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The Power of Collaboration for Improving Safety in Complex Systems

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Synopsis

Many potentially hazardous industries involve systems that consist of a complex array of subsystems that must work together effectively in order for the entire system to perform. Often the subsystems are coupled, such that changes in any one subsystem can affect other subsystems. "System Think" refers to an awareness of the impacts throughout a system of changes in any subsystem.

The U.S. commercial aviation industry, in its continuing endeavor to improve safety, uses a collaborative approach to accomplish System Think –bringing all of the key parts of the industry together to work in a collaborative manner to identify and address potential safety concerns. The collaborative approach resulted in an 83% reduction in the fatal accident rate in only 10 years. It also demonstrated that, contrary to conventional wisdom that safety improvements usually hurt productivity, safety improvements that result from a collaborative approach can simultaneously improve productivity. Last but not least, it minimized one of the continuing challenges of making changes in complex systems, which is unintended consequences.

The purpose of this presentation is to describe the collaborative approach and to discuss its transferability to other potentially hazardous industries that are seeking to manage their risks more efficiently and effectively.

Country or International Agency

United States of America

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