



Presenting:
Bernat Carreras, CEO

16th January, 2024



BOLD is a technology company that manufactures battery systems for high performance applications at scale

Founded in 2019 by Bernat Carreras

- Mechanical Engineer +10 years
- McLaren, Honda, Renault working in batteries and lightweight structures

BOLD started with engineering services to high end clients in UK

In 2021 moved into a manufacturing facility to realize the goal of producing our own battery products at scale

The company has always been profitable and has worked with paying customers from day one



Value Proposition



Creating technology to make all forms of mobility sustainable at scale

- Turnkey projects
- Own serial Products
- All systems produced at BOLD
- Capacity to engineer and manufacture
- On site work for integration
- Validation and Testing at BOLD
- Constant R&D for battery development
- High performance batteries
- Inhouse software development
- Product Adaptation or new development

Customer obsession

Excellence

Boldness

Ownership

Integrity

Key figures of engineering and production capability that has lead to delivered products

+100

engineers

design and battery

200 MWh/yr

current production line
manufacturing capacity

+1200

batteries under contract
to deliver in 2024

+150

employees

including production

+100 packs

delivered

in 2023

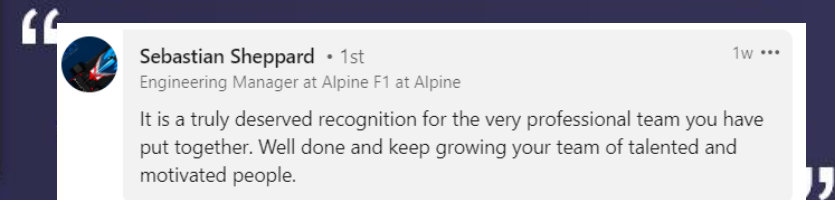
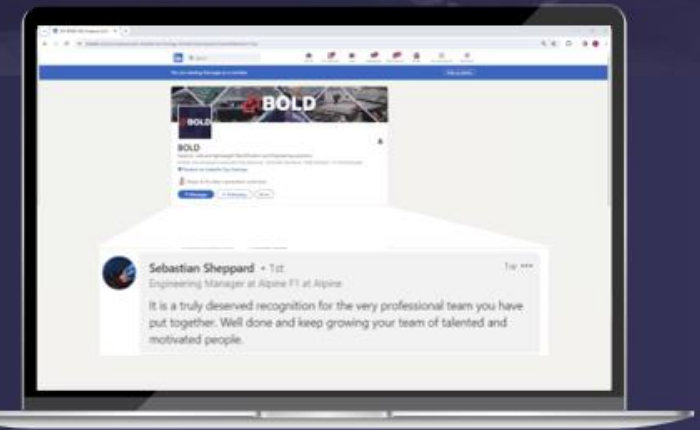
3000 m2

**office and
production**

site in Barcelona

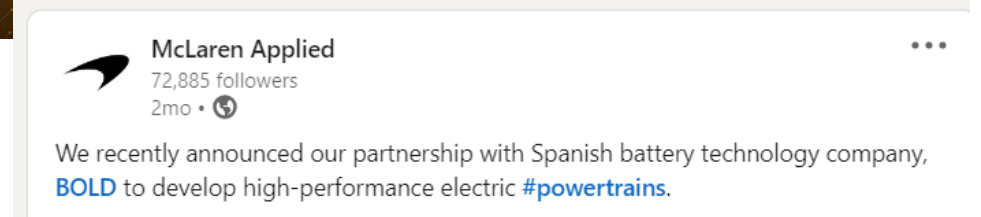
Applied Engineering is where the company started and has been funding R&D and CAPEX for the electrification division

- Top clients in niche OEM automotive, motorsport and others
- +60 engineers with several customers and long-term contracts
- Applied Engineering has been funding the CAPEX and R&D for electrification



