

Next-Gen-Auto

Frank V. Billotto | Feb. 2022



DuPont's Global Overview

24,000+

Colleagues

110+

Manufacturing Sites

40+

Countries Where We Operate

~15

Global R&D Centers



Future-Gen Auto focuses on key industry challenges

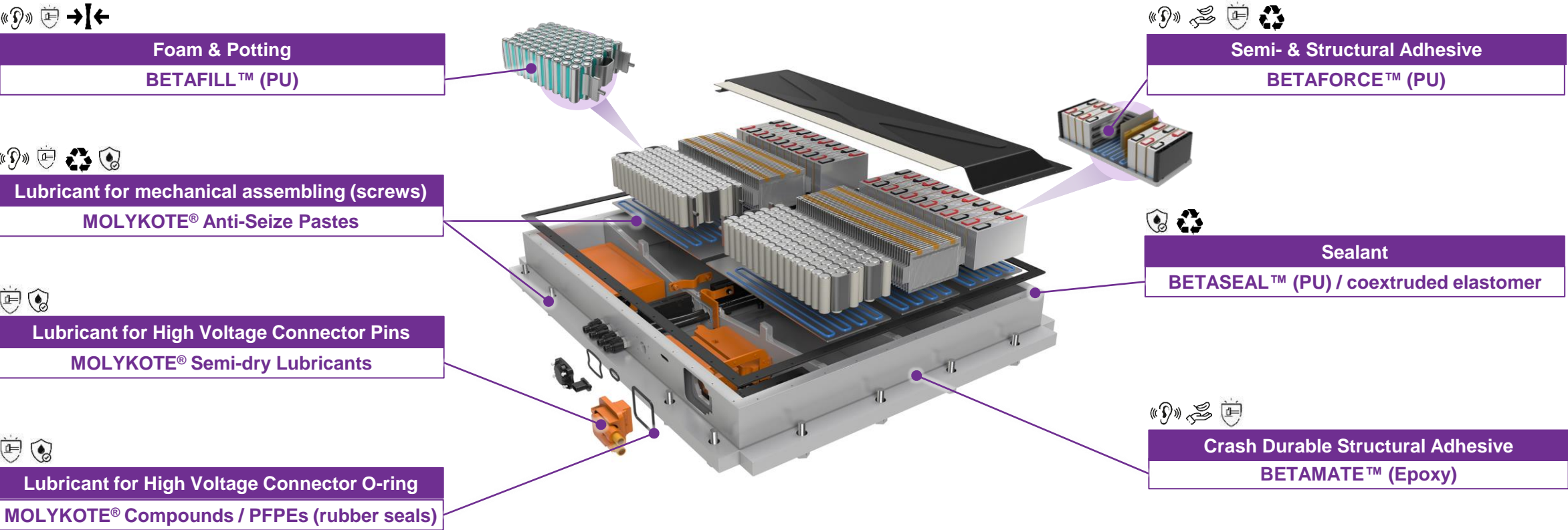
	Battery	eMotor and Drivetrain	Power Electronics (Inverter)	Connectivity, HMI, ADAS (Electronics)
FOCUS AREAS				
INDUSTRY CHALLENGES	<ul style="list-style-type: none"> • Improve battery durability and efficiency • Optimize thermal management and fire prevention for safe operations & rapid charging • Enable component reduction, serviceability and repurposing 	<ul style="list-style-type: none"> • Improve efficiency with high-voltage motors • Increase ease of assembly • Reduce NVH 	<ul style="list-style-type: none"> • Improve power output and heat removal • Improve ease of assembly • Improve efficiency via transition to next-gen technology, e.g., SiC 	<ul style="list-style-type: none"> • Improve signal integrity • Enable thermal mgmt. for PCBs • Protect structural integrity • Reduce complexity and sensitivity of calibration
OUR SOLUTIONS	<ul style="list-style-type: none"> • Thermal interface materials and Fire prevention liners • Multi-material bonding and Structural Crash Durable adhesives for sealing & assembly • Electrical insulation Films & Laminates • Lubricants to prevent seizing, wear and noise emission 	<ul style="list-style-type: none"> • Motor insulation systems • Wear and friction components • Materials for high voltage & extreme environments 	<ul style="list-style-type: none"> • Thermal interface materials • Robust technologies for high voltage/temperature environments 	<ul style="list-style-type: none"> • EMI shielding • Thermal interface materials • Electronics Protection Materials (Vibration/Gap Filler, etc.) • Flexible Printed Circuits



