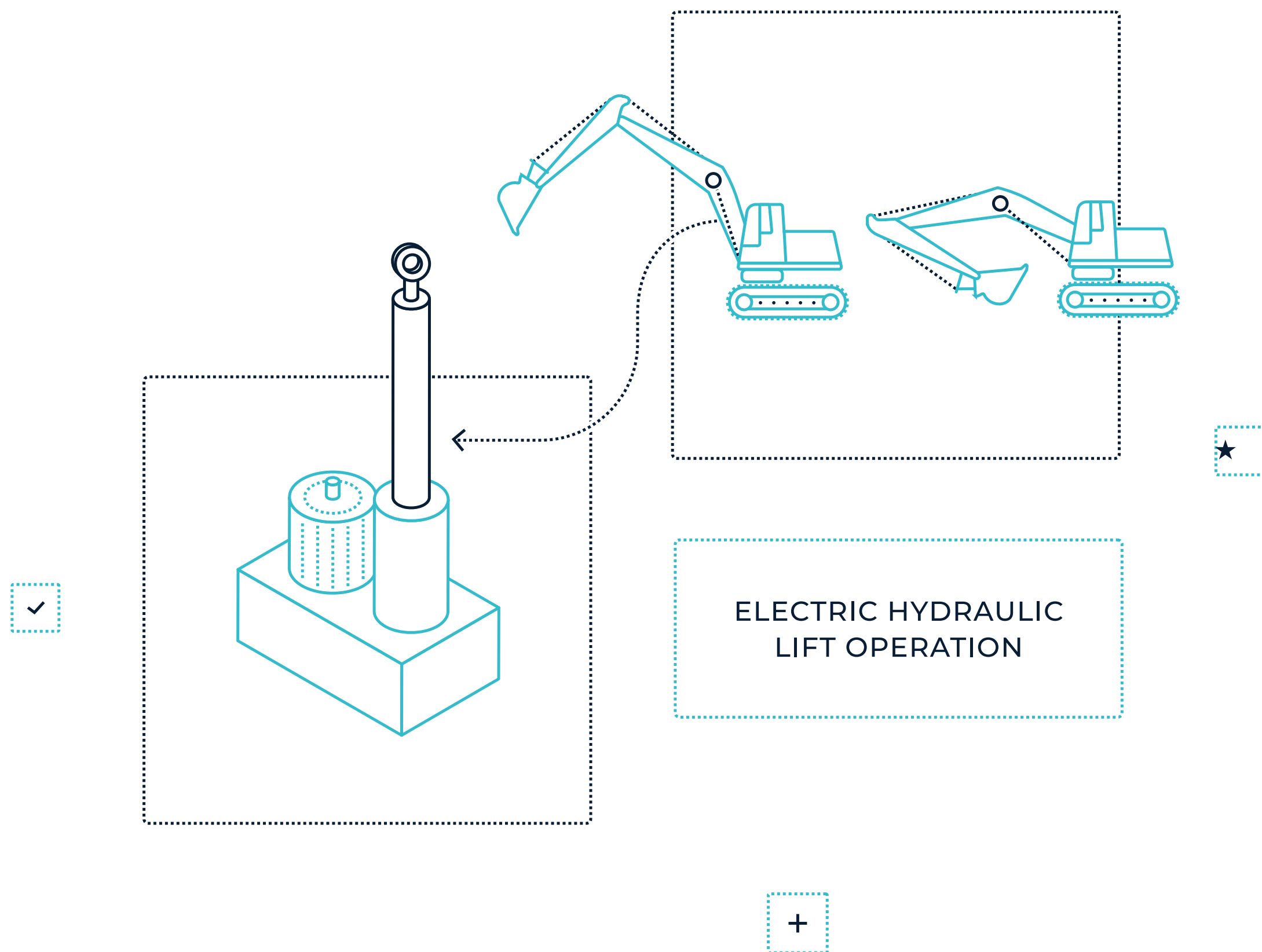
Electric motor with gearbox, controlled by a VECTOPOWER inverter.

Main advantages:

- High energy savings thanks to efficient recuperation during braking
- Reduction of gear wear through "smart" acceleration curves
- More cycles per hour due to higher acceleration with limited jerk.

# / Excavator - electrified

## Direct electro-hydraulic lifting movement



### Direct electrohydraulics for lifting movement

One hydraulic pump supplies exactly one cylinder. The drive is electrically controlled via VECTOPOWER inverters. There are no control valves with throttle losses.

