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The Boeing Company has developed a new analytic tool to help airlines reduce safety risks.

PEAT - which stands for "Procedural Event Analysis Tool" - is used to analyze situations in which crew procedural deviations led to a safety hazard or incident. Studies have shown that commitment to established procedures is one of the best strategies for enhancing airline safety.

"PEAT is a cognitive analysis process, with software, that identifies factors that contributed to crew decisions," said PEAT developer Mike Moodi, senior crew performance specialist - Boeing Commercial Airplanes Group. Such factors might involve ambiguously written procedures, inadequate training, unexpected operational situations or individual judgment. Knowledge gained through the PEAT approach will be used to improve both training methods and the procedures themselves.

"PEAT relies heavily on the investigative philosophy that professional flight crews very rarely intentionally fail to comply with a procedure - especially if doing so is a safety risk," Moodi said. "PEAT focuses on why an incident occurred - not who is to blame." Moodi emphasized that PEAT is not designed to be punitive in any way.

Boeing developed and validated PEAT with the participation of a multi-cultural team comprised of representatives of eight airlines in Asia, Europe and North America, as well as the International Federation of Airline Pilots Association.

"When a procedurally related incident occurs, an airline safety officer can use the PEAT process to gain a greater understanding of why the event occurred," Moodi said. "It is during this process that all contributing factors to crew procedural errors are identified and analyzed. From this analysis, it is possible to develop specific recommendations aimed at preventing the re-occurrences of such errors in the future."

Boeing will begin offering PEAT implementation support to individual airlines beginning in June. Advance requests from Boeing customers have already booked the company's PEAT team through the beginning of next year. The implementation process includes training airline personnel in the use of the PEAT process and software, and will take from three to four days.

Moodi said he is hopeful that Boeing and its customers will find opportunities to share data and enhance safety in the industry as a whole.

Boeing formally unveiled PEAT at a recent company-sponsored flight operations symposium, held in Seattle.