INTERNATIONAL MEDIA LAUNCH BMW i8 ROADSTER

ErG Private Banking BMW i AND TEAM MALIZIA COPERATON







YACHT CLUB DE MONACO MAIN RACES 2018 - 2020

Bermuda

Guadeloupe

4

(2)

2

New York

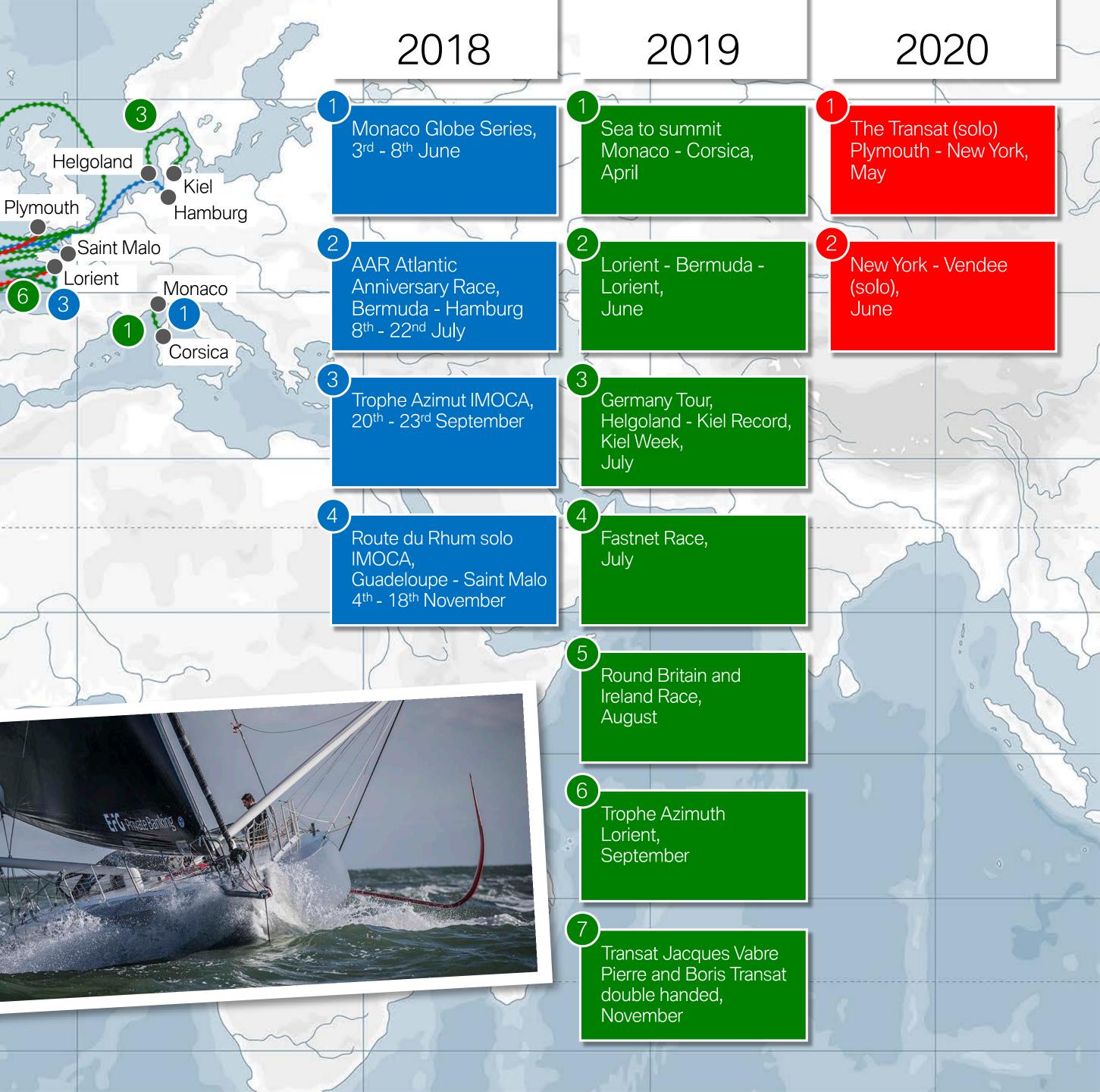
....

