

Module 2c :

# Why RCFA Initiatives Fail ?



### Root Cause Analysis View :

**RCFA :** Hello Mr. Alfred Ludwig, just a few moments of your time to answer a few questions

**Mr. Ludwig :** OK, What can I do for you ?

**RCFA :** Are you still working and what is your position ?

**Mr. Ludwig :** I'm retired, use to be the Chief Overhauling Manager for Boeing ground fleets, lots of them, carry on with me 40 years of experience in overhauling and repair, name it, I know them all

**RCFA :** In your time, have you tried to analyze why you frequently perform those repairs and why these parts as you've mention seem to fail anyway

**Mr. Ludwig :** I have limited staff and we were busy most of the time and I think even if you have me analyze those failures and we have cleared them out what do you suppose I'll be doing, perhaps they will retire me a little bit earlier

**RCFA :** Well if you have cleared them out then the best thing for you and your staff to do is to analyze some more failures. Lets take an example on this bearing, if this fails what do you do ?

**Mr. Ludwig :** Well we just need to replace them so the equipment can be up you know the game

**RCFA :** Did you know that a metallurgy test indicates that this bearing failed because of fatigue brought about by misalignment



**Mr. Ludwig :** Well I think you've got a point there, if we address the real issue here we aint be replacing this part quite often, I guess we should have done that a long time when we have the time

**RCFA :** thanks for your time Mr. Ludwig

### TOP REASONS WHY PEOPLE DON'T PERFORM RCFA

#### 1) Simply I don't have the time to do RCFA . . . .

- The reason that people do not have time to perform RCFA is that they are busy reacting to the needs of the field or fire-fighting. **We simply have no time to analyze and prevent its recurrence but we always have time to fix it again and again, in fact we have been doing it for the past 30 years.**

***We know that it is important to do Root Cause Failure Analysis but we just cannot do maintenance and RCFA, there are only 24 hours in a day !***

