



In safe hands.

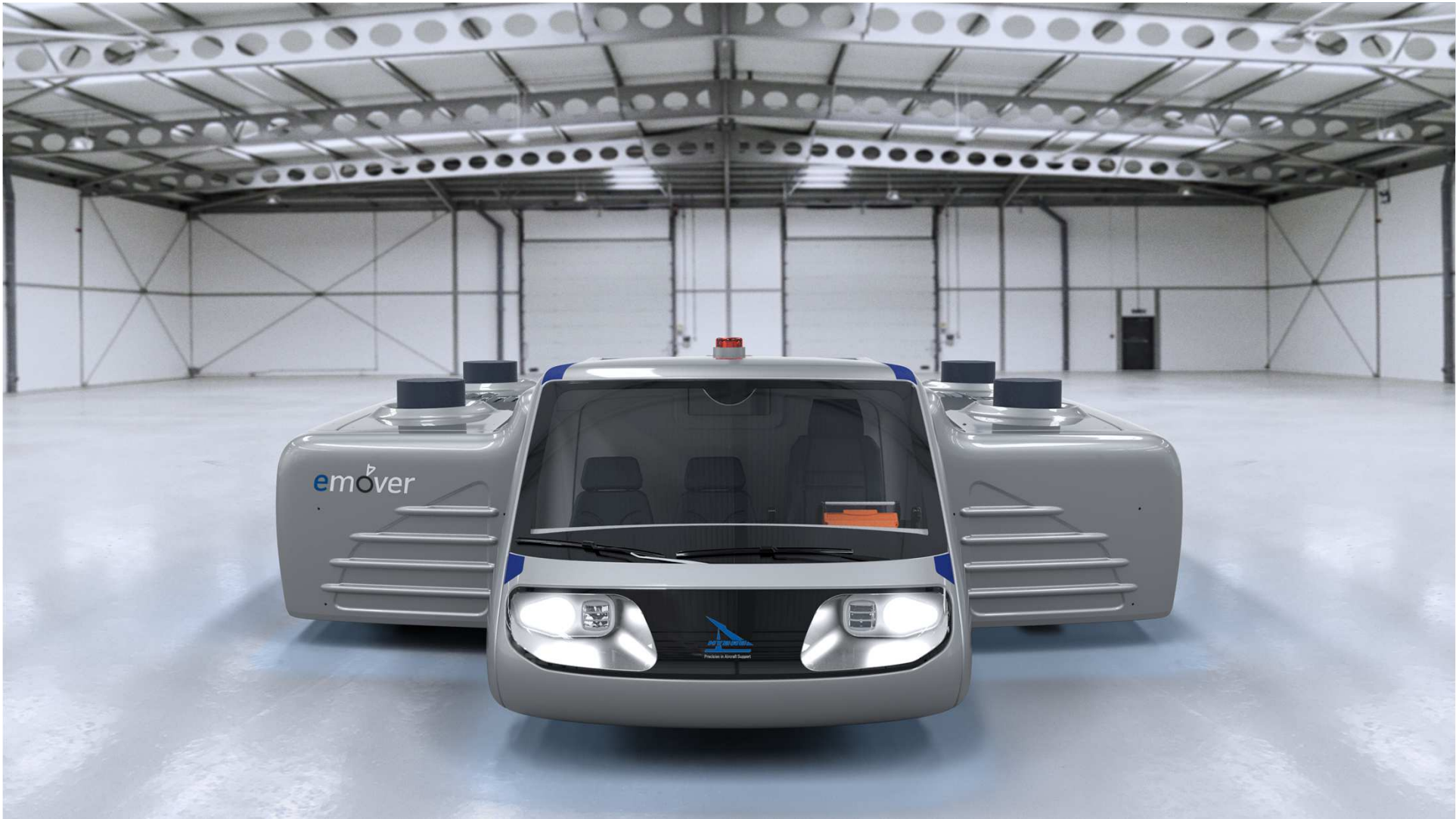
EMOVER

27.09.2019



*e*mo^over

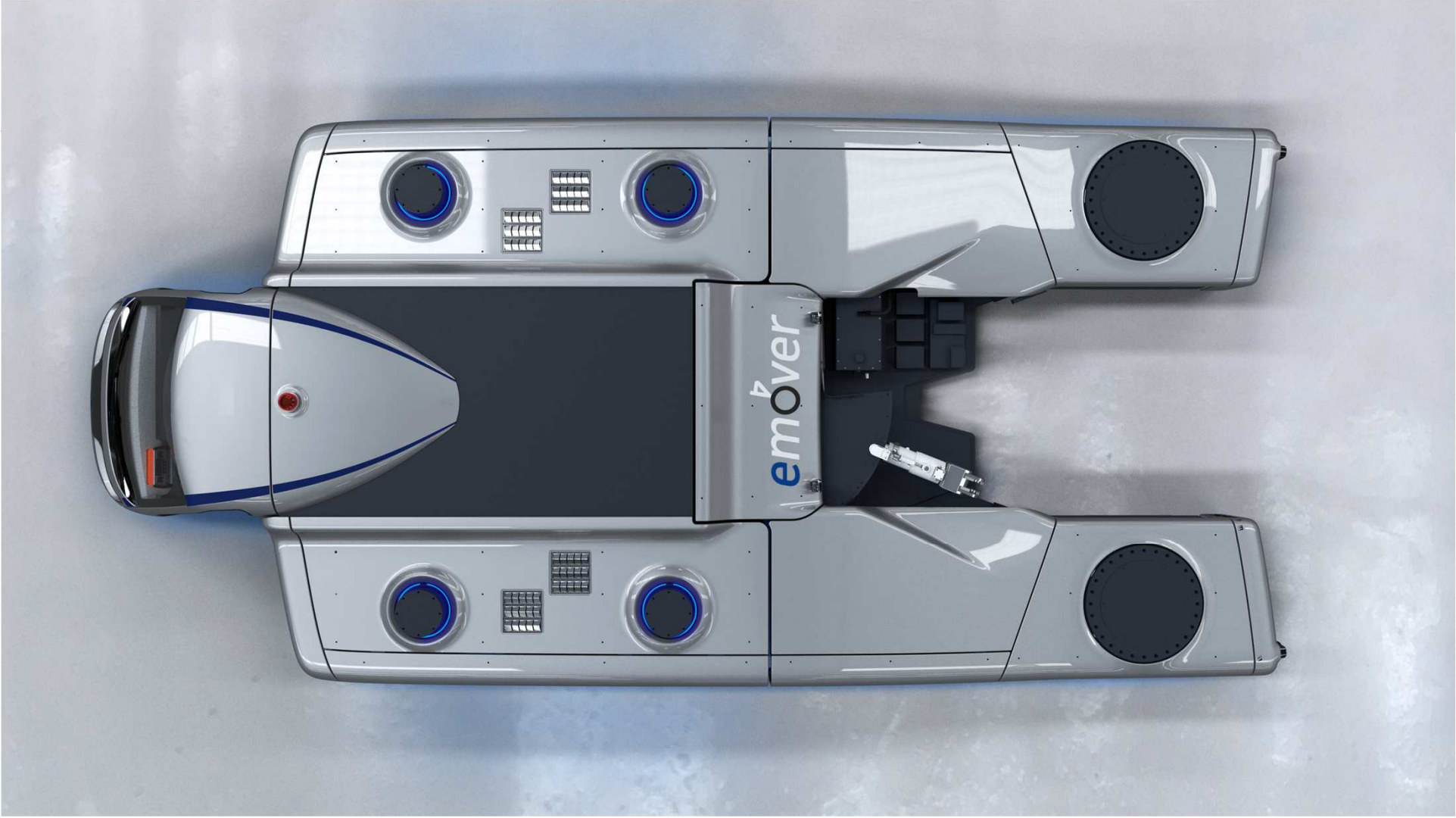
PURE INNOVATION











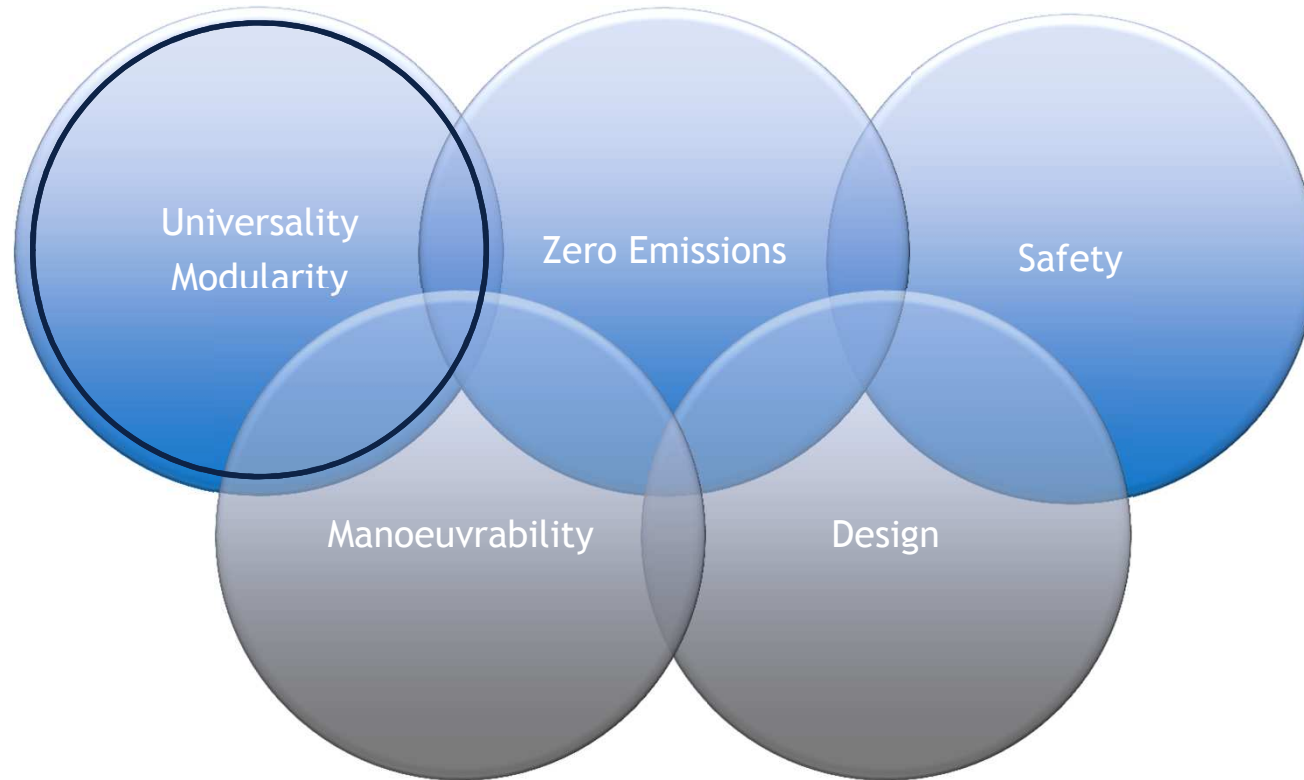
UNIQUE SELLING PROPOSITIONS

UNIQUE SELLING PROPOSITIONS

OVERVIEW



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UNIQUE SELLING PROPOSITIONS

UNIVERSALITY



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EMOVER TYPE 3: A220-300 to B747 and A380



MTW: 37,5 t



MTW: 577 t

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- Unprecedented range of narrow body and wide body aircraft - from the Embraer 170 family to A380
 - Maximal Towing Weight of 600 t (661 tn.sh.)
 - The independence from a/c-type allows to cover of a complete terminal section of close-by gates.
- No inefficient unloaded drives.
- Reduced quantity of needed tugs.

