

The “Hybrid Balanced Scorecard”

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We utilize the principles of statistical process control, six sigma and the balanced scorecard approach to create a high powered visual display. This display can readily let management know if a business process is performing in accordance with the customer requirements.

Traditional balanced scorecards are cumbersome, time consuming to create and hard to read. This Hybrid approach takes all the good things from these principles and creates an easy to read and easy to create display for informing management when to take action and when to leave a process alone. It utilizes “stoplights” with green, yellow and red indicators and metrics to reflect trends.

The balanced scorecard is created to measure and monitor internal processes. Each “stoplight” has a corresponding metric which outlines the trends for that indicator and whether or not the trend is acceptable.

Some companies create charts and graphs but are not measuring the right thing. A company who measures their internal production on time delivery but does not measure it's performance to the customer may eventually lose that customer. Metrics need to reflect the inputs and outputs of a process.

Classic “control charts” and statistical process control does not perfectly fit these examples. This type of business data is not variable daily measurements but attribute data measured monthly. It doesn't automatically lend itself to upper and lower control limits. In fact, these metrics don't even have a lower control limit. For example, the lower limit of a warranty defects metric is always zero.

The rules for control charts state that control limits can't be calculated until the data is under control. However, many business metrics are not in control and are actually trending in one direction or the other. Hopefully, they are reflecting our continuous improvement efforts over time.

For these business metrics, we are still utilizing the Statistical Process Control (SPC) principles- except in a different way. Various SPC tools are utilized including control limits, run and bar charts, trend analysis, paretos, histograms, means, averages and problem solving.

Arguments for not utilizing this approach range from:

“We don't have the time to create metrics- we know how we are performing”

“Our data collection process is very poor and therefore our data would not be accurate”

“I can't get anyone to understand that we need to start collecting data and improve our processes- everyone is too busy putting out fires!”

“We don't have the knowledge and training to understand how to create the balanced scorecard”

A business cannot improve unless it is measuring and controlling it's critical processes!

Some customer comments after reviewing the process:

“I wish my other suppliers had a balanced scorecard like this”- Current Customer

“This is what I have been telling my other suppliers to create and you have already done it”- New Customer

“This scorecard allows me to focus on the problem areas without losing sight of the areas that are under control”- Senior Manager

The following pages go into more detail regarding the explanation and process of creating these Hybrid Balanced Scorecards and metrics...

Definition: “Balanced Scorecard”- a pictorial display of a company’s performance metrics. These metrics let management know if a key process is under control and meeting the target levels. If all stoplights are green, then we must be satisfying all of our customers (stock holders, customers and employees). All yellow or red indicators require corrective action. This process is part of our Six Sigma continuous improvement methodology.

The balanced scorecard is structured as a matrix.

- We monitor Quality, Delivery, Service and Financials.

Metrics that affect the Customer

Metrics that monitor our internal processes

Metrics that monitor our supplier’s performance

	Quality		Delivery		Service		Financials			
	Metric Name	Met	Not Met	Metric Name	Met	Not Met	Metric Name	Met	Not Met	
Customer	1. Overall Escaping Defects			12. Overall On Time Delivery			23. Customer Problem Reports			
	2. Production Escaping Defects			13. Production On Time Delivery			24. SOAR Score Card			
	3. SOAR Repair Escaping Defects			14. SOAR Fill Rate			25. PWR Score Card			
	4. PT Escaping Defects			15. PT On Time Delivery						
	5. PWR Escaping Defects			16. PWR On Time Delivery						
Internal	6. Production Final Inspection			18. Product Cycle Counts			26. Corrective Action Response Time			
	7. Sun Repair Final Inspection			19. Service Cycle Counts						
	8. SOAR Final Inspection			20. RMA Turn Around Time			30. Average # days to Collect Payments			
	9. PT Final Inspection			21. RMA Aging			31. Inventory Turns/Year			
	10. PWR Final Inspection						32. Product Inventory Turns/Year			
Supplier	11. Supplier Incoming Defects			22. Supplier On Time Delivery			27. Supplier Report Card			

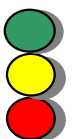
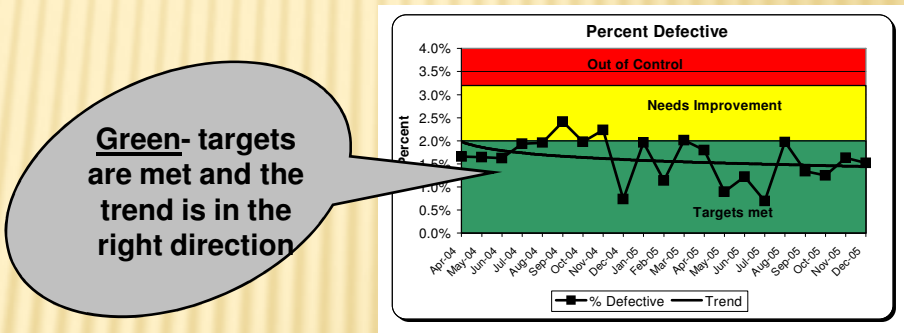
