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Root Cause and Corrective Action (RC/CA) Guidelines for Oracle and Oracle Suppliers

Document Number and Revision: 923-3148 rev 06

Overview

This document defines guidelines for effective and efficient RC/CA, including setting up the team to look at the issue, data gathering, impact analysis, preventive and corrective actions, and closing the issue after resolution.

Audience

This document is for all Oracle Supply Chain Organization (SCO) employees and Oracle SCO suppliers who are responsible for and contribute to RC/CA of product or process issues.

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Introduction

The guidelines in this document promote Root Cause and Corrective Action (RC/CA) excellence. RC/CA is an expected core competency both internally and in the supply chain. An effective RC/CA process provides many benefits to oracle:

- Decreases new product development time to market
- Improves production yields and predictability
- Decreases costs and increases profit margins
- Lowers supply chain costs and inventory levels
- Minimizes impact to Oracle customers

This document lays the foundation of understanding and sets expectations for performing RC/CA in response to quality issues.

The guidelines within this document apply to RC/CA efforts in the supply chain, including (but not limited to) issues that warrant the generation of:

- Failure analysis records of any type
- A formal record of a non-conformance, problem or issue
- Product and process change notifications (PPCN)
- Engineering changes (EC)

Note: This document does not provide specific instructions for the creation, preparation, procedures, maintenance instructions or requirements of any specific Oracle tools for failure analysis, problem tracking, corrective/preventive actions or part, process or engineering changes.

A key element of this document is the understanding that RC/CA activities are dynamic and need to be adjusted in scope and resource commitment to fit each individual circumstance. Quality issues which expose Oracle Operations to higher risk, or which involve higher level of complexity may require a higher level or resources and may utilize different RC/CA tools.

This document does not cover all aspects of setting up day-to-day RC/CA processes and procedures within the design community or manufacturing operations, but it does address the following main activities:

- Recognizing the issues and collecting the initial data relating to it
- Simplified RC/CA flowchart
- RC/CA Best Practices
- When to form a Tiger Team

A simplified RC/CA flowchart is illustrated in Appendix A, “Simplified RC/CA Process Flow Example” as a guideline. However, the sequence of events is only an example. Some activities and processes might run in parallel, or an alternative sequence of events might better suit the dynamics of the business situation.

1.0 Problem Solving Process

1.1 Identifying the Problem

A problem may be uncovered at any point in the Product Life Cycle:

- Design and Development Qualification Testing
- 1st Article Testing
- Incoming Inspection
- Manufacturing:
    - Assembly, Test, Post Pack Audit (PPA)
    - On-going Reliability Testing (ORT)
    - Reliability Qualification Test (RT)
    - Defective Pats per Million (DPM) Trends

- Customer Field Failure (IE: Dead On Arrival (DOA))
- Oracle Cloud Infrastructure (OCI) Ingestion

1.2 Important Rules for Identifying Problems

When trying to understand and define the problem:

- Avoid opinions and focus on accurate data to fully represent the problem.
- Avoid jumping to conclusions, no matter how obvious the root cause may seem.
- Beware of the “experts”. Often, the assumed experts are working from previous experience or “gut feel” and may or may not be correct in this particular case.
- Maintain objectivity, question all assumptions and statements being made, establish the verified facts, and capture the data relevant to those facts.

1.3 Reporting the Problem

Manufacturing defects will be documented using the appropriate failure analysis tool. When a component quality problem first becomes apparent, the person who discovers the problem, the issue owner, will pull together the available data associated with the problem (such as test logs, troubleshooting steps, failure locations, and so on). The issue owner may use RC/CA tools to better understand and report the problem, such as brainstorming, “2x5 Whys”, troubleshooting trees, and so on. Refer to the Appendix for other RC/CA tools which can be used.

> Note: It is crucial that the data included within the failure analysis record indicates a true representation of facts, and events leading up to the defect so that the proper disposition can be determined.

1.4 Material Review Board Disposition (MRB)

After the problem is identified the Oracle Product Engineering (PE) and or Oracle Manufacturing Engineer (ME) will evaluate the data provided by the issue owner and determine the disposition. The disposition will indicate the usability and status of the material. For example, the disposition may be to “Use As Is”, “Scrap”, “Rework”, or “Return to Vendor” (RTV). If the material is RTV the PE will determine if the defect is the Supplier’s or Oracle’s responsibility. This disposition is used by Oracle personnel responsible for the Return Material Authorization (RMA) process.

1.5 Return Material Authorization (RMA)

After the material is dispositioned, the Oracle Procurement Buyer will solicit an RMA number from the supplier. The RMA process will vary depending upon the MRB Disposition. If the disposition is RTV at Oracle’s cost, then Oracle will assume responsibility for Repair Costs. If the dispositioned is determined to be the Supplier’s responsibility, the repair costs will be paid for by the Supplier. The RMA disposition may also affect the Supplier actions after the material is returned to them.

1.6 FA/RCCA Turn Around Times

- **24 Hours:** Initial FA response is due within twenty-four (24) hours of receipt of non-conforming material (RMA) for all issues identified to the Supplier as "Urgent" by Oracle.
- **3 Business Days:** FA Report, Containment Plan, and Risk Assessment is due within 3 business days, isolating what failed, down to FRU (Field Replaceable Unit) or Component level as appropriate, depending on the Product supplied.
- **10 Business Day**s: RC/CA response (8D) is due within 10 business days after receipt of non-conforming material.
- **30 Calendar Days:** Corrective Action Implementation is due within thirty (3) calendar days after receipt of a non-conforming material. Supplier shall take corrective action for all known non-conforming product prior to shipment of product to Oracle unless otherwise directed by the Oracle Operations Program Manager for the affected product.
- **Note:** The timelines can be waived under instruction from an agreement by the responsible Oracle Product Engineer (PE).
- **Note:** For a quality incident such as a non-functional failure where the affected item is not returned to the Supplier, and Oracle provides an adequate documented description of the failure and photographs to enable the Supplier to evaluate the physical condition of the part and initiate FA/RCCA, the FA/RCCA timelines will apply starting from the data the supplier receives this data from Oracle.

1.7 Failure Analysis (FA)

Failure Analysis will normally be performed on all RMA's. It is important that each failure be fully understood and that agreement is reached between the Supplier and Oracle as to the actual responsibility for each RMA.

1.7.1 Oracle Responsibility

When the RMA is determined to be Oracle's responsibility, the supplier will perform FA of the returned material to verify the defective component and failure mechanism, repair the defects, and return the unit to Oracle. The supplier will document the results of this activity in an FA Report.