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MODULARITY



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MODULARITY



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Configuration/retrofitting according to customers needs

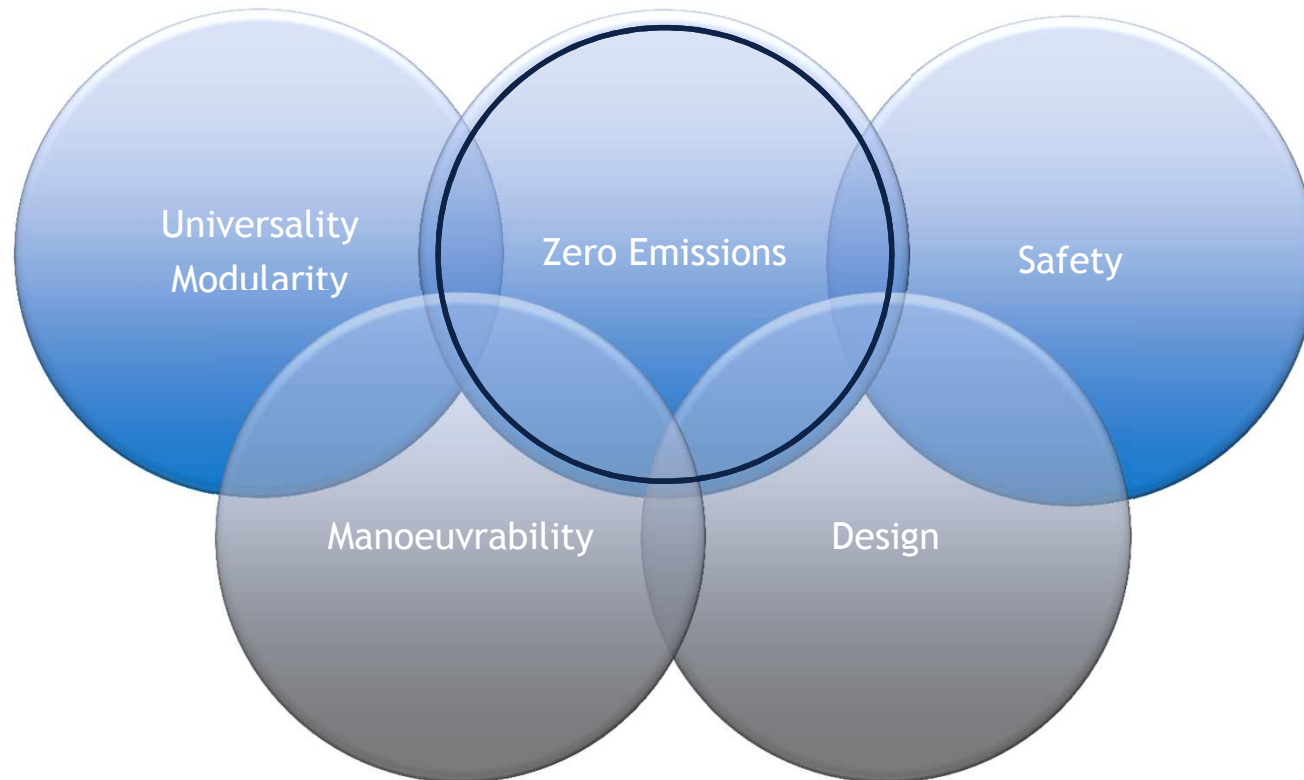
- With cabin
 - Fast drive capability: Max. 23 km/h (14,3 mi/h)
 - Operator and wing assistant transport
- Without cabin
 - Low speed drive only: Max. 6 km/h (3,7 mi/h)
- Battery capacity
- Weight
- Drive power and torque capability
- Range of aircraft
 - Variation of tow heads

