



SMART ENERGY MANAGEMENT FOR MOBILE ROBOTS

Next level efficiency in robotic transportation.



2024 Award winner



LOGISTICS
AWARDS / POLAND

HETBOT Sp. z o.o., Stefanowskiego 18, 90-537 Łódź, Poland

Actual problems of contact charging

AMR downtime

Robots waste up to 40% of their operational time during charging.

Battery drain

Reduced battery life due to fast charging results in increased hazardous waste and operation costs.

Any minute over 100,000 robots worldwide do nothing losing their time during charging. What if we could decrease it by 20 times?

No cost optimization

Lack of charging time scheduling eliminates the opportunity to recharge during lower-cost energy periods.

Crowded space

Single charger supports up to 6 robots (one robot at a time) due to long charging time.



Unlocking Efficiency: HETBOT energy management

Improved efficiency

Up to 99% runtime efficiency due to fast automatic battery swapping.

Optimal charging conditions

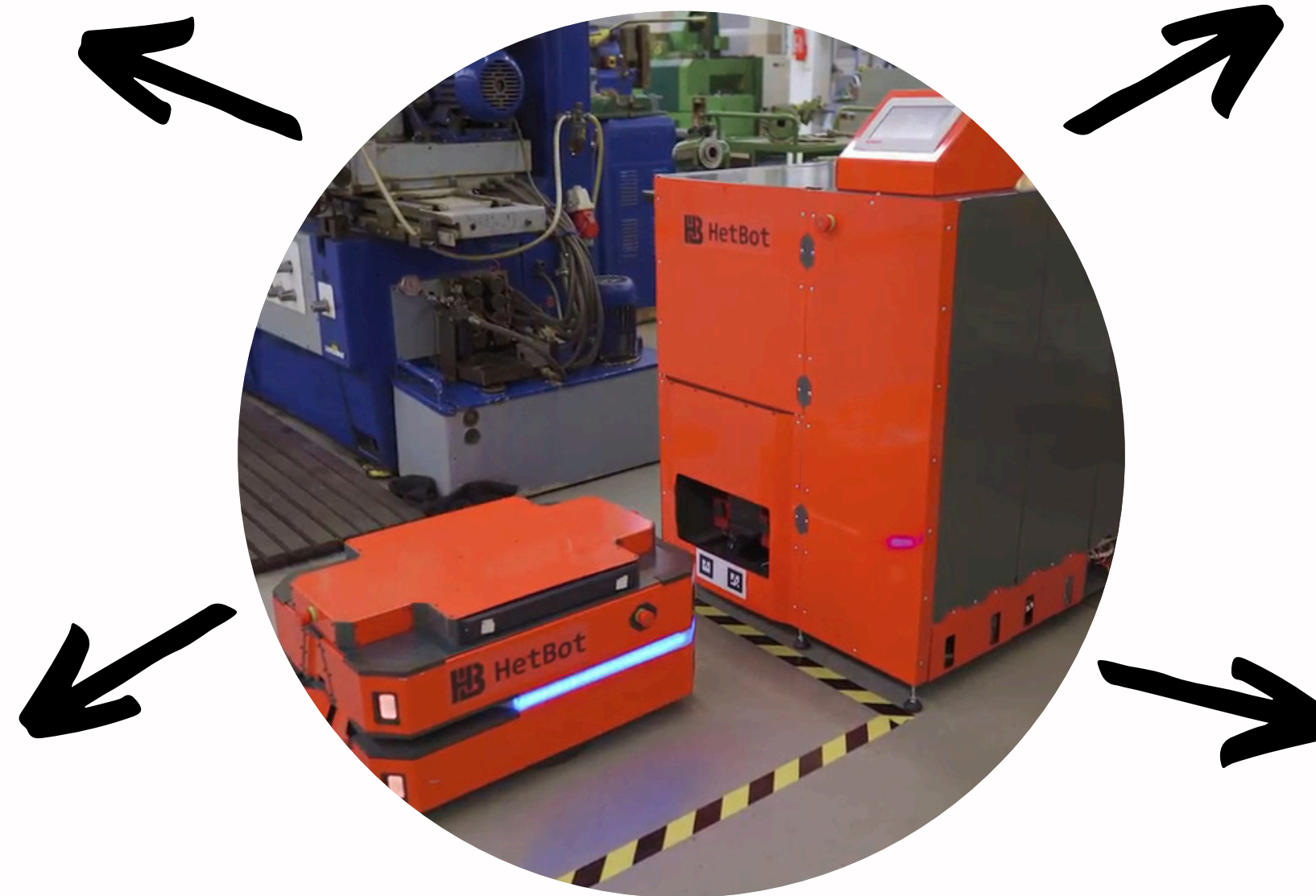
Optimal charging rates extends battery's life. Eco-friendly approach by minimizing the environmental impact of battery production and disposal.