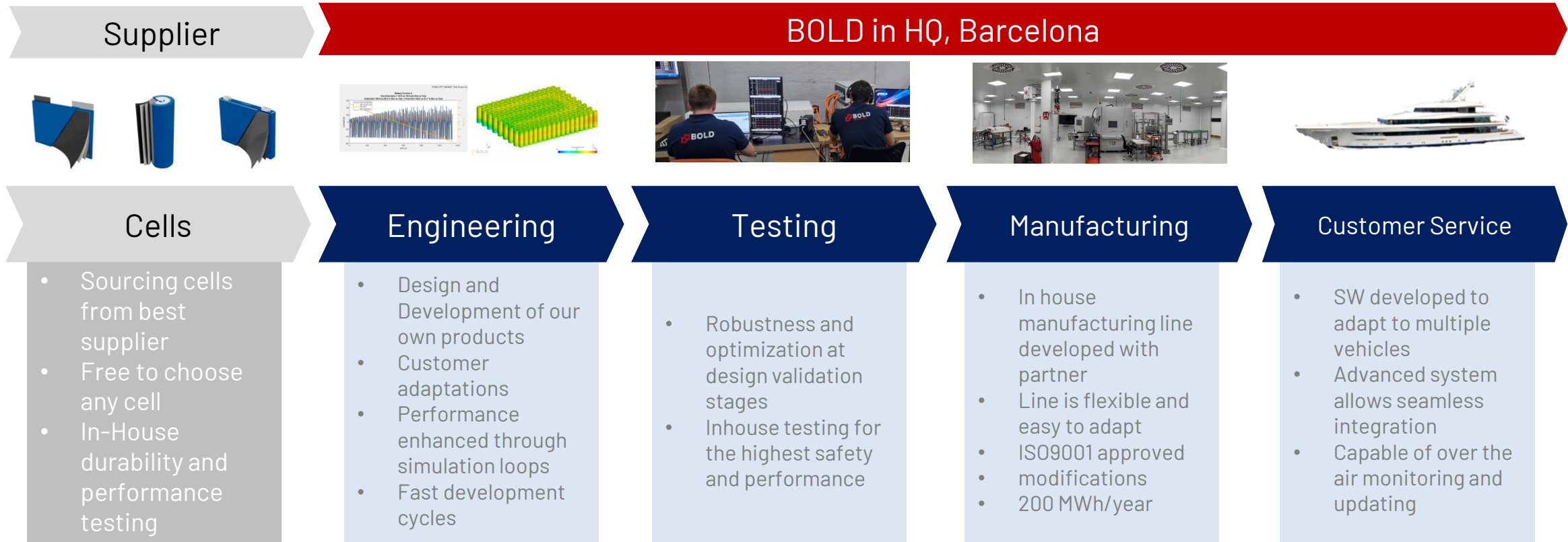
Since, 2021 the company has been focused on high-performance batteries to a range of sectors within high performance

BOLD has achieved important interest and POs from large players in the industry that confirm validation for the technology at this early stage of the company



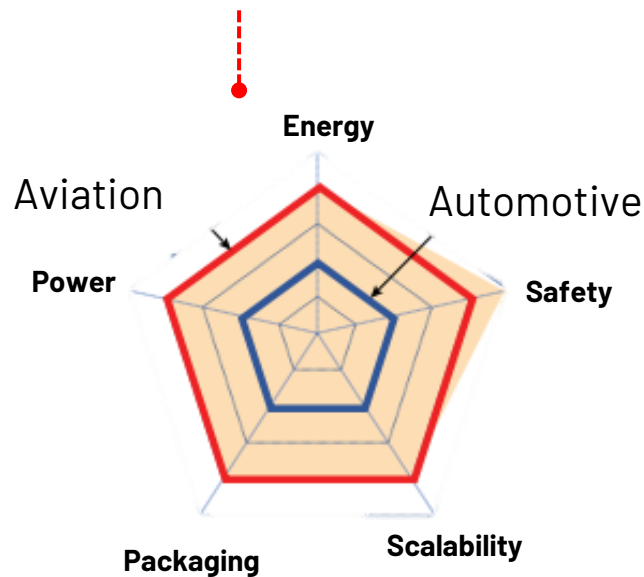
Battery Supply: Vertically integrated for engineering and manufacturing

Enhances performance and controls cost



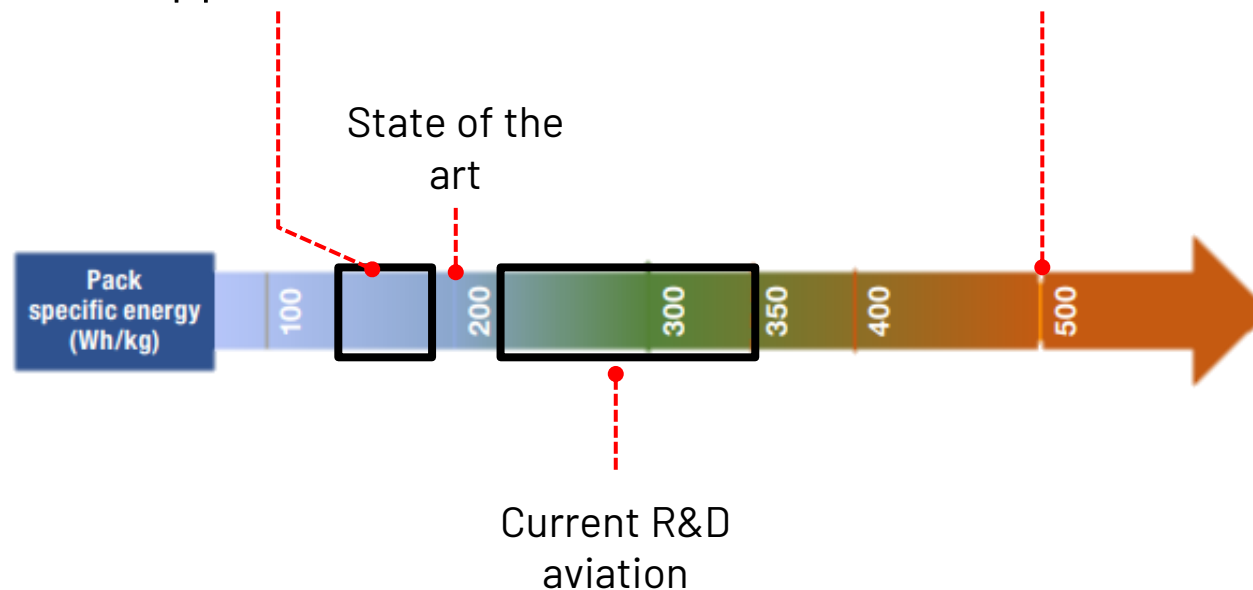
Gravimetric energy density is simply not here yet to allow for fully electric propulsion across the industry

