

# Quality Program General Overview

Purpose: To constantly improve the quality of our product and service.

How is the technical staff going to improve the quality of our product and service?

## Awareness (CCDS and Monday Morning Meeting)

Awareness to problems is what our present quality system relies on. We have had the Customer Call Documentation System (CCDS) in place for five to six years. The system is adequate for gathering customer feedback on our product and service. This information is shared with the technical staff at the Monday Morning Tech Meeting. Awareness of the problems our clients encounter helps the technician keep a mental note to watch for that specific problem. Heightened awareness of such problems compels us to tighten our individual checkout practices, so similar problems don't occur.

We also use awareness to change present systems in an effort to prevent similar problems from happening. When a certain problem seems to keep occurring we change our checkout procedures or rely on our own innovation to solve the reoccurring problem.

## Getting Field Experience

We send our technical staff out in the field to gain a better understanding of the overall picture. This generally results in growing a better understanding for why we need to be so concerned about the quality we put into our product and services.

## PDSA (Plan Do Study Act)

### **Standards and Procedures**

**Checkout Procedures**

**Quickstarts**

**Helpful Hints Page**

**Troubleshooting Guides**

Right now the standards we employ for most of our equipment is more stringent than the manufacturers. This has always been the case.

We have checkout procedures for most of the equipment we own. Most of the more complex items anyway. What we are in the process of doing however is creating a system to keep improving our checkout procedures, quickstarts, helpful hints page, and troubleshooting guide. The plan is:

Pick a piece of equipment to focus on.

Hand out a survey with the following question:

What are the top ten problems that we have to fix on this piece of equipment when it gets put up on the bench?

Then all of the CCDS for that particular piece of equipment are compiled for the last year.

The survey information is compared to the CCDS information. This gives the improvement team a list to focus their efforts on. All possible information will now be used to update our checkouts, quickstarts, and troubleshooting guides.

A new checkout procedure is made to address any needed changes. At the same time, the quickstart and helpful hints page are added to the manual.

While the checkout procedure is being updated, 10 pieces of equipment are taken directly from the inbound shelf and placed on the bench. The equipment is powered up and run through. All information is documented.

The new checkout procedure is completed and implemented. The procedure is run through ten times. The equipment that gets run through the new procedure is tracked. When it comes back in from rental it get put directly on the bench and run through its paces. All information is documented.

The improvement team gets together after the tenth checkout and reviews the procedure. Changes can be made at that time to the checkout, quickstart or helpful hints page.

This system of improvement requires more from the procedures we right. We are shifting our expectations from the equipment working properly "first time out of the box", to the equipment working properly "second time out of the box". If all goes well the equipment will come back from rental, get put up on the test bench, and work properly without changes.

At first this process is going to increase the amount of checkout time. Some equipment is going to be operated before a checkout is done. Eventually, the system will shift from a ten piece cycle to a time based cycle. Time based cycle means we will review checkouts based on a timeline, or an as needed schedule.

*I am going to ask a certain group of techs to right the new procedures. It was too much for me to do on my own. Took too much time.*

## Customer Follow-up

The CCDS form and the Customer Follow-up form have been put together. When a CCDS form is filled out documenting a problem, that particular asset is listed on the Customer Follow-up Board. The asset is watched for everyday. It becomes a second priority when it gets in the door. The asset is checked out. The documentation form is filled out and given to the Customer Service Rep involved. The information from this

system will be reviewed once a month in the Monday Morning Meeting to heighten awareness.

## Tracking

The tracking that is going to be done may include:

