Port & Terminal Technology

2016 – Charleston, USA

Full E-RTG

Next step of RTG electrification

CONDUCTIX wampfler

DELACHAUX GROUP

Existing technologies

Todays E-RTG Solutions

Motorized Cable Reel Solution	Conductor Rail Solution		
	0851 Plug-In	0851 Drive-In	0852 Drive-In **L**
			

The missing link in electrification?

- Travel in-between blocks
- Travel to maintenance area
- Crossing drive ways

- No grid connection
- Need for external power
- Need for Generator!

How to get power on the RTG….

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…. but without using a generator to produce power?

Just add the magic box!

What is inside the magic box?

- Newest battery technology
- State of the art BMS
- Easy control and monitoring interface

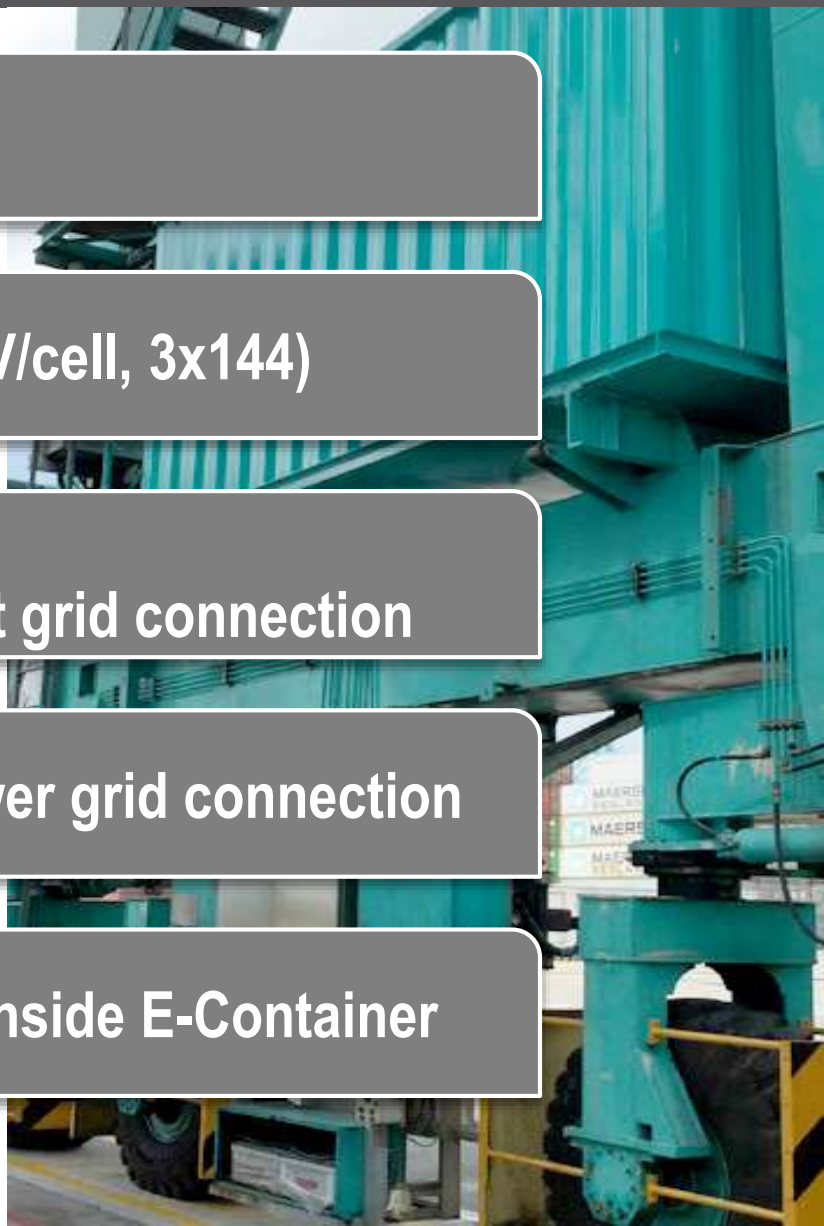
Full E-RTG - benefits

- Maintanence free on-board Power supply
- No need for combustion engine
- Zero emmission through full electrification

Now E-RTG becomes 100% electric!