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SOLE FULLY ELECTRICALLY POWERED B747- AND A380-TUG



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ZERO-EMISSIONS



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Electrically powered

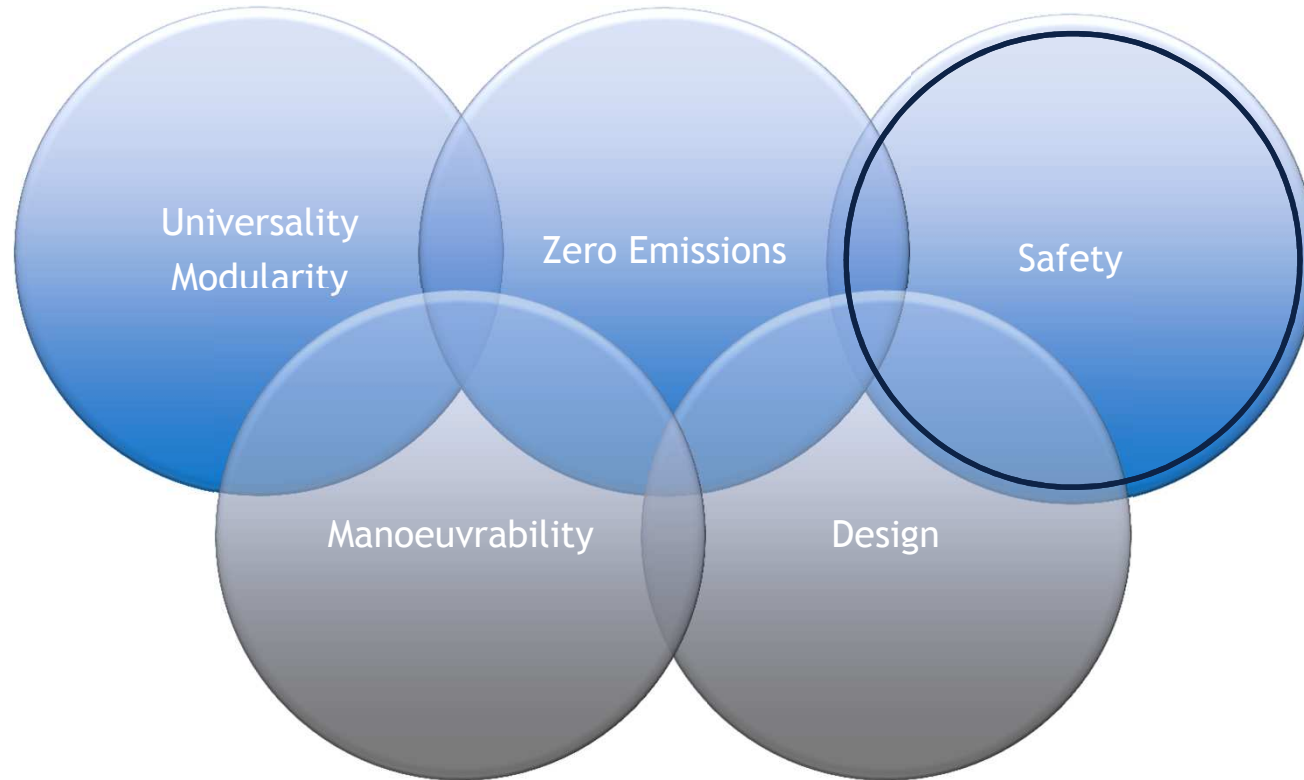
- Equipped with a high capacity lithium-ion battery and an AC on-board charger
- DC high performance charger interface for fastest rechargability
- High performance, electrical wheel hub motors with a total power of 720 KW

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UNIQUE SELLING PROPOSITIONS

SAFETY



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Nose landing gear remains on the ground

During braking the aircraft moves according to NLG's steering angle → No jack knife incidents

