



SHAPING A CIRCULAR FUTURE, TOGETHER

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Empowering Multiple New Energy Industry Applications With Covestro polycarbonate solutions



Photovoltaics



Electrical Vehicle
Charging



Energy Storage

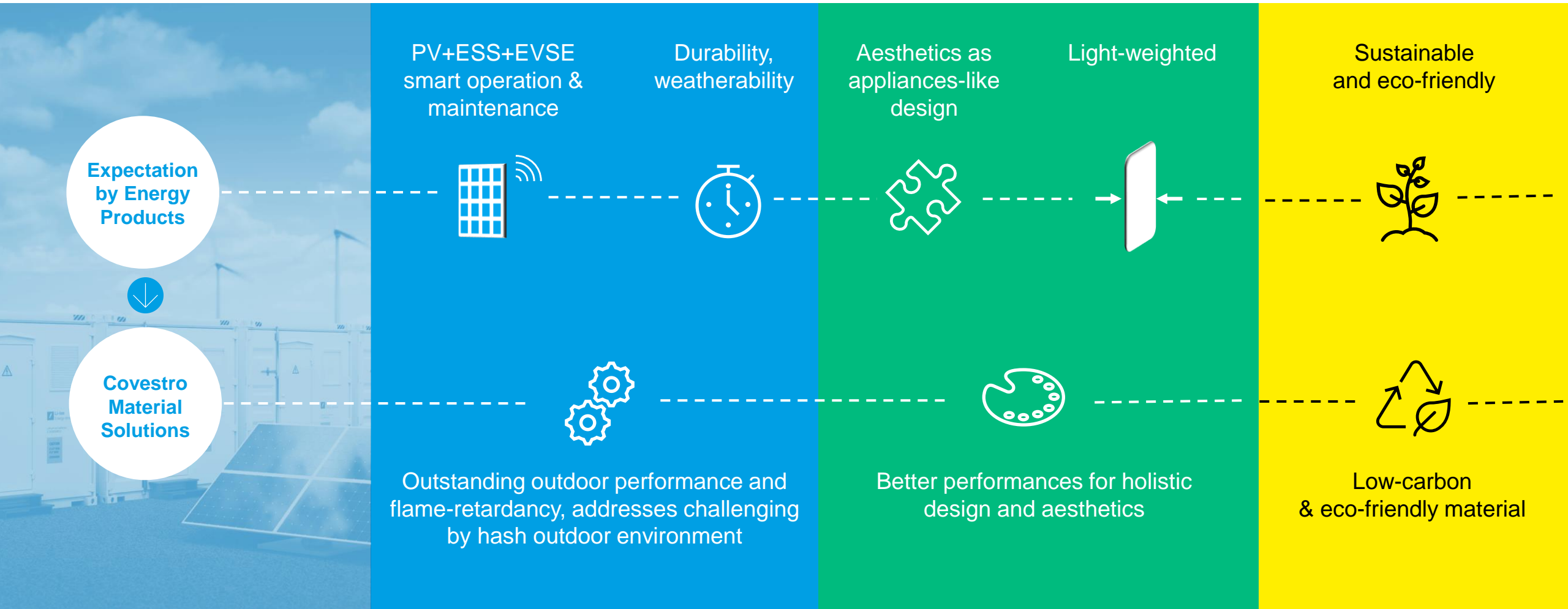


Battery



ENE
STOR

Market Trends of New Energy Industry



Balancing Light-weight with High Performance, Aesthetics and Sustainability



- Performances meet industry standards
- Proven **reliability** by global customers' long-term outdoor tests
- **Low-carbon material** with eco-friendly concept



Advantages of Covestro New Energy Solutions

- **High design freedom**
- Extensive colors, materials and optical effects
- Excellent dimensional stability

