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As an early pioneer in the field of critical thinking as it applies to operational excellence, Colonel John Boyd USAF (Ret.) is unsurpassed. His contributions included the OODA loop as a way to capture important situational aspects of air warfare, and the brilliantly conceived power equation. Colonel Boyd was perhaps the first to recognize that aviation had, over the years, slowly but surely turned its perspective in on itself, neglecting the broader picture. This inward focus emphasizes technical elegance over mission performance whereas Colonel Boyd’s position was that these two were often at odds with one another. Colonel Boyd was almost single-handedly responsible for the light-weight fighter project which became the F-16, the most successful fighter program to date.

A special recognition to the members of the team of five. This was a tiger team formally organized to investigate significant features of a modern crew station which could be employed in the nation’s first fifth generation fighter. The team began to consider a multitude of display features and representations but quickly discovered that the issue should not be on the what, but the how. That is, we cannot, without any accuracy, determine what needs to be displayed in a modern cockpit without first determining how one goes about the process of discovery. Ad hoc approaches would no longer work, since the modern flight deck environment had become exceedingly complex as evidenced by the operational employment of both the F-14 and F-15 aircraft. The team realized a clear distinction needed to be made between technology engineering and operational engineering. For the latter, the team developed a set of concepts, tools, and methods that supported the employment of operational
engineering, presenting this to the aviation community at the Digital Avionics Systems Conference, in San Jose, California, June 1988. Team members were Daniel Florio, Vito Comparato, Graham O’Neil, Jeffrey Smith, and the author, Kevin Smith.

Dr. Douglas “Doug” Farrow. For more than twenty years Dr. Farrow has spearheaded the advanced airline training project known as AQP at the federal level. This initiative has brought to the aviation community, for the first time, the ability to improve the problem solving skills of the nation’s flight crews. Understandably, this is a major component of the “Smart Cockpit Initiative.”

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