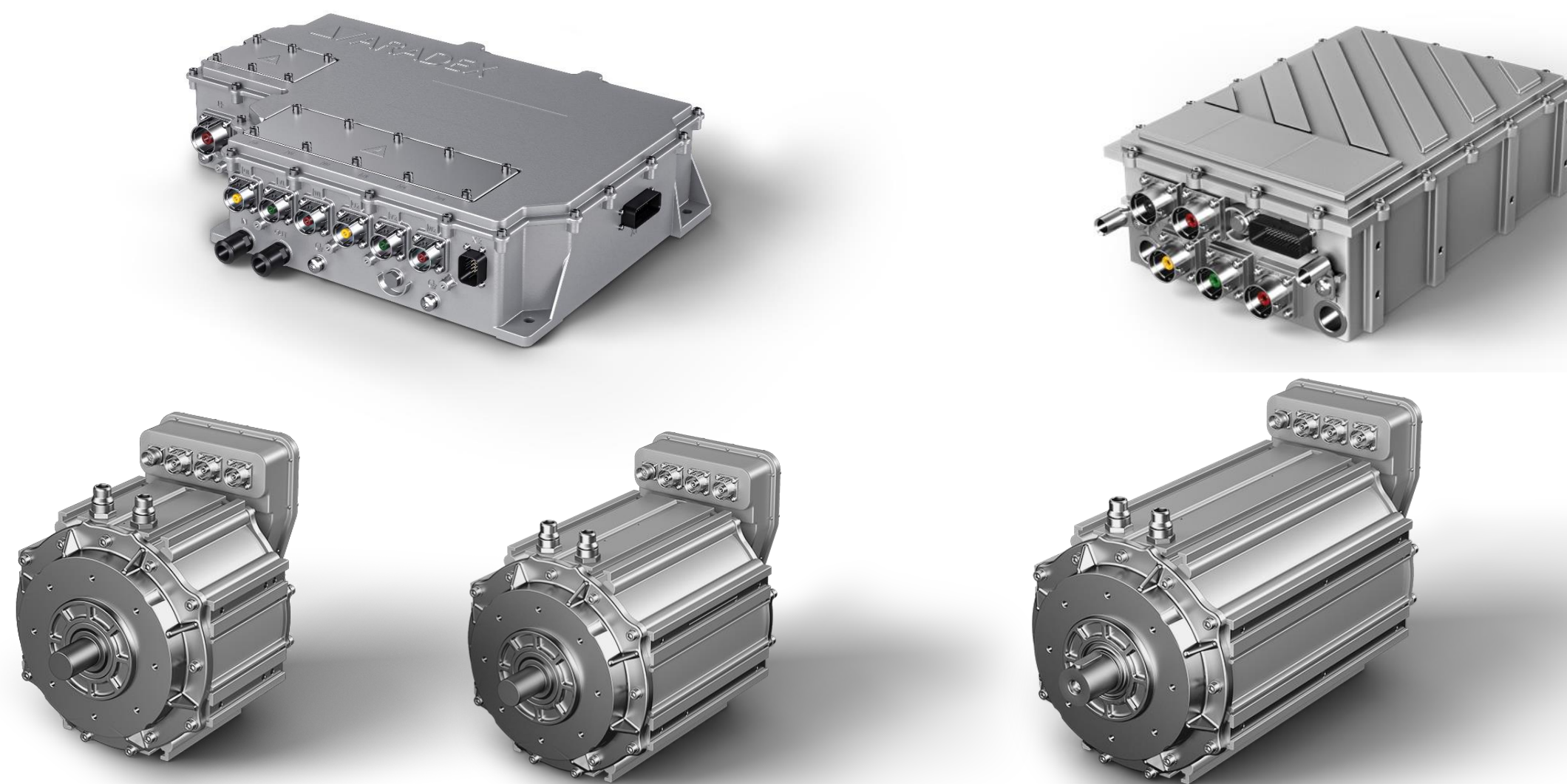
Main advantages:

- High energy savings through reduction of throttle losses and recuperation
- With ARADEx VirtualSensor technology for accurate estimation of the lifting load and rapid detection of undesirable operating conditions.