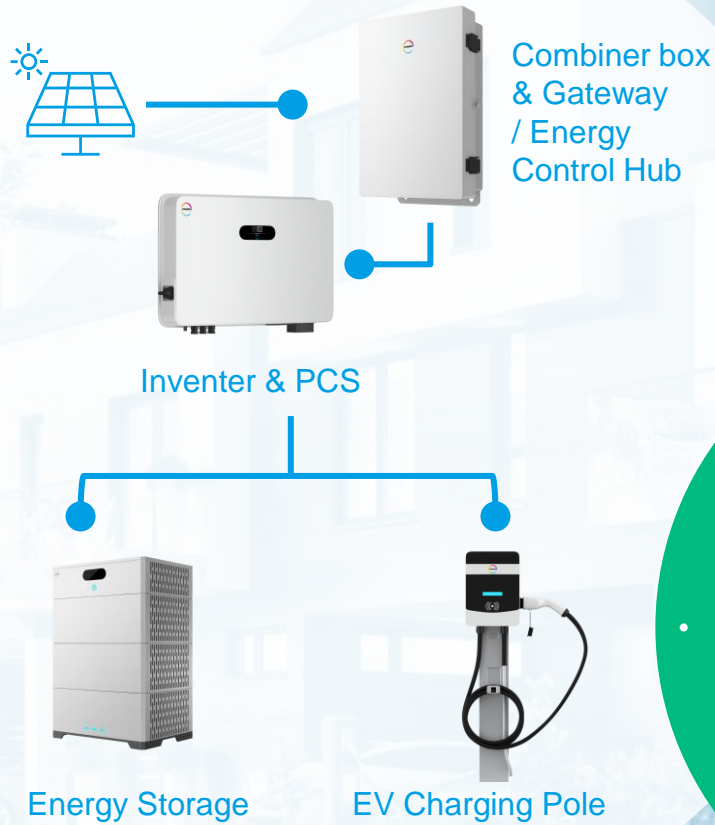


- Injection molding increases efficiency, empowering **more competitiveness**
- CMF solutions simplify coating process and bring down cost
- **Lightweight** brings down cost of logistics and installation

- Lighter
- Thin-wall design
- Integrated design



Covestro Leading New Energy Solutions for Outdoor Makrolon®



Performance Benefits

-  Excellent weather resistance
-  Excellent flame retardant
-  Excellent low-temperature impact resistance
-  Meets lightweighting & aesthetic requirements

Suitable for PV / ESS / EVSE

- Energy control unit
- Photovoltaic & energy storage inverter
 - Photovoltaic connectors
- Energy Storage Battery System (BMS + Battery)
- Charging pile + charging gun

Solutions

- ✓ Outdoor PC solution
- ✓ Low-carbon environmentally friendly solutions

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Performance Benefits



Excellent weather resistance



Excellent flame retardant



Excellent low-temperature impact resistance



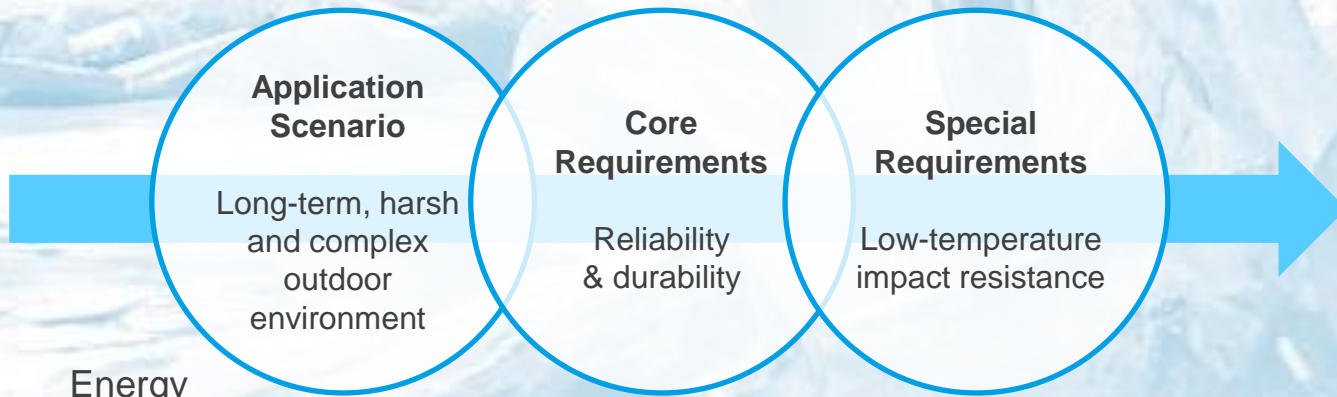
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Solutions

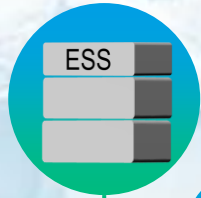
- ✓ Outdoor PC solution
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Covestro Leading New Energy Solutions for Outdoor Makrolon®



Energy Storage



Inverters



5G Base Station



Charging Station and Gun



Satellite Terminals



Outdoor Wi-Fi



Upgraded Performance of Outdoor PC



Excellent UV resistance



Excellent flame resistance



Excellent low-temperature impact resistance



Excellent heat resistance



Excellent waterproof

Covestro Leading Solutions for Internal Structures





Makrolon® & Bayblend®



Internal Frame

- Cell holder
- Busbar insulator
- Upper cover of battery module
- BMS...