If the FA indicates that the responsibility is actually the Supplier's responsibility, the supplier will also determine the root cause, and perform permanent corrective and preventive actions.

1.7.2 Supplier Responsibility

When the RMA is determined to be the Supplier's responsibility, the supplier will perform FA of the returned material, and will also determine the root cause, and perform permanent corrective and preventive actions.

1.8 Root Cause/Corrective Action Process (RC/CA)

The key to a robust RC/CA is achieving ongoing quality improvements. When the RMA is determined to be the Supplier's responsibility, the supplier will perform Root Cause Analysis (RCA) of the returned material to verify the defective component and failure mechanism described in the failure analysis report. The RC/CA process should result in several deliverables:

- True root cause is identified and documented

- Reason not detected is identified and documented
- Permanent corrective action to prevent recurrence is implemented and documented
- Containment action to assure quality of future shipments is implemented
- Documentation of the RC/CA results in an 8D Report

1.8.1 Brainstorm Root Causes using RC/CA Methodologies

Brainstorm **all** the potential root causes. Document and communicate the results using one of the many recommended RC/CA tools:

- Process flow chart. Refer to Appendix A, "Simplified RC/CA Process Flow Example."
- Ishikawa Diagram Ishikawa Cause and Effect Analysis, Fishbone Diagram, to capture all possible root causes. Refer to Appendix D, "Ishikawa (Fishbone) Diagram".
- Functional block diagram.
- Fault tree analysis.
- Fail Mode Effects Analysis (FMEA), or Process FMEA (PFMEA) for risk analysis.
- Use other tools as necessary. Several recommended tools are illustrated in the Appendices.

1.8.2 "2x5 Why" Process for Root Cause and Why Not Detected:

Use the "2x5" Why" process for determining both the "Root Cause", and the "Reason Defect was not Detected". Both of these elements are important and necessary to fully address complex quality problems. The 2x5 Why process has a higher probability of identifying process and system deficiencies. A key to success is to ask full questions versus just asking 'why' after each answer.

- Take the top possible cause from the Fishbone Diagram and start the "5 why" process of asking why, and drill down until the root cause is determined.
- Next, take the same top cause and start the "5 why" process again. This time, address the "why not detected".
- The Root Causes for 'Cause' and for 'Why not detected' should be documented and included in the final 8D report.

1.8.3 Containment

Containment, or preventive action, is an immediate fix for the problem, and may only be temporary. Avoid temporary fixes if a timely, full, systemic corrective action can be put in place instead. When you **know** what the root cause is, consider the following:

- How will Oracle contain the problem?
- How will the Supplier contain the problem?
- Should a problem report be generated for recurring yield trends?
- Is an SSP (Stop Ship and Purge) needed to stop production and purge on-hand material?
- Will the containment result in more harm, cost or risk than waiting for the full fix?

1.9 RC/CA Report (8 D)

The supplier documents their RC/CA activity and results using an 8D form or similar process. The 8D problem solving methodology includes 8 disciplines, hence the name 8:

- **1D: Establishing the Team.** The 8D approach is based on a team working together to solve a problem. Teamwork must be coordinated and guided. The team should include only competent persons actively involved in the process and who have been assigned a task or responsibility in subsequent steps. Efficient teams are usually not big**.**
- **2D: Problem Definition/Statement & Description.** The more clearly the problem is defined the more likely it will be resolved. Problem solving must be based on facts, no opinions. It is important to clarify the issue type, what is wrong, when did it happen, how big the failure extent is and how many times has it happened. The description must be specific and easy to understand. If possible, a supposed cause should be specified. A complete problem description offers the team directions to solve the problem and helps them prioritize tasks. For example, the fact that defective products may have already been sent to a customer is very important in deciding which containment actions to take and in prioritizing those actions.
- **3D: Developing Interim Containment Actions**. In this 8D Report step, we try to limit the problem extent and protect our customer. Interim containment actions are a "first aid" that protects the customer from the problem until we define the root cause and implement permanent corrective actions. Containment actions must not introduce any new problems. They have to be carefully documented with precise information (serial number ranges, lot or date codes, purchase order number, etc.). This information can then be used to verify the scope and effectiveness of performed actions.
- **4D Identifying & Verifying Root Cause**. To effectively prevent a problem from occurring again we have to find the root cause of the problem and remove it. In some situations there could be more than one root cause. To identify the root cause, a systematic and well-documented analysis is needed. Each possible cause should be tested against the problem description and test data. Root cause is often hidden by other causes and can be hard to find. There are many RCA methods that can be used. For example, "Is, Is Not" Analysis, 2x5 Whys Analysis, Fishbone Analysis, and others. If the correct Root Cause is not found, the Corrective Actions may be misdirected and the defect will be more likely to recur. Refer to the Appendices for examples of typical RC/CA tools.
- **5D**: **Identifying Permanent Corrective Actions (PCA).** The goal of corrective actions is to remove the root cause and prevent the problem from ever happening again. If good corrective actions have been taken we should never have to write another 8D report for this problem. In this step we are concentrated on a specific event or problem that has already arisen.

  The corrective actions have to be carefully documented. For each action a responsible person should be identified and when an action has been finished the actual date of implementation and results should be recorded. For each root cause identified there are usually many corrective actions needed.
- **6D: Implementing and Validating PCA.** The purpose of this 8D Report step is to verify if the actions taken in step 5D have removed the root cause. If we discover that the root cause has not been completely removed, then we have to take additional measures. It is sometimes necessary to return to root cause analysis in step 4D and repeat the RC/CA cycle.
- **7D Preventing Recurrence.** This step is similar to step 5D. The difference between these two steps in 8D Report is the reason why we perform them and in final goal. Actions in step 5D are meant to prevent an existing problem from happening again. In contrast, preventive actions remove causes for a potential

problem and prevent it from ever happening. 7D actions are proactive and oriented towards a potential event in the future.

Preventive Actions are often based on results of FMEA analysis or observations of negative trends. Often, concrete problems encourage us to think about other problems that could arise on the same product or about the same problem arising on another product or process.

- **8D: Recognizing Team Efforts.** At the end of an 8D process is the time to recognize the team efforts and special team member contributions. This is also a good point to document lessons learned. This is a chance for the Champion to express thanks to those who have helped in dealing with this problem.

