

σ Six Sigma

Process Improvement



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Executive Blueprints

INDEX

1. Goals
2. Map
3. Measure
4. Analyze
5. Define
6. Implement
7. Control

Using Six Sigma techniques to improve processes



CONDUCTING EFFECTIVE TEAM MEETINGS

Preparation:

- σ Define the Purpose of the Meeting and Write it Down
- σ Prepare and distribute an Agenda in advance
- σ Identify a Meeting Leader
(The Leader may facilitate but should not participate in debate)

Meeting Etiquette:

- σ Start on Time
- σ Establish Time Limits
- σ Makes Notes
- σ Share observations, make points with facts
- σ Keep an open mind
- σ Listen without Bias
- σ Avoid side conversations
- σ Respect Other Opinions
- σ Develop Action Items
- σ Summarize Meeting with the Group
- σ Establish Follow-up dates and times
- σ End on time

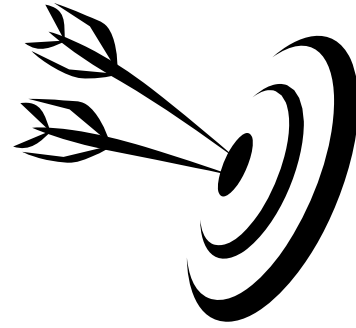
Post Meeting:

- σ Distribute an Activity Report
- σ Follow-up on Action Items and report to group

"I have left orders to be awakened at any time in case of national emergency, even if I'm in a cabinet meeting."

Ronald Reagan (1911 - 2004)

GOALS



Define the Goals associated with a specific process.

Examples:

- For the process of receiving merchandise or product, goals may include speed to process, accuracy of reconciliation, reporting for credit or payment, and forwarding for inventory of handling.
- For the process of applying payments against invoices, the goals may include aging of receivables, accuracy in applying funds, reconciliation, past due limits or collection.
- For the process of handling customer support phone calls, the goals may be speed to answer, handling time, first time call resolution, and customer satisfaction.

Define the goals as the outcomes of the process and establish benchmarks or desired results with metrics. Metrics may be numbers, percentages, dates or anything that is measured. Base benchmarks on industry standards, business requirements, previous performance, or management objectives.

What are the GOALS (desired outcome) of the process?

“Results! Why, man, I have gotten a lot of results. I know several thousand things that won't work.”

Thomas A. Edison (1847 - 1931)

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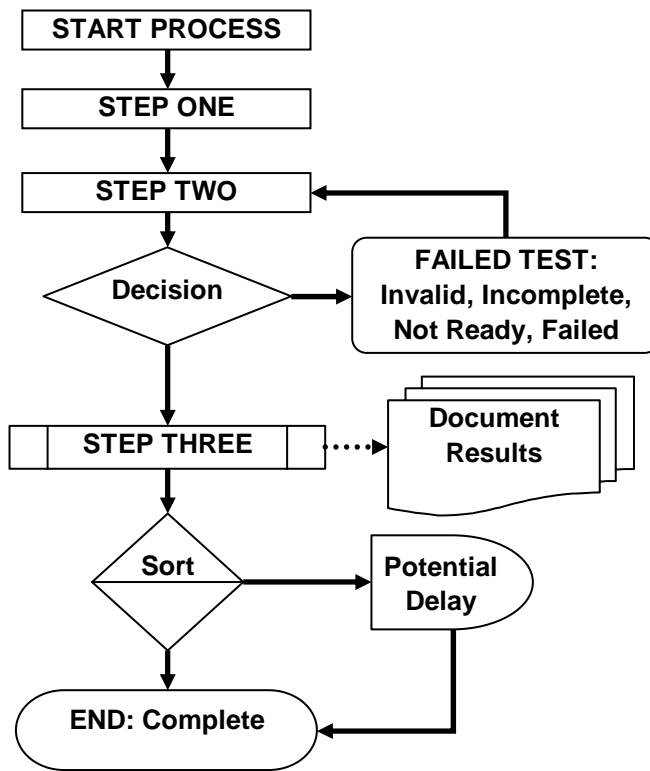
MAP

Create a Process Map.

- σ Define each step in the process.
- σ Define delays / potential delays (and if acceptable or not)
- σ Define “Decision Steps” (process branch with more than one possible result)
- σ Define Owners for each step in the process
- σ Define Methods of Measurement for each step (when is it OK to continue)
- σ Define END RESULTS (Should align with GOALS)



Example of a Process Map with Steps, Decision, Repeat, Sort and Delay



HINT:

You can create Flow Charts in Microsoft EXCEL.

(Insert > Picture > AutoShapes)



MEASURE

- σ Define Type of Measurement for each step in the process
- σ Define Acceptable Levels for each measurement
- σ Obtain historical Metrics for each of the steps (if possible)
- σ Obtain current Metrics for each of the current steps
- σ Which Measurements are currently at acceptable levels?
- σ Which Measurements are NOT meeting your GOALS?

Types of Measurements:

Measurements include numeric, date, percentage, financial, or anything that can be plotted with a graph or a chart.

Historical Measurements:

Historical Measurements create a baseline and can establish trends.