Full E-RTG®
Technical data

Voltage	533 VDC nominal
Battery capacity	60 Ah (432 cells, 3,7V/cell, 3x144)
Capacity RTG	Block changes 1500m travel without grid connection
Charging	max 2C through power grid connection
Battery pack	packed in modules inside E-Container



We are adding further features and benefits

- No onboard syncronisation required
- Energy recovery when lowering containers
- Re-use of recovered energy for hoisting
- Further Engery savings of up to 75%
- Reduction of grid infrastructure!

How does this work?

Load
Power Profile

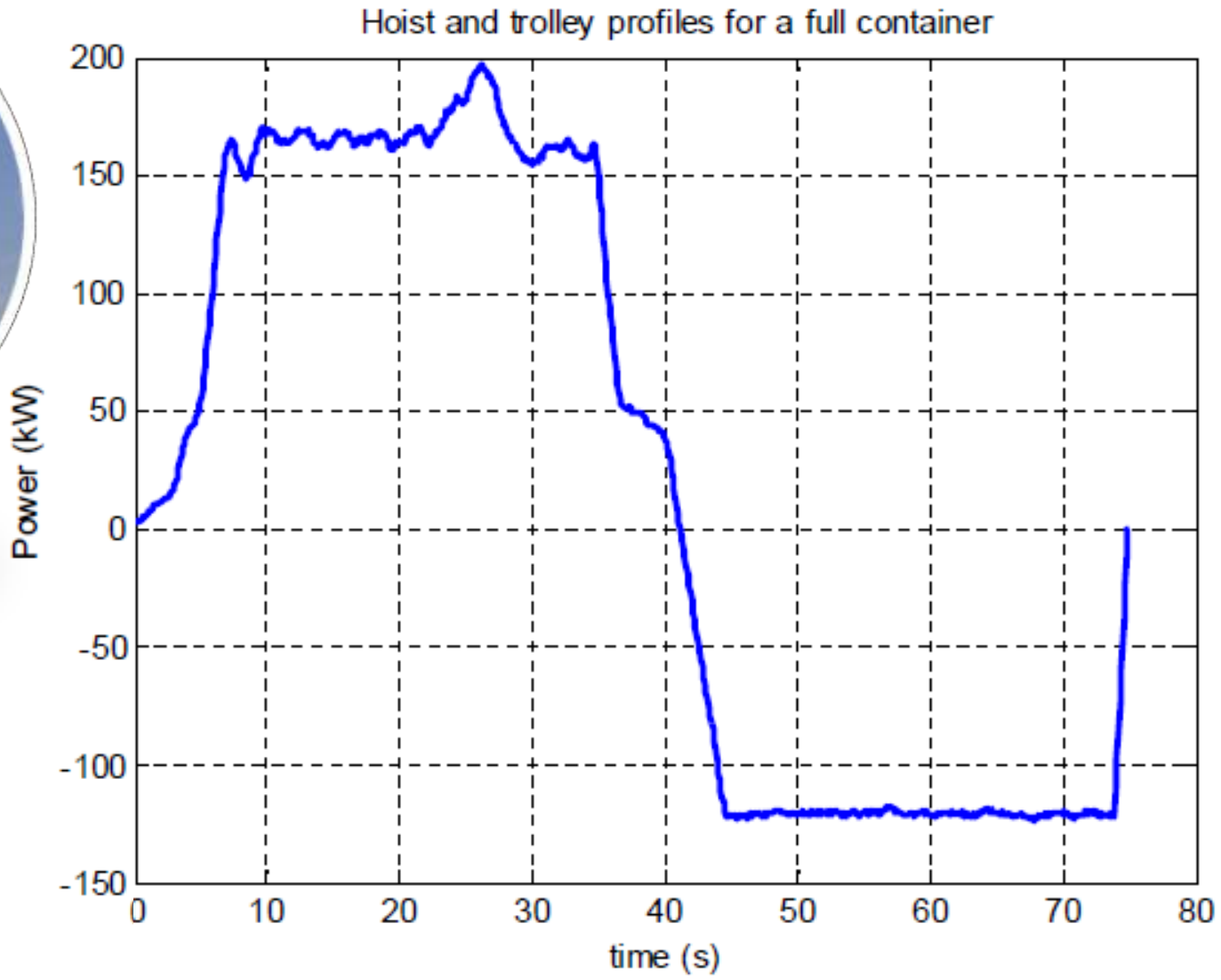
DC/AC

Electrical Network

DC/DC

Battery

Power profile of RTG – Hoist and travel

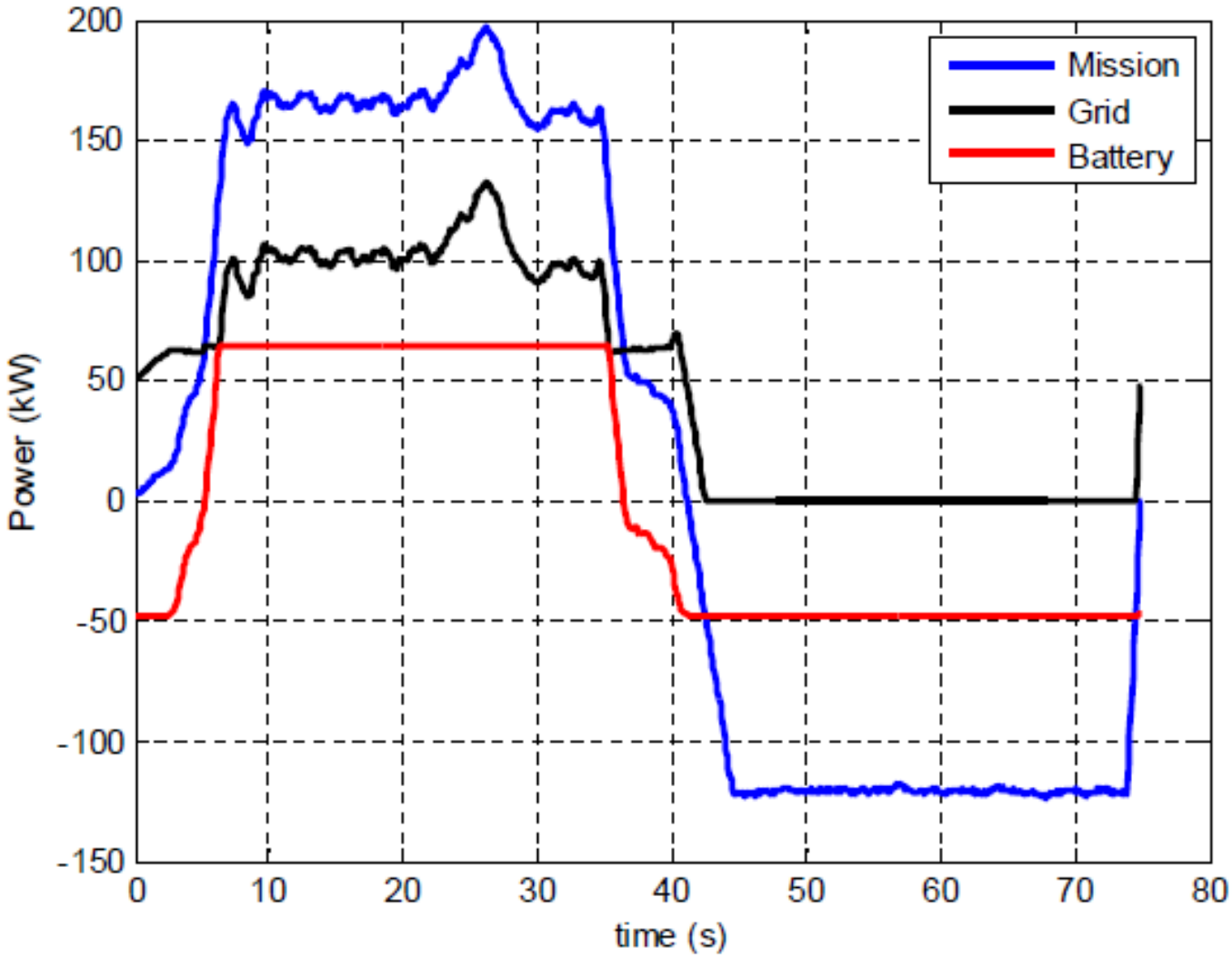


Hybrid power from battery and grid – case 1

Battery power:
Max 60kW

Difference needs to come from grid power

Grid 125kW
Only 60% !

