

DATA COLLECTION PLAN

Data collection is usually the most time consuming process and the most resources in the measuring process. This step is very important because the quality of this will have an impact on the following decision-making process, in particular to the analysis of the data.

Data collection plan is a document that makes us sure that all team members speak about the same parameters, that information is properly transmitted to people in the organization in order to receive and collect the exactly data needed.

Before starting data collection, we must ensure that we discuss and reach a consensus with the team on the following aspects:

What do we measure? With what types of data we work? What kind of data are available? Are these data somehow already in a one database (SAP / ERP)? Who collects the data? Where is the data collected? What is the sampling frequency? How do we arrange (present) the data? What kind of table we use and what graphical methods we plan to use, Pareto / Control charts / Run charts?



The answer to all these questions must be found in the data collection plan.

Variable name	Sample size (sample / population)	Variable type	Operational definition	Collection responsible Who?	Frequency of collection When?	How data are collected?	From where are data collected?	MSA is needed?

A Data collection plan contains the following columns

- ✓ **Variable name** – could be an important output from the process (Y) or an input / process parameter (x) – it should HAVE the exact name that is in Cause Effect Matrix.
- ✓ **Sample size** and if we collect data using sampling or entire population is considered;
- ✓ **Variable type**, or the data type - Continue or discrete?
- ✓ **Operational definition** of variable – detailed explanation about what it is, measurement units and how to record, etc;
- ✓ **Who is responsible for data collection**; there is a person who collect data or we have data from a machine?
- ✓ **When data are collected** or **frequency of collection** – every hour, shift, day, month?
- ✓ **How data are collected**; What tools do we use? We use data collection sheets?
- ✓ **From where data are collected**; to that process we have to go to collect data?
- ✓ **If MSA (Measurement System Analysis) is needed** – Can we trust that we have no big measurement errors?

As a conclusion, we must be aware that the accuracy of the data that we measure is one of the conditions of success and confidence in the data we collect is primordial. Design of Data Collection Plan is just the beginning of the measurement process and we have to start well.