Recently, Reliability Center, Inc. received an inquiry from one of our web visitors asking the differences between three confusingly similar Reliability acronyms. We thought others in the Reliability community may also wonder what the differences are between Failure Analysis (FA), Root Cause Analysis (RCA) and Root Cause Failure Analysis (RCFA) so we decided to share with you our view on this. Please keep in mind that the explanation contained in this article is strictly Reliability Center, Inc.'s viewpoint only.

**Failure Analysis:**

Stopping an analysis at the Physical Root Causes is typically where most people stop, what they call their "Failure Analysis". The Physical Root is at a tangible level, usually a component level. We find that it has failed and we simply replace it. I call it a "parts changer" level because we did not learn HOW the "part failed." 

**Root Cause Failure Analysis:**

Indicates conducting a comprehensive analysis down to all of the root causes (physical, human and latent), but connotes analysis on mechanical items only. I have found that the word "Failure" has a mechanical connotation to most people. Root Cause Analysis is applicable to many more than just mechanical situations. It is an attempt on our part to change the prevailing paradigm about Root Cause and its applicability.

**Root Cause Analysis:**

Implies the conducting of a full-blown analysis that identifies the Physical, Human and Latent Root Causes of HOW any undesirable event occurred. The word "Failure" has been removed to broaden the definition to include such non-mechanical events like safety incidents, quality defects, customer complaints, administrative problems (i.e. - delayed shutdowns) and the similar events.

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