Operator independent safety systems

- Permanent force control
 - Push-/pull and torque forces are accurately measured
 - All forces are controlled in accordance with aircraft-specific force profiles
- Brake away force minimization
 - The continuously increasing towing force will be dropped as soon as the aircraft moves
 - Most sensitive way to push and pull an aircraft
- Steering Angle Control (SAC)
 - Permanent control and limitation of steering angle prevents oversteering
- Autonomous positioning - low speed drive to the hook position
 - Self-centering + angle alignment
- Customized Aircraft Protection System (CAPS)

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SAFETY



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Customized Aircraft Protection System (CAPS)

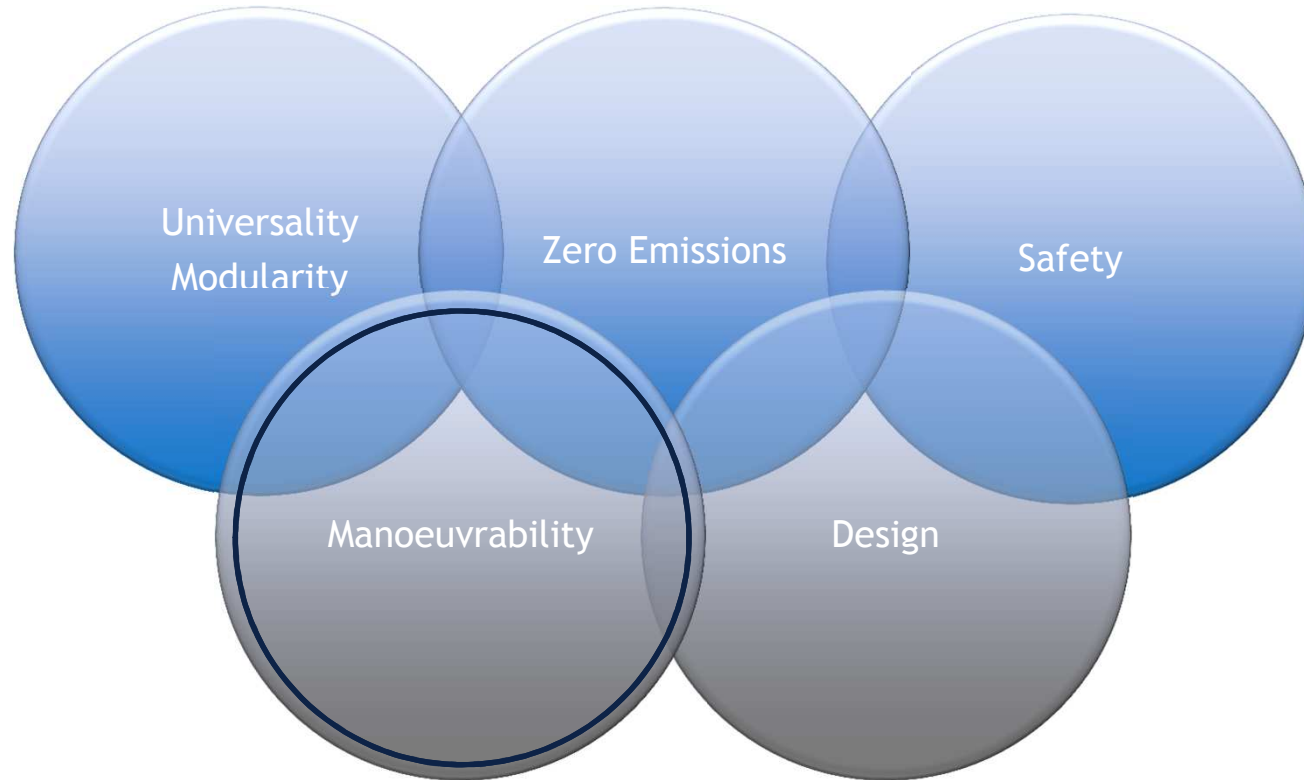
- Aircraft identification
- Collision warning

