



The Rockland Group, Inc.

Root Cause Analysis

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Root Cause Analytical Methods

- Numerous Analytical Methods (Six Sigma)
 - 5 Why's
 - Fault tree Analysis
 - Cause and Effect Diagrams (Ishikawa)
 - Flow Diagrams and Process Maps
 - Pareto Diagrams
 - Trend Charts
 - Histograms

Root Cause Analysis Is

- A method for finding:
 - An identified reason for the presence of a defect or problem (first principles)
 - The most basic reason, which if eliminated, would prevent recurrence
 - The source or origin of an event

What Root Cause Analysis Is Not

- Problem Solving.
 - Plan, Do, Check, Act (PDCA).
- Does not require the application of some radically new skill
- Simply “common sense”
- Quick fix = status quo
 - Insanity - doing the same thing over and over again and expecting different results

Root Cause Guidelines

- Requires a methodical and systematic approach
 - Cannot randomly conduct the analysis
- Requires knowledge of the company's processes
- It is not necessary to prevent the root cause from happening
 - Just need to break the chain to avoid final failure
- Usually more than one root cause for any given problem

Root Cause Guidelines (cont.)

- You must portray INTEGRITY in your approach:
 - Focus on the clients needs, not yours
 - Don't talk "down" to your client
 - Never ask a client to act against their self-interest
 - Project empathy
 - Don't try and fake it
- Stop talking - listen
- Find and assess the clients pain point
 - Is this problem worth fixing?

Root Cause Analysis Basic Steps

- Understand the process
- Identify all possible sources of errors or variation
- Collect and analyze quantitative and/or qualitative data
- Requires a fundamental shift in attitudes and mindset
- Requires a supportive organization
- Work backwards
 - Think proof read – read backwards one word at a time

Root Cause – The 5 Why's

WHY???

WHY???

WHY???

