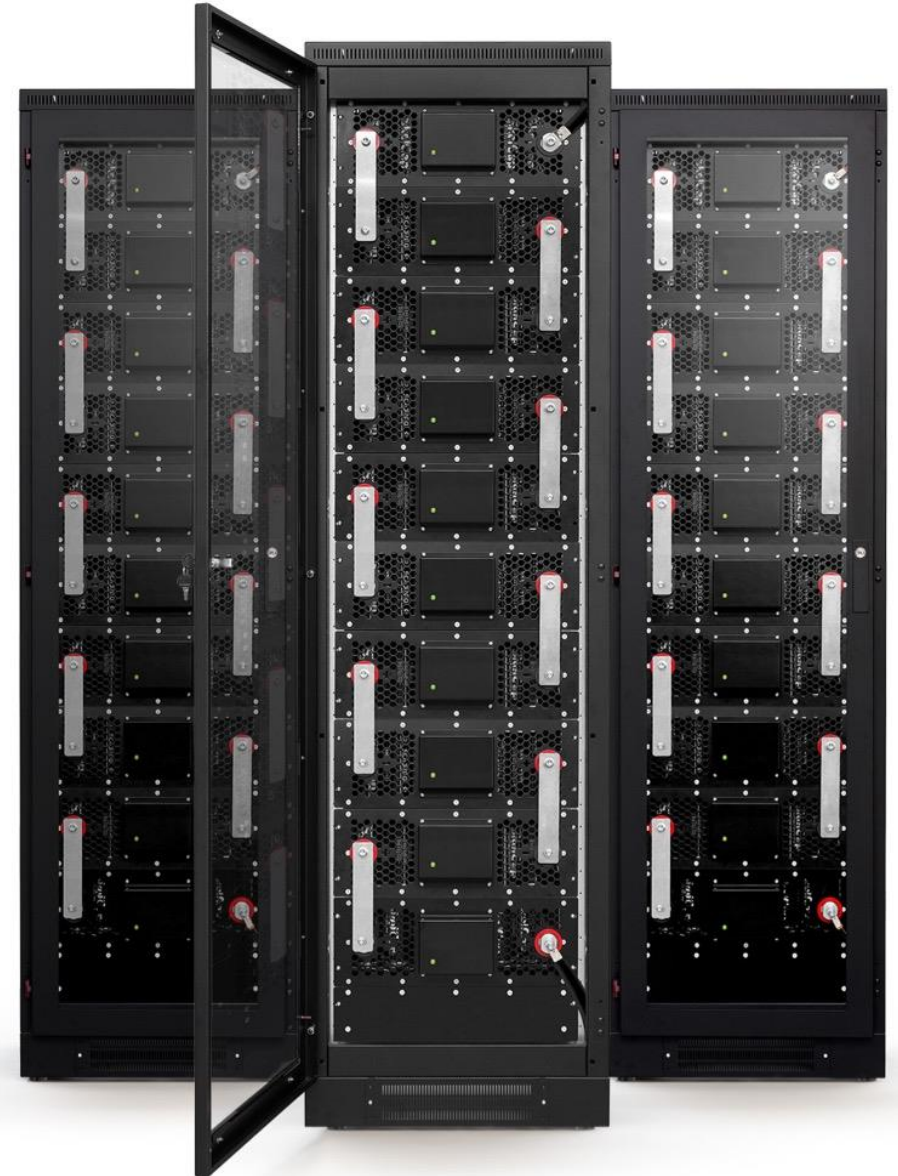


SKELE+ON

TECHNOLOGIES

GLOBAL LEADER IN
ULTRACAPACITOR-BASED
ENERGY STORAGE





COMPANY

COMPANY OVERVIEW

Skeleton Technologies Group

SKELE+ON
TECHNOLOGIES

ULTRACAPACITORS

- + Ultracapacitors are an energy storage technology that offers high power density, almost instant recharging and very long lifetimes.

