



KEEPING YOUR PRODUCT PROMISE

Every product represents a promise — a commitment to reliable, robust performance. ANSYS helps you honor that commitment with industry-leading design exploration capabilities that deliver product integrity, quickly and cost-effectively.

**By Barbara Hutchings, Director,
Strategic Partnerships/HPC Strategy, ANSYS, Inc.**

In today's hyper-competitive, hyper-connected business landscape, product integrity has never been more critical. As recent headlines attest, the financial cost of product failure can have a major impact on a company's bottom line — eroding current profit margins and impacting future financials as potential warranty costs are built into the forecast. There are other long-term costs of product failures that may be less tangible but equally important. Today, thanks to the expansion of social media, a single dissatisfied customer can share his or her views with the world in seconds, via a single mouse click. Though harder to measure than warranty costs, negative product reviews can cause irrevocable damage to any manufacturer's hard-won brand equity.

To make things even more challenging, product reliability is not the only imperative that engineering teams face today. With shorter and shorter product lifecycles — and an increased level of product customization — engineers are pressured to produce more designs, faster than ever. The rise of smart products, with their plethora of electronic components, has taken design complexity to a level we could not have imagined even a decade ago.

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At ANSYS, we call this reliability-driven product development focus “robust design.” Pratt & Whitney has coined the term “design for variation,” while other industry leaders reference “design for six sigma.” Whatever name it takes, design for product integrity is a pressing engineering imperative today, spanning every industry, product and engineering discipline.

ANSYS has made a sustained investment in developing a parametric, persistent computer-aided engineering (CAE) platform to support our customers' robust design initiatives. The parametric simulation capabilities of ANSYS software allow engineers to easily

vary a wide range of parameters — including geometry, material properties, model controls and operating conditions — to identify those few critical areas that could jeopardize product integrity. ANSYS has also committed to making it easier and more straightforward to integrate multiple physics in this parametric approach, which is essential because design failures often come as a result of physical interactions that would be missed in a single-physics design approach.

High-performance computing (HPC) is an enabler for robust design; the ability to consider multiple design ideas requires significant computational throughput. Our customers can achieve high throughput because ANSYS software is optimized to run fast and deliver outstanding scaling on today's multicore processors. With the latest release, we have innovated our HPC licensing to enable parametric analyses to be performed simultaneously — and more affordably — using parametric HPC job scheduling.

While robust design is growing as a strategic imperative, many engineering teams still express doubts about their ability to adopt this far-reaching, yet highly targeted, method of product development. The good news is that simulation software improvements are making it easier, faster and more cost-efficient than ever for every engineer to embrace the concept of robust design. At ANSYS, we are making a promise to continue our solution improvements until robust design becomes not just the leading practice, but the industry standard. By keeping this promise, we hope to help you keep your own essential promises. ▲