- σ Do you have seasonal or cyclical trends?
- σ Are external elements creating an impact to internal processes?

Current Measurements:

The results of current measurements are often misleading, due to changes from concentrated study. For example, errors or omissions may not appear during the time of a study simply resulting from heightened awareness. This is typical, and it is one of the reasons that historical value and ongoing tracking is important.

Acceptable Levels:

If measurements are currently performing at acceptable levels, then –

- σ What is the alert mechanism if something falls below acceptable levels?
- σ Who is responsible for making the alert?
- σ What Authority does each person have for corrective action?
- σ What is the frequency of the reporting?
- σ Is the acceptable level an opportunity for improvement?

Less than Acceptable Levels:

If measurements are currently performing below acceptable levels, then –

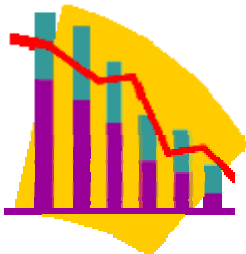
- σ What is the established GOAL?
- σ What is the alert mechanism if something falls below acceptable levels?
- σ Who has the Authority for making improvements?
- σ Who has the Responsibility for making improvements?
- σ What Support is necessary for making improvements?

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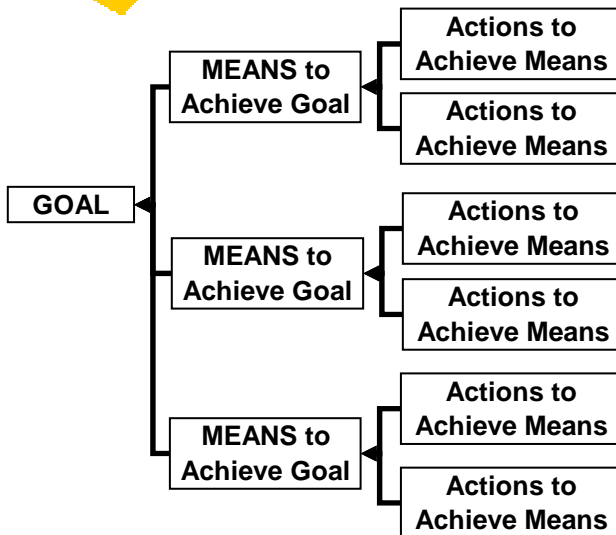
ANALYZE

Common Tools for Analyzing Defects or Opportunities for Improvement

Brainstorm – Individuals offer suggestions in a group setting. Keep an open mind. All ideas are welcome. Example: In a warehouse setting with ‘too much noise’, one suggestion was to create ‘other noise to cancel the offending noise’ – White Noise was the effective solution.



Pareto – Use this to focus on problems that have the greatest potential for improvement by relative frequency or size in a descending graph. Choose the most meaningful measurement and sort the existing data (measurements) from high to low for a specific amount of time.



Tree Diagram – Commonly used with brainstorming, create a tree of activities to achieve a desired goal. Starting with the end goal (left), work toward the Means (objectives) required to achieve the goal. Then, focus on the actions or activities necessary to achieve the Means. This is an excellent way to create a visual representation of the tactics necessary for achieving a desired goal.

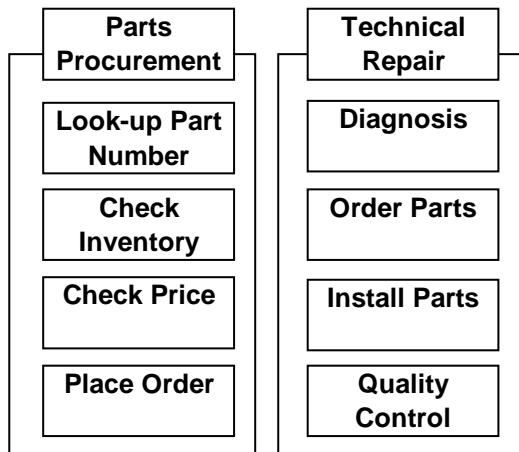
RESOURCES	TASKS		
	Receive	Process	Reconcile
Mel	○	◎	
Art	◎		○
Barb		○	◎
IS / IT		△	
Finance			△
Logistics	△		

- ◎ Primary Responsibility
- Team Members
- △ Resources or Support

Matrix Diagram – Systematically identify, analyze and rate the presence and strength of relationships between two or more sets of information.

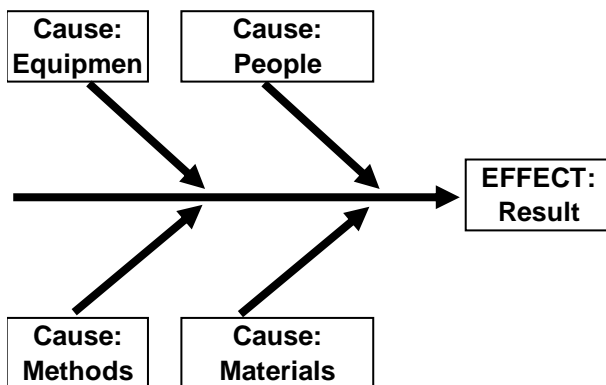
Choose and define sets of information and methods of comparative analysis.

