

Innovation at PPG



PPG maintains a long-standing tradition of developing leading-edge technologies, achieving the highest quality standards and exceeding customers' requirements.

Through leadership in innovation, we help customers in industrial, transportation, consumer products, and construction markets and aftermarkets enhance more surfaces in more ways than does any other company.

Innovation by the numbers

\$464MM invested in research and development in 2018

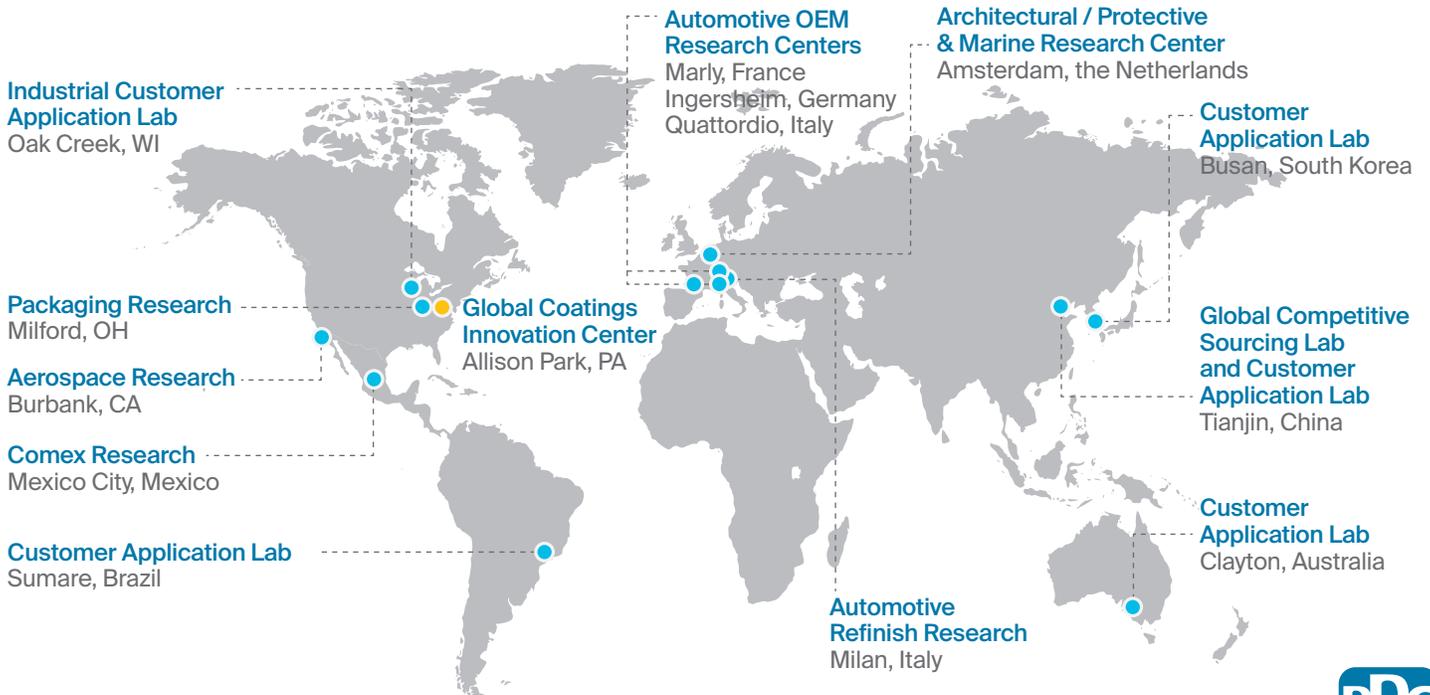
\$473MM average investment annually over the last four years in research and development, representing more than 3 percent of net sales from continuing operations

3,500+ technical employees at more than 100 global locations

32% of sales from sustainably advantaged in 2018, a 19% increase since 2014

40% target for total sales from products and processes that have improved sustainability by 2025

Global technical footprint



To learn more, visit ppg.com.



Key innovations and awards



R&D 100 awards again honor PPG products

Our OLYMPIC™ SmartGuard waterproofer in a pouch and Ambient Reactive Extrusion additive manufacturing (3D printing) process earned 2018 R&D® 100 awards in the mechanical devices/materials and processing/prototyping categories. The awards are one of the most sought-after recognitions for R&D innovation.



PPG named THE HOME DEPOT Supplier Partner

PPG received THE HOME DEPOT® Supplier Partner of the Year award in the paint category for the launch of PPG TIMELESS™ interior and exterior paint and *Olympic* stains. PPG *Timeless* paint provides one-coat coverage and the toughest, most wear-resistant finish for interior paint.



Aerospace intelligent window system recognized for innovation

Our WINLOGIC™ intelligent window system earned our aerospace business a bronze-level 2018 EDISON AWARD™ in the automotive and airline technology category. The system is engineered to sense the aerospace windshield's health and provide protection from emerging electrical problems that may result in failure or breakage of the window.



PPG recognized as CIO 100 award winner for fourth time

In recognition of its dramatic increase in color-matching confidence and accuracy for automotive refinish customers, our PAINTMANAGER® XI software platform received a 2018 CIO 100 award. The award program recognizes organizations around the world that exemplify the highest level of operational and strategic excellence in information technology.



Driving the future of mobility

PPG is at the forefront of the future of autonomous driving by developing a broad portfolio of advanced coatings that play key roles in the deployment of autonomous and electric vehicles. These products include exterior coatings that enhance vehicle visibility to light detection and ranging (LiDAR) systems; easy-to-clean coatings that help prevent obstruction of autonomous vehicle sensors; and environmentally-sensitive cathode and anode coatings used to store and transfer energy within modern lithium ion batteries.



The whole sustainability package

The lightweight pouch package and super-concentrated formula for our *Olympic* SmartGuard multi-surface waterproofer deliver a sustainability trifecta – decreased energy consumption, resource use and waste. We anticipate the product will reduce fuel consumption by 4.25 percent, tree consumption for pallets by 3.92 percent and stretch wrap usage by 13 miles (21 kilometers) compared to traditional stains. The sealer earned a 2018 R&D® 100 award in the mechanical devices/materials category.

To learn more, visit ppg.com.

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