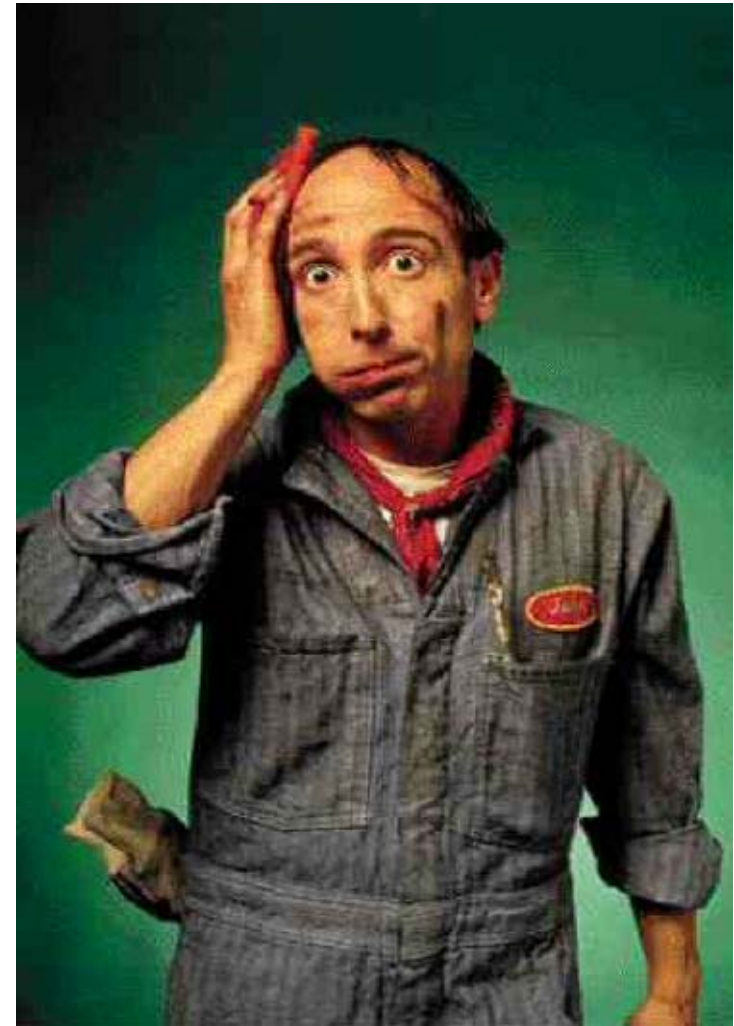


### TOP REASONS WHY PEOPLE DON'T PERFORM RCFA

#### 2) We think we know it all . . . .

- How often do we see a problem occurs and we make decisions to modify or improve the system without really analyzing the real root cause of the problem, and sometimes we think that we have solved the problem but a new problem arises because of our conclusions and improvements implemented
- Have we really eliminated the problem or what we have performed is a simple case of an improvement failure. People tend to go to the solution without first analyzing the root cause of the failure

***Remember the Chinese Definition of Insanity, When we do the same things over and over again and we expect a different result, that is insanity. . .***



### TOP REASONS WHY PEOPLE DON'T PERFORM RCFA

#### 3) We praise our people for being reactive

- Why do we spend so much time working on the problem (reactive work) instead of being proactive ? The reason is that production supercedes all other concerns. Maintenance is praise not because he was able to analyze the problem but on how fast he is able to repair and replace the part that failed. We value people who can give the quick fix or band-aid therapy & have the equipment up and running again . . . .



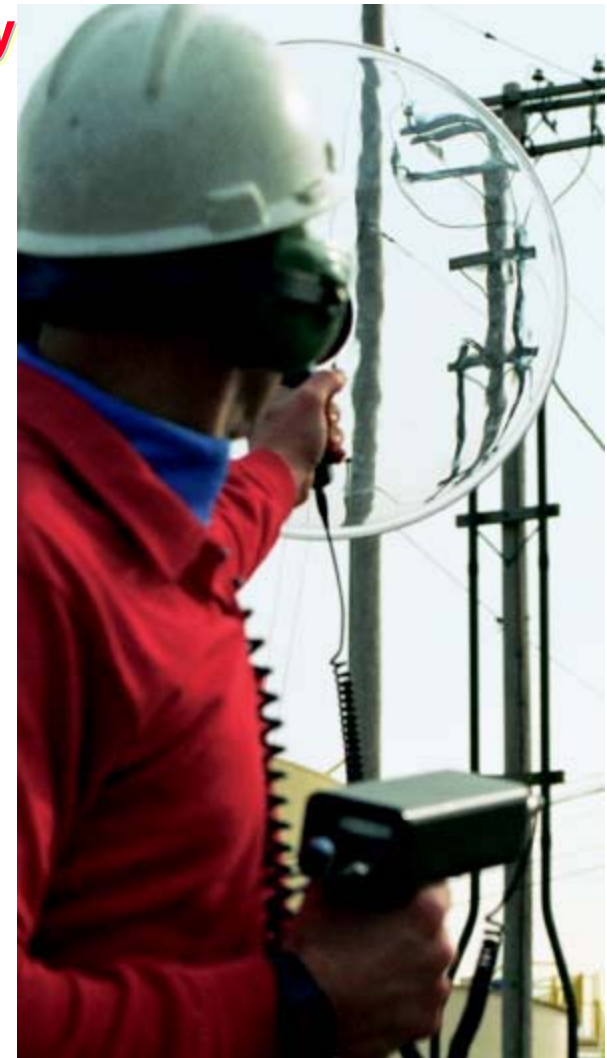
*We simply have no time to perform a Root Cause Analysis. It is easier to identify who cause the problem and punish him*

### TOP REASONS WHY PEOPLE DON'T PERFORM RCFA

#### 4) Being reactive gives me a sense of security

- In many cases a good backlog of maintenance work will ensure them of their job security. They always feel that if we analyze failures and prevent the recurrence of the problem then maybe we have nothing more to fix and I might loose my job. This is a valid fear by the maintenance personnel

*Traditional maintenance is confined to repairs & PM but the scope of our job is beyond boundaries, CBM, Oil Analysis, Lubrication, Tribology, Coaching their Operators on Basic Equipment Condition, Oil Contamination Control, Spare Parts Management, Maintenance Cost Reduction Team, just to name a few*