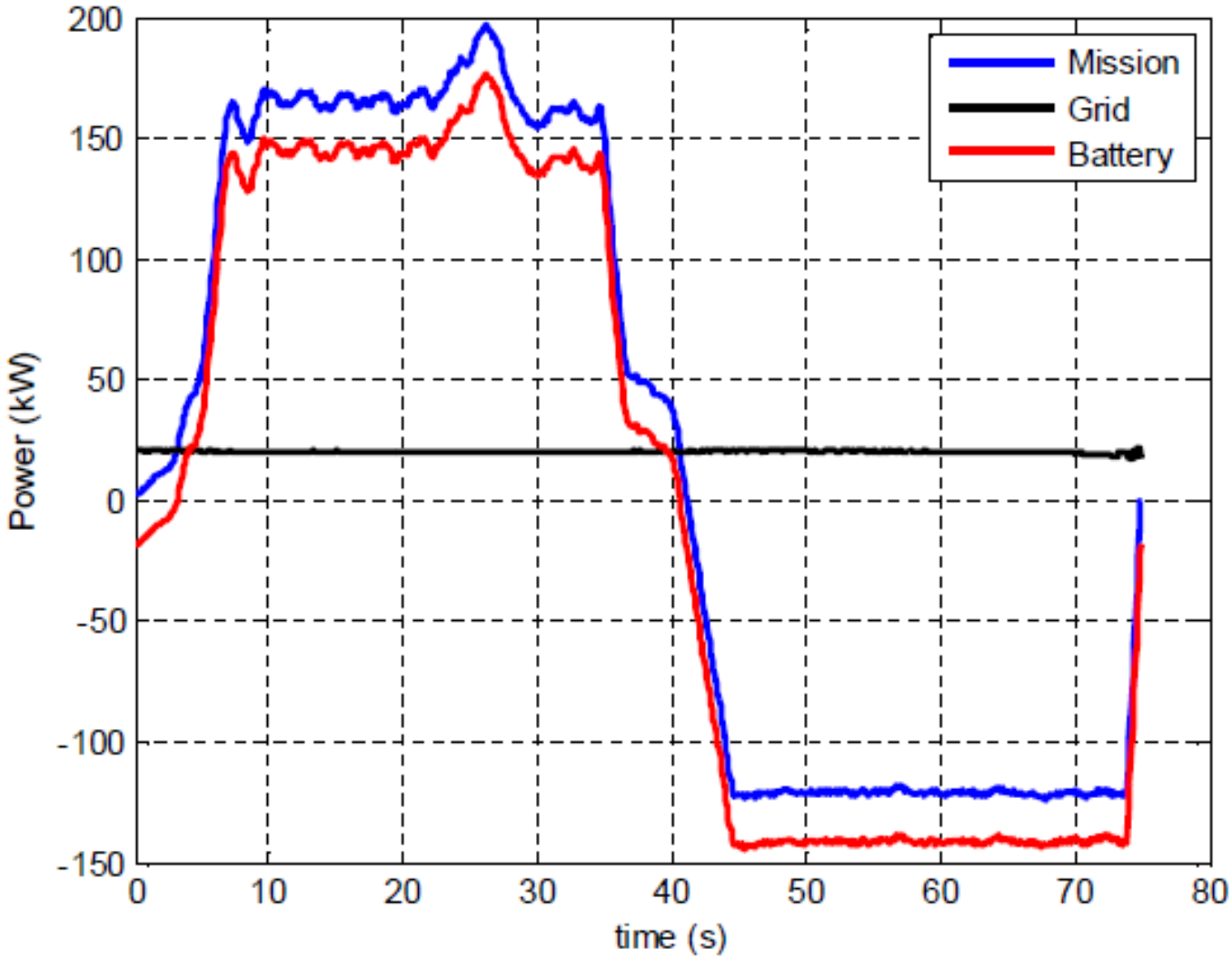


Hybrid power from battery and grid – case 2

Battery power:
Max 160kW