Aviation has more stringent requirements than automotive

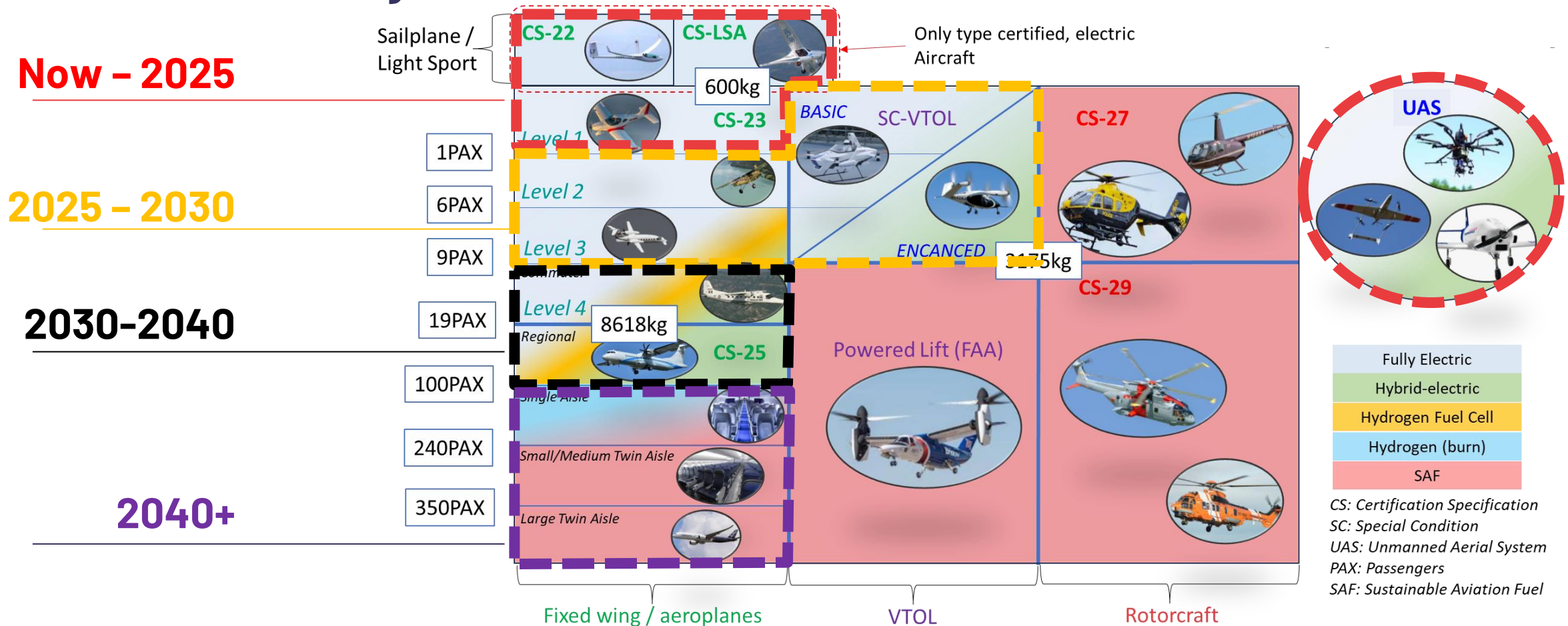


Range suitable for automotive applications

Required for regional aircraft (<100PAX)



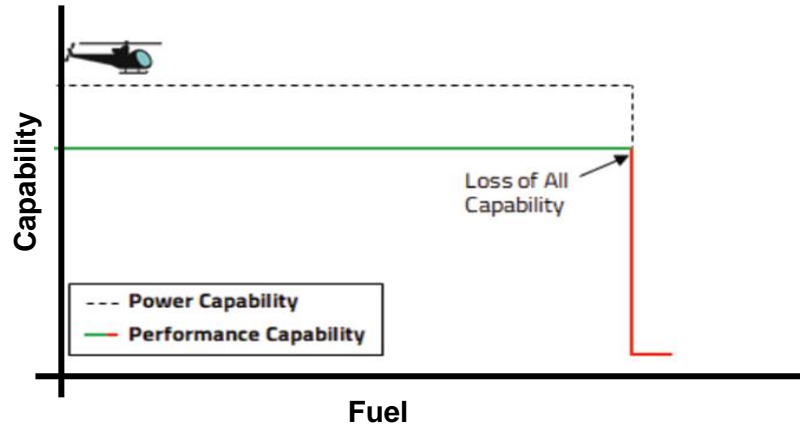
The OEM and suppliers must be realistic about the path to electrifying the aviation industry