1.10 RC/CA Report Review/Approval (8D)

The key to effective RC/CA effectiveness is the identification of the actual root cause, and the full implementation of corrective actions that will prevent the problem from happening again. The review of the 8D Report should consider the following questions:

- Was the correct Root Cause identified?
  - Does the report include a Fishbone Diagram?
  - Does the report include the results of the 2x5 why analysis?
  - Does the report include the reason that the "Defect Was Not Detected"?
- Was a reasonable Corrective Action identified and implemented?
  - Examples of less tangible Corrective Actions:
    - Employee was retrained or fired.
    - Inspection criteria was added or updated.
  - Examples of more tangible Corrective Actions:
    - Process was fool proofed using Poke Yoke techniques.
    - New equipment was installed with better process capability.
    - New tools or fixturing were added to prevent defect from occurring.
    - Test software was updated to prevent this defect type from escaping the system.

1.11 Additional RC/CA Report Follow-up (8D)

In some cases, the 8D report may not be approved due to inadequate RC/CA activity. In such cases, the RC/CA activity will need to be revisited:

- Root Cause diagnosis may be incorrect/unclear
- Corrective Action may be inadequate
- Ability to detect the defect may be inadequate
- Defect may have repeated after Corrective Actions went into effect

In some cases, it may be sufficient to reject the 8D report and request a more thorough RC/CA analysis and follow-up actions, and to update the 8D report to include the resulting RC/CA activities and results. In such cases, the updated

8D may need to include a more thorough treatment of the RC/CA activity, including verifiable objective evidence (VOE) such as a copy of the Fishbone diagram, 2x5 Why results, etc.

1.12 RC/CA Closed

The problem can be "Closed" when the RC/CA activity as documented in the 8D Report has been deemed sufficient and is "Approved". Typically, the 8D report is reviewed and approved by a Supplier Engineer (SE), Product Engineer (PE), Tiger Team or others. For minor or low occurrence issues, it may be sufficient to close the issue after Approval of the final 8D Report.

Repeat issues after an 8D Corrective Action has been implemented may result in escalation, including additional reporting and analysis, implementing a screen or SSP to further contain the issues, or other actions necessary to improve RC/CA effectiveness and prevent recurrence.

For significant issues, such as when a corrective action request has been generated or an SSP has been performed, it will be necessary to validate the RC/CA effectiveness, to prove that the RC/CA activity has been adequately completed, and that the new incoming material meets specifications. The validation process is crucial when complex issues are involved, or to mitigate the risk of receiving defective incoming material at Oracle.

2.0 Other Follow-up Activities

2.1 Other RC/CA Processes

In some cases, it may be necessary to invoke other processes to better address the problem:

- Generate a formal corrective action request to add additional RC/CA rigor and oversight, or to perform an SSP
- Generate an SSP to stop build, stop shipment or to purge inventory (a corrective action request is required)
- Supplier generates a product or process change notice PPCN to change internal processes or specifications
- Oracle generates an engineering change order to change internal processes or specifications

In other cases, it may be necessary to escalate the problem to obtain more resources/expertise:

- Ops PM, SPM, TPM
- Business Unit Engineering
- Tiger Team

2.2 Corrective Action Process

- Corrective action requests are a way that Oracle drives root cause and corrective action on significant product and process issues. Reference *Corrective and Preventive Action Process*, 923-3644.
- These issues are treated with priority, given high visibility, and are held to update and review requirements.
- These issues are tracked to the appropriate level of analysis before closure.

Corrective action requests should be opened per minimum criteria requirements

- Process Escapes/Deviations
- Field Failure/Alarms
- DPM/Incoming Materials
- Manufacturing Yield Trends
- Ongoing Reliability Test Failures (ORT)
- Reliability Qualification Test Failures (RQT)
- Audit Findings
- Stop Ship and Purge Events

2.3 Stop Ship and Purge Process (SSP)

An SSP is an extension of the corrective processes. An SSP is initiated for significant problems that may put Oracle shipments at risk. In the case of such high risk, a formal corrective action request must be opened, and a technical pre-assessment initiated. The SSP process will invoke a team to start the Stop Ship and Purge process. Reference *Stop Ship and Purge (SSP) Process for Hardware*, 923-1826.

In parallel, the Supplier should take precautions to identify and quarantine all impacted material. A formal corrective action request must be generated as a prerequisite for an SSP.

2.4 Process Alert/Process Deviation Process (PA)

A Process Alert (PA) or Process Deviation may be necessary for Oracle to receive material that does not meet Oracle specifications. The PE or SE will usually initiate the PA request. The PA number is used to label the affected material and packaging, and to define the stock location to segregate material. Reference *SCO Manufacturing: HLS Process Alert* (PA), 923-2141 or *Process Alert Process*, 7086975.

2.5 PPCN Process

A PPCN is required when the supplier wants to make process or design improvements or changes that do not affect Oracle drawings. The supplier uses the PPCN system to propose changes for Oracle Approval. The PPCN process may include validation of first articles which have resulted from the proposed changes. A Process Alert (PA) or Process Deviation may be necessary for Oracle to receive the material before the PPCN is approved. Reference *Supply Chain Product and Process Change Notification (PPCN) Request Procedure*, 923-2465

2.6 EC Process

An EC is required for form, fit or function changes to Oracle drawings. EC's can be initiated by Oracle personnel or by an Oracle Supplier. When a supplier identifies a product or process improvement that affects the form, fit or function of an Oracle controlled drawing, the supplier will initiate a PPCN to communicate the improvement to Oracle for Approval. The PPCN process will then generate an EC to manage the needed Oracle Actions and obtain necessary improvements/changes.

2.7 Tiger Team

Complex issues may require the formation of a Tiger Team. Highly complex and high priority issues can have multiple potential root causes and solutions. The Tiger Team is composed of experts who will brainstorm the possible root causes and develop corrective action according to the following guidelines:

- The Tiger Team leader is often a senior or principal engineer or manager.
- The Supplier may also identify a representative to coordinate activities in their organization.
- Multiple organizations may be involved.
- The Tiger Team may also include Industry Experts or Consultants.
- Tiger Teams members should be recognized as experts within their organizations and should be able to manage communications, analysis and action items between organizations.
- The Tiger Team should define what “is” and what “is not” within the scope of the problem they are trying to solve to prioritize activities, and to ensure that the team is focused on the most likely causes of the problem.
- Tiger Team meeting minutes need to be documented and communicated. Minutes should capture significant discussion points, action plans, action items, and decisions.
- An example of an action plan for one possible root cause is illustrated in Appendix E, “Root Cause Action Plan Example (Field Effect Transistor Plan)”.
- Tiger Teams are often tasked with addressing very complex issues, especially design issues and issues with significant financial impact. So, additional tools and processes are often brought to bear by the Tiger Team, such as a DOE.