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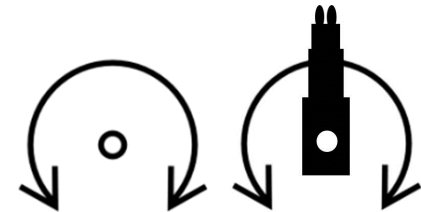
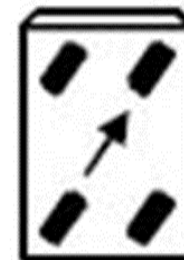
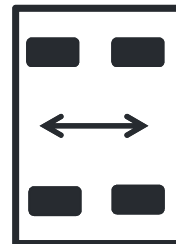
MANOEUVRABILITY



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Driving Modes

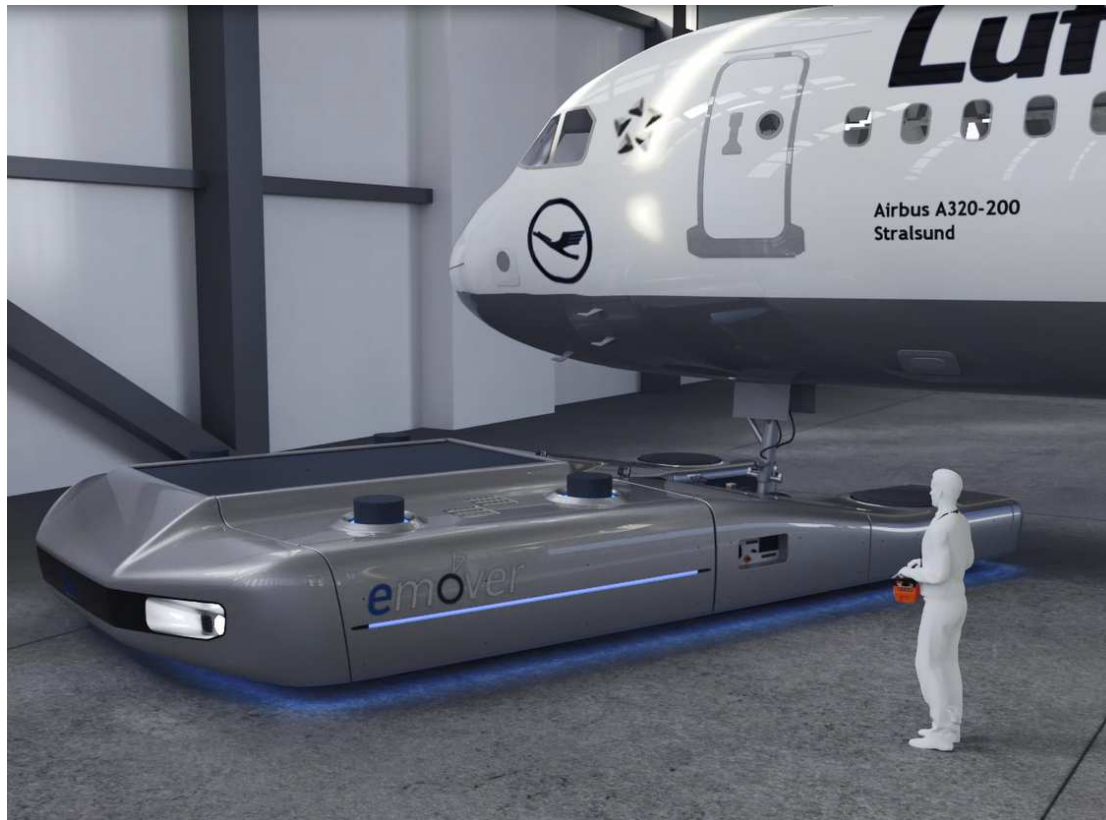


UNIQUE SELLING PROPOSITIONS

MANOEUVRABILITY



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Selectable vertical rotation axis:

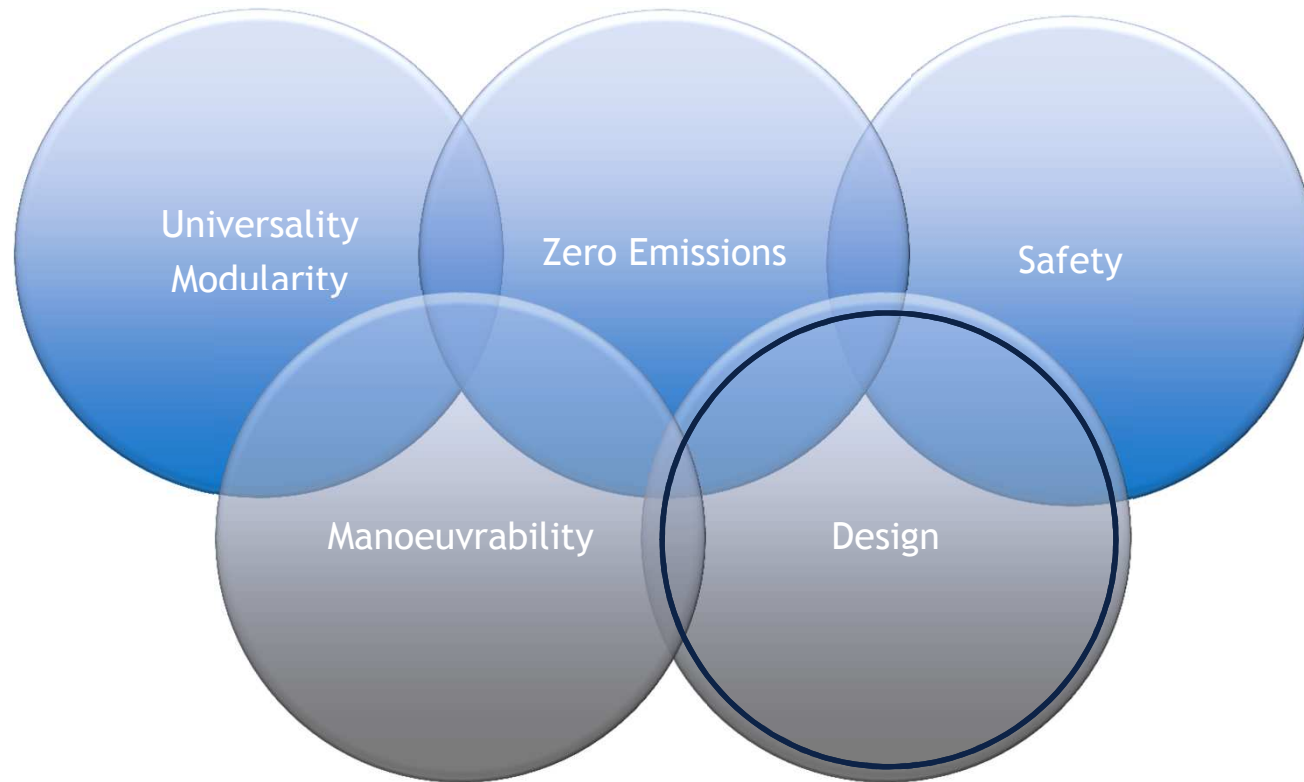
- Nose landing gear
- Central point

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TECHNICAL DATA

PRODUCT DATA

SPECIFICATION



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Characteristic	Specification
Dimensions (l x w x h)	10,35 m x 4,85 m x 1,55 m (0,78 m) (407,4 in x 190,9 in x 61,0 in (30,7 in))
Weight	52 t to 60 t (57,3 tn.sh. to 66,1 tn.sh)
Number of tow heads	Max. 8
Towing load capability	600 t (661 tn.sh)
Driving power	720 KW
Range of aircraft	E170 to A380
Max. torque	6 x 20000 Nm
Drive	6 x electrical motors
Battery capacity	195 KWh

THANKS



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THANK YOU FOR YOUR INTEREST !





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