PRODUCTS

- + Our patented “curved graphene” delivers twice as much energy storage capacity and four times higher power performance
- + Ultracapacitor-based energy storage solutions:
 - + Full energy storage systems
 - + Industrial modules
 - + Ultracapacitor cells

PEOPLE

- + 60 employees, 5 PhDs

FUNDING

- + 26,7 M EUR invested by UP Invest, Harju Elekter, KIC InnoEnergy and FirstFloor Capital

FIRSTFLOOR CAPITAL

HARJU ELEKTER

up invest

CUSTOMERS

- + Tier 1 automotives, OEMs



LOCATIONS

Skeleton Technologies Group

SKELE+ON
TECHNOLOGIES



Skeleton Technologies GmbH
Großbröhrsdorf, Germany

- + Industrial scale manufacturing facility



Skeleton Technologies OÜ
Viimsi, Estonia

- + Assembly facility and module development



Skeleton Technologies OY
Espoo, Finland

- + R&D Laboratory
- + State of the art electrochemical characterisation equipment

THE MANAGEMENT TEAM

Industry experts, entrepreneurs, and experienced leaders

SKELE+ON
TECHNOLOGIES

Oliver Ahlberg, COO

- + Co-founder of Skeleton
- + Serial entrepreneur
- + Successfully co-founded and sold local e-commerce company to market leader



Ants Vill, VPP

- + Mr. Vill's prior experience includes production management and Kaizen consulting. Knowledge of lean manufacturing has been acquired by studying renowned senseis like Taiichi Ohno's apprentice, sensei Nakao from Shingijitsu USA Corporation..



Taavi Madiberk, CEO

- + Co-Founder of Skeleton
- + Former Chairman of the Supervisory Board of Estonian Railways
- + Serial entrepreneur

Indrek Kaldoja, CFO

- + 11 years of experience in the financial sector
- + Founder and former COO at Essentia Capital
- + Previously fund manager at Swedbank Investment Funds and Ex General Manager at Hansa Private Equity Partners



James McDougall, Non-Executive Director

- + Start-up professional with global experience in commercializing new technologies
- + Has held several global leadership positions in North American, Asia and Europe as CEO and Managing Director



ENERGY STORAGE



WHAT IS AN ULTRACAPACITOR?

SKELE+ON
TECHNOLOGIES



FAST

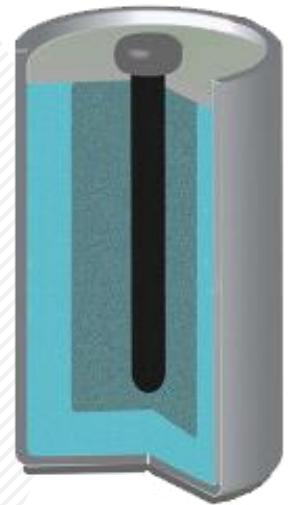
ULTRACAPACITORS USE AN ELECTRIC FIELD TO STORE ENERGY

- + high power density
- + almost instant charging and discharging
- + lifetime of up to 1 M cycles

