Exponential growth in design complexity and a growing skills gap are threatening the industry while it works to innovate faster.

A&D companies must improve engineering productivity by digitally transforming their engineering processes and implementing simulation.

Simulation accelerates innovation at a lower cost and with fewer resources.

OF INDUSTRY EXECUTIVES WILL ADOPT NEW AND EMERGING TECHNOLOGIES BY 2020

TOP CHALLENGES FOR A&D PRODUCT DEVELOPMENT

- 42% of products are BECOMING MORE COMPLEX
- 37% of products OPERATE in VARIABLE and COMPLEX ENVIRONMENTS
- 34% of DEVELOPMENT RESOURCES are LIMITED
- 48% of A&D businesses claimed that recruitment issues had DELAYED PRODUCT DEVELOPMENT and INFLATED OPERATING COSTS

The first B-757 was flown in 1982. By 1992 the B-777 had 21X MORE ONBOARD SLOC* than the B-757, which required an estimated 28.5X GREATER DEVELOPMENT EFFORT

TOP ACTIONS TO IMPROVE PRODUCT ASSESSMENTS

- Use simulation earlier in the development process: 73%
- Promote collaboration between analysis experts / design engineers: 53%
- Combine more physics into analyses to increase simulation realism: 49%
- Capture simulation expertise and make it more accessible to others: 42%
- Invest in hardware infrastructure, such as HPC, to support simulation: 34%

Materials data management can reduce the time for materials research from DAYS TO HOURS

A CONSOLIDATED SIMULATION PLATFORM will lead to a 17% improvement in prompt launch dates and a 20% rise in achieving product cost goals

Multiphysics simulation users are 44% more likely to meet launch dates and 58% more likely to meet product cost targets, compared to non-simulation users

Sources: Aberdeen.com, Accenture.com, ANSYS.com, Carbon60global.com, Savi.avsi.aero

ANSYS.com/A-D