 $\overline{7}$

5

4

°.0 0



MALIZIA IMOCA OPEN 60

Sail area upwind: between 240 and 330 m²

Sail area downwind: between 460 and 620 m²

Combustion engine system: 377 kg

Length: 18.28 m (60 feet) Beam: approx. 5.50 m Draught: 4.50 m

Type of keel: Canting

First IMOCA generation with hydro foils

Mast height: 29.00 m

MON 10

ErG Private Banking

Ballast tanks: 2.5 tons of water on each side



BMW i8 ROADSTER 374 hp / 275 kW 53 km ≤ 2.0 ltr + 14.5 kWh 4.6 sec System output Consumption / 100 km* 0 - 100 km/h Electric range*

Sports car performance with efficiency of a compact car

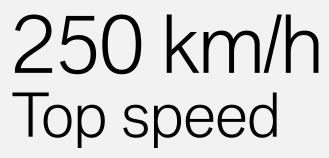
BMW electric motor

* According to WLTP regulations.

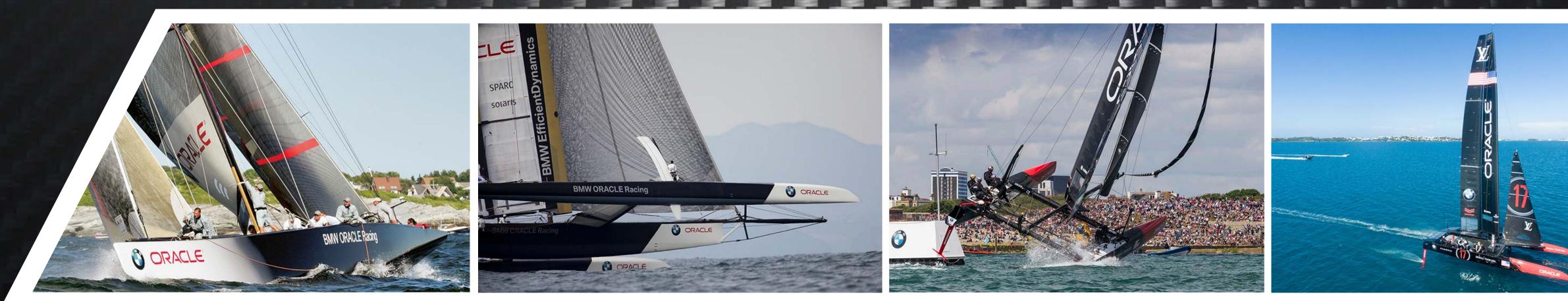


Carbon fibre frame

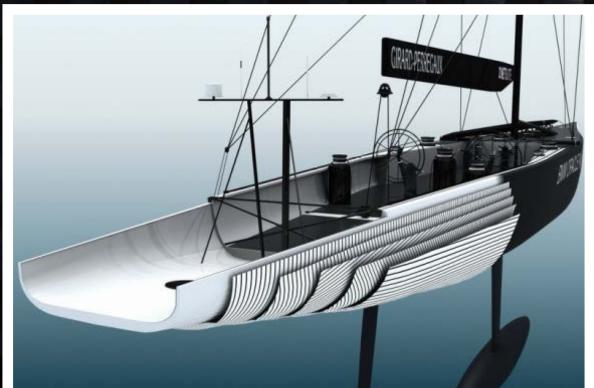
BMW three-cylinder high-performance combustion engine







ACC V5 90 ft Trimaran AC45F AC50 2002 2007 2010 2013 2017 HISTORY BMW HISTORY IN SPORTS TECHNOLOGY - SAILING. HISTORY AMERICA'S CUP.