SLOW

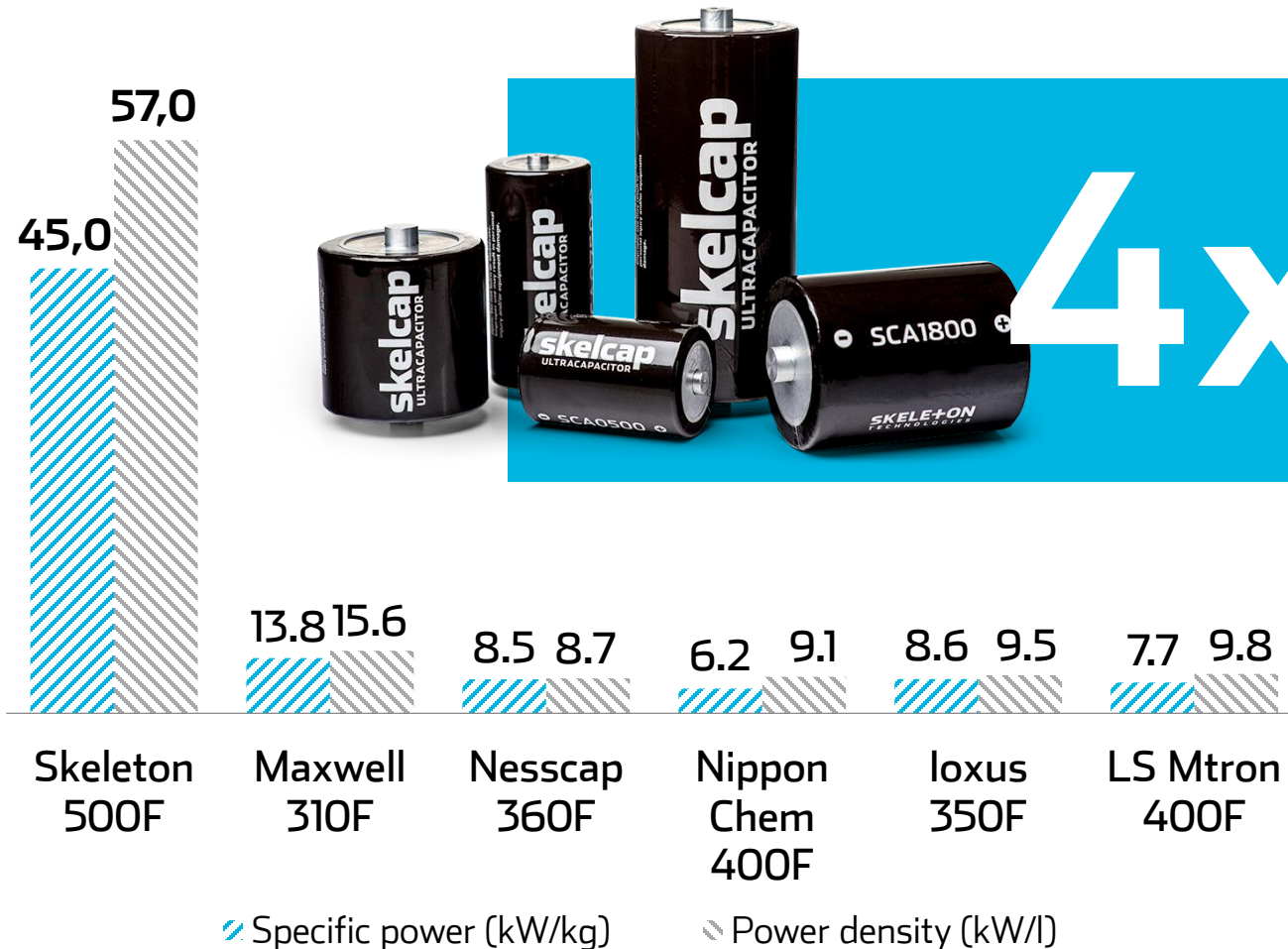
BATTERIES USE A CHEMICAL REACTION TO STORE ENERGY

- + high energy density
- + slow charge and discharge rate
- + lifetime counted in thousands of cycles



COMPETITIVE ADVANTAGE

SKELE+ON
TECHNOLOGIES



4x

**POWER DENSITY
vs COMPETITION**

+ Lower internal resistance and 4x higher power density achieved in cost-efficient product design

COMPLETE VALUE CHAIN

MATERIALS

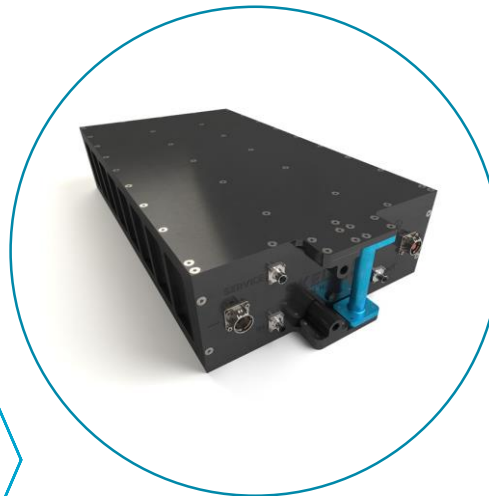


Curved
Graphene

SINGLE CELLS



SOLUTIONS





AUTOMOTIVE



AUTOMOTIVE USER CASE

Electric Turbochargers

Skeleton's advantages:

- + Lower cost and volume
- + Higher power density

5.7 kW

178g

0.124l

5.5 kW

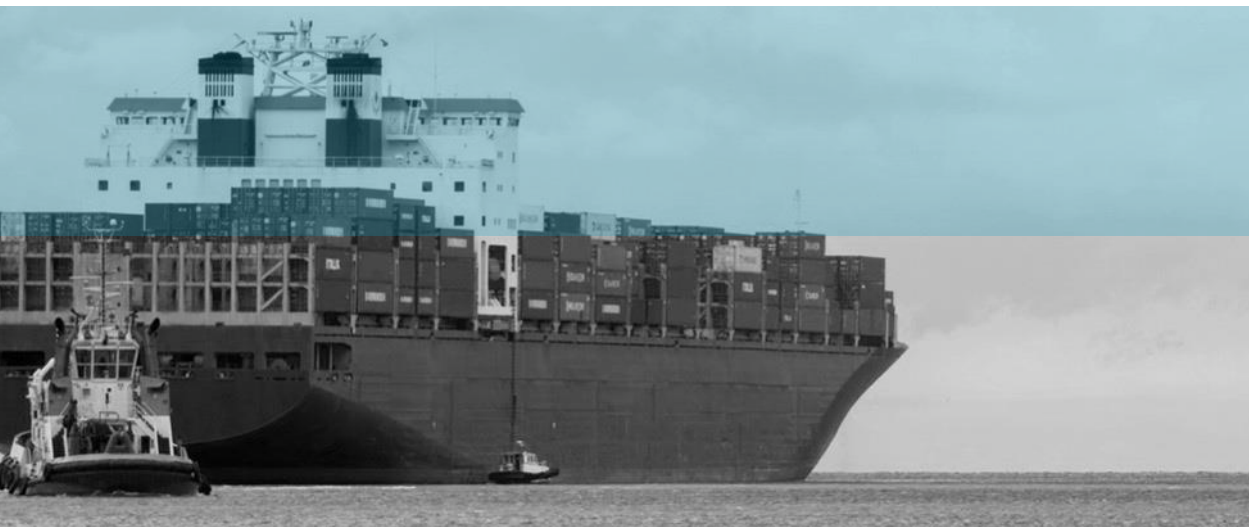
510g

0.4l





TRANSPORTATION



TRANSPORTATION USE CASE

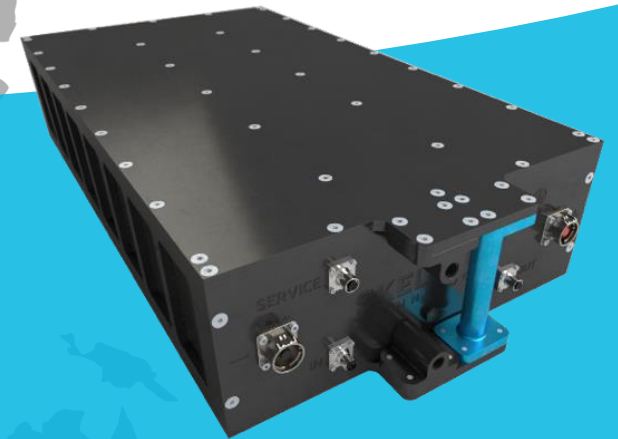
Hybrid Electric Buses



OTHER ULTRACAPACITOR MANUFACTURERS
MAXIMUM AMBIENT TEMPERATURE 25°C



SKELETON'S ADVANTAGE:
LOWER INTERNAL RESISTANCE KEY
ENABLING TECHNOLOGY FOR HOT CLIMATES
ALLOWS AMBIENT TEMPERATURE 45°C



A photograph of a wind farm with several wind turbines in a field. The image is overlaid with a semi-transparent teal horizontal band across the middle. The text 'GRID & RENEWABLES' is centered within this band.

GRID & RENEWABLES

GRID & RENEWABLES USE CASE

Pulse Power Supply 2,5 MW

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TECHNOLOGIES



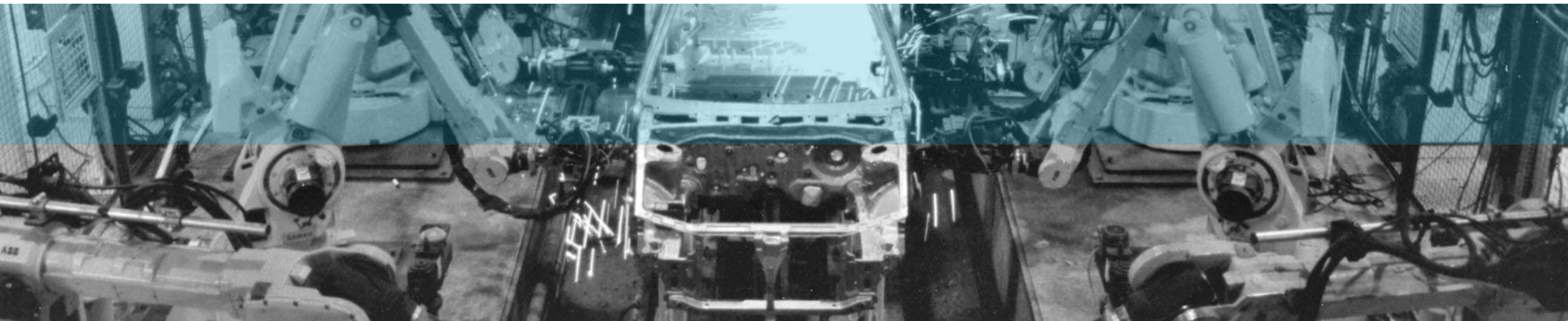
	MS	SCA3200
2,5 MW	2593 pcs	1250 pcs

Benefits:

**TWO TIMES LESS ULTRACAPACITORS
FOR THE SAME PERFORMANCE**



INDUSTRIAL EQUIPMENT



INDUSTRIAL EQUIPMENT USE CASE

Hybrid Excavators

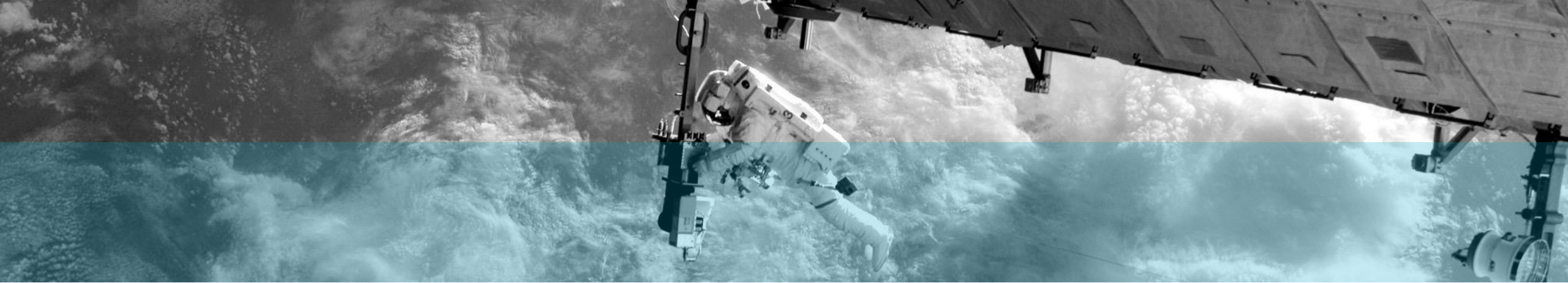


Benefits:

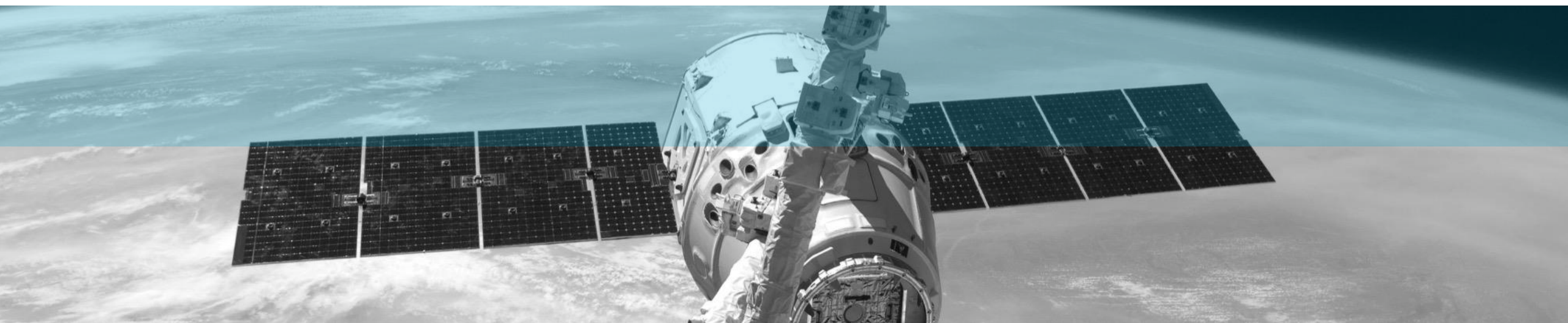
HIGHER LIFETIME
LOWER COST



CONTINUOUS CURRENT	CYCLE LIFETIME	
	MS	SkelCap
160 A	280 000	520 000
220 A	89 000	298 000



SPACE



RADAR- AND TELECOMMUNICATIONS SATELLITES

SKELE+ON
TECHNOLOGIES

10

**TIMES LESS
ULTRACAPACITORS
FOR THE SAME
PERFORMANCE**



DEVELOPED FOR
EUROPEAN SPACE AGENCY

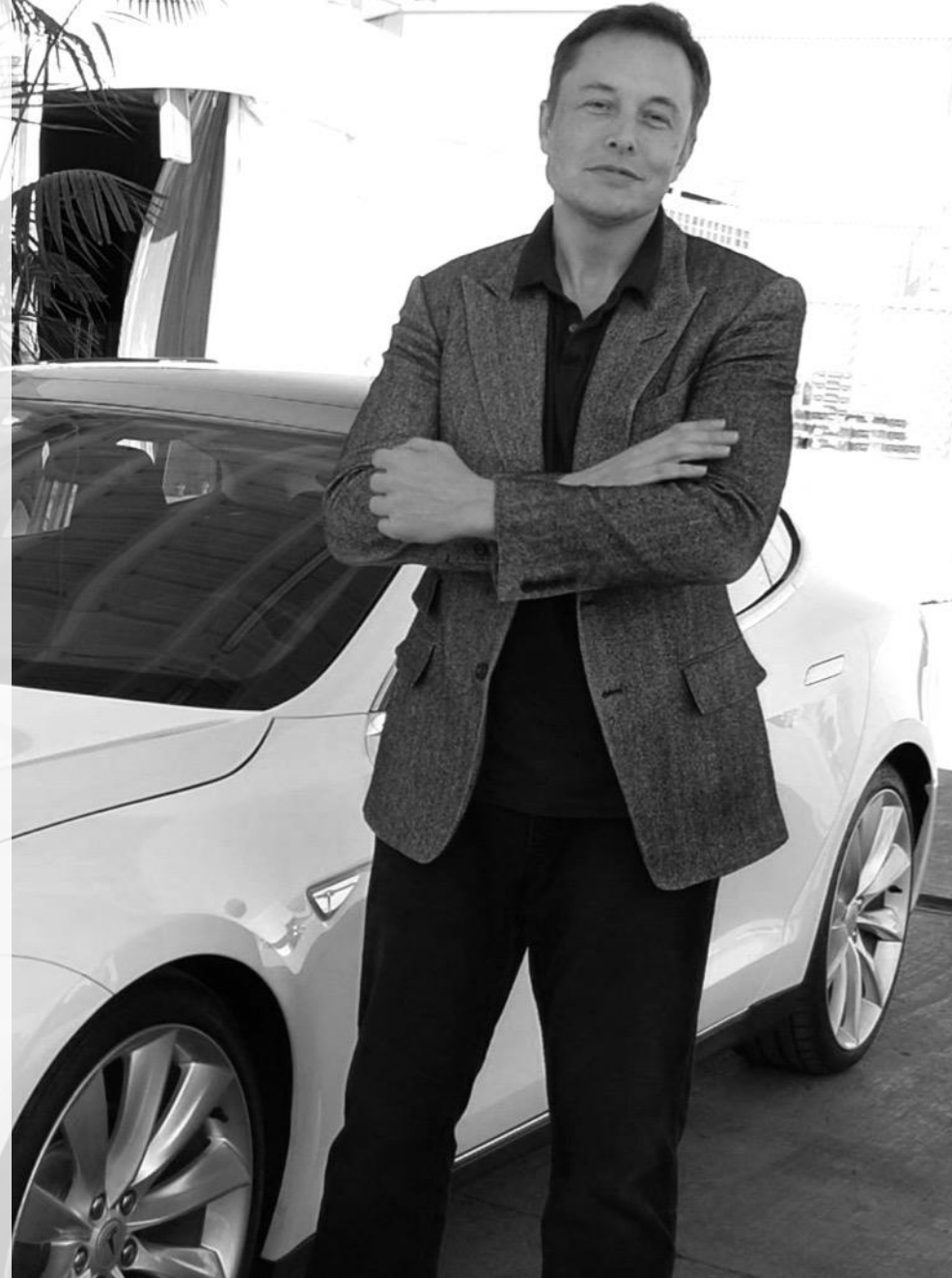


“

**ULTRACAPACITORS,
NOT BATTERIES,
WILL BE THE
BREAKTHROUGH**

Elon Musk

TC TechCrunch



WE ARE

SKELE+ON
TECHNOLOGIES

**WE HELP TO
SAVE ENERGY**