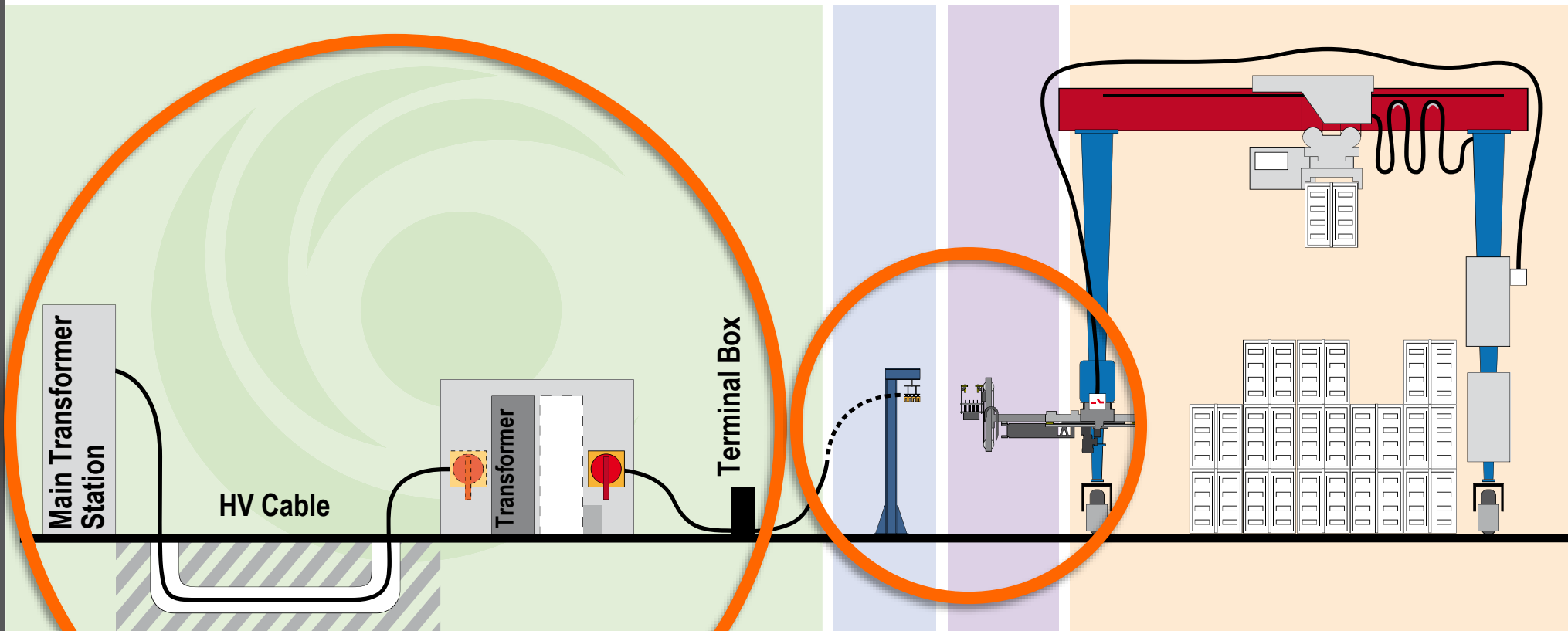
Difference needs to come from grid power

Grid 20kW
Only 10% !