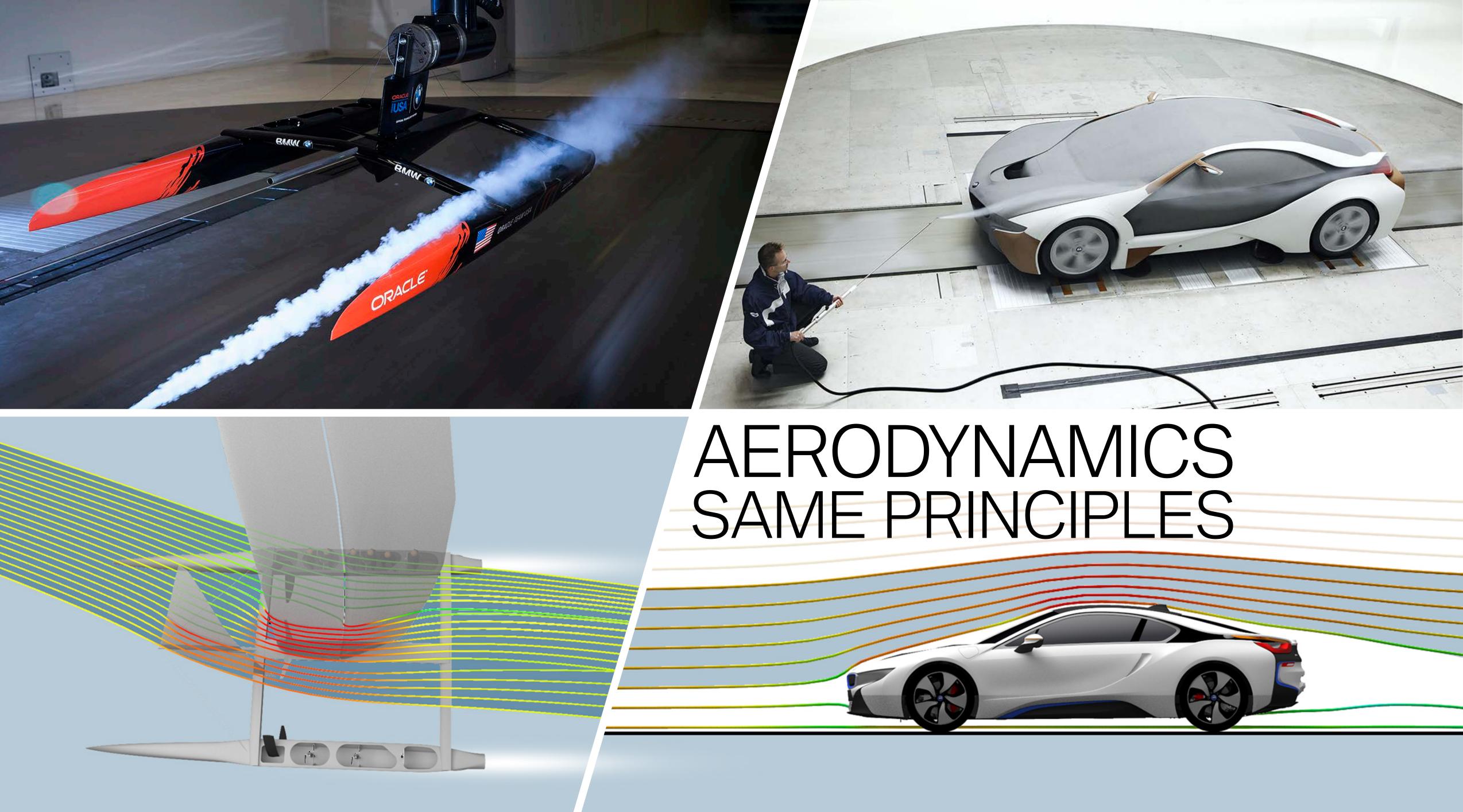


Process & Optimization Stainless Steel Keel Fin



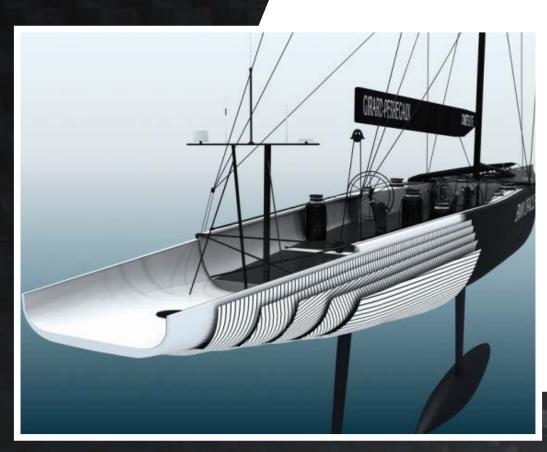
Ceramic Bearings -Winches Aerodynamic Development

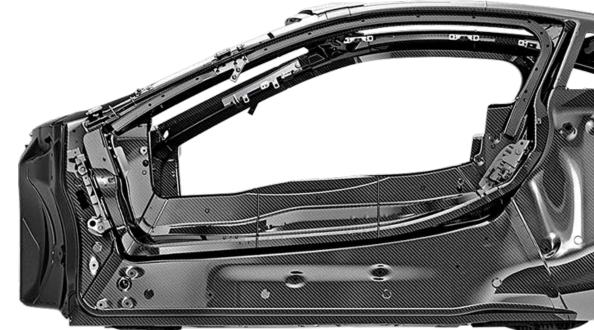






2004 2007 2010 THE CARBON STORY HOW CARBON KNOW-HOW EVOLVES.





