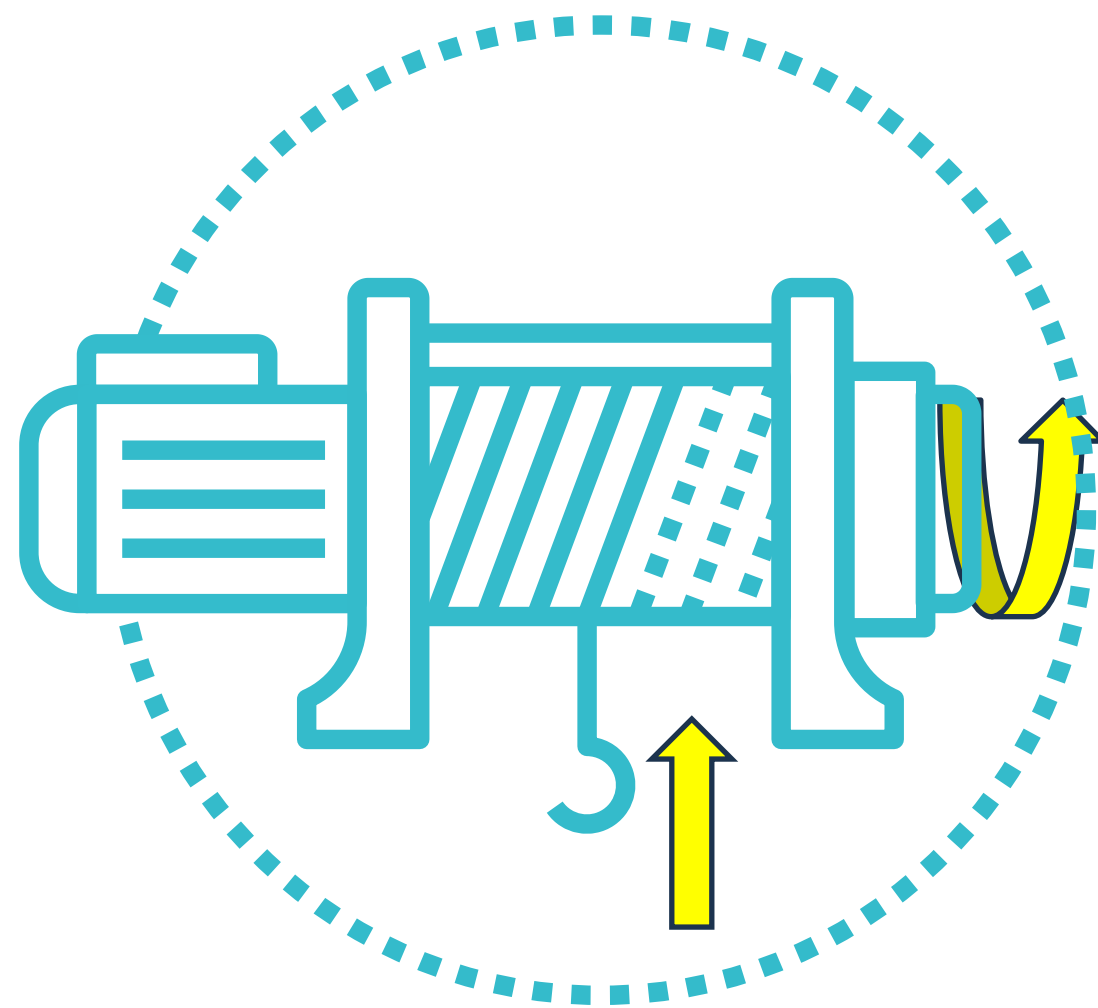


CASE STUDY

# Smart winch: Electrified winch with added value

## / "SmartWinch": Winch process optimized

New USPs with VirtualSensor



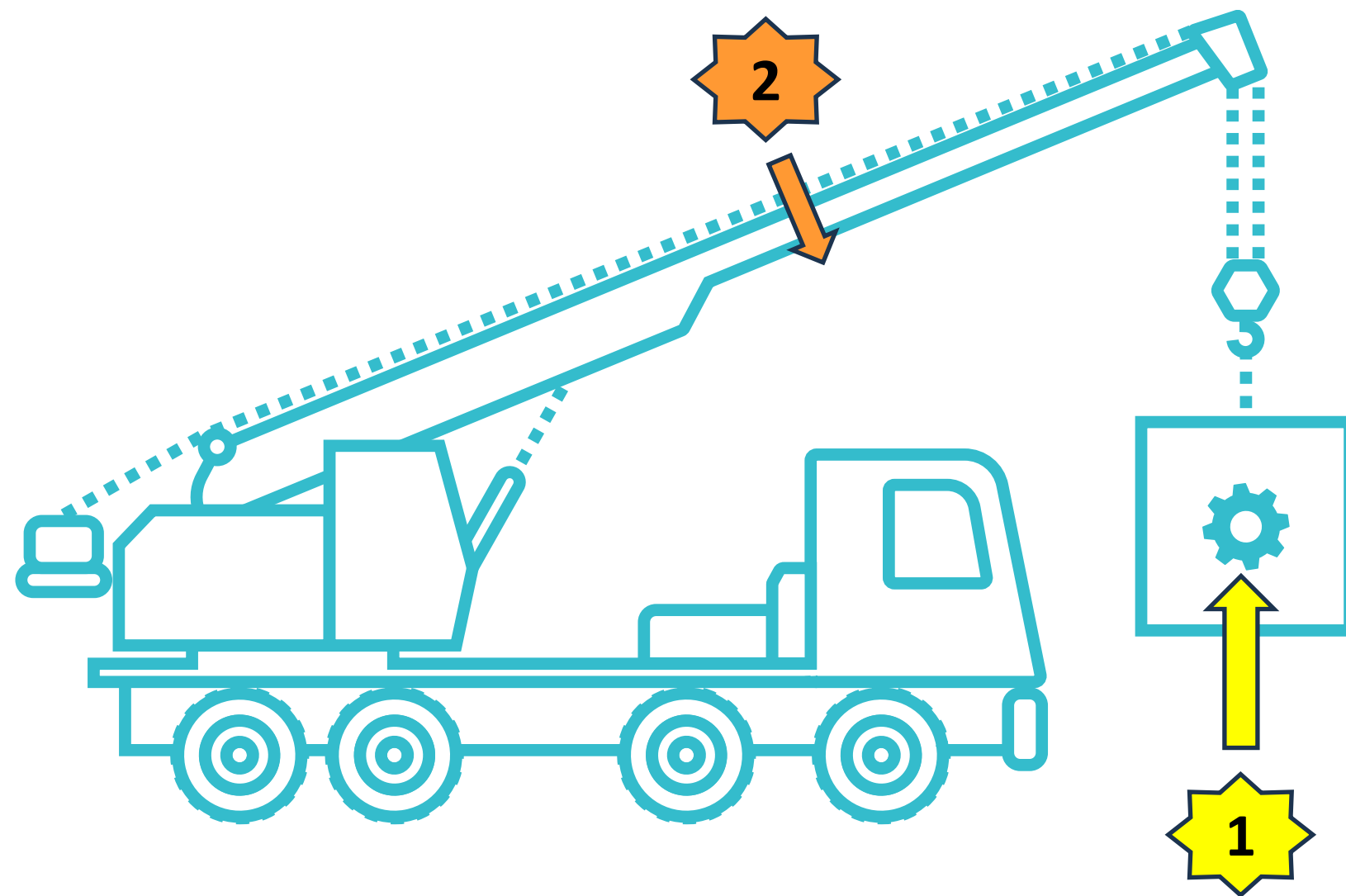
### Electrification creates additional benefits

- Relevant energy savings through recuperation when lowering the load.
- Monitoring the torque of the winch in high resolution and real time
- Improved functional safety due to the possibility of detecting rope rollover during winding

**We consider the application of our [VirtualSensor](#) technology as a key to drive functions with considerable additional benefits.**

## / "SmartWinch": Winch process optimized

New USPs with VirtualSensor



### Exemple of use of **VirtualSensor** technology:

Lifting a load (1) leads to an unintentional pitching movement (2) of the boom and/or the entire superstructure.