# / ARADEX contribution

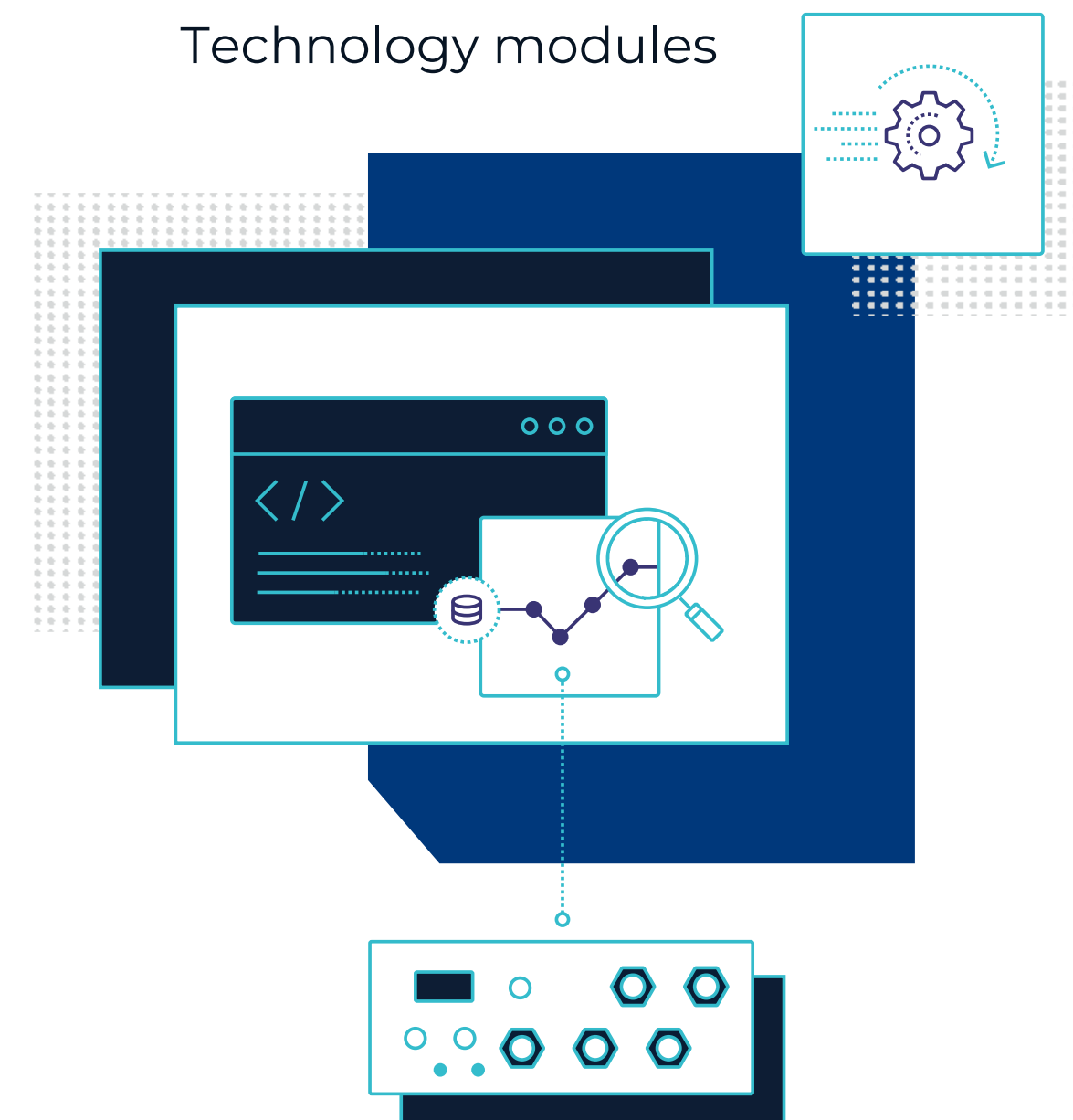
Hardware, software, tools

## HARDWARE



- Inverter
- E-motors
- Accessories

## Technology modules






- Smart DC
- VirtualSensor
- MultiDeviceAnalyser
- .....



Challenge us with your application!

**Proven added-value  
mobile drive technology**



-  Ziegelwaldstr. 3, D-73547 Lorch, Germany
-  [Sales@aradex.com](mailto:Sales@aradex.com) | [Vertrieb@aradex.com](mailto:Vertrieb@aradex.com)
-  +49 / (0)7172 / 9181-0