Cost-Efficient Charging

Adjusting battery swap schedules based on real-time energy prices and energy demand and utilizing renewable energy sources to power the swapping process.

Space savings

One swapping station supports multiple robots. Intelligent scheduling to prevent station congestion.

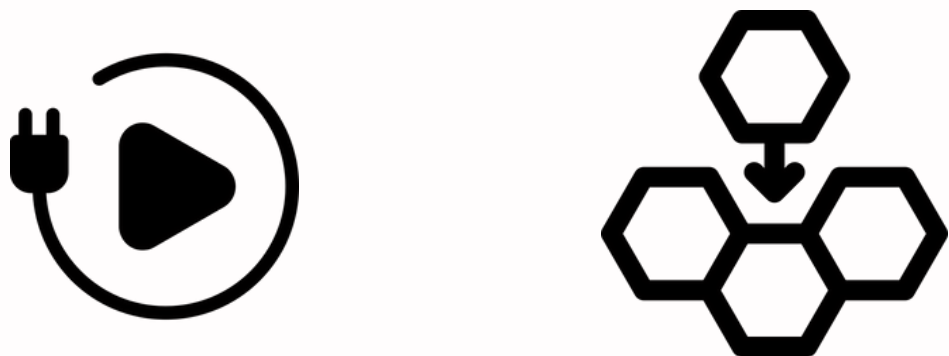


How Hetbot will change AMR solutions

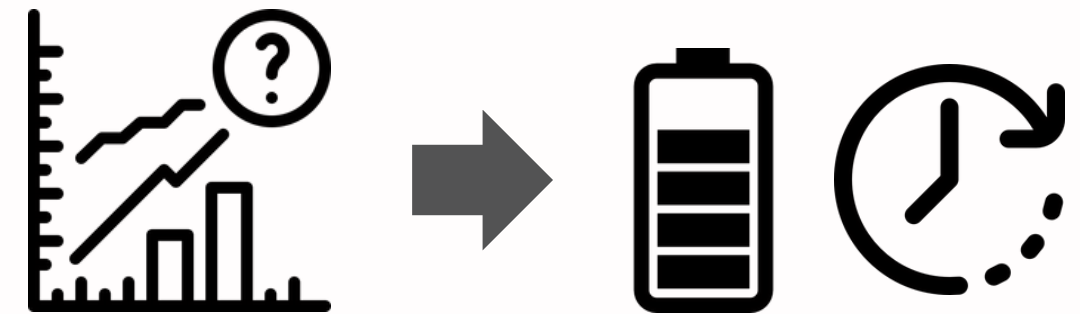
Power supply unification



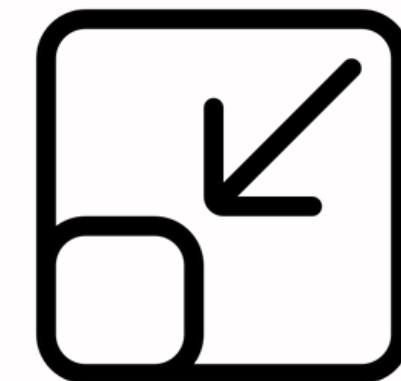
Easy integration,
modularity



Making it a bit more
intelligent