2.7.1 Design of Experiments (DOE)

The Supplier or Tiger Team may be required to complete a DOE to solve very complex problems involving the optimization of multiple process variables to achieve a desired quality improvement. DOE deals with planning, conducting, analyzing and interpreting controlled tests to evaluate the factors that control the value of a parameter or group of parameters.

A well planned and executed DOE may provide a great deal of information about the effect on a response variable due to one or more factors.

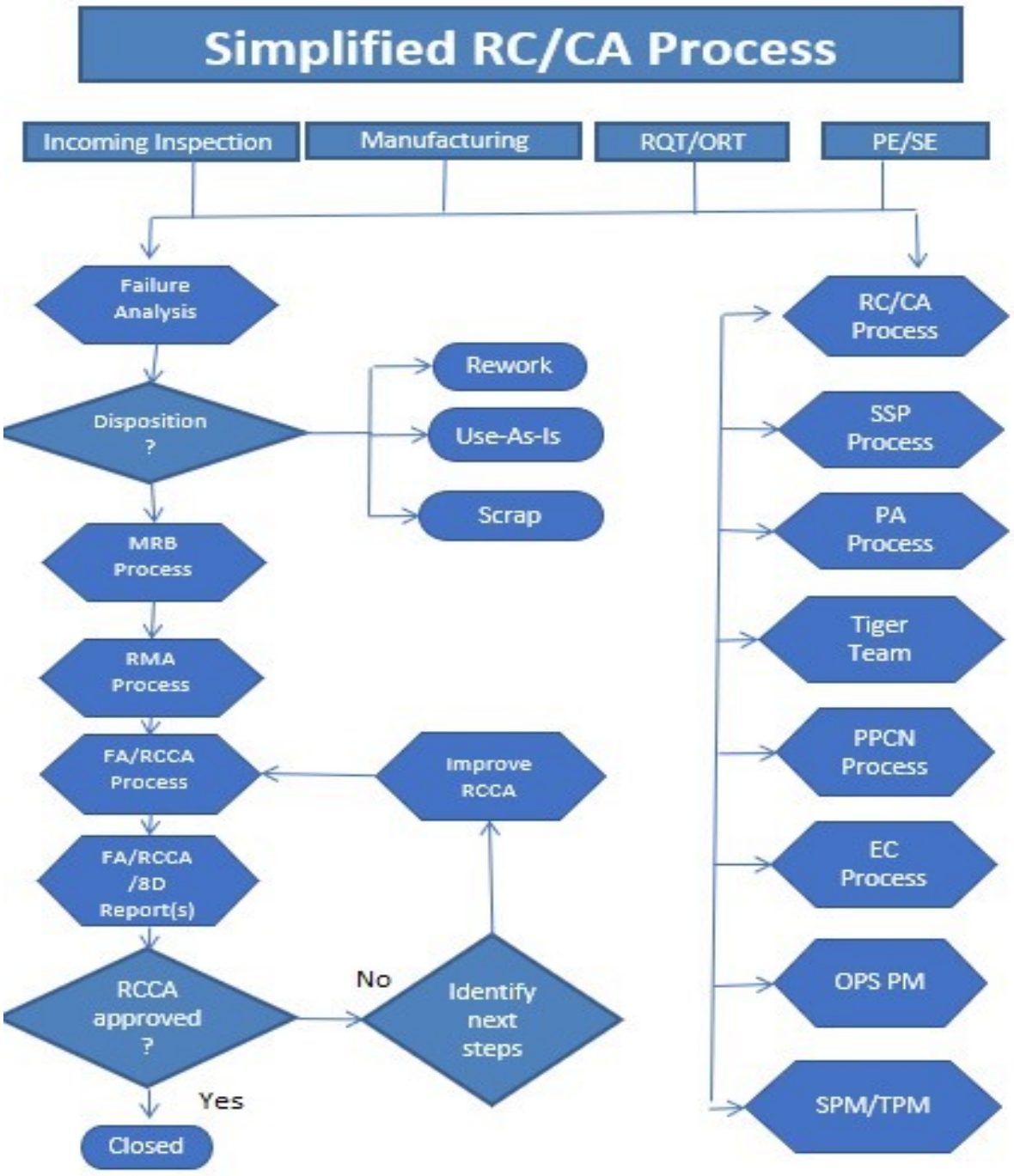
DOE may involve holding certain factors constant and altering the levels of another variable. The One-Factor-at-a-Time (OFAT) approach to process knowledge is inefficient when compared with changing multiple factors simultaneously.

Key concepts in creating a designed experiment include blocking, randomization and replication. A well performed experiment may provide answers to questions such as:

- What are the key factors in a process?
- At what settings would the process deliver acceptable performance?
- What are the key, main and interaction effects in the process?
- What settings would bring about less variation in the output?