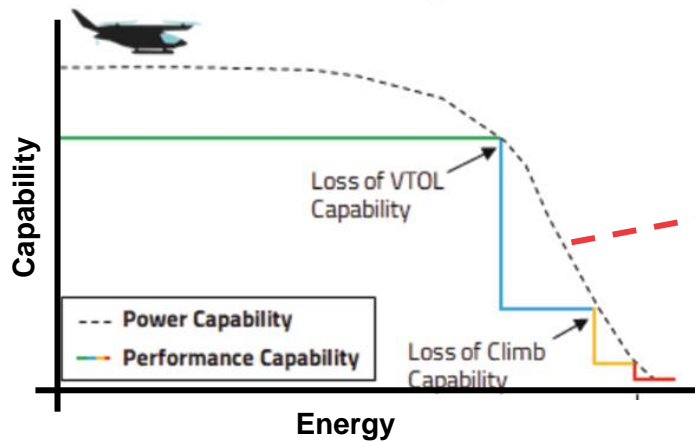
Cell Chemistry will change the way aircraft are operated

Power available for a battery is relative

Conventional



Electric



Influences

Power Demand



Power Available



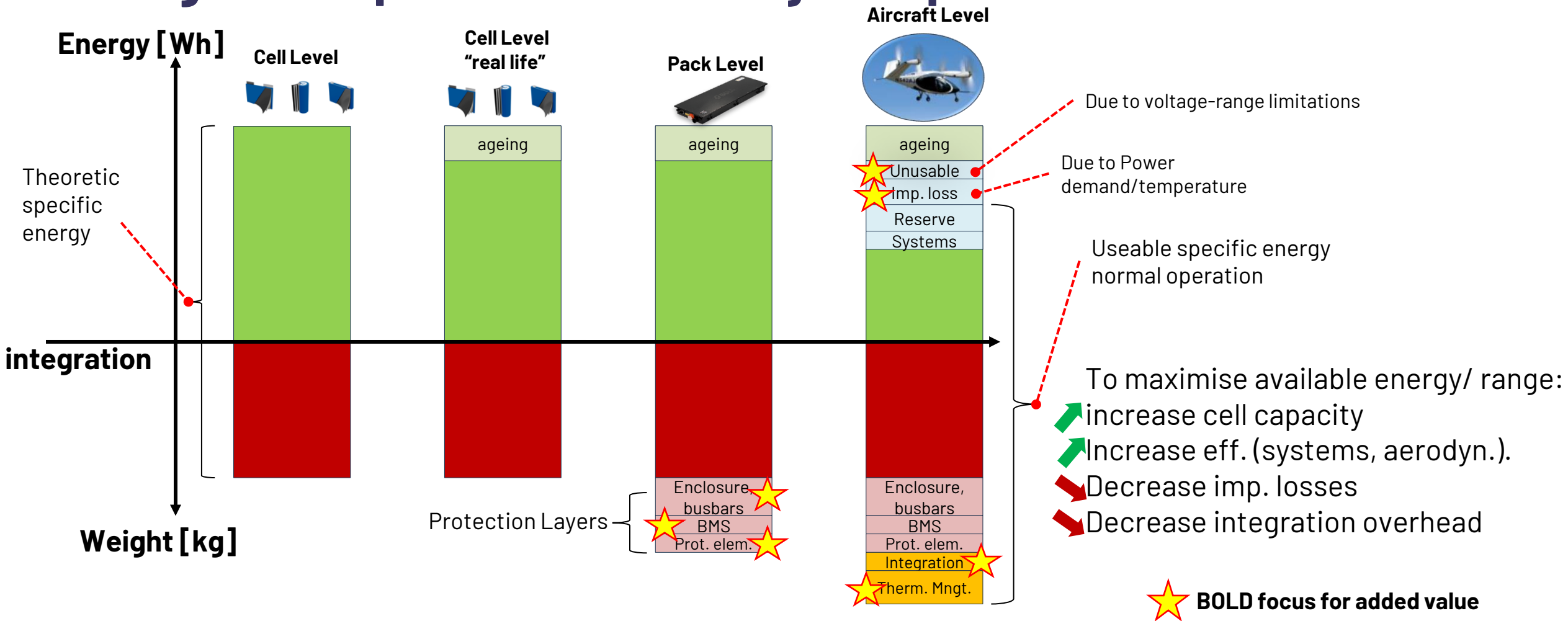
Energy Available



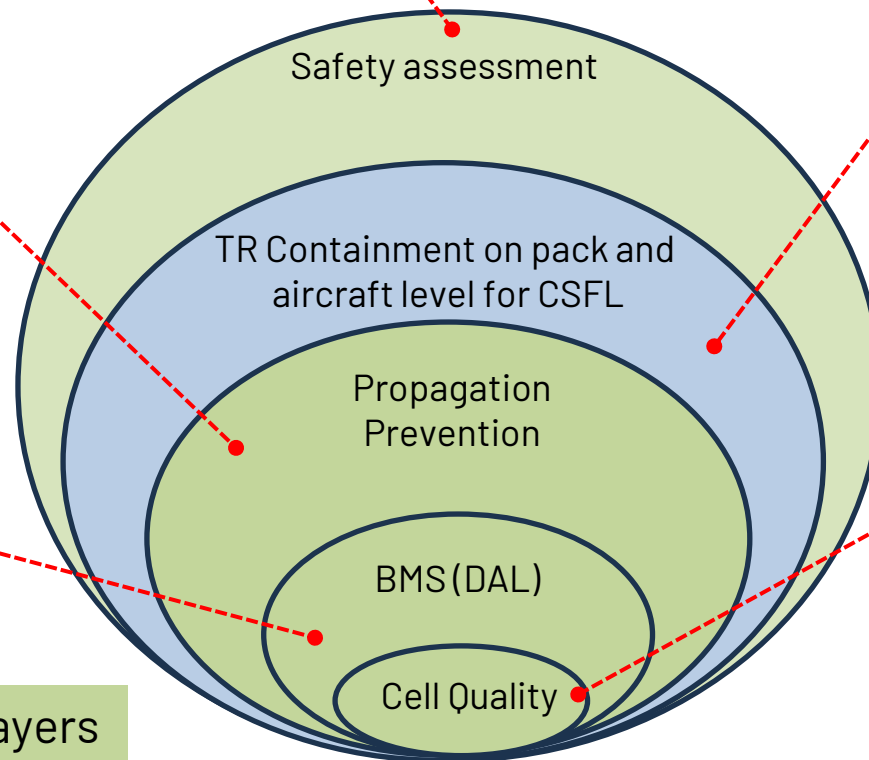
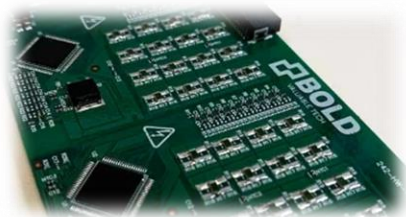