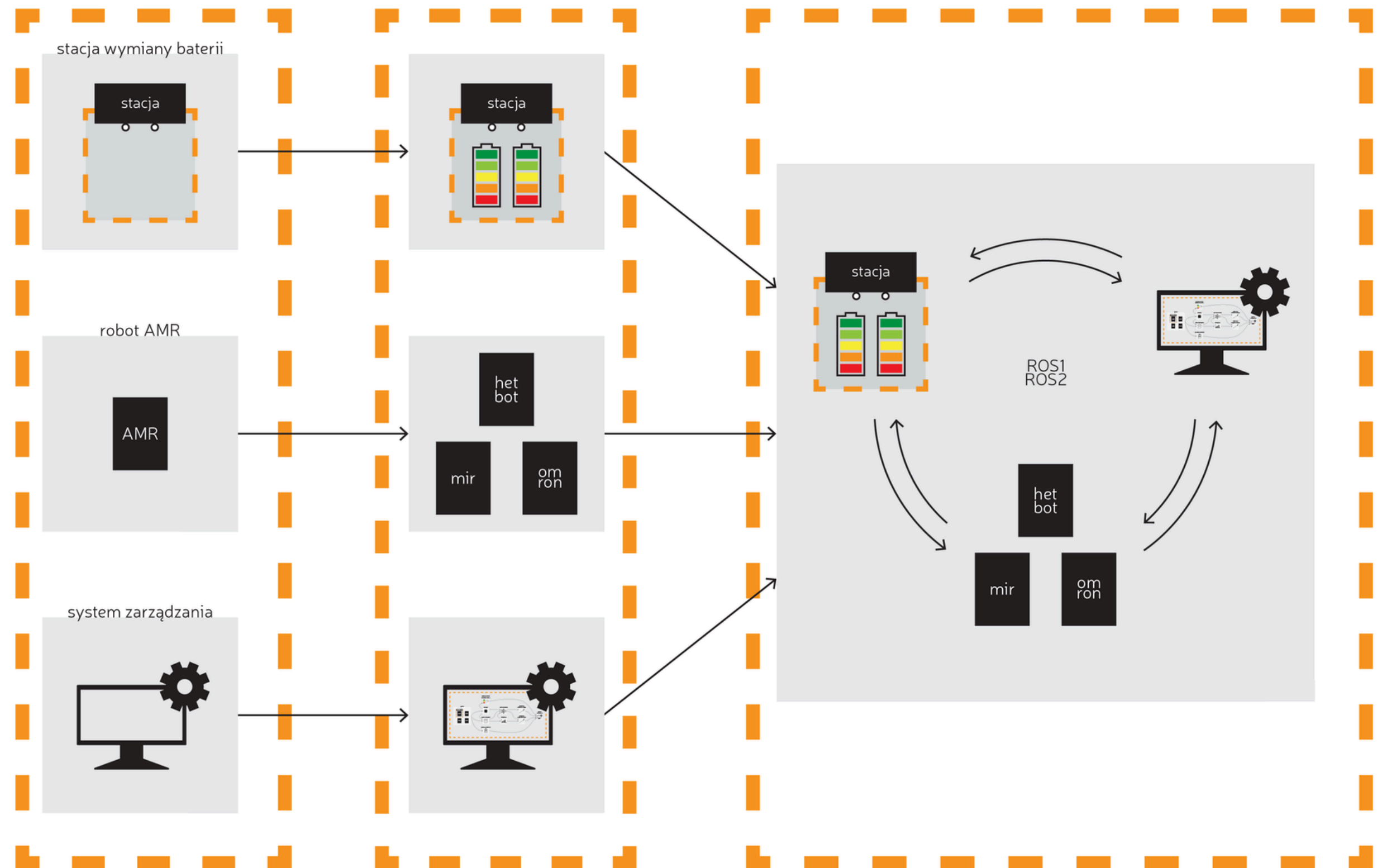


Minimizing battery size

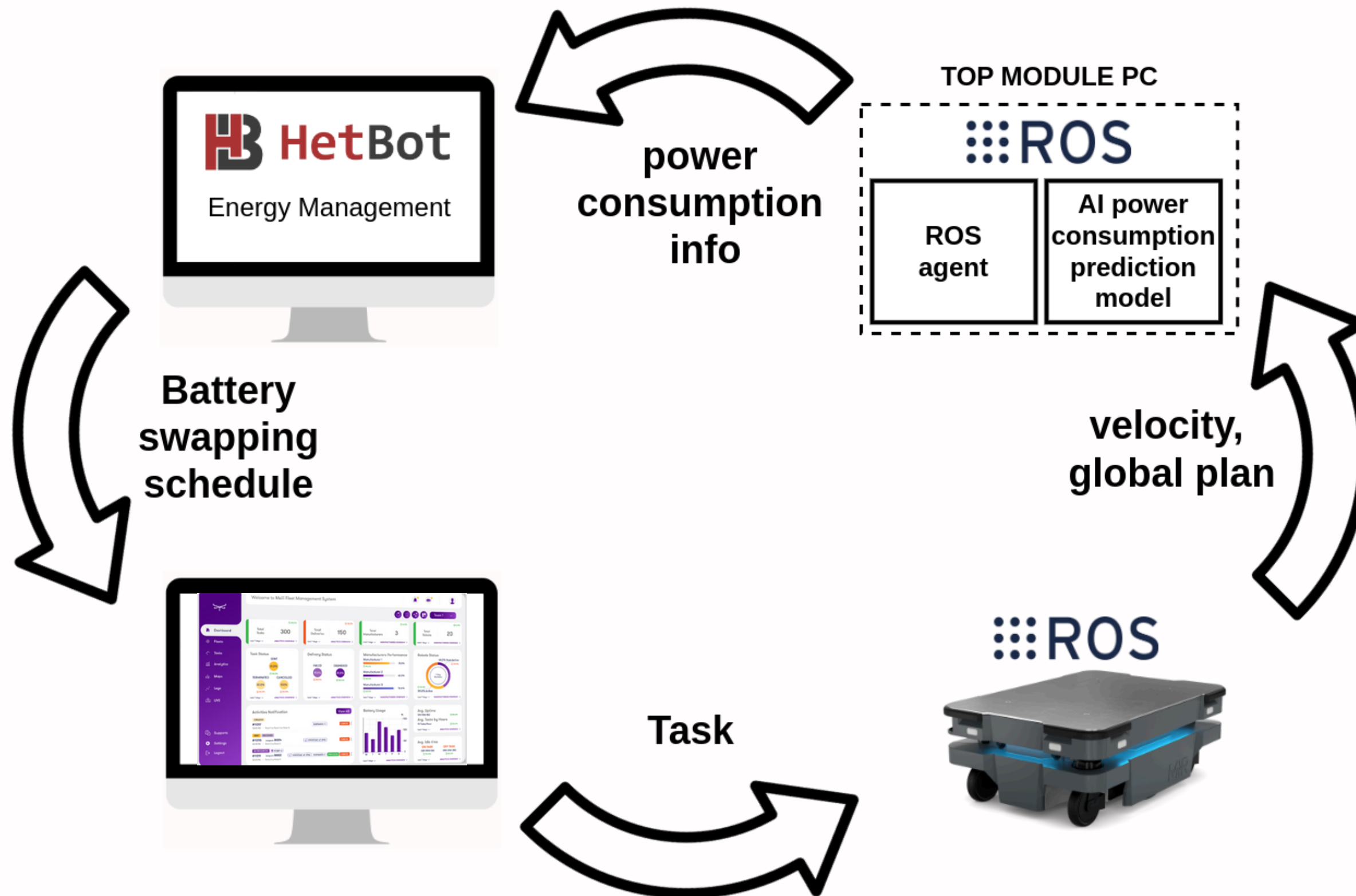


How does the system work

Energy prediction system
+
Unified and modular hardware devices
+
Management and optimization tools
=
Solution for customers' needs