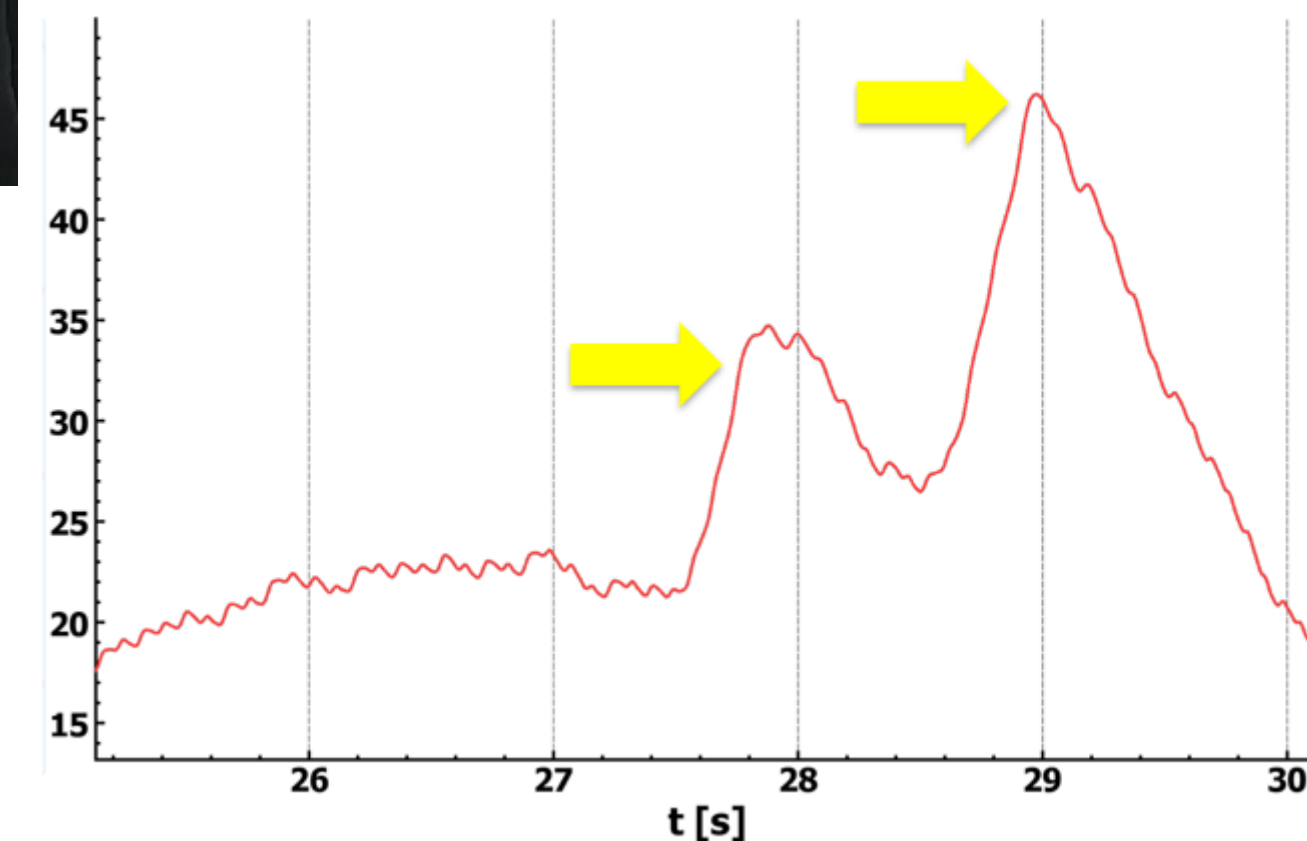
An electrified winch drive with VECTOPOWER inverters and VirtualSensor technology enables detection and active dampening of this unwanted movement:

- Safe lifting process
- Simplified handling
- Slack rope detection

Sophisticated diagnostic tools and oscilloscope functions support you in the actual implementation

## / VirtualSensor: our experience advantage

Application: Force measurement on electrified vehicle



### Application: E-transporter

We have been successfully using VirtualSensor technology in our customers' production machines for years.

The experiment now shows a real measurement on a mobile application:

- The van moves at a regulated speed of 2 km/h
- We push against the movement with 2 times with little but different force
- The VECTOWER inverter provides us with the effect of these minimal forces in impressive resolution

**Our sales team has more information and impressive videos on the potential of VirtualSensor ready for you!**

## / VirtualSensor for mobile machinery



### "VirtualSensor" ready for your applications

... also especially for mobile applications and mobile machines in "heavy" environments.

VECTOPOWER inverters offer you:

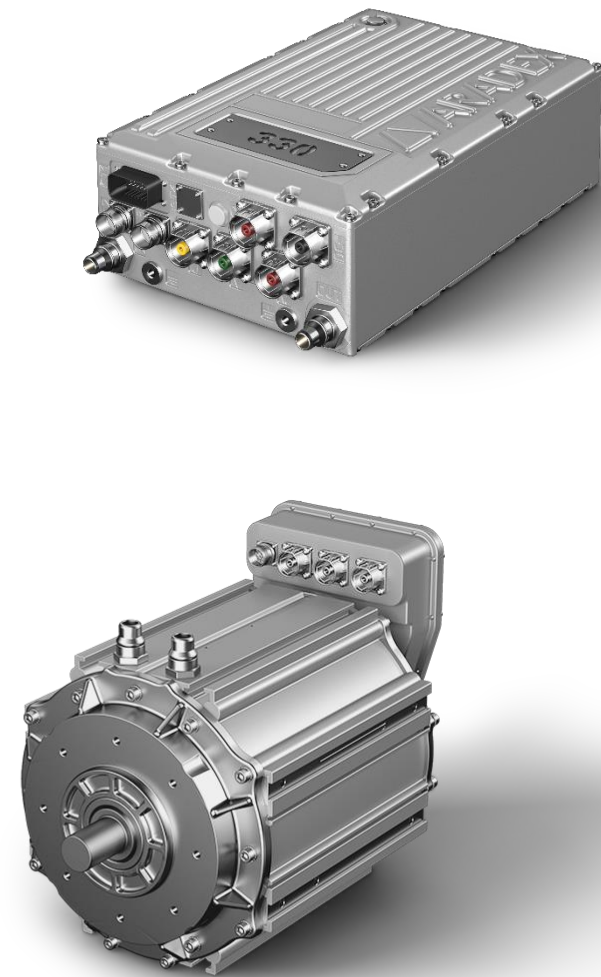
- Determination of the torque of electric motors in very high resolution and in real time, without using potentially interference-prone sensors.
- Integrated PLC functionality for processing these measured variables in real time.
- Synergy of inverter and machine controller: by combining the machine function in your controller with the extremely fast signal processing in the inverter.
- Integrated oscilloscope functions and log files for optimization, documentation etc.....