Performance Benefits

-  Heat resistance
-  Thin-wall flame retardancy
-  Low-warp & dimensional stability
-  Easy molding and lightweight

Solutions

- ✓ Makrolon®
- ✓ Bayblend®
- ✓ Low-carbon solution



Covestro CQ Family: Flexibly Applied in Multiple Scenarios and Empowering Sustainability

#CircularIntelligence



Less impact to environment



Sustainable design



Lower cost by drop-in solutions



Establishing reliable green supply chain



Covestro CQ Family: Flexibly Applied in Multiple Scenarios and Empowering Sustainability



Post-consumer
Mechanical Recycled



R - series



Bio-circular-attributed



RE - series



Post-consumer
chemical-recycled attributed

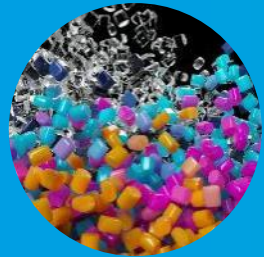


RP - series



- **Collaboration with sources of renewable materials** (wasted PC water bottle from Nongfu, electronics wastes from TES, ENCINA, etc.) increases traceability and reliability
- Certified by UL ECV, ISCC PLUS, etc., to **align with EPEAT & Amazon Climate Pledge Friendly**
- CQ solutions contain **recycle material ranging from 25% - 90%** and can be flexibly applied in extensive industries, supporting customers **goals of sustainability** such as **reducing plastics, carbon emission deduction and Scope 3**

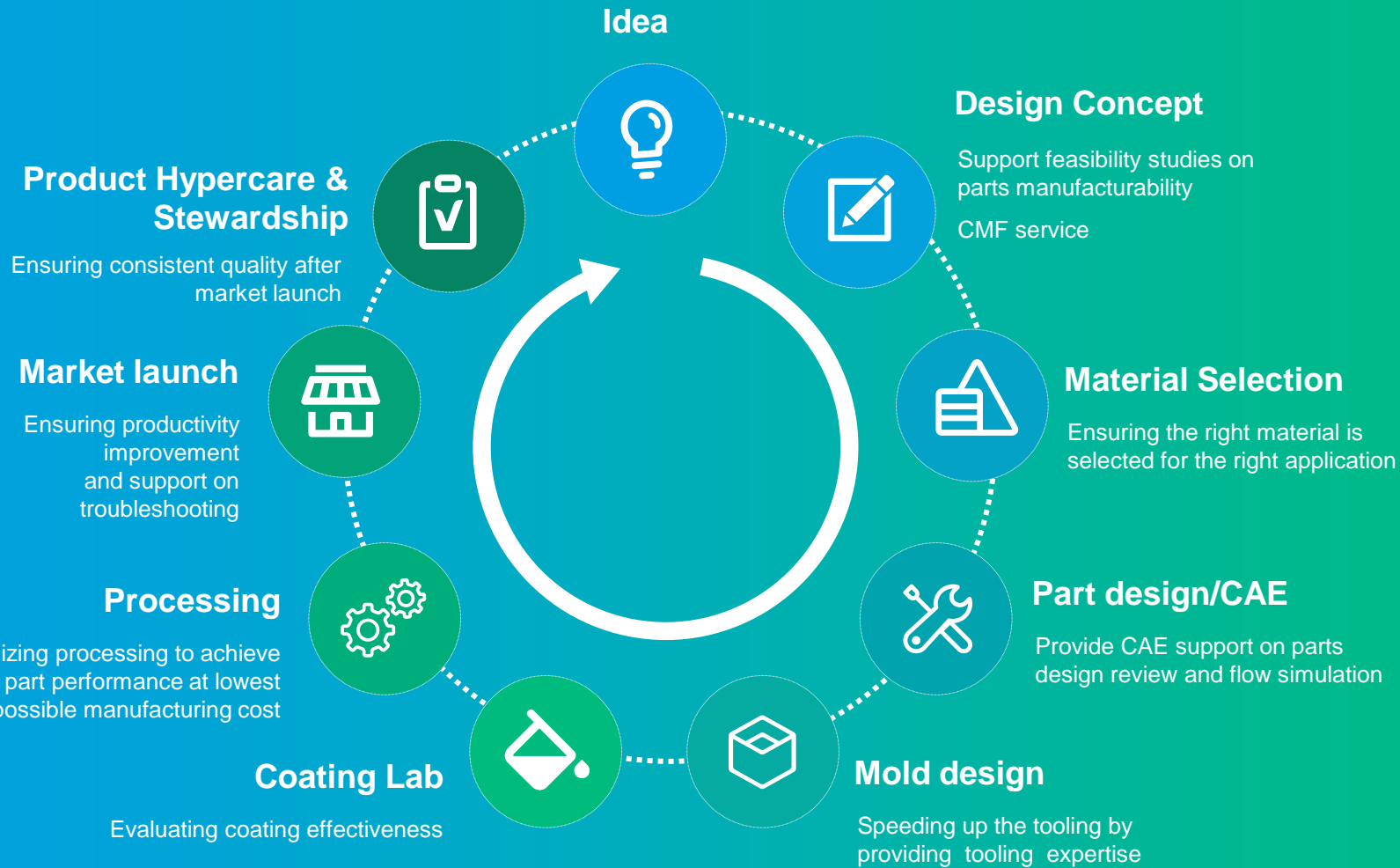
Covestro Supports Customers through Whole Product Cycle



PC and PC alloy



Advanced process



Design



CMF trends



Circular design guidance



THANK YOU.

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