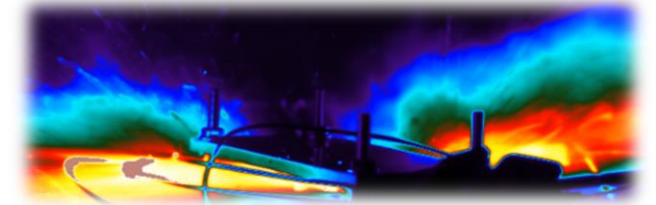
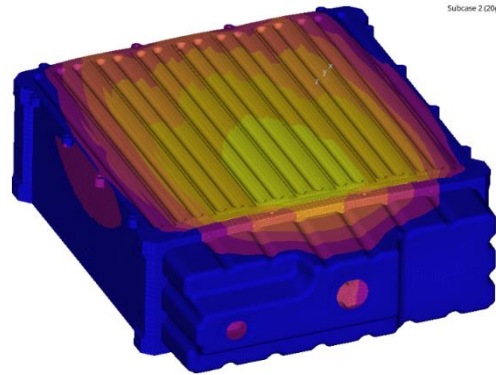
Impedance, SoC,
Capacity, Ageing,
Temperature

Source: GAMA Whitepaper Managing Range and Endurance of Battery-Electric Aircraft

Battery system technology have large influence in aircraft design and operation for safety and performance