Items rented to CCDS problem call

Total items rented to total customer feedback

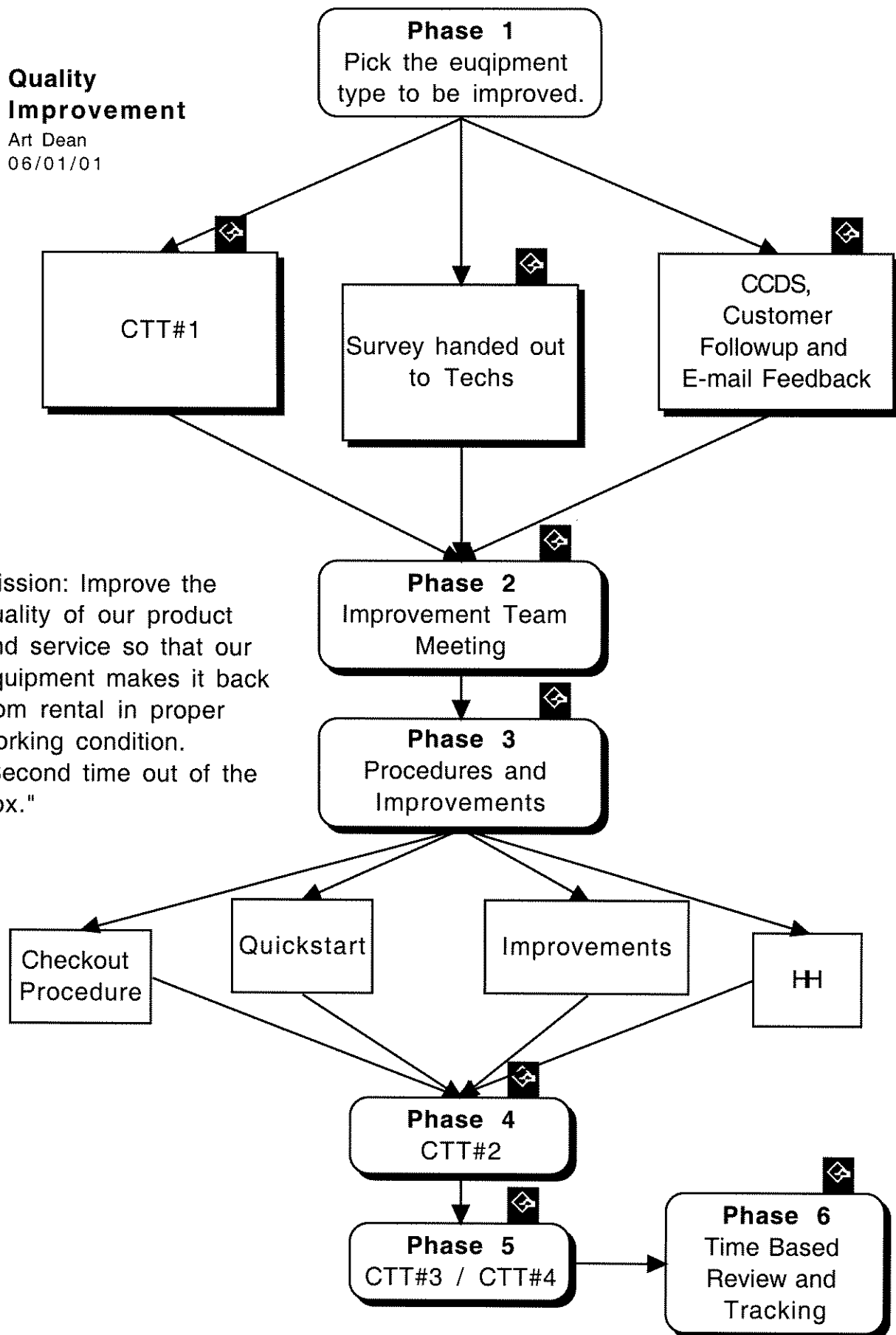
Credited Items to Items rented

(Still working on the tracking stuff.)

## Quality Improvement

Art Dean  
06/01/01

Mission: Improve the quality of our product and service so that our equipment makes it back from rental in proper working condition.  
"Second time out of the box."



CTT#1

Checkout Target Ten

Ten assets of the same type are put up on the bench and operated before a checkout is done. The asset gets logged in and the CTT#1 form gets filled out by the Tech. Then the instrument gets checked out using the old procedure to establish somewhat of a baseline. These Target-Ten will be tracked through the system.

While this is going on, the data from the survey and the CCDS information is being gathered.

[illegible]

CTT#1

EQUIPMENT TYPE: \_\_\_\_\_

ASSET # \_\_\_\_\_

DATE OUT : \_\_\_\_\_

DATE IN: \_\_\_\_\_

DATE CHECKED OUT: \_\_\_\_\_

CASE DESCRIPTION:

HOW DID IT WOR?

# Equipment Survey

Art Dean 05/31/01

When this piece of equipment comes back from a rental, if the client has used it properly, it should function properly without anything done to it what so ever. The tech should be able to throw it up on the test bench and it should operate properly. Out of 10 instruments or pieces of equipment, how many do you think come back in this condition?

What are the 10 most common problems that you have to fix on this particular piece of equipment when it comes back from rental?



## **Survey**

The purpose of the survey is to help the improvement team focus on the most common problems with the equipment. The information is compared to the CCDS information and a top-ten list is compiled. This information is part of what will be used to change all procedures concerning that particular piece of equipment.