Appendix A – Simplified RC/CA Process Flow Example

Figure A-1 Simplified RC/CA Process Flow



Appendix B – Classic Problem Solving Steps and Support

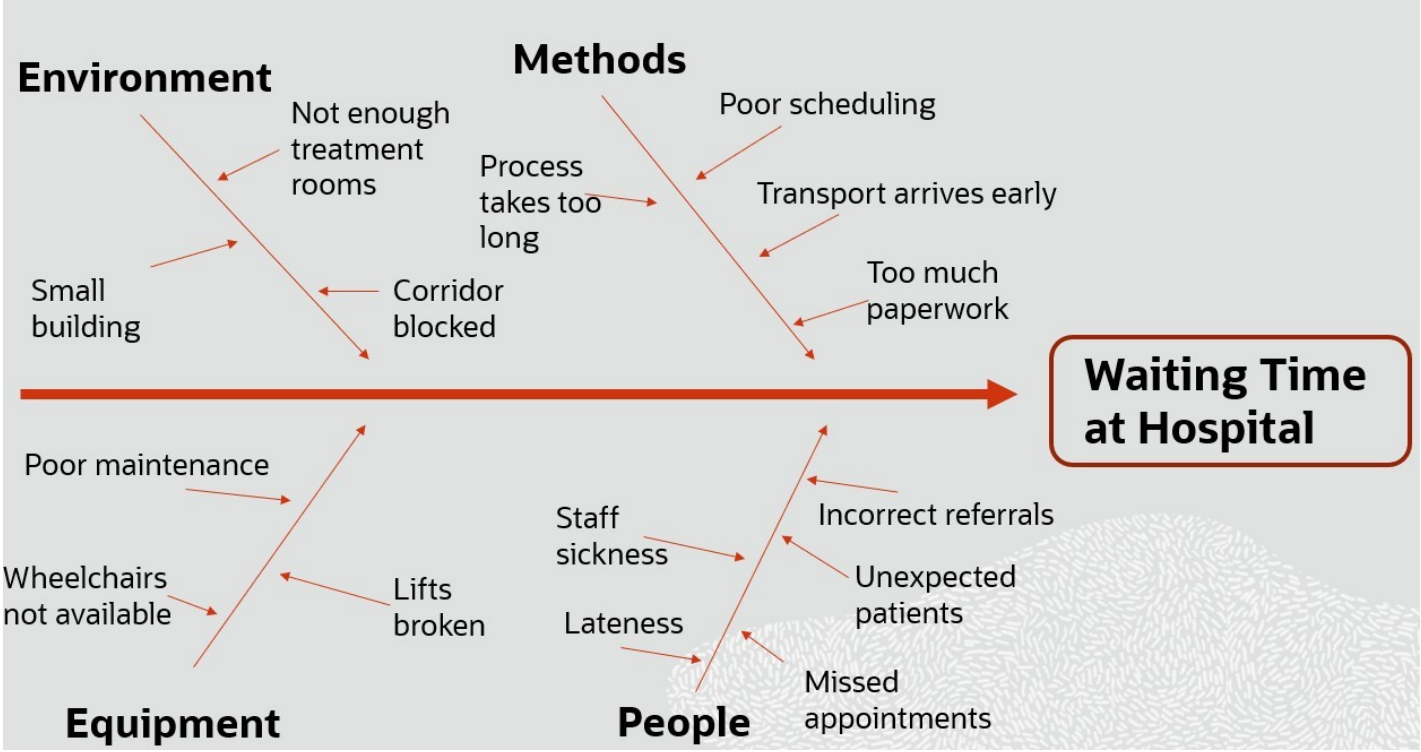
Table B-1 Problem Solving Steps and Tools Summary

Step	Support Tools
Identify the problem	• Brainstorming • "2x5 Whys" • Pareto diagrams • Check sheets • Consensus Plan/do/check/act • Nominal grouping technique
Define the problem	• Fishbone diagrams • Rational subgrouping • Process flow • Check sheets • Pareto diagrams • Systematic troubleshooting
Investigate the problem	• Check sheets • Graphs • Process capability • Control charts • Histograms • Scatter diagrams
Analyze the problem	• Brainstorming • 2x5 Whys • Fishbone diagrams • Graphs • Histograms • Systematic troubleshooting • Experiment design • Affinity diagrams
Solve the problem	• Brainstorming • Check sheets • Pareto diagrams • Root cause • Containment • Preventive and Corrective actions • Multi-voting • FMEA, PFMEA
Confirm the results	• Control charts • Check sheets • Pareto diagrams • Histograms
Standardize Improvements	Make changes to: • Control charts • Check sheets • Pareto diagrams • Histograms • PFMEA • Process flows • Training • Materials • Manufacturing assembly instructions (MAIs) • Designs • Other relevant areas

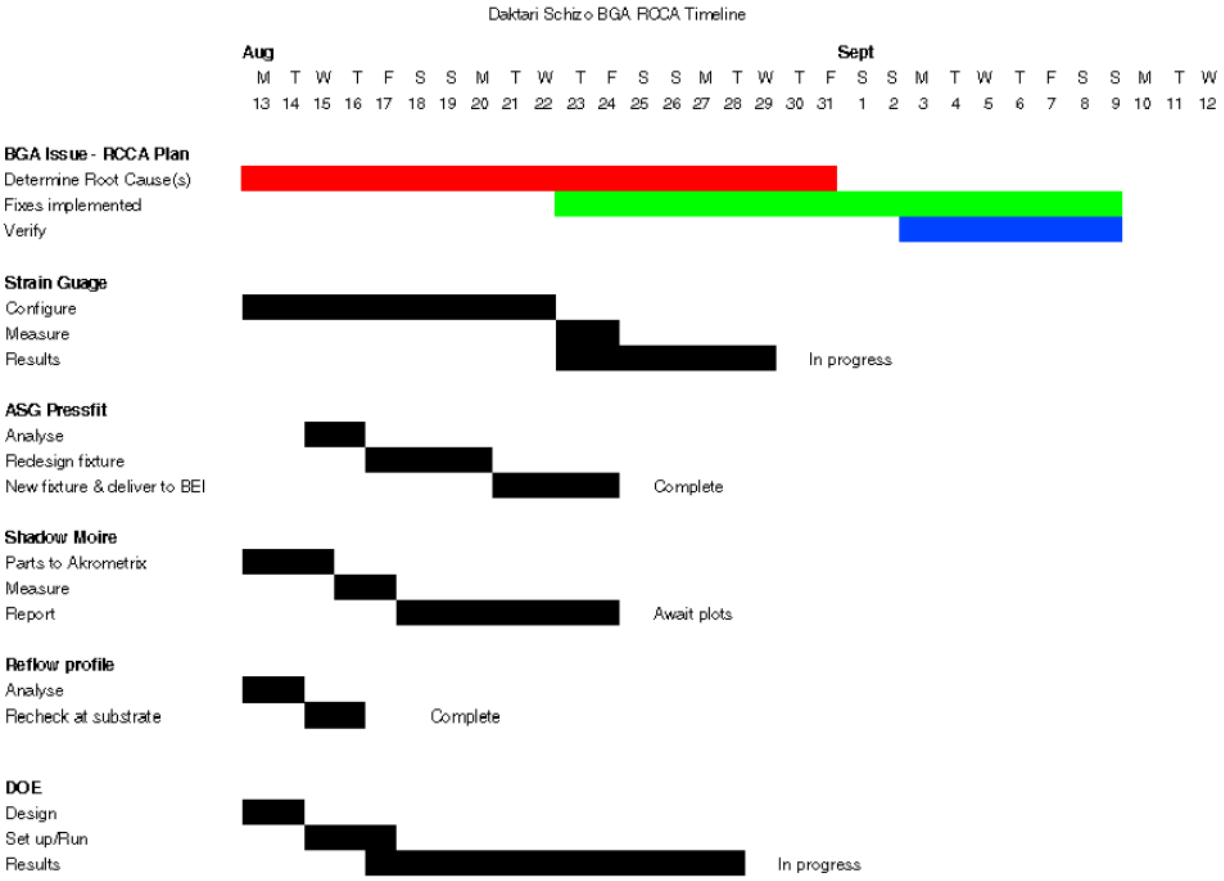
Appendix C – RC/CA Prioritization Scoring Tool