The battery is a key element influencing safety on an electrified aircraft



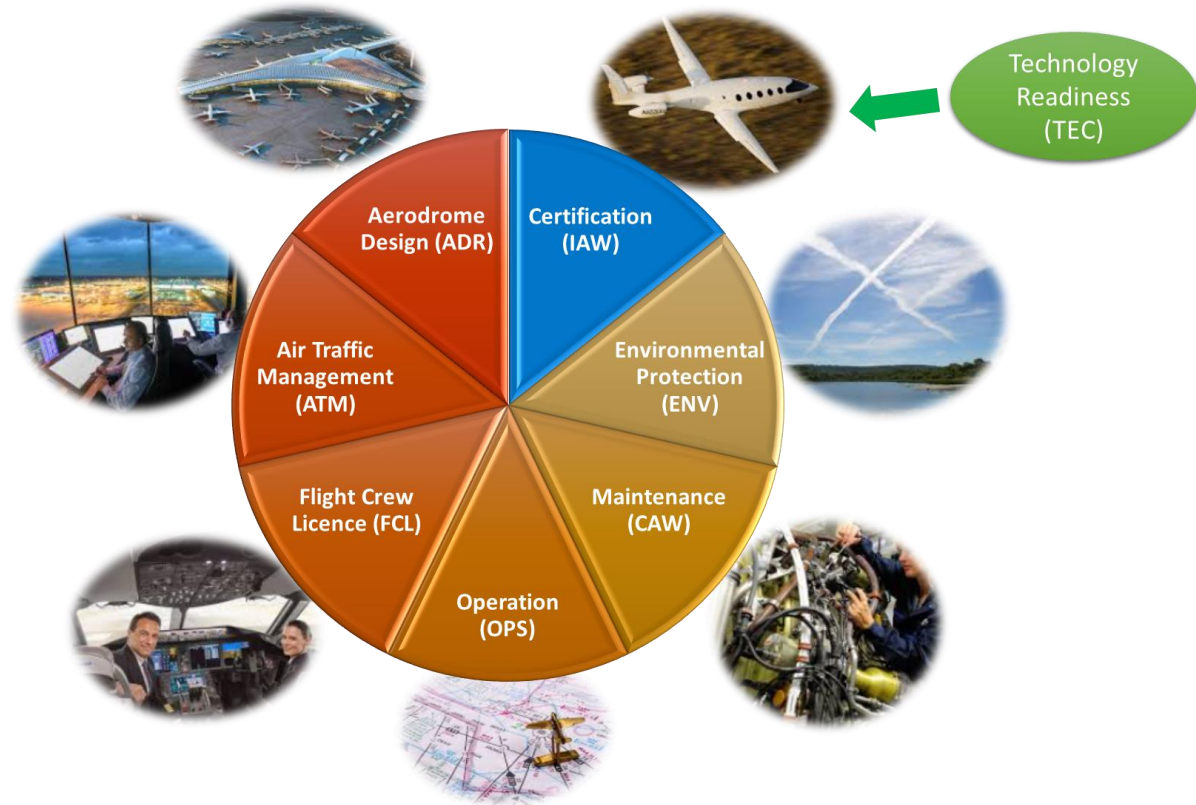
Protection Layers

Prevention Layers

BMS: Battery Management System
CSFL: Continued Safe Flight and Landing
DAL: Development Assurance Level
TR: Thermal Runaway

Certification is a major hurdle to bringing electric aviation to reality, but necessary

- Regulatory framework is still in development.
- Most projects/opportunities for business development are still in an early stage.
- Definition of DAL is a major driver for development time and cost.
- Technology maturity is still evolving