## CCDS (Customer Call Documentation System Customer) Follow-up, E-mail Feedback

All of the CCDS, Customer follow-up forms and E-mail Feedback are looked at for the last year concerning the equipment of interest. A top-ten list of common problems is made. This information will be compared to the survey information and a common top-ten list will be made. This list will be used by the improvement team to improve the quality of the equipment.

## **Improvement Team Meeting**

The Technicians that completed the survey meet around the piece of equipment being focussed on. This is a brainstorming session. All gathered information will be used to improve the equipment and any procedures associated with that piece of equipment.

## **Procedures and Improvements**

### **"The equipment should work the second time out-of-the-box."**

#### Checkout

The Checkout procedure is the cornerstone of our quality system. A good checkout procedure should eliminate most of the problems our clients experience with our equipment. A Tech is selected to take all of the information gathered and re-write the checkout procedure for the piece of equipment. The procedure should address all or most of the top-ten common problems with the equipment. This is the most important part of the system.

#### Quickstart

A Tech is selected to re-write the Quickstart. Clients don't like to read through lengthy manuals. The purpose of the Quickstart is to help our clients get our equipment up and working properly in the shortest amount of time, with the least amount of frustration. Step by step instruction is detailed in the quickstart. The quickstart is strategically fashioned using our combined knowledge on where most clients get confused in the set-up of our equipment. The quickstart is printed on a different colored paper than the manual. This should help catch our clients attention when they unpack the equipment. Quickstarts have historically helped decrease the amount of client calls we receive.

#### HH (Helpful Hints)

A Tech is selected to write the HH page. This page goes directly behind the Quickstart. This page is included for the reason that each piece of equipment has its' own peculiarities. This could be viewed as a, "best way to use this equipment", page. Over the years our Techs have gained knowledge about the best way to use the equipment. Call it the tricks of the trade. The intention here is not to give away all of our secrets, but to assist the client in some common practices they may not be aware of. This page will include general tips on set-up and use of the equipment, set-up diagrams, and things to watch for. This page should give our clients a better rental experience and decrease the amount of technical calls for help. It may also prolong the life of our equipment. Proper use of equipment will decrease the cost associated with parts replacement and labor time for maintaining equipment that has been improperly used.

#### Improvement

Innovation compels our Technical staff to improve on the manufacturers design, decreasing the problems associated with the rental of the equipment. Any piece, part, or design may be changed to make the equipment work better than the manufacturers specifications.

**\*\* All improvements, checkouts, quickstarts, and HH pages are reviewed by the improvement team selected for that particular piece of equipment.**

CTT#2

Checkout Target Ten the Second Time

After improvements are made and procedures re-written, the equipment that was previously checked out in CTT#1, receives any upgrades recommended. It is then checked out using the new checkout procedure. This establishes a base line for the improvements.

CTT#2

EQUIPMENT TYPE: \_\_\_\_\_

ASSET # \_\_\_\_\_

DATE OUT : \_\_\_\_\_

DATE IN: \_\_\_\_\_

DATE CHECKED OUT: \_\_\_\_\_

CASE DESCRIPTION:

HOW DID IT WORK?

CTT#3

Checkout Target Ten #3

The improvements having been made and the equipment having gone out on a rental, the equipment is put up on the bench for a quick check to evaluate its working condition. CTT#3 form is filled out. After all ten pieces of equipment being tracked have gone through CTT#3, the improvement team reviews all changes made. Any changes recommended from this point are made right away.

[illegible]



CTT#3

EQUIPMENT TYPE: \_\_\_\_\_

ASSET # \_\_\_\_\_

DATE OUT : \_\_\_\_\_

DATE IN: \_\_\_\_\_

DATE CHECKED OUT: \_\_\_\_\_

CASE DESCRIPTION:

HOW DID IT WORK?

CTT#4

EQUIPMENT TYPE: \_\_\_\_\_

ASSET # \_\_\_\_\_

DATE OUT : \_\_\_\_\_

DATE IN: \_\_\_\_\_

DATE CHECKED OUT: \_\_\_\_\_

CASE DESCRIPTION:

HOW DID IT WORK?

### Time Based Review

After the equipment has made it through the forth checkout, the review of procedures moves to a time based schedule unless major improvements or changes are made. The procedures will be reviewed every three months.

### Tracking

This part of the system is still being hammered out. The purpose of the tracking will be to gauge success and growth.