



## case study

# Root Cause Analysis Team Helps Holcim Utilize E-learning To Boost Skills & Save Money

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

## Overview

As part of Holcim's reliability engineer (RE) competency model, all REs are required to complete root cause analysis (RCA) training, and they are expected to apply it on the job. Holcim, with the primary business of producing cement, experienced a drop in demand due to the construction slowdown. As a result, an innovative and lower-cost way to provide RCA training was needed, especially because many

people who required this training were spread over multiple sites, and none had sufficient numbers to economically justify on-site, instructor-led training. Instead, Holcim partnered with the Sologic team to design and utilize a "blended" training solution that combined e-learning, and virtual meetings and mentoring to achieve its training goals.

## Approach

Holcim and Sologic leaders discussed how to achieve all Holcim's goals. The plan included:

1. Identify training goals.
2. Establish threshold criteria, defining exactly when to conduct an RCA.
3. Schedule WebEx and/or video conferences for each of the four training sections in order to review and verify that everyone understood the concepts, discuss homework assignments, and communicate the next tasks.
4. Provide one-on-one instructor-student mentoring related to training and homework.

In order to assure that all training goals were met specific criteria were established for the e-learning to assure it delivered the necessary knowledge and skills. Specific goals for the e-learning were:

1. Engage students with compelling and visually interesting material.
2. Require students to interact frequently.
3. Assure competency by scoring challenge questions and by accompany incorrect answers with suggestions as to which lesson modules should be re-visited.
4. Ensure the skills and knowledge could be effectively transferred to students by utilizing proven instructional system design techniques.
5. Minimize IT complications, or the burden placed on the IT department, by enabling students to access over the internet.

## Results

The "blended" training strategy achieved Holcim's goals in many ways, including:

- Student competencies are equivalent to the two-day classroom RCA training.
- The time students needed to invest online - between e-learning and completing homework - was roughly equivalent to the two-day classroom training.
- Each student could progress at his/her own pace.
- Students were able to allocate time to the training as it best fit their schedules.
- Due to immediate (required) application of RCA skills to real work-related problems:
- Students' retention of material covered in training was greatly improved
- Actual solutions to real problems were identified
- The likelihood of a positive return on training investment increased
- No travel time was required.
- Holcim saved approximately 66 percent on out-of-pocket costs related to travel.

### Do's/Dont's

#### Do's For Rollout Of "Blended" RCA Training, Including E-Learning:

- Develop a complete communication plan including goals, expectations and tactics.
- Maintain flexibility of assignment deadlines.
- Assure everyone completes their online training. Monitor results closely.
- Get IT involved early to assure minimal access and usability problems.
- Assure you select an e-learning package that is dynamic and engaging.
- Enlist a champion who has influence and can visibly endorse the training rollout effort from start to finish.
- Sustain momentum during the rollout.
- Have specific real-life projects in mind that you want the students to work on after they complete training.
- Monitor individual performance and intervene if you are not 100% certain they understand the training concepts.

#### Dont's For Rollout Of "Blended" RCA Training, Including E-Learning:

- Expect that people will automatically understand what to do with their training.
- Allow procrastinators to let team deadlines slip.
- Shortcut the training. E-learning still requires much of the same time as classroom training. It's just more flexible.
- Avoid IT because you think they will be a roadblock.
- Rely on a set of PowerPoint slides as your e-learning training. Today's students expect professionally developed training.
- Expect that students and their respective bosses will take the initiative to ensure the training is completed.
- Allow too much time between group meetings.
- Tell the students to "pick a problem and use your training." Many will get sidetracked with other priorities and promise to "get you a project soon."
- Expect that a struggling student will speak up with their questions during a group telecon or meeting.

### 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).



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