### TOP REASONS WHY PEOPLE DON'T PERFORM RCFA

**No time for analysis only heroes in a reactive world of maintenance**

- ***It's a bird, it's a plane it's a job for super maintenance man!***
- **Our maintenance manager is simply interested on who can repair the failure with great speed and have it up and running**
- **We always measure our response to failure & have such indices monitored such as MTTR or the Mean Time To Repair. But We salute and give high five to people who can response quickly and put out the fire.**
- **Its late in the morning since we are running on 3 shifts then a machine bug down and no one can do what Joe can do so we try to wake him up at 2:30am in the morning and have him come to the plant to fix the failure**



### TOP REASONS WHY PEOPLE DON'T PERFORM RCFA

#### 5) Lack of a Disciplined RCFA Training

- OK Joe since you were the one trained in RCFA you are now the expert. You are also expected to solve any failure in 8 hours. **We do not become an expert in RCFA by sitting in a classroom for a week, it involves lots of practice**
- Management seeing that Joe cannot deliver at all and eliminate the failure since he was assigned alone was re-routed once again to his old job of repairing. Management blames the RCFA method of being just another FAD
- RCFA is performed not by individuals but by teams. Group of 3 to 6 at the most to work out a particular problem



***Like in Basketball, practice makes a perfect slam dunk, what does it takes to be a Michael Jordan, practice and a good team***



### TOP REASONS WHY PEOPLE DON'T PERFORM RCFA

#### 6) Lack of Management Support on RCFA

- If management does not support their activities, the team's efforts will fail. For example, management must provide access to technical resources such as labs to the analysts to verify hypothesis. Management must make changes in the work order system or procedures to ensure proactive recommendations. Management must allow the team to meet and perform RCFA & must gain cooperation from other departments.



*Oftentimes it is not only support that is likely needed from management but commitment and involvement. The team can only complete their analysis if management allows them to do it otherwise it all ends up and the team goes back again to their old jobs of repairing failures*

### TOP REASONS WHY PEOPLE DON'T PERFORM RCFA

#### Management Role on RCFA should include

- At first it is hard to perform RCFA or try to perform a proactive tasks in a reactive environment. Management support is a must in RCFA. Managers must consider the following considerations essential to conducting a successful RCFA
  - Allow the team to meet & perform the analysis
  - Provide resources to validate the hypothesis (Expertise, sending samples to labs, etc.,)
  - Provide simple and inexpensive recognition to successful analysis
  - Provide changes to work systems that ensure proactive recommendations are implemented and not put behind the desks
  - Write a letter of expectation to the team
  - Demand results and review the progress of the teams analysis

