

Run/Control Charts



Definition

A graphic representation of system performance over time. A Control Chart helps us to determine if a system is stable and predictable over time (no special cause) and gives a team baseline data against which to mark future changes. Both variable and attribute data can be placed on Control Charts.

Utility

A Run/Control Chart can tell you what kind of variation is at work on your system (special or common cause), and give you an assessment of your systems performance over time. It can help you avoid undercontrolling or overcontrolling your system by understanding what is normal, predictable variation and what is not. At the beginning of every improvement project, a team should evaluate the system performance to help gather baseline of results data against which all changes can be evaluated.

Construction

1. Begin by planning how and where you will get your data (write an Operational Definition).
2. Complete the chart identifier information (what is being measured, dates, location, collector, and other relevant information) and record the data on the sheet.
3. Calculate the process average (for Control Chart only).
4. Calculate the upper and lower control limits (for Control Chart only).
5. Determine the scaling for the chart on the paper form, draw the center and control lines (for Control Chart), and plot the points.
6. Interpret the chart.

RULES FOR CONTROL CHART INTERPRETATION

Any of the following indicate an unstable or "out-of-control" system:

1. A point outside the limits (99.7 percent should fall within the limits).
2. A run of seven points:
 - Above the center line
 - Below the center line
 - Going in one direction up
 - Going in one direction down
3. Nonrandom patterns
 - Cycles (may indicate too many data are combined—shift, equipment, and so on)
 - Too close to the average (center line)
 - Too far from the average (center line)

Worksheet #61 *Run Chart Template*

Activity Worksheet

Name: _____

Date: _____

Each student will plot his or her data using a different color. A transparency could be made for this activity.

20					
19					
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	Day 1	Day 2	Day 3	Day 4	Day 5