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Affinity Diagram – Generate a large number of ideas, issues or activities and organize or summarize natural groups to understand the essence of a problem or solutions.

HINT: A common method is to write ideas on “Sticky Notes” and place them on a board. Then group ideas into natural order and summarize them.



Cause & Effect Diagram – Commonly referred to as the “Fishbone Diagram”, this is a means to identify, explore and graphically display possible causes related to a problem or condition. This is a common step in identifying possible root causes and which may result in further investigation or correlation of relationships to the defect.



Check Sheet – Capture data to systematically record and compile data from historical sources. It is preferable to derive check sheet data from system records with events logged with date / time stamp. If necessary, compile check sheets with manual ‘checkmarks’ tallied to identify patterns, trends or basic measurements.

HINT:

There are many more Six Sigma tools for graphical analysis of detailed data. The more data and the more accurate the measurements, the better your results will be. The tools referenced and demonstrated in this summary do not require any special software, systems or mathematical proficiency. These tools are easy to adopt for analytical thinking and group participation.



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DEFINE

Once you have mapped the process for desired goals, measured the steps and analyzed the results, then any shortcomings or “less than desired” results should be easy to identify.

- σ Define the shortcomings
- σ Define the GAP between desired and actual results (use Metrics)
- σ Using the Analysis, Define the Root Causes for the GAP
- σ Define “What” Actions are necessary to correct or improve
- σ Define “How” to implement the actions
- σ Define “Who” will implement these actions
- σ Define “When” these actions will be complete (timeline)
- σ Define Future Measurement and Reporting

“An undefined problem has an infinite number of solutions.”

Robert A. Humphrey



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IMPLEMENT

Do it.

- σ Make a plan with Milestones (measured steps)
- σ Make the plan attainable (small steps, reasonable goals)
- σ Define Owners / Champions to each step (leadership)
- σ Use a “Facilitator” to manage meetings and keep on track
- σ If a step has adverse results, stop and evaluate with analyzing techniques
- σ Communicate progress,
- σ Celebrate success

“I am always doing that which I can not do, in order that I may learn how to do it.”

Pablo Picasso (1881 - 1973)



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CONTROL



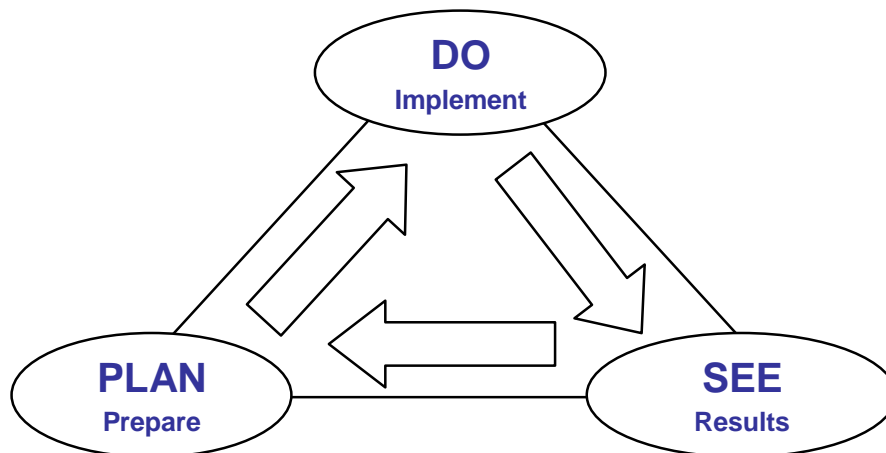
Once you have implemented the solution, it is time to measure the results.

Compare the results to the previous performance and the desired goals.

Define the frequency of ongoing measurement and reporting.

Define the methods and responsibility for escalations in the event of deviation from anticipated performance, and ownership.

Determine regular schedules for reviewing the results of your process, your goals and the changing environment. Changes in the competitive landscape will make goals of today obsolete in the benchmark performance tomorrow. Continually monitor your most critical processes for accurate, repeatable and acceptable performance.

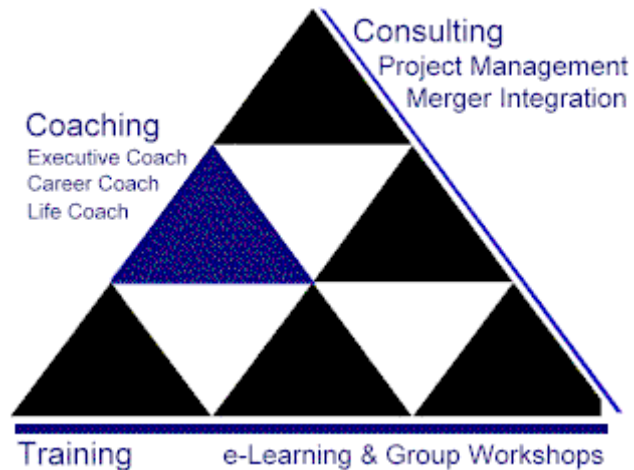


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