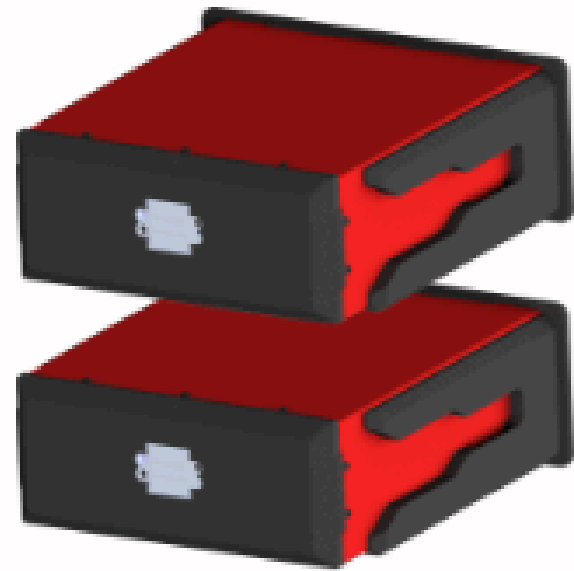


Easy software integration

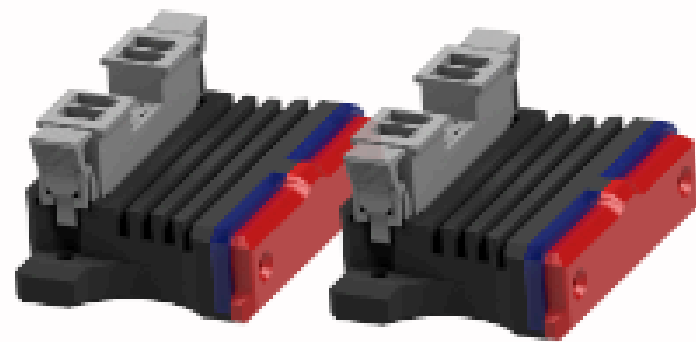


Easy hardware integration

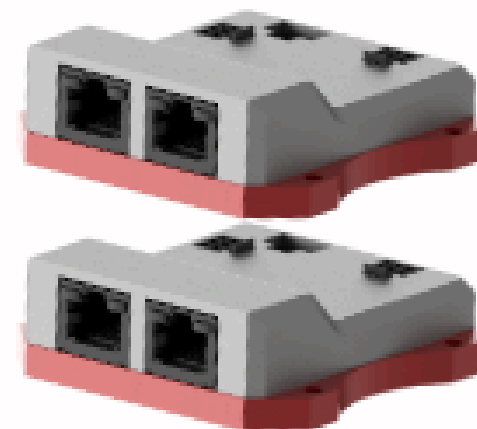
Batteries



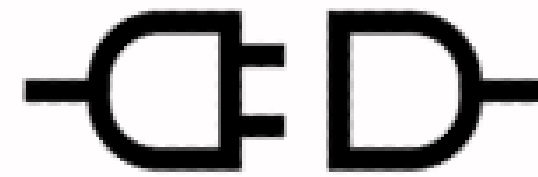
BMS and
energy flow
control



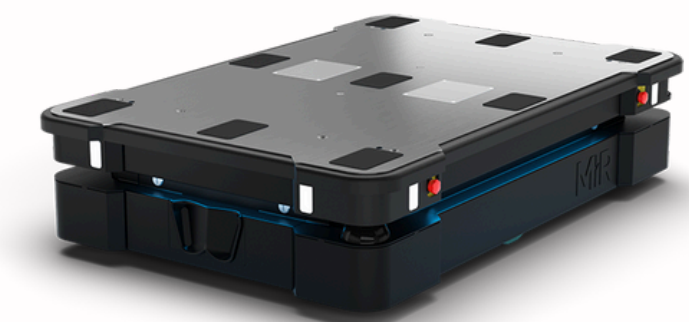
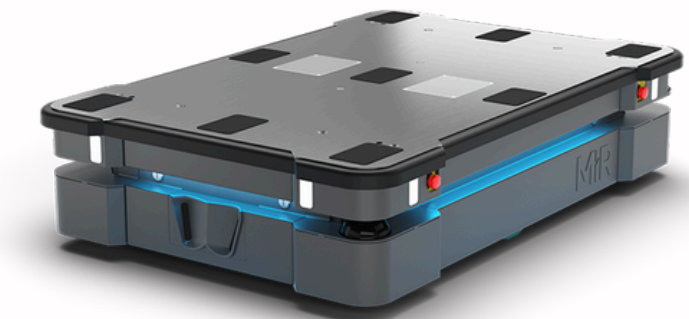
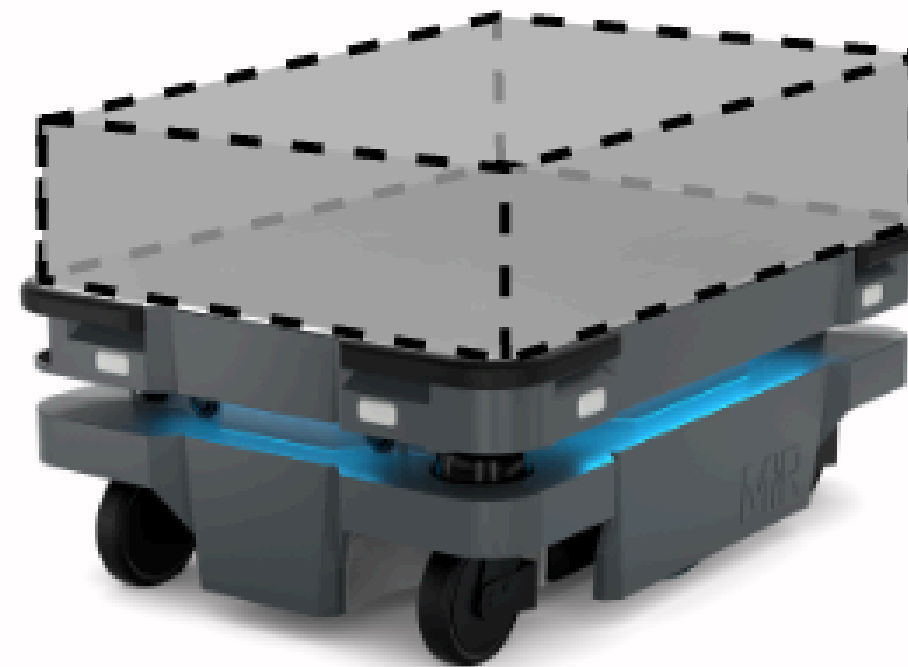
Power
converters