## / What can ARADDEX offer for your project?

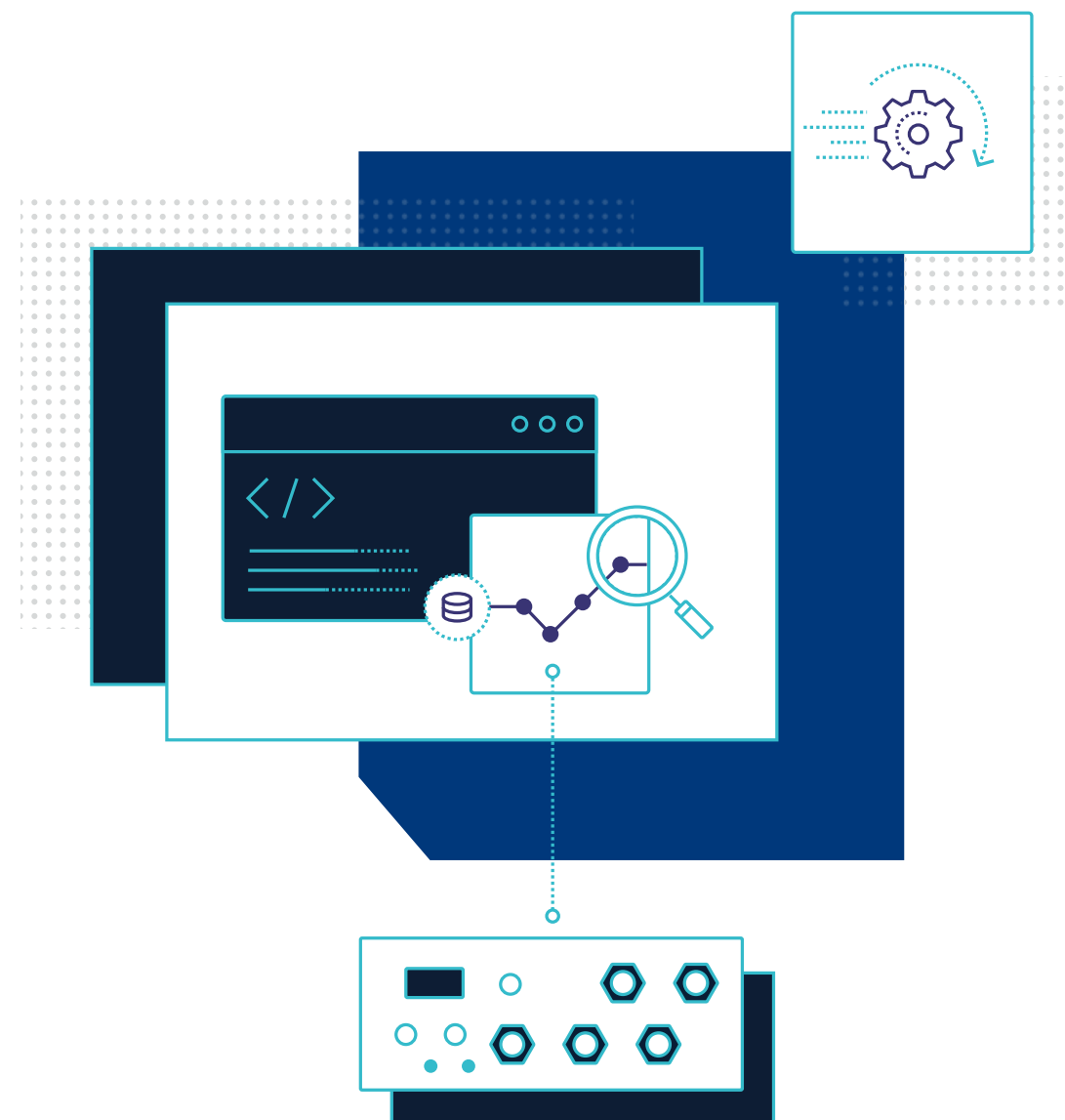
Hardware, software, tools

### HARDWARE



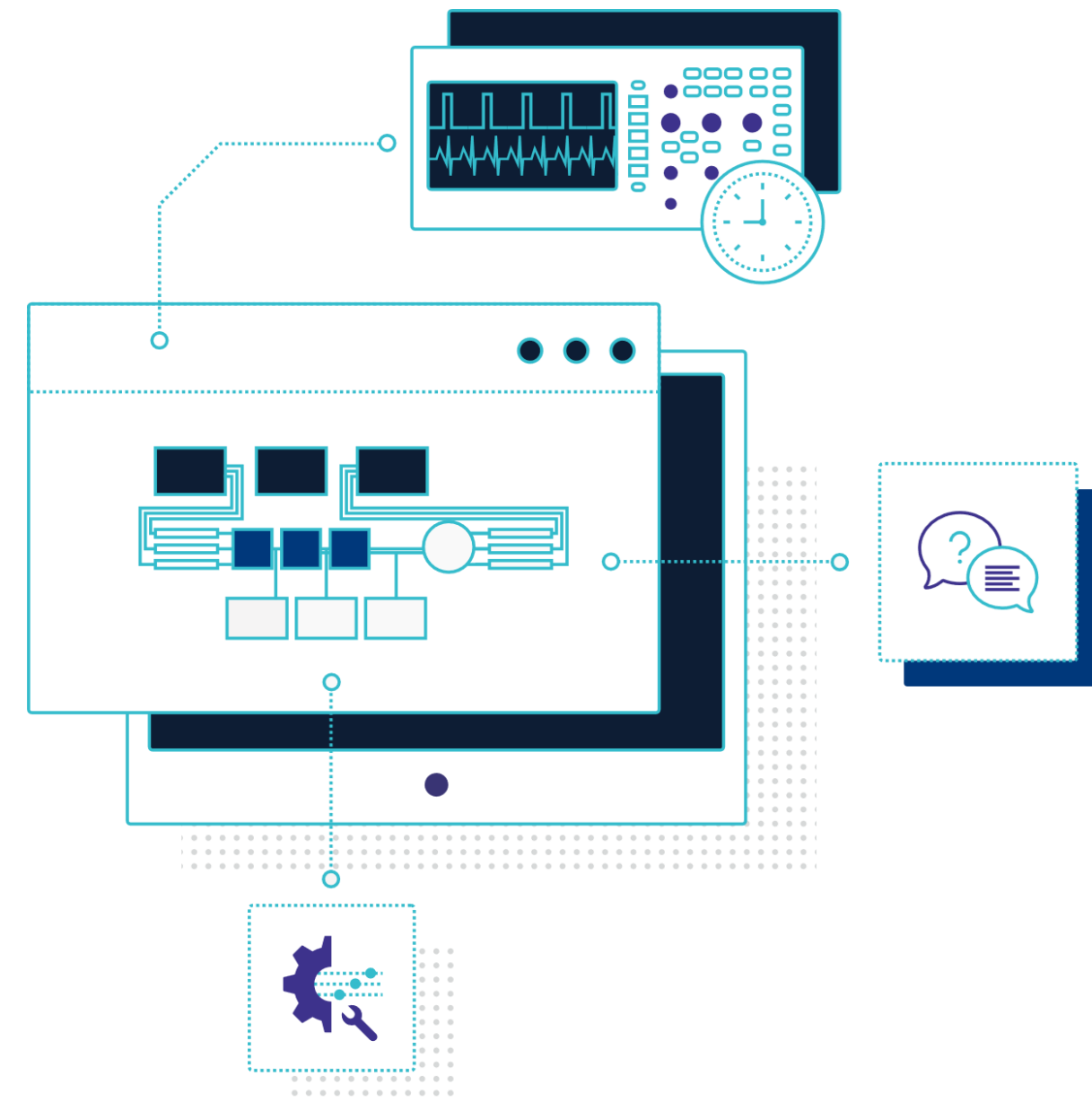
- Inverter
- E-motors
- Accessories

### INTEGRATED SPS FUNCTION



- Sophisticated real-time PLC
- For function and diagnostics
- Your know-how, your USPs

### TOOLS



- Programming
- Parameterization
- Oscilloscope function








Challenge us with your application!

**Proven added-value  
mobile drive technology**



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