DuPont High-Voltage Battery Solutions



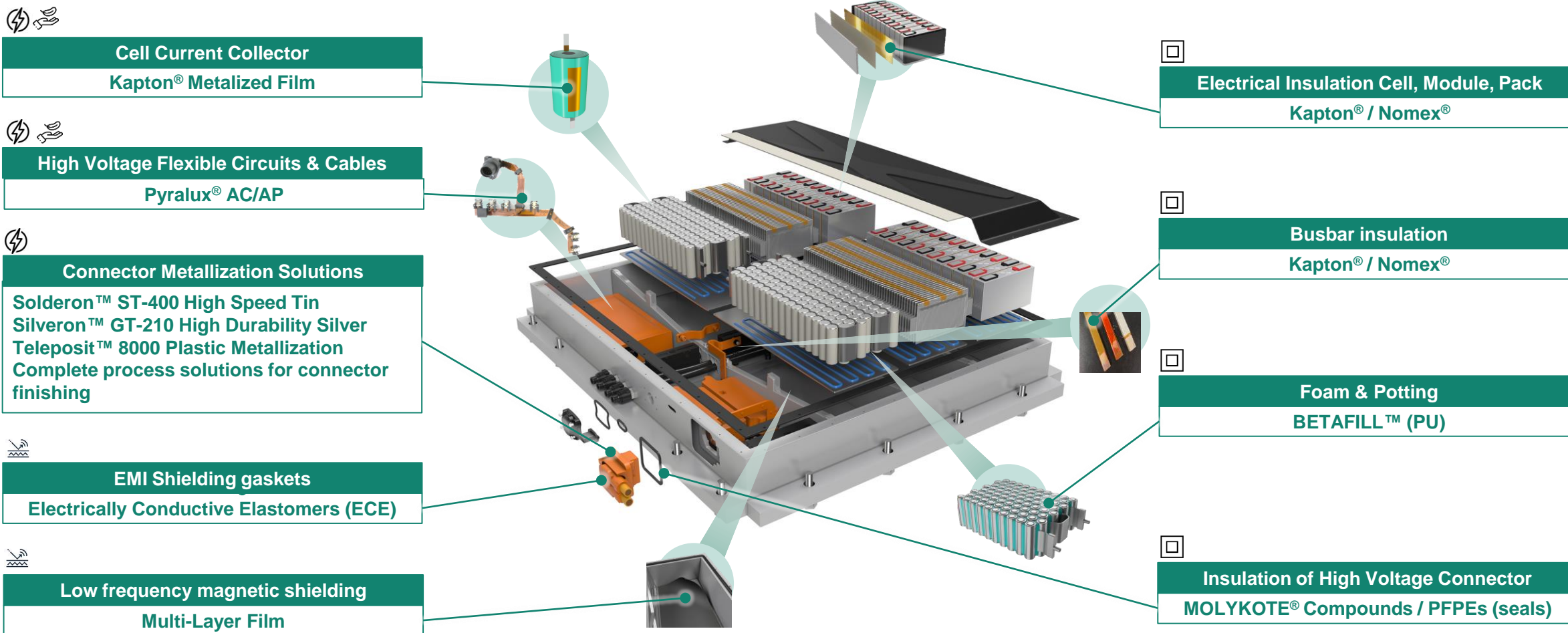
Battery Pack “Mechanical” solutions



«»» Anti vibration and NVH 🦋 Lightweight 🛡️ Structural integrity 🛡️ Environment & corrosion protection →|← Cushioning, compression & fixation ♻️ Repair, Repurpose & Recycle ability



