Abstract: Even though in aviation maintenance, as in many other regulated industries, written procedures are mandated, we still see “Failure to Follow Procedures” as a contributing factor in too many event/ incident/ accident reports. This safety study in aviation maintenance seeks to find recurring patterns of events, contributing factors to these events, and potential good practices that, if followed, will reduce the incidence and/or severity of these events. Over 100 reference sources were examined to provide a framework of event classification. A total of 154 events selected for procedures content from ASRS was analyzed, plus 93 NTSB reports of failure to follow procedures accidents. Hierarchical classification schemes for contributing factors and potential good practices were derived and compared across sources. The main findings were that both design of the procedure itself and the organizational milieu surrounding its use had significant potential for reducing these adverse events.

Bio: Colin G. Drury is Distinguished Professor Emeritus of Industrial and Systems Engineering at the University at Buffalo. He is also President of Applied Ergonomics Group Inc., which specializes in human/system integration for a variety of industries. His work has concentrated on the application of human factors techniques for error reduction to manufacturing, quality and maintenance processes. At UB, he was the Founding Executive Director of The Center for Industrial Effectiveness (TCIE). Since 1989 he led a team to reduce errors in aviation maintenance and inspection, as well as security services, as Director of Research Institute for Safety and Security in Transportation (RISST). He has over 200 publications on topics in industrial process control, quality control, aviation maintenance, security and safety. He is a Fellow of the Institute of Industrial Engineers, the Chartered Institute for Ergonomics and Human Factors, the International Ergonomics Association and the Human Factors & Ergonomics Society, receiving the Bartlett medal of the Ergonomics Society and both the Fitts and Lauer Awards of the Human Factors Ergonomics Society. In 2005 he received that FAA’s Excellence in Aviation Research award, while in 2006 he was awarded American Association of Engineering Societies’ Kenneth Andrew Roe Award.