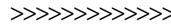


Root Cause Corrective Action System Plan

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ABSTRACT-As a Project Quality Engineer working for (X) Inc. required to do the analysis to find the root causes and develop a plan to implement a Root Cause/Corrective action system plan. In order to achieve and maintain the excellence for The(X) Inc. that has been the leader in the industry for the last 20 years. To accomplish our company's publicity that has been running in the market for 20 years, the Vice president and the Quality Director at the company realized that there isn't a good, solid, or preventive Root Cause Analysis and Corrective Action System in place. Due to the lack of such system there has been a yield of 25%rejection rate internally, and 15%rejection rate from its customers. As a result there are total rejection rate of 40% which may impact the existence of The (X) Inc. in the market. The management top priority for The (X) Inc. is to gain back the trust from its customers by implementing preventive Root Cause Analysis and Corrective Action System plan. The management realizes the competition and the challenges in the business force. The focus of this Corrective Action Plan (CAP) is to successfully address the deficiencies identified in the RCA and improve The(X) Inc. employee and management performance. Below are most significant issues and underlying Root Causes and Corrective measures for both shop floor and management level.



Root Causes for Shop Floor Level, and Corrective Measures

Quality Department for The (X) Inc. (Shop floor level)	
Most significant Issues and underlying Root Causes	Corrective Measures
Issue- Low quality components for sensors. Life time for sensors Warranty for sensors Shelf life for sensors	CORRECTIVE MEASURE #1-Establish connection with other vendors to provide genuine parts.
Issue- The CNC machines that fabricates the PCPs (printed Circuit Board) for the inner component for sensors, overall performance is degrading.	CORRECTIVE MEASURE #2 -Establish a team from the maintenance department to check the air compressor and valves for any low air pressure and calibration standards for the tools.
Issue- Inadequate supervision with in shop floor level. Shop supervisor is busy with paper work	CORRECTIVE MEASURE #3- Establish training program to focus on the technical role for the Shop Supervisor.
Issue- Inadequate of manufacturing process within shop floor.	CORRECTIVE MEASURE #4- Check the manufacturing process and update it to be more effective and flexible.
Issue- Inadequate working environment. No ventilation ACs are not enough to cool down the equipment and technicians	CORRECTIVE MEASURE #5- install ventilation and ACs.
Issue- Inadequate handling procedures. The personal in the supply point are mixing the electronic components together No use of proper handling tools	CORRECTIVE MEASURE #6- Use the latest technology of handling electronic components and train the handling personnel on methods of transportation and handling of such components.

Issue- Lack of professionalism. Engineers and technicians are not doing their roles as supposed to. Most of the experienced Engineers and technicians have gone to different jobs outside the company or retired.	CORRECTIVE MEASURE #7- Establish OJT (On Job Training) for those who are in need of special training program and make refresh courses for those who don't have the basics knowledge. Establish a special training plan for those who are experienced and professional to train their new colleagues.
Issue- No Engineering standards. Engineering drawings are not provided Engineers and technicians are using their own experience and knowledge No SOPs(Standard Operating Procedures)	CORRECTIVE MEASURE #8- Provide an engineering designer to make all the necessary designs to the technicians. Establish all engineering standards and SOPs and train on how to use them by the engineers and technicians.
Issue- Old documentation within shop floor level.	CORRECTIVE MEASURE #9- Make all documentation Up to date
Issue- Long working hours for the engineers and technicians.	CORRECTIVE MEASURE #10- Establish and supervise working shifts.
Issue- Lack of motivation and communication skills with in the technicians and engineers in the shop floor. No creativity. No competition	CORRECTIVE MEASURE #11- Establish a financial system to give bonus to motivate the technicians and engineers to work harder.
Issue- Lack of integrity. Mechanical integrity. Electronic integrity.	CORRECTIVE MEASURE #11- Establish working policies and principals.
Issue- No quality personnel in the premises. No audits. No inspection on the sensors.	CORRECTIVE MEASURE #12- Hire quality personnel to check all manufacturing process from the initial fabrication process to the final product.