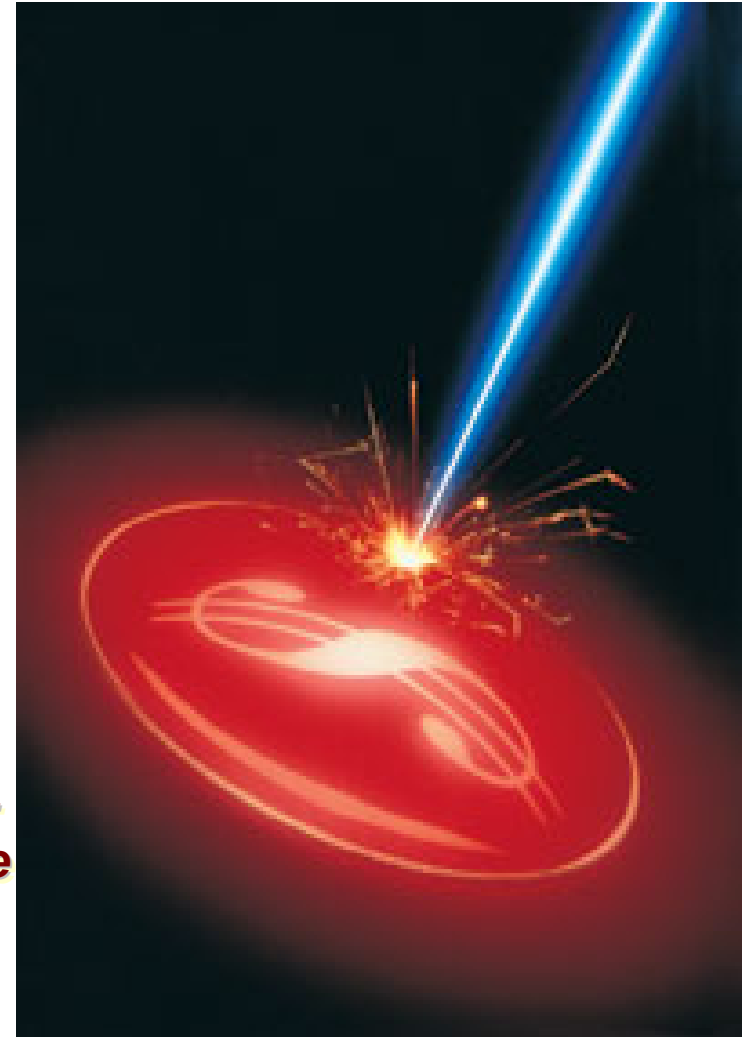


### TOP REASONS WHY PEOPLE DON'T PERFORM RCFA

#### 7) RCFA Cost Too Much Money

- Many believe that implementing the recommendations from RCFA will be expensive venture. Most of the time, the majority of causes are based on deficient organizational systems which includes maintenance and operating procedures, policies, guidelines and training systems since most people will make decisions based on these systems

*Most of the time we end up wasting money because we tend to spend the money on equipment's and not on our people. Investments must be spend on making our people make better decisions, this will provide us far greater returns than many equipment investments*



### TOP REASONS WHY PEOPLE DON'T PERFORM RCFA

#### 8) Lack of Documentation on failures

- No matter what the nature of the failure or loss, trying to solve a failure with little or no data is like a detective trying to solve a crime with no evidence at all
- Any failure will leave clues as to its sequence of events that lead to its surfacing until the time it failed. The team will need to validate their hypothesis to validate their conclusions



***Imagine your on a diet and you want to loose some weight but you don't measure how much you weight before you proceed with your dieting, and you will never know how much weight you loose since you don't have a weighing scale to measure***

### TOP REASONS WHY PEOPLE DON'T PERFORM RCFA

#### 9) The Biggest Barrier to change will always be cultural in nature

- This is the way we do things here. Resistance to change is quite normal specially for older workforce. The more the program is pushed the more resistance is expected from the users themselves
- People do not want to improve , since they think that improvement programs are fads and they aim to reduce workforce in the long run. They usually observe the program for 6 months and if its not heard after the due date then its gone
- ***Culture is the pattern of basic assumptions that a given group has invented, discovered or developed in learning to cope with it's problems of external adaptation and internal integration that has worked well enough to be considered valid and therefore taught to new members as the correct way to perceive, think and feed in relation to these problems - Schein 1983***



### A TYPICAL DAY AT THE PLANT : Part 2 : On Cost Savings

- The Plant Manager walked into the plant and found oil on the floor. He called the Foreman and asked him **why there was oil on the floor. The Foreman indicated it was due to a leaky gasket in the pipe joint above.** The Plant Manager then asked when the gasket had been replaced and the Foreman responded that the mtce had installed 4 gaskets over the past few weeks and they each one seemed to leak. The foreman also indicated the Mtce had been talking to Purchasing about the gaskets because it seemed they were all bad. The Plant Manager then went to talk with the Purchasing about situation of the gaskets and Purchasing Manager indicated that they had been trying for the past 2 mo to try to get the supplier to make good on the last order of 5000 gaskets that all seemed to be bad. **The Plant Manager asked the Purchasing Manager why they had purchased from this supplier if they were so disreputable and the Purchasing Manager said because they were the lowest bidder when the quotes was received from various suppliers. The Plant Manager then asked why they went with the lowest bidder and he indicated that was the direction he received from the VP of Finance. The Plant Manager went to talk to the VP of Finance and asked why he set up that direction, the VP of Finance said, because you indicated that we had to be as cost conscious as possible and purchasing from the lowest bidder saves us a lot of money.** The Plant Manager was horrified when he realized that he was the reason there was oil on the Plant floor. End of Story