AMERICA'S CUP TECHNOLOGY FOR THE ROAD

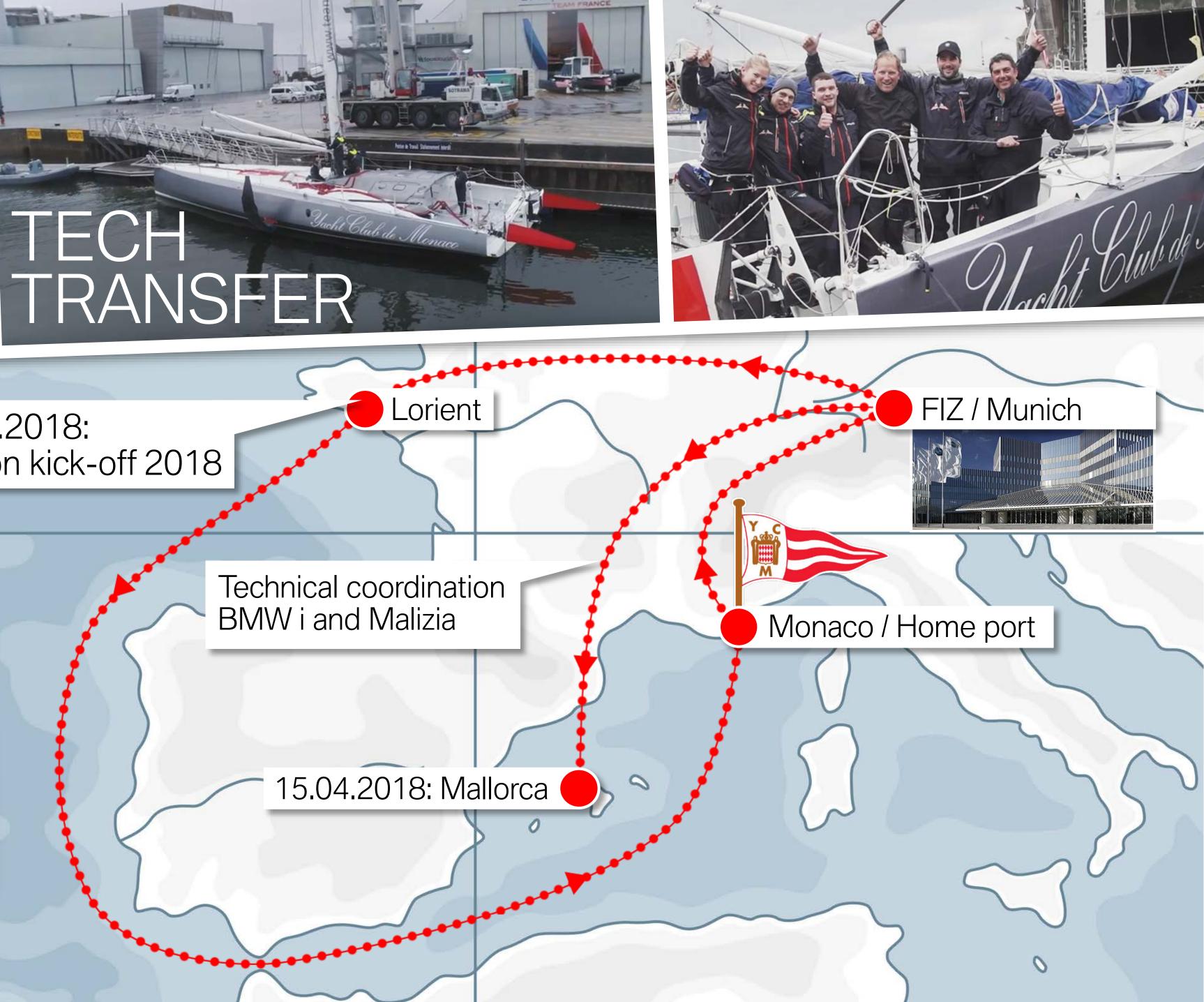
2011

BMW Oracle Racing BMW

> BMW i3 / i8 Development







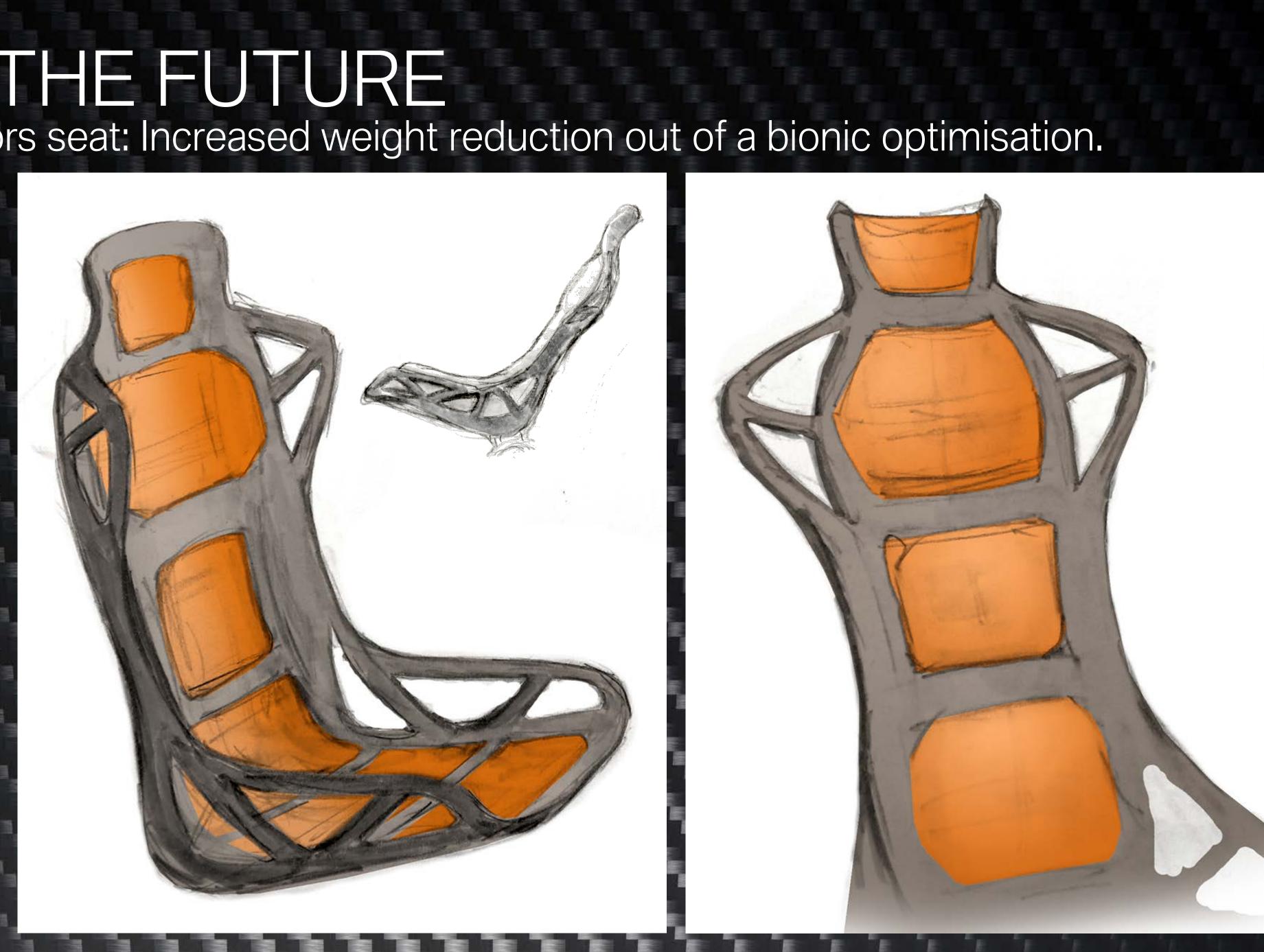
16.03.2018: Season kick-off 2018



0

LOOK INTO THE FUTURE Next generation navigators seat: Increased weight reduction out of a bionic optimisation.





COOPERATION

- integrated into Torgeedo motor systems.
- available for boating.





LEADING EDGE BATTERY TECHNOLOGY. TOTOPEDO

POWER 48-5000

Taking lithium batteries for boats to a new level.