Root Causes for Management Level, and Corrective Measures

Quality Department for The (X) Inc. (Management level)	
Most significant Issues and underlying Root Causes	Corrective Measures
Issue- Administrative configuration doesn't match reality. The job description does not match with the existing reality.	CORRECTIVE MEASURE #1 - Establish a committee to make all the reviews to the job description and edit them.
Issue- The (X) Inc. does not complete front-end planning to an appropriate level before establishing business performance baselines. Insufficient number of personnel. Lack of personnel with the appropriate skills. Inadequate time dedicated to front-end planning.	CORRECTIVE MEASURE #2 -Establish and implement measures to ensure adequate business requirements definition is accomplished before a business performance baseline is established.
Issue- Lack of appropriate sections in the	CORRECTIVE MEASURE #3- Establish an

<p>quality Department in the administrative configuration for The (X) Inc. No Quality Control. No Quality Assurance.</p>	<p>integrated Quality Department to manage and monitor all operation in the shop floor level. Establish Engineering Configuration Section to make sure all procedures and designs are up to date. Create Engineering Study Section to do all the necessary designs and drawings. Implement all audits by the quality control and assurance personnel.</p>
<p>Issue- Lack of integration between the structures of The (X) Inc. departments. Each department is isolated by one another.</p>	<p>CORRECTIVE MEASURE #4- Enforce communication between the departments not just on formal basis but by implementing flexible software to communicate easily.</p>
<p>Issue- Lack of management commitment. No Goals and plans. No training and development.</p>	<p>CORRECTIVE MEASURE #5- Enforce commitment by the upper management to adhere to The (X) Inc. policy and procedures.</p>
<p>Issue- inadequate employee monitoring system. Old device for timesheet card is used. No integrity between employees.</p>	<p>CORRECTIVE MEASURE #6- Establish fingerprint device to monitor all employees working hours from the top management to the lower level of The (X) Inc.</p>
<p>Issue- Lack of professionalism. Managers are not involving with the lower management on the shop floor level.</p>	<p>CORRECTIVE MEASURE #7- Establish short term courses for the upper management level on project management and 6sigma. Create effective communication skills between the managers by providing refresh courses on communication.</p>
<p>Issue- Inadequate roles and responsibilities definition by the upper management.</p>	<p>CORRECTIVE MEASURE #8- Establish Policies for The (X) Inc. for upper division managers to use as hand book for their daily work.</p>
<p>Issue- Lack of change in the upper management. Some managers are in the same position for 20 years.</p>	<p>CORRECTIVE MEASURE #9- Establish a change in the management system by changing the management every 3 years to comply with the competition that The(X) Inc. encounter.</p>
<p>Issue- No Supply Department in the administrative configuration for The Best Inc. The parts are stored in the shop floor level as (shop use) with an adequate storage standards. No Quality Control.</p>	<p>CORRECTIVE MEASURE #10- Establish a Supply Department to manage and monitor all parts needed for the shop floor level. Establish Research and Analysis Section to provide different resources for parts and check for any obsolescence. Create Stock Control Section to monitor all operation on supply/demand level to check for reorder points, safety level, and float to keep up with the supply chain. Create Packaging Section to insure all packaging are done properly to avoid any damage to the sensors. Create a Receiving point that its mission to receive all parts and check them by (QC) randomly to assure that is working properly before stocking them.</p>
<p>Issue- Lack of motivation and communication skills with in the technicians and engineers in the shop floor.</p>	<p>CORRECTIVE MEASURE #11- Establish a financial system to give bonus to motivate the managers on the upper level.</p>

No creativity. No competition.	Establish strong team work between the upper management level by addressing them the importance of being pride of The Best Inc.
Issue- Lack of monitoring and management software. No KPIs. All operation on shop floor and management level are done on paper. Lack of monitoring system. Lack of supply system.	CORRECTIVE MEASURE #12- Establish a monitoring and management software for example Enterprise Resource Planning (ERP) to enhance the operation in The (X) Inc. Execute training program for all employees on all levels for the software.
Issue- No ISO certification for (X) Inc.	CORRECTIVE MEASURE #13- Implement all the corrective measures to ensure that The(X) Inc. is in compliance with ISO certification requirements.

References

1. Gitlow, Howard S. & Levine, David M. (2005). Six Sigma for Green Belts and Champions. New Jersey: 2005 Pearson Education, Inc. ISBN 0-13-117262-X
2. Eckes, George (2001). The Six Sigma Revolution. New York: John Wiley and Sons, Inc.