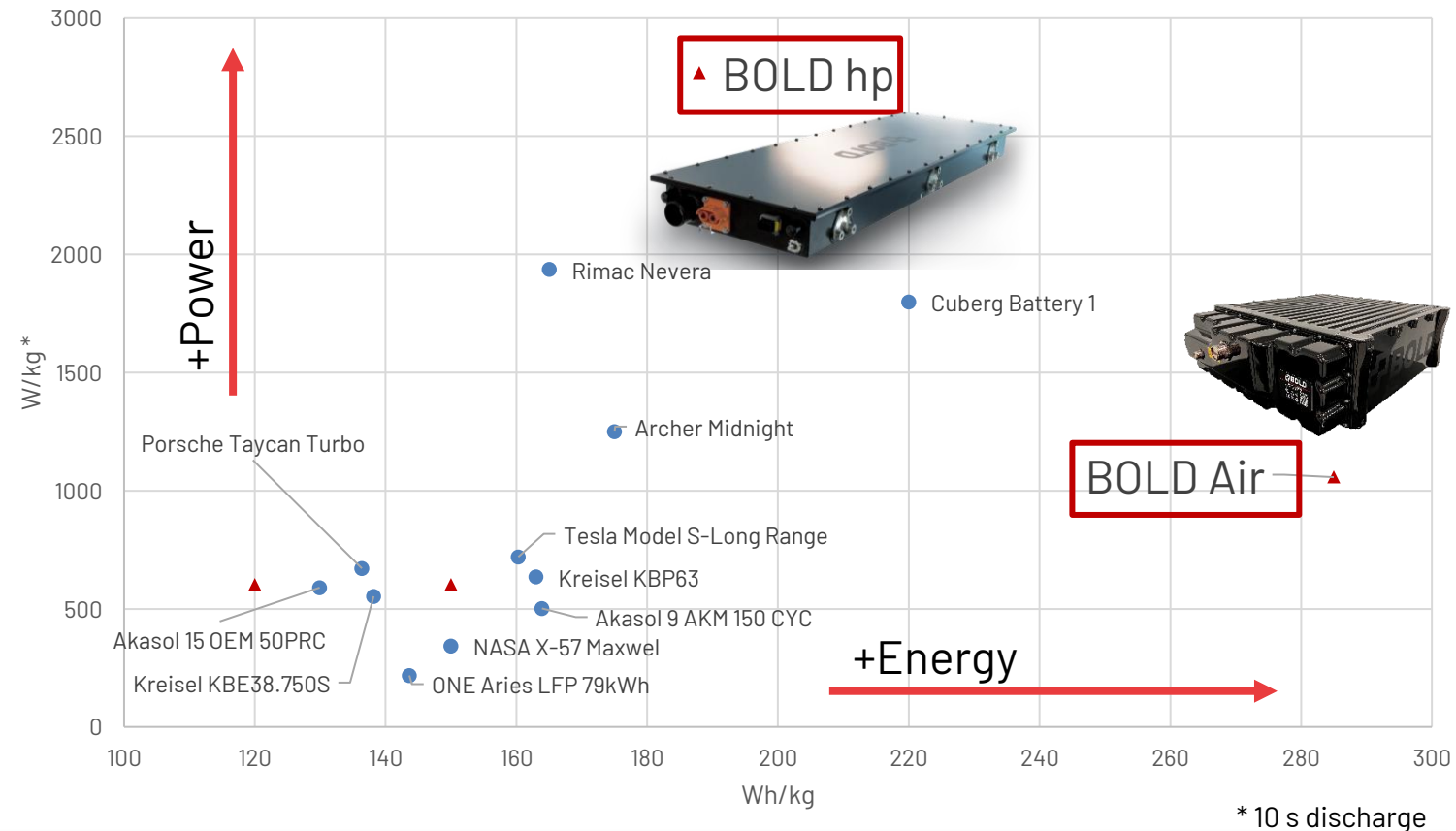


Operation at scale goes beyond aircraft certification.



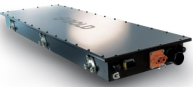









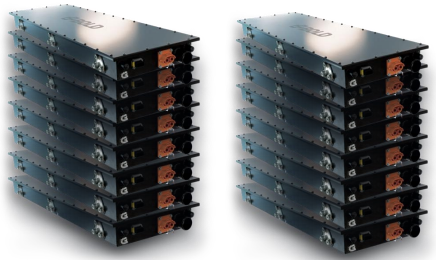



Current BOLD products competitive advantage leading to superior performance

By having several products developed and validated, our customers can get solutions quicker, cheaper and more reliably

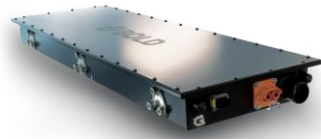
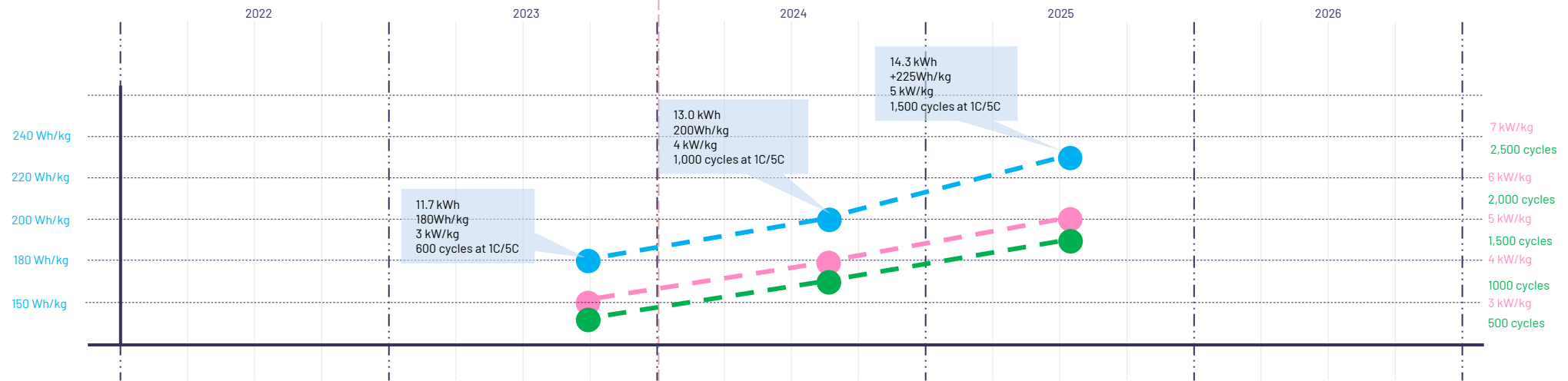
- Own software & hardware for BMS
- Cell to pack concept
- Composite enclosure in BOLD air
- TR propagation resistance BOLD hp
- Adapt to customer voltages and energies
- Ready to ship with UN38.3



BOLD hp is a versatile platform with very high continuous power and good energy density that can be parallelized