Significant downsizing of infrastructure

- **Smaller size conductor rails or reels/cables**
- **Smaller transformers and cables**
- **Smaller substations with significantly lower consumption – up to 70%!**



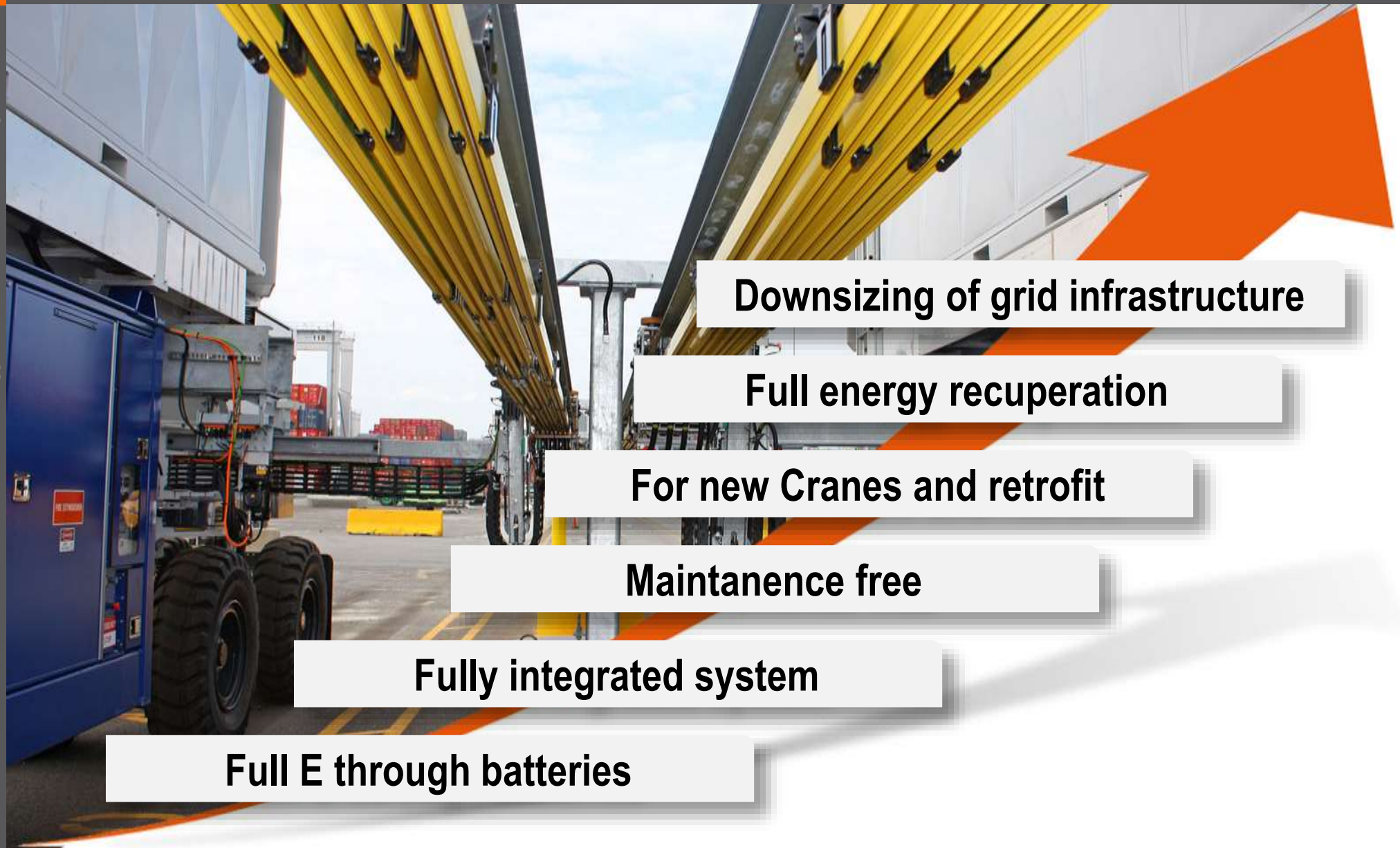
Full E-RTG – a complete solution

Electrical system control & integration
Mechnical design & integration

Battery Charging/Temperature Management
DC/DC converter

Battery pack
- Capacity calculation
- Battery selection
- Pack assembly design

Conclusion



- Downsizing of grid infrastructure
- Full energy recuperation
- For new Cranes and retrofit
- Maintanence free
- Fully integrated system
- Full E through batteries

Full E-RTG®

For more information

please contact us on

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