12/24/48 V

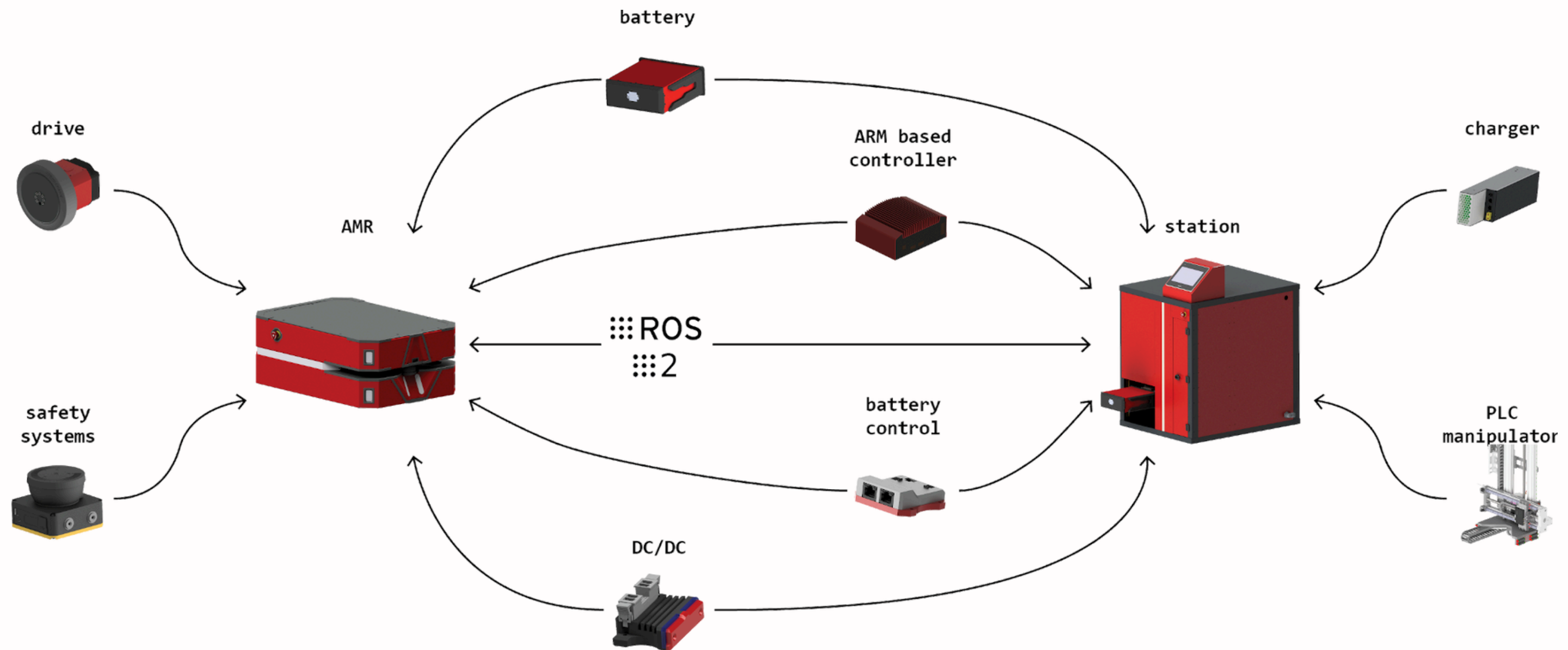


TOP MODULE



Modular design

Complete modular ecosystem for energy management in a single AMR and AMR fleets.



