System Safety Needs NASCAR Communication

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After reviewing various types of safety analysis methods and techniques at work and during educational opportunities, I assumed many connections exist between system safety approaches in diverse establishments. A master's thesis was developed knowing system safety was used to judge the severity and likelihood of risks and to develop mitigation strategies to reduce danger [Ref. 1].

I reckoned that there was not a statistically significant difference between safety professionals, based on their years in the safety profession and where they work, and that they believed different system safety groups employed significantly different safety methodologies; after all the goal was the same: Illuminate hazards. The assumption was that the system safety professionals would say that they employ similar system safety functions and methods.

My hypothesis was proved incorrect; the majority of system safety professionals believe there are significant differences between system safety methods used in different organizations.

Other conclusions from my limited study found that the longer a practitioner has been in the safety profession, the more differences become apparent between the safety methods employed in different organizations. It was recognized that safety requirements should be written more clearly, using some type of internationally recognized safety standard that can be tailored to individual needs. Time is wasted in the interpretation of safety requirements.

The most interesting finding was that after statistical analysis, private business safety professionals significantly believe that there are dissimilar interpretations of safety requirements between organizations, regardless of their years in the profession compared to government (defense) and government (non-defense) practitioners. The study included 143 respondents — the vast majority from the aviation safety profession. It seems that safety pros in private business may face confusion from poorly communicated safety rules from external and internal sources (see Figures 1-6 below).

Recent events may prove that private business does face a crisis when it comes to safety communication. Many examples are found in the safety aviation field. The U.S. NTSB this year came to the conclusion that recent business aviation accidents showed that the companies which had experienced misfortune did not even have the most basic parts of a safety culture, because of laissez faire management attitudes and standard operating procedures that were neither valued, nor imposed. It is anticipated that business aviation wants and will become a bigger part of the aviation sector; in order to reach this goal, customers will need to perceive business aviation to be as safe as commercial airlines [Ref. 2]. Without a clearly communicated safety culture, business aviation may have its own NASCAR moment.

In the 2000-2001 NASCAR Sprint Cup Series, four drivers were killed. NASCAR took clear safety steps, including beefed-up seats, seat belt attachments and ignition termination switches to the vehicles. Infrastructure improvements made energy absorption walls compulsory [Ref. 3]. Since these improvements, no NASCAR driver has suffered a fatality, a record many would not have foreseen in the near past.

When will business aviation safety professionals have their NASCAR moment? The next question is, will there be the ability to mandate necessary safety measures for the good of the industry? Clear communication of regulations and expectations may be an important lesson that the safety community can learn from NASCAR.
1. I believe there are significant differences between the methods used to evaluate hazards by different safety organizations.
2. I believe system safety methods should have more easily understood requirements.

3. I believe having a universal system safety standard that could be amended for different programs would benefit my organization.

4. I believe that different organizations have dissimilar interpretations of safety requirements.
References:

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