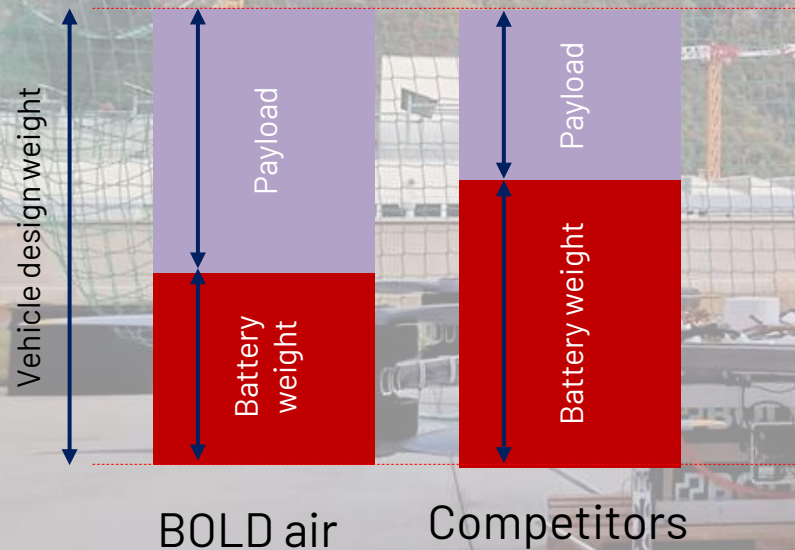
Building block	Application	Stackable	Customer Adaptations
 <p>11,7 kWh 200 kW</p>	 <ul style="list-style-type: none"> Hybrid System Small Energy High power 		<p>Energy </p> <p>Voltage </p> <p>Power </p>
<p>Standard BOLD battery</p>	 <ul style="list-style-type: none"> Large engine hybrid eVTOL High power 		<p>Energy </p> <p>Voltage </p> <p>Power </p>
<p>Standard BOLD battery</p>	 <ul style="list-style-type: none"> High Energy Lower voltage 		<p>Energy </p> <p>Voltage </p> <p>Power </p>

Strategic roadmap technology BOLD Hp

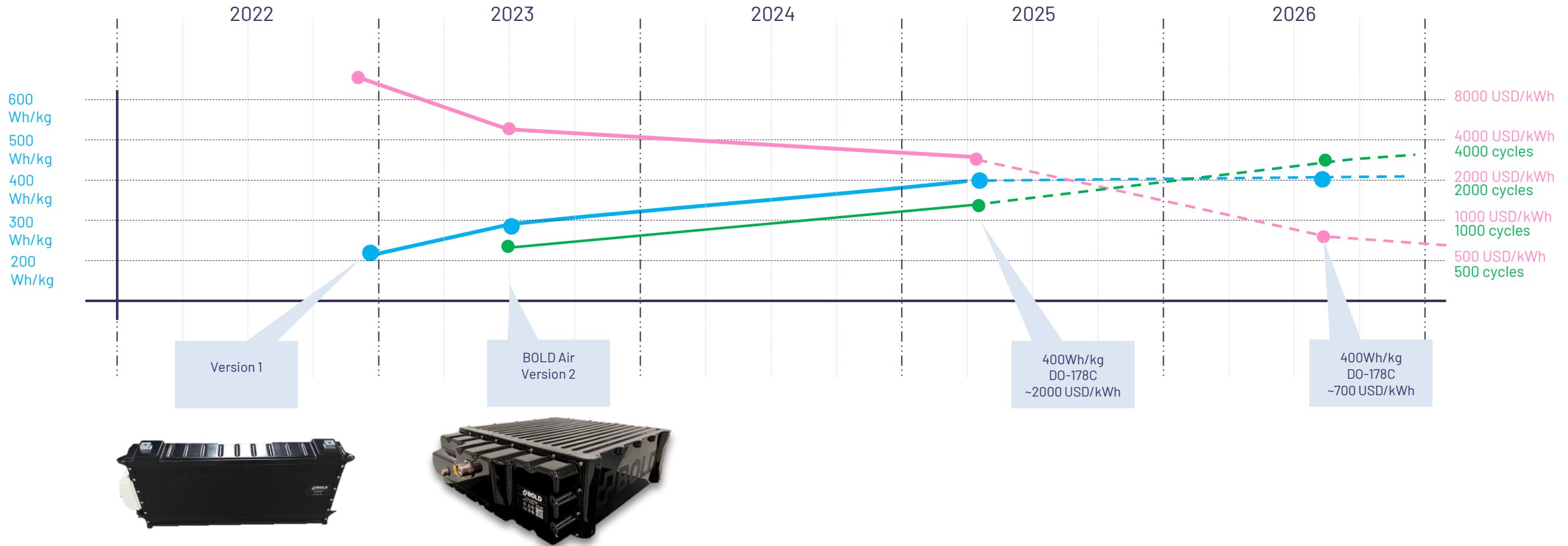


BOLD Air is a very high energy density with medium continuous power for UAV and large aircraft applications

Payload maximization with BOLD air battery—40% lighter than any competitor



Strategic roadmap technology BOLD air



Thank you

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