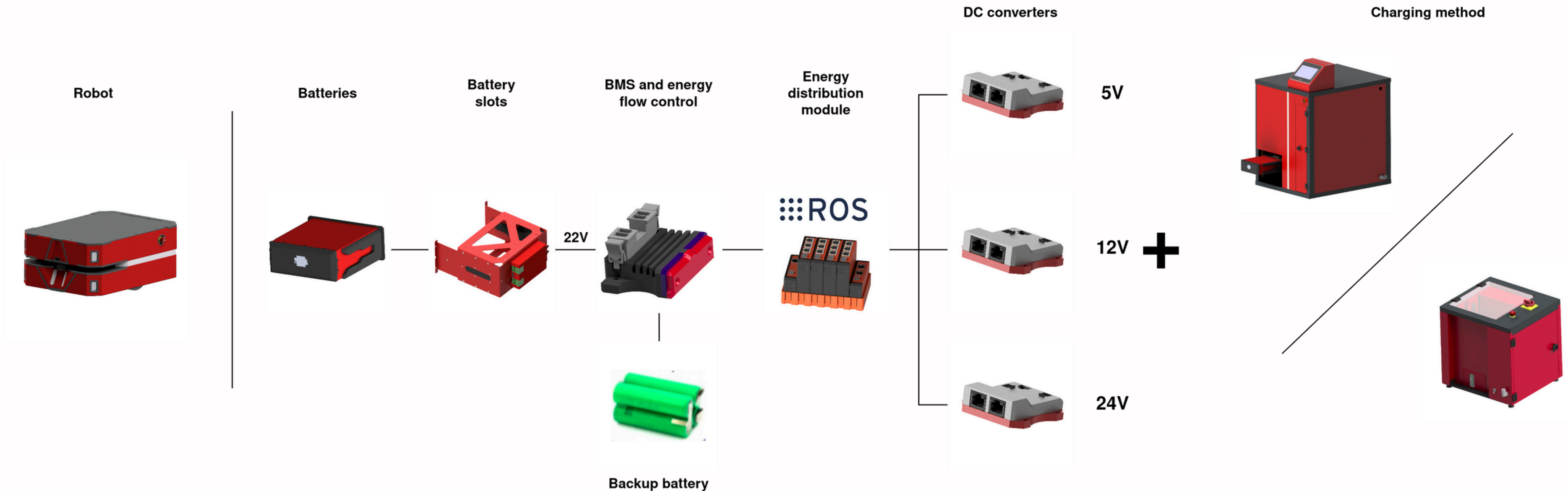
Power supply
unification

Easy integration

Minimizing
battery size

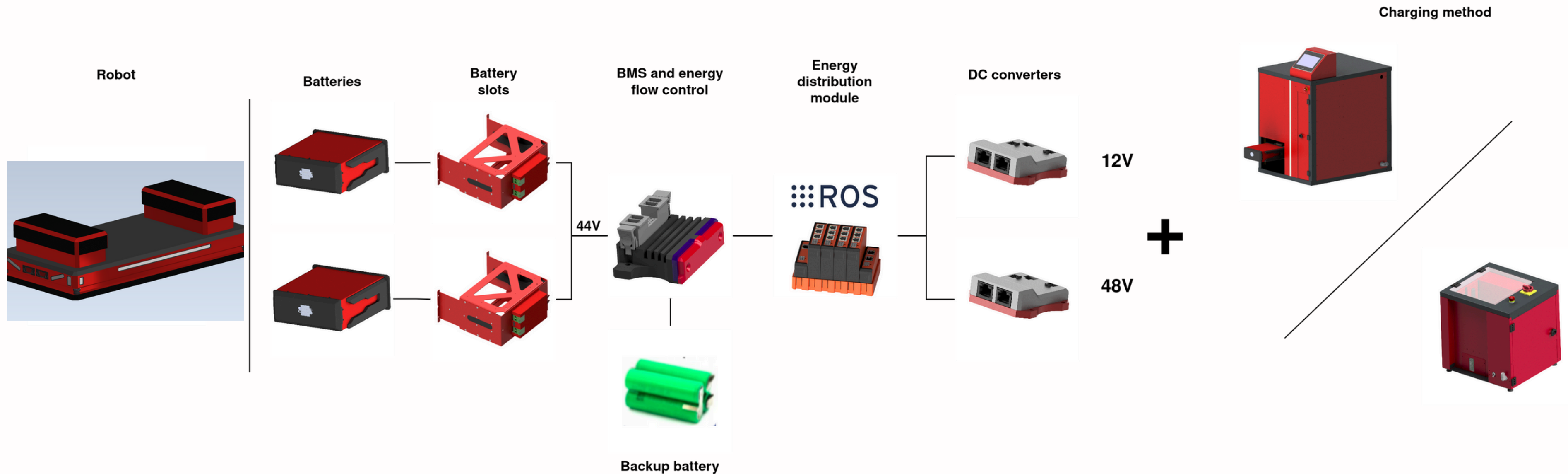
Design your own configuration

Single battery configuration (small - medium robots)



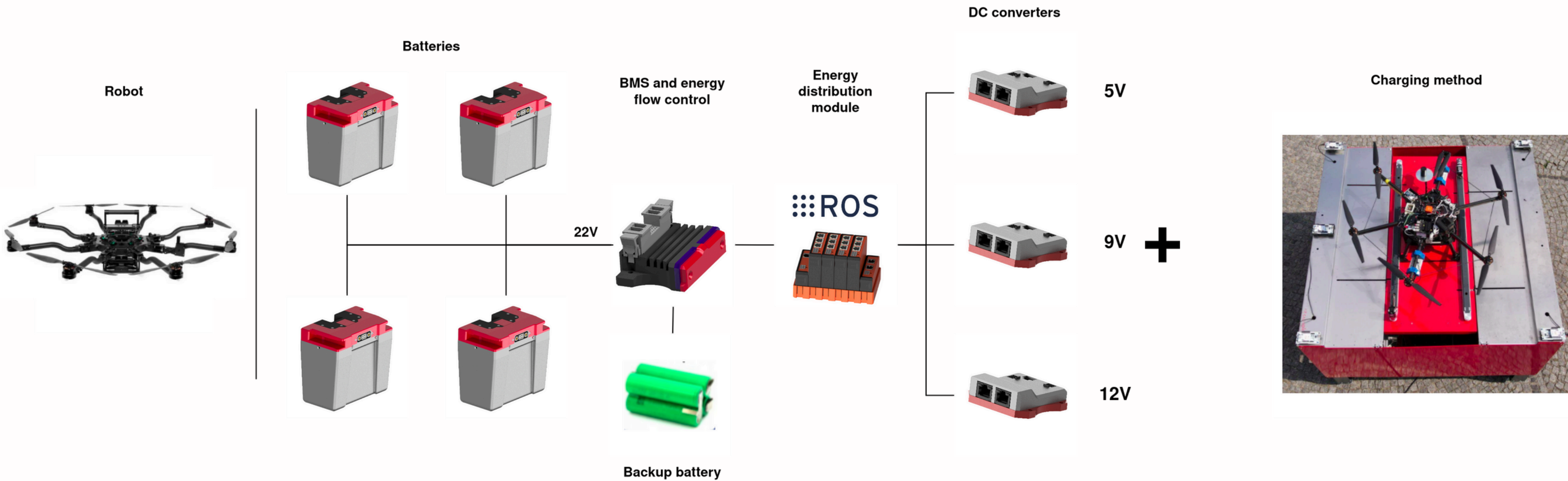
Design your own configuration

Multi battery configuration (medium - large robots)



Design your own configuration

The same system for multi-type robot applications



Studio
Shedwo



LET'S STAY IN CONTACT

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