Score	Definition
Probability of occurrence:	
1	Remote possibility – similar parts have been used for similar functions in previous designs or processes and there have been no failures.
2	Low failure rate with similar parts having similar functions in previous designs or processes.
3	Moderate failure rate with similar parts having similar functions in previous designs or processes.
4	Frequent failure rate with similar parts having similar functions in previous designs or processes.
5	High probability of failure – it is almost certain to occur in a significant proportion of cases.
Severity:	
1	Failure of a minor nature which may or may not be detectable by the customer; causes only slight annoyance without any noticeable degradation in system or subsystem performance.
2	Failure **with** prior warning which causes customer dissatisfaction and customer is made uncomfortable or is annoyed by the failure; some system or subsystem degradation noted.
3	Failure **without** prior warning which causes customer dissatisfaction and customer is made uncomfortable or is annoyed by the failure; some system or subsystem degradation noted.
4	Failure **with** prior warning which causes major customer dissatisfaction because of an inoperable system or an inoperable convenience subsystem.
5	Failure **without** prior warning which causes major customer dissatisfaction because of an inoperable system or an inoperable convenience subsystem.
Probability of detection:	
1	Very high probability that the defect will be detected before reaching the customer. The defect will most probably be detected during manufacturing and assembly, as a result of inspections and tests.
2	High probability that the defect will be detected before reaching the customer. Tests and inspections during manufacturing will catch most defects. This defect will rarely reach a customer or supplier.
3	Moderate probability of detection before reaching the customer. The defect will not often be detected during manufacture. Final inspections, out-of-box audits, and customer installations will detect most of the remaining defective units.
4	Low probability of detection before reaching the customer. The customer will accept the uit with an indication of minor defects. There will be latent failures.
5	Very low probability of detection before reaching the customer. The customer will probably accept installation of the system and the defect will be detected sometime after this.
Example: 5 for Occurrence + 5 for Severity +5 for Detection = 15 for Prioritization Score	

Appendix D – Ishikawa (Fishbone) Diagram



Appendix E – Action Plan Matrix and Schedule Chart (BGA/RCCA Gantt)



Appendix F –RCCA Action Plan Example (Field Effect Transistor Plan)

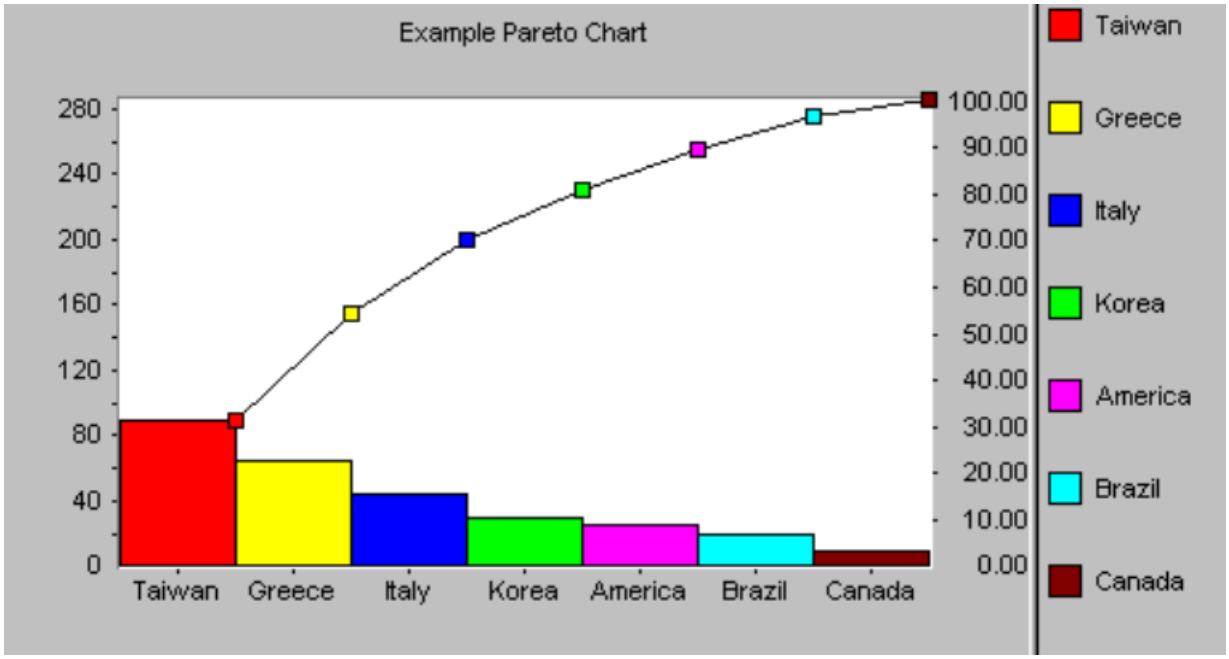
FET Fault Analysis

Revision **Confidential – Oracle Restricted**

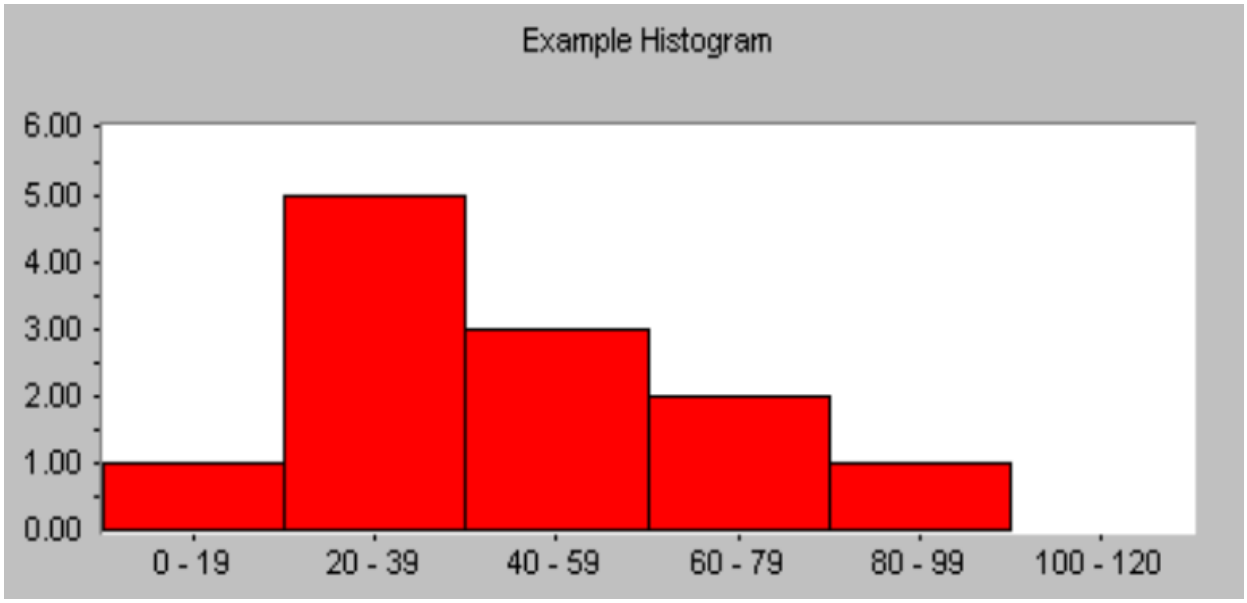
01/31/24 **Open Actions for Cause and Effect Analysis – FET Faults**

