

Case Study: Developing Safety Reporting Systems

INTRODUCTION

The Aviation Safety Reporting System (ASRS) was established in 1975 by the Federal Aviation Administration (FAA) and the National Aeronautics and Space Administration (NASA) in order to improve flight safety. ASRS collects confidential safety incident reports that are voluntarily submitted by pilots, operators, maintenance personnel and other related aviation positions. The information from these reports are integrated, analyzed, shared and responded to in order to improve flight safety.

ASRS is administered by NASA and contracted to the Battelle Memorial Institute. ProWorks joined the ASRS project as a sub-contractor in 2000.

Modeled after the success of ASRS, NASA and the Department of Veterans Affairs (VA) founded the Patient Safety Reporting System (PSRS) in 2000. PSRS serves VA health care centers nationwide as an external reporting system complimentary to their existing internal system.



THE CHALLENGE

The ASRS goal was to identify inadequacies and inconsistencies in the National Aviation System (NAS) so that they may be corrected and provide supportive data for NAS planning and policy forming. ASRS was initially created as a paper based system. ProWorks' challenge was to automate and simplify this system into a secure intranet based workflow and make it accessible through a single portal.

The foundation behind ASRS is to encourage accidents to be reported promptly, voluntarily and confidentially without the threat of future punitive action against the reporter. Due to the success of ASRS, Battelle again selected ProWorks as the developer for the PSRS software. Working in collaboration with Battelle, NASA and the VA, ProWorks would apply the ASRS process to patient safety and create PSRS.

HOW PROWORKS DELIVERED

To provide analysts with a single interface to ASRS, ProWorks developed the ASRS workbench. This workbench allows reports to be electronically processed and coded into a secure database and provides analysts with an easy-to-use interface to the workflow process. A unique, easy-to-use search tool enables users to explore the complex database using simple plain-language style queries. ProWorks utilized the BizTalk Framework to allow ASRS to integrate with the various report formats received by airline partners. In addition, the workbench is web based and supported by both Windows and Macintosh operating systems.

ProWorks designed the ASRS workbench for easy portability and extensibility utilizing Microsoft's .NET framework. As a result, ProWorks was able to re-use much of the ASRS workbench for application in PSRS. The ASRS and PSRS workbenches provide users with the ability to share information, analyze reports and collaborate with one another in order to identify hazards and discover root causes.

HIGH QUALITY SOLUTION

ASRS has been in operation for over 25 years. Its success has been critical to the significant improvement of aviation safety over the last three decades. Over half a million incident reports have been submitted by aviation personnel and over 2,500 safety alerts have been issued. ASRS holds the largest archive of aviation human factors incidents in the world. This is particularly significant because it is accepted that over two-thirds of all aviation incidents are caused by human error.

The ASRS and PSRS databases are available for search requests and research studies. This information is sanitized in order to protect the confidentiality of the reporting parties. Since their inception, neither ASRS nor PSRS has had a single a breach of confidentiality.

ProWorks continues to develop and improve the ASRS and PSRS web-based workflows. Working in collaboration with Battelle and NASA, ProWorks implements new features such as customized graphical reports and online manuals and glossaries. The ASRS and PSRS projects are ongoing examples of ProWorks' proficiency for collaborating with other organizations to improve their processes and capabilities.