- >> Build with BMW i3 battery module technology.
- Record level energy density: 145 Wh/kg on battery level - 68 % better than typical LiFePo4 batteries.
- >> Record level cycle life: 80 % capacity remaining after 3000 cycles.
- Superior safety based on Torqeedo's 5-step safety system.
- >> Specifications:
 - > Useable energy: 5,000 Wh.
 - > Nominal capacity 5,275 Wh.
 - > Waterproof IP67.
 - > Weight: 36.5 kg.



LEADING EDGE MOTOR TECHNOLOGY. TOTOPEDO

CRUISE 10 i / 20 i

Lightweight high efficiency electric motor.

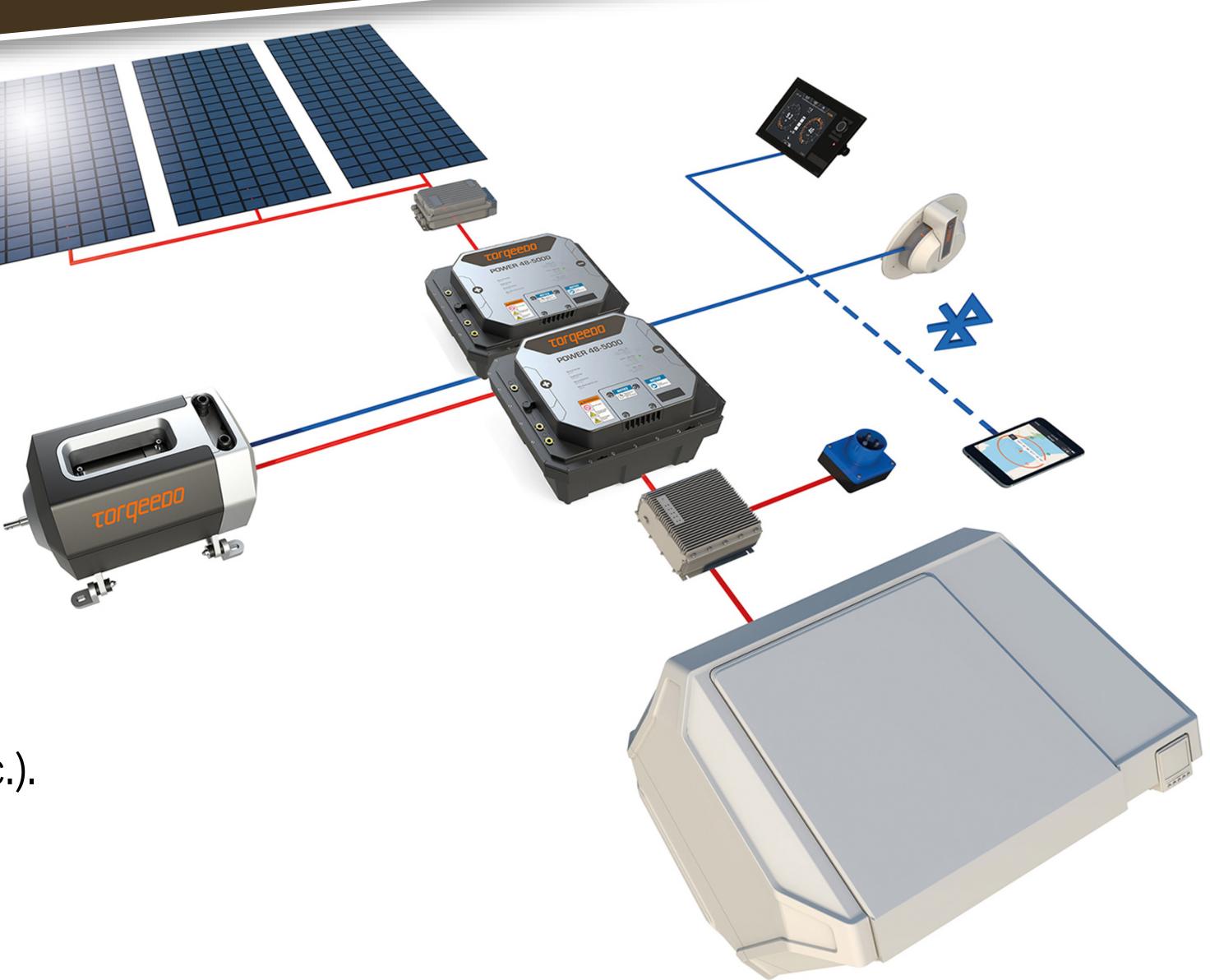
- >> Field-oriented control, electronically commutated brushless motor, rare-earth magnets.
- Peak efficiency (motor and motor electronics combined) 92 %.
- >> Motor RPM: 7000.
- >> Propeller RPM: 1400.
- >> Gear: 5:1 with 98 % efficiency.