Header	Sub activity	Date Action Logged	Log Number	Owner	Original Due Date & Subsequent Update	Action Detail	Response
ICT							
Pwr Up/Dwn Sequence	Eng Doc Pwr Sequence	1/31/24	31-01	Scott			
	Define sequence as is today in fixture	1/31/24	31-02	Perry			
	Scope sequence – pwr rails; time based on full up/down timing	1/31/24	31-03	Perry			
	Scope during digital	1/31/24	31-04	Perry			
	Scope during analog	1/31/24	31-05	Perry			
	Scope FETs all of them during pwr up/down	1/31/24	31-06	Perry			
	Check FET oscill at gate	1/31/24	31-07	Perry			
	Perform test with reference gnd on pwr conn or closest gate	1/31/24	31-08	Perry			
	Set scope for timing and log data	1/31/24	31-09	Perry			

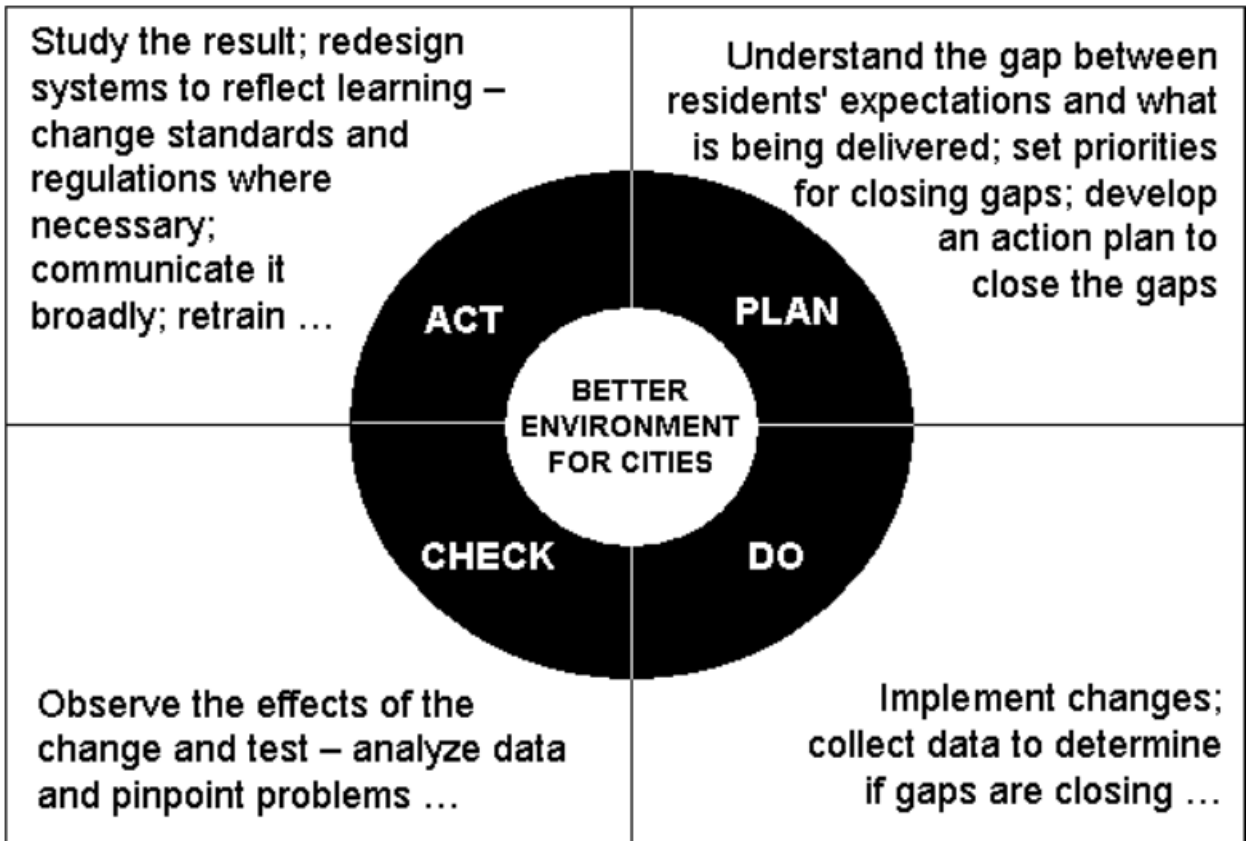
Appendix G –Pareto Analysis Example



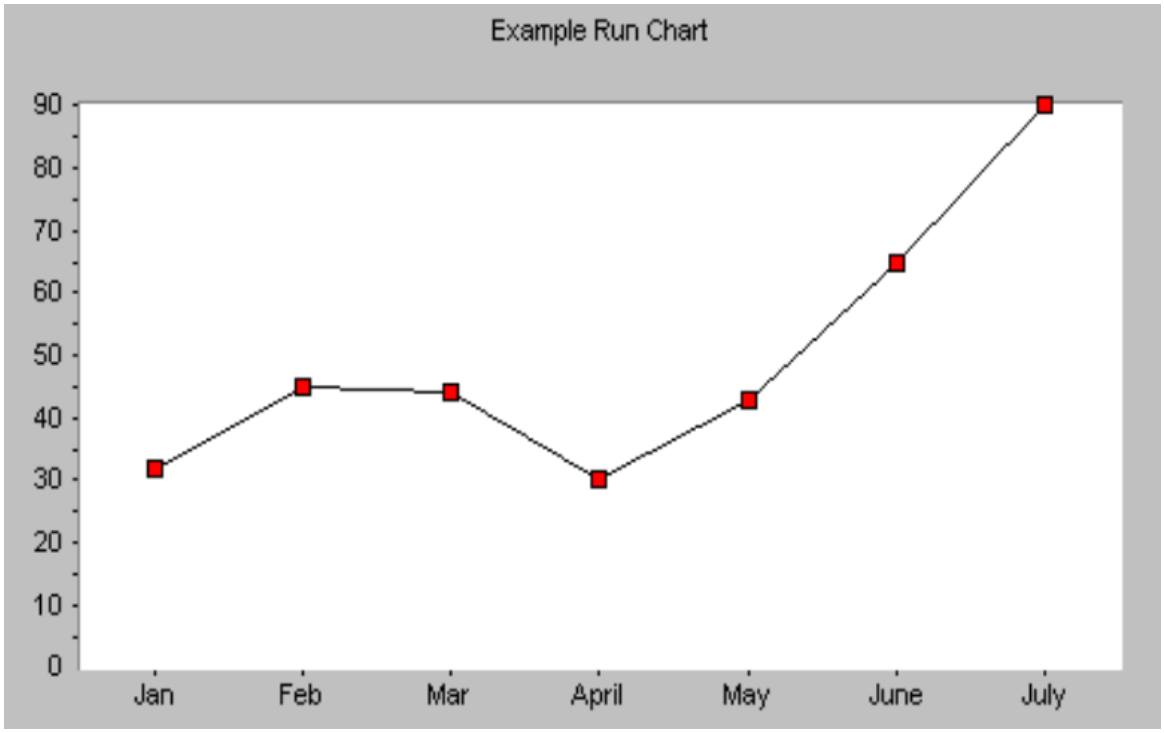
Appendix H – Histogram Example



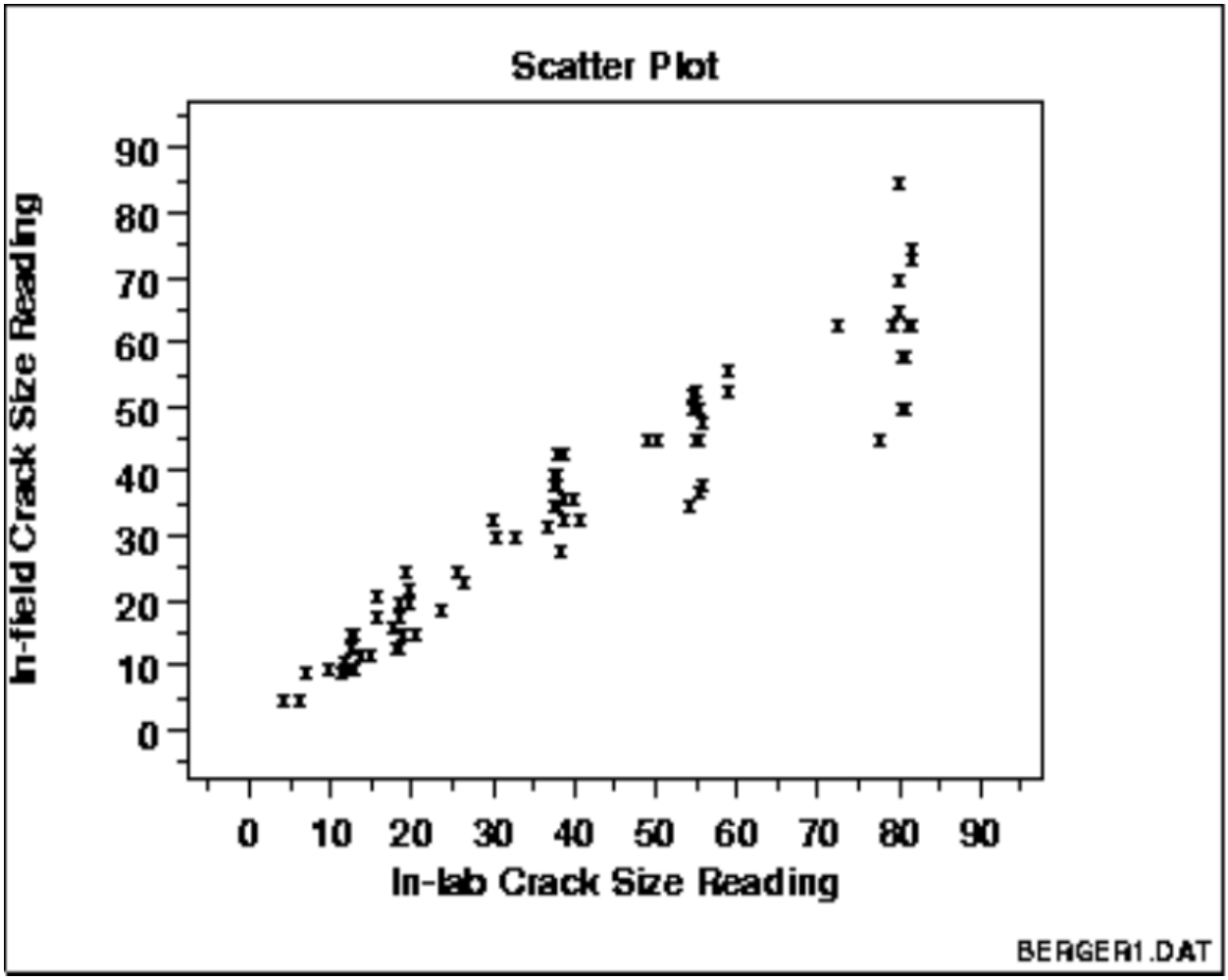
Appendix I – Plan, Do, Check, Act (PDCA) Cycle



Appendix J – Run Chart Example



Appendix K – Scatter Diagram Example



Related Information

Document History

Rev	Date	Description of Change	Originator
01	09 Mar 2002	Initial release.	N/A
02	02 Dec 2014	Total rewrite of the previous Sun document to apply to help drive and improve Oracle supplier RC/CA efforts. Added document references to Sections 2.2 (923-3644), 2.3 (923-1826), 2.4 (923-2141 and 7086975), and 2.5 (923-2465).	N/A
03	24 Feb 2017	Update to reflect organization changes and converted to Word file format. Removed NCR references from the Morrisville specific activities (Morrisville is no longer in operation for Oracle).	N/A
04	12 Apr 2019	Updating title and links due to Fusion transition.	N/A
05	16 Mar 2024	canceled	N/A
06	06 Nov 2024	Updated to Redwood format. Removed Webdocs reference, updated doc titles throughout, updated ESO link. Removed specific tool references. Updated appendixes: Ishikawa diagram, simplified RC/CA flow, RC/CA action plan example. Updated 8D step titles. Added OCI Ingestion to section 1.1	N/A

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