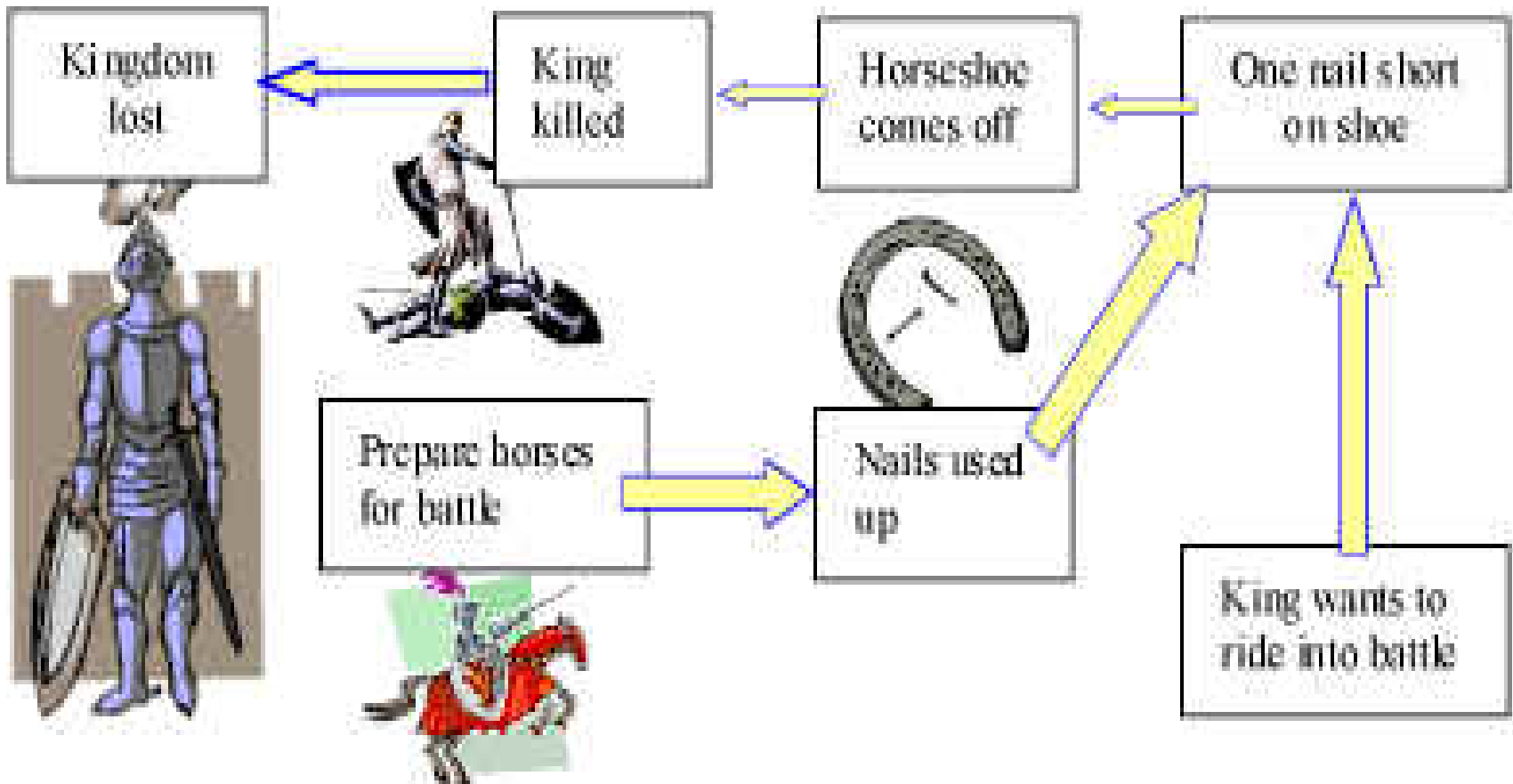


WHY???

WHY???

WHY???

For Want of a Nail the Kingdom Was Lost



Root Cause Types of Questions

- Closed Question:
 - Are you the one who has responsibility to protect the king?
- Semi-Open Question:
 - Who, besides you has responsibility to protect the king?
- Open Question:
 - What is the process here for protecting the king?

Root Cause Analysis Challenges

- We tend to seek problems in our area of expertise
 - Ready to ignore facts that do not correlate with our current perceptions
 - Ready to accept those that do
 - We see what we want to see
 - Best to get OUTSIDE, OBJECTIVE advice

Root Cause Analysis Challenges (cont.)

- Stoutenburg Study (Apollo Root Cause Analysis, 1999)
 - When presented with a corporate problem:
 - 10% sought to place blame
 - 26% expressed an immediate unsubstantiated opinion
 - Only 20% examined the problem in sufficient detail to identify an effective solution
- Few organizations have adequate processes in place to monitor the effectiveness of solutions
- Be careful of linkage when intervening to fix a root cause
 - Intervention at any point can cause a ripple effect

Types of Root Cause

- Physical (technical) cause
- Human cause
- Latent cause (lack of a system)
 - Both of above can cause same result
 - Common to find that technical problem has a human root cause
- Single event
- Repetitive event
 - Look for patterns.

Root Cause – Implementing the Solution

- Project Management Skills
 - Identifying what actions should occur, when, and by whom
- Change Management Skills
 - Identifies potential resistance and addresses this proactively
- Worst Outcome
 - Great solution that no one will adopt
- Evaluate the impact
- Try to leave client with a standard model – must be understood by everyone
- Be gentle – don't damage egos
- Is dealing with the symptoms cheaper than uncovering and removing the root cause?
 - Beware “analysis paralysis”

Root Cause Quotes

- “If you don’t ask the right questions, you don’t get the right answers. A question asked the right way often points to its own answer. Asking questions is the ABC of diagnosis.”
 - Edward Hodnett
- “The most important numbers are unknown and unknowable.”
 - W.E. Deming

Root Cause Analysis

Q & A