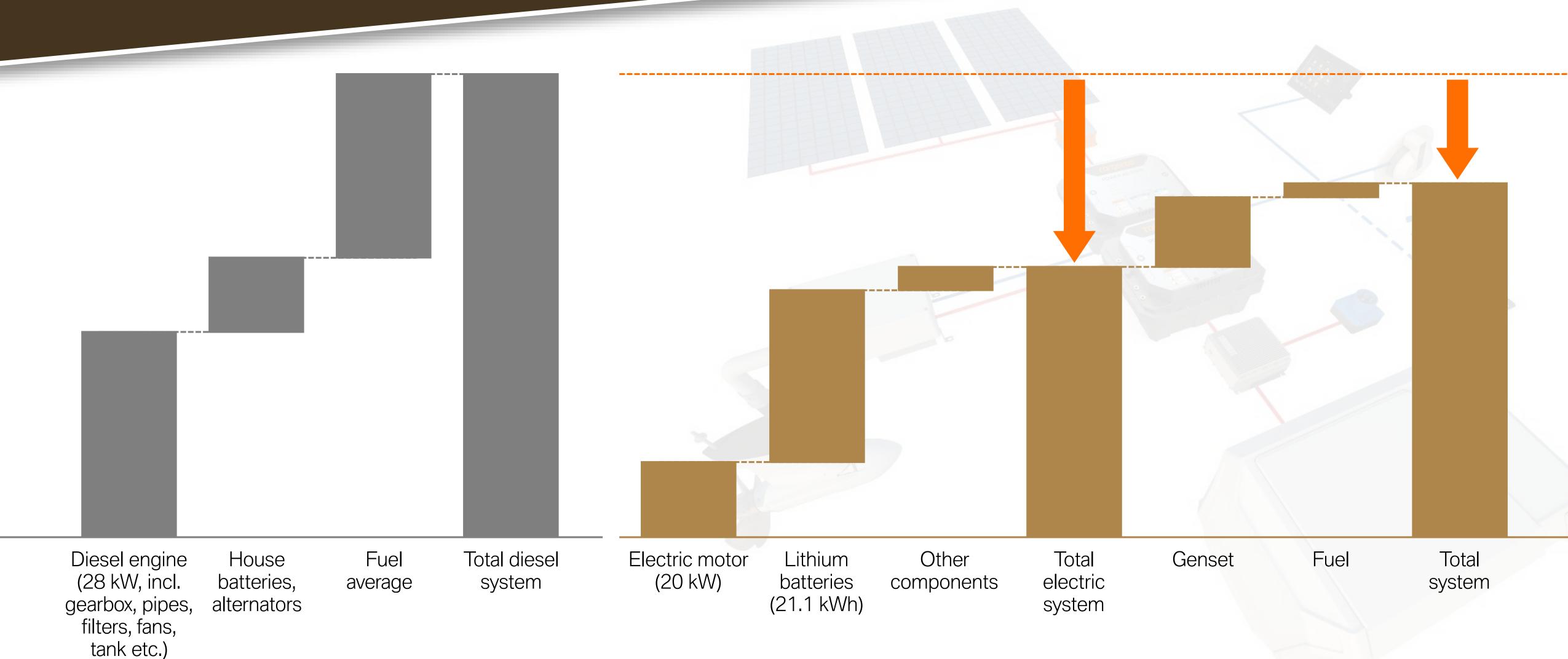
FULLY INTEGRATED SYSTEM. TOrgeedo

- >> Components:
 - Batteries.
 - > Motor.
 - > Throttle with on-/off- and kill-switch.
 - > Onboard computer.
 - > DC-to-DC converter (24 V system).
- >> Functionalities provided:
 - > Propulsion.
 - > Energy management for 24 V network (autopilot, canting keel, watermaker etc.).
 - > Power generation via hydrogeneration.
 - Integration of solar.





THE LIGHTEST DRIVETRAINS ARE ELECTRIC.



BMW I AND TEAM MALIZIA COOPERATION ZEROEMISSIONS

