Human Factors and Ergonomics Society

Human Factors and Ergonomics Society (HFES) Testifies at U.S. House of Representatives Committee on Transportation and Infrastructure Hearing

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Dr. Mica Endsley serves as an expert witness on the Boeing 737 MAX 8 accidents earlier this year

Washington, DC (December 12, 2019) – Human Factors and Ergonomics Society (HFES) Government Relations Committee Chair, Dr. Mica Endsley, testified yesterday on behalf of the Society during a U.S. House Committee on Transportation and Infrastructure hearing entitled "The Boeing 737 MAX: Examining the Federal Aviation Administration's Oversight of the Aircraft's Certification." The hearing examined the Boeing 737 MAX 8 and the Federal Aviation Administration's (FAA) oversight of the aircraft's certification.

Dr. Endsley's testimony focused on how Human Factors Engineering should be applied and prioritized in the design and development of all civilian and military aircraft systems, and how Human Factors standards were not followed in the design and certification of the MAX 8 aircraft. She discussed key system design deficiencies that HFES believes contributed to these accidents, including issues stemming from a lack of necessary displays, pilot training, and understanding of the automation. "While automation can be beneficial, it can also lead to new types of human error," Dr. Endsley stated. Addressing the increased workloads for operators associated with failures of automation, Dr. Endsley discussed at length the importance of clear, understandable alarms to allow pilots to diagnose cockpit issues.

When Chairman Peter DeFazio (D-OR) asked what the Committee's highest priority ought to be, Dr. Endsley pointed to the importance of ensuring a high level of safety culture at manufacturers like Boeing. Fellow panelist G. Michael Collins, a retired FAA propulsion specialist, echoed her recommendation.

Dr. Endsley presented in the second panel of the hearing, while the first panel featured FAA Administrator Stephen Dickson. When asked by Rep. Grace Napolitano (D-CA) about Dr. Endsley's testimony, Administrator Dickson praised the recommendations in her submitted statement. Administrator Dickson was particularly interested in Dr. Endsley's thoughts on how best to maintain pilot engagement. Dr. Endsley also took questions from Reps. Rick Larsen (D-WA), Carol Miller (R-WV), and Julia Brownley (D-CA) on how to integrate human factors into the certification process and how to strengthen the FAA's human factors capabilities.

"HFES thanks the U.S. House of Representatives Committee on Transportation and Infrastructure for the opportunity to provide expert testimony on such an important topic as the Boeing 737 MAX 8 accidents." Stated HFES President, Dr. Susan Hallbeck. "Human factors looks at every aspect of how humans, think, perceive, and human capabilities and limitations. Accounting for Human Factors Engineering during every step of the design and development process is vital across aircraft and other occupational systems."

Dr. Endsley's testimony for the record, a list of other witnesses, and an archived webcast of the hearing can be found on the Committee's website.

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About the Human Factors and Ergonomics Society (HFES)

The Human Factors and Ergonomics Society, founded in 1957, is the world's largest scientific association for human factors/ergonomics professionals. HFES serves the needs of members and the public by promoting and advancing the discovery and exchange of knowledge concerning the characteristics of human beings that are applicable to the design of systems, products, tools, and environments of all kinds. For more information, visit www.hfes.org.

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