

# Innovation

\$4.0B

invested in company- and customer-funded research

**United Technologies is synonymous with innovation. The company was founded by some of the greatest inventors of all time and today is home to many of the world's most brilliant engineers, scientists and developers.**

Innovation is woven into the fabric of the company. And leading the effort are two distinct organizations — engineering and research, and digital. Both made substantial contributions to company milestones in 2018.

On the aerospace side, Collins Aerospace Systems and Pratt & Whitney celebrated the Embraer E-Jet E2's entry into service. The aircraft is equipped with significant Collins Aerospace content, including engine controls, nacelles, wheels and carbon brakes, fire protection, evacuation systems, air data systems, Head-up Guidance System, electric and emergency power generation, and primary and secondary power distribution. The aircraft also features Pratt & Whitney's latest Geared Turbofan variant, which continues to exceed expectations for fuel efficiency, noise reduction and emissions.

On the commercial building side, Carrier launched more than 100 new products for the fourth year in a row, including a new HVAC rooftop unit that offers a 40 percent improvement in efficiency. Otis is on track to connect its global portfolio of 2 million elevators and escalators. Its new Otis ONE service platform collects real-time performance data to predict and prevent shutdowns.

We have made significant investments in our research centers, a move that will enable us to expand our capabilities in scientific modeling and simulation; advanced materials and manufacturing; high-power electrical systems; connectivity and embedded intelligence; and cyber-physical security.

We also are expanding our digital capabilities. We are aggressively using our domain expertise, data analytics and software development to design solutions that enable customers to achieve new levels of value, while also accelerating growth across our business lines.



▶ Diana Giulietti, senior engineer, works in United Technologies' new additive manufacturing facility in East Hartford, Connecticut. Additive manufacturing is one of the most transformative technologies to come along in decades. Using 3D modeling software, it enables rapid prototyping and reduces costs, timing and risk.

▶ At our state-of-the-art digital hub in Brooklyn, New York, a team of nearly 150 data science, design, product and software experts are working together to develop solutions that make the most of big data and the increasing connectivity of products and services. Their mission is to ensure that United Technologies is a leader in the digital world, developing products and services that deliver value for customers and drive our own efficiencies.

