

[Dr. Robert Baron](#) is the President and Chief Consultant of [The Aviation Consulting Group](#). He performs extensive work in his core specializations of Human Factors (HF), Safety Management Systems (SMS), Crew Resource Management (CRM), and Line Operations Safety Audit (LOSA). He consults with, and provides training to, hundreds of aviation organizations on a worldwide basis.

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The Human Factors Ladder Still Needs To Extend Higher

We have certainly come a long way in respect to human factors training for aircraft maintenance technicians. I have had the opportunity to work with organizations around the world teaching and helping to develop customized human factors programs. I have measured both quantifiable and qualifiable changes in attitudes and behaviors as a direct result of human factors training. That is the good news.



Then there is the not so good news. I have also observed a somewhat disappointing common trend throughout many organizations—the lack of management participation in many of those human factors courses. We understand the basic tenet that human factors training really does require participation from all levels, including all levels of management, if it is to be truly effective. The same can be said about Safety Management Systems (SMS). Yet, I have observed a number of situations where the opposite is true. Upper-level management believe that they do not need to participate in human factors training because, "We don't need it, it's only for mechanics," "We don't make mistakes," and, "We just don't have the time for this kind of training." Well guess what? Managers do make mistakes. In fact, some of the most vivid aviation

accidents have been precipitated by management errors that occurred at the very highest levels of the organization (sometimes referred to as latent errors, see Reason's Swiss cheese model). But even as history repeats itself over and over again there still appears to be an element of "error insulation" for those in management positions. And this type of management mindset has been one of the remaining impediments to successful human factors programs.

When this type of management attitude permeates an organization it can have negative consequences. First, it can negatively affect an organizations' safety culture. Management is not only about making strategic business decisions and watching out for the bottom line—it also serves as a model of safety behavior that is clearly visible to employees at all levels of the organization. Thus if employees see that management is not buying into, or attending, human factors courses then it will certainly diminish the importance of human factors training to line employees. Managers need to not only "talk the talk" but also "walk the walk." Second, it can lead to a disavowance in organizational safety philosophies. This is where line employees and management may have divergent views on how things get done. It is also how negative norms are propagated. "Them versus us" is not an admirable (or profitable) organizational virtue.

To put this in perspective, one of the most memorable human factors courses I taught was so positively received by the aircraft maintenance technicians that they wished the training lasted a few more days! Yet, in general, they were disappointed (but not surprised) that the highest level managers did not attend the course. When speaking with a few of the aircraft maintenance technicians individually it was quite apparent that they thought the training would be futile because of management's lack of interest and participation in the course.

In summary, the purpose of this article was to highlight one of the ongoing weaknesses in the progression of human factors training programs both in the United States and around the world.

High-level managers need to understand that they can, and do, make mistakes. After all, to err is human. Management should attend a human factors class not only to learn about their own human performance limitations but also to understand what their aircraft maintenance technicians are learning in order to reduce errors and thus reduce error-related expenditures. Once we truly have management commitment and it is more than organizational “lip service” then, and only then, can we say that we have reached the highest step on the human factors ladder.