



## case study

# Leading Aviation and Aerospace Company Used Root Cause Analysis to Improve Enterprise (IT) Problem Management

This work was performed by the Sologic® team when it was known as Apollo Associated Services, LLC.

## Overview

This global aerospace company's ability to innovate and meet customer expectations depends on IT service reliability and excellence. The company has been a longstanding trailblazer in utilizing the world's most proven root cause analysis methodology to consistently improve IT service management, as well as manufacturing capability, reliability and quality among its world-wide business units, suppliers and customers.

The IT department utilized Root Cause Analysis to:

- Reduce or eliminate costs associated with interruptions in IT service.
- Reduce the risk of IT problem recurrence.
- Maintain internal confidence related to the company's Enterprise Management Program.

## Challenge

In the competitive world of aircraft manufacturing, IT-related problems can be extremely costly when they impact production costs and/or customer delivery dates.

Looking to improve their problem-solving abilities, the company's Enterprise Problem Management Group (EPM Group) began researching structured problem-solving methods. The Group sought a method that offered universality to any kind of industry and problem, scalability to any discipline or incident size, and ability to be used for IT problems. They concluded that the RCA method and services provided by the Sologic team offered those features. Considering the RCA method was already being used by the manufacturing division, this enabled IT to more easily share results across functional groups.

Over a 10-year period, the company consistently reduced the number and severity of IT-related problems, as well as the negative impacts and costs that recurring IT problems could have on the business.

The company understood that from the time an incident occurs to the time solutions are implemented, the organization is vulnerable to the consequences of problem recurrence. As a result, they worked constantly to reduce the time it takes to conduct and complete each IT-related RCA, and to implement the recommended solutions. The Group focused on ensuring all short-term solutions were implemented within 45 days of opening the investigation. The company's Enterprise Management best practices are built around the Information Technology Infrastructure Library (ITIL).

## Solution

The company's success in consistently reducing the time it takes to conduct RCAs, implement solutions, and effectively reduce the risk of recurrence has been achieved through a variety of initiatives. Working closely with the Sologic team - utilizing its consulting, software and training solutions - the following actions ultimately improved overall IT service quality:

- Utilizing a set of clearly defined criteria, only high-value IT help desk incidents were escalated to the EPM Group, ensuring that the team members could balance their RCA and regular job responsibilities.
- Implementing root cause analysis on all threshold level IT incidents.
- Clearly establishing roles and responsibilities at all levels, including establishing a Problem Resolution Board (PRB) comprised of business unit leaders to eliminate roadblocks and assure timely implementation of RCA solutions.

- Applying LEAN value stream mapping to RCA work processes, thus finding ways to implement solutions more efficiently and reducing vulnerability to problem recurrence.
- Prioritizing solutions based on their ability to quickly mitigate risks.
- Archiving and sharing RCA results through a searchable intranet so that previous solutions could be used to quickly address similar new problems.
- Conducting RCAs using virtual tools like e-mail, intranet and Webex, thus enabling IT team members worldwide to more efficiently and cost-effectively solve problems.
- Educating internal business units about the IT department's RCA capabilities and demonstrated results increased internal utilization and problem prevention.

## Benefits

- A systematic approach to more successfully identify root causes and solutions that prevent recurrence. Problem recurrence was prevented 100 percent of the time after all solutions recommended by the EPM Group were implemented.
- The group reduced the time it took to conduct an RCA from 90 days in 1998, to 44 days in 2007. The increase in efficiency and effectiveness was so significant that the group doubled the number of RCAs that it was able to conduct, all while improving RCA quality and maintaining regular IT services and job responsibilities.
- A tool that allowed Practitioners to perform RCAs in a virtual environment.
- The use of cause and effect charting software to help identify previously unknown causes.
- A requirement for backing up cause and effect analyses with evidence, such as data from server logs, largely eliminates guessing, finger-pointing or arguing.
- A consistent approach that enables comparison of RCAs in order to proactively identify solution opportunities.
- The means to minimize organizational vulnerabilities by prioritizing and scheduling solution implementation.
- The means to align problem management with business goals.
- As other people and departments within the organization learned of the IT group's value and track record, the group gained credibility and its skills were applied to problems existing in other divisions. The group increased its RCA volume by 100 percent in four years by addressing problems that otherwise would have been left un-solved.
- The group's efforts ultimately reduced the number and risk of problem/incidents, increased internal and external customer confidence and satisfaction, and realized significant savings.

## IT Dept.

Effective and efficient IT service management is critical to the world leader in design and manufacturing of commercial jetliners and military aircraft.

Effective IT systems enhance the company's abilities to:

- Create more efficient + electronically enabled airplanes.

- Integrate cutting-edge aerospace and aviation technology into systems.
- Collaborate across business units.
- Control the cost of goods + services.

## Sologic

The Sologic team has provided root cause analysis (RCA) training, consulting, software and investigation solutions since 1987, formerly under the name Apollo Associated Services, LLC. Sologic helps organizations attain and maintain leading positions in a competitive global market by achieving measurable results, including: cost reduction, throughput gains, time savings, quality improvement, injury reduction, improved regulatory compliance and reduction or elimination of day-to-day problems.

Sologic RCA is a five-step method that includes managing information, defining the problem, analyzing cause and effect relationships using Causelink™ cause and effect charting software, identifying and implementing solutions, and reporting findings.

For more information, go to [www.sologic.com](http://www.sologic.com).



2501 Washington Street  
Midland, MI 48642, USA  
[info@sologic.com](mailto:info@sologic.com)