Battery Pack “Electrical” solutions



Electrical insulation



Electrically conductive

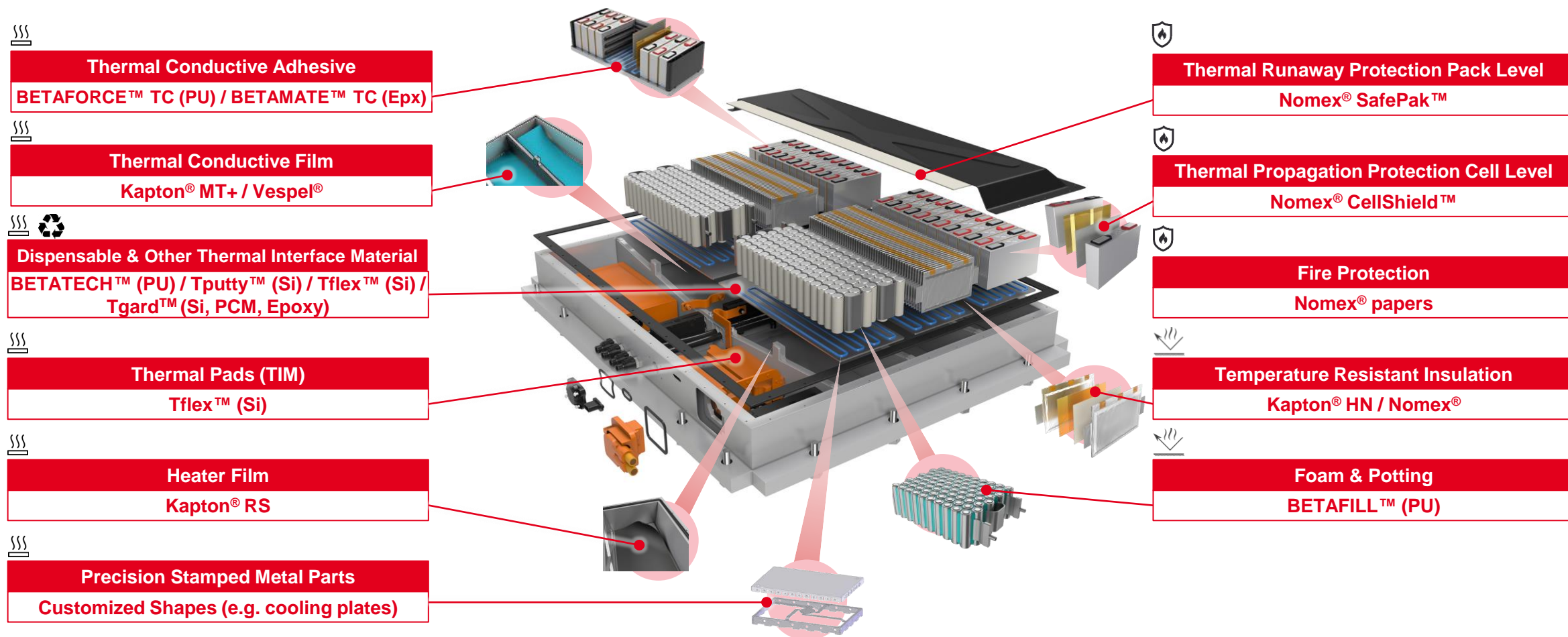


EMI Shielding



Lightweight

Battery Pack “Thermal” solutions



Thermal Conductivity



Thermal Insulation



Fire protection



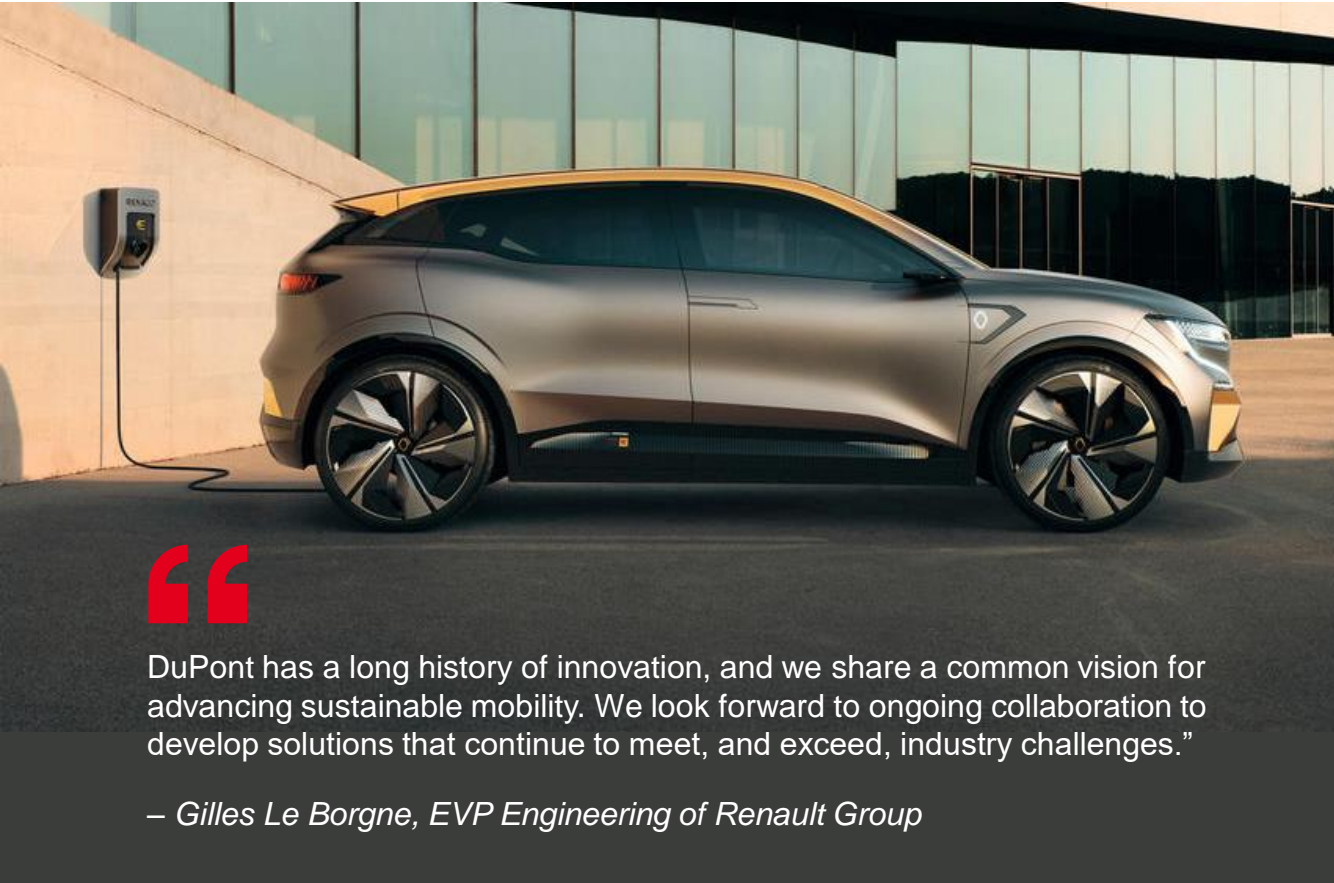
Repair, Repurpose & Recycle ability

Battery Management System “Performance” Solutions



Example: DuPont solutions OEM's are utilizing today!

BETATECH™ Thermal Interface Material



- Renault is a pioneer in automotive electrification, committed to the development of large-scale electric mobility
- Our one-component BETATECH™ was developed together with Renault to meet their performance and technical needs for high thermal conductivity, low viscosity and robust aging performance
- BETATECH™ was qualified by Renault and is now supplied to key EV production facilities in Maubeuge and Douai in northern France



DuPont has a long history of innovation, and we share a common vision for advancing sustainable mobility. We look forward to ongoing collaboration to develop solutions that continue to meet, and exceed, industry challenges.”

– Gilles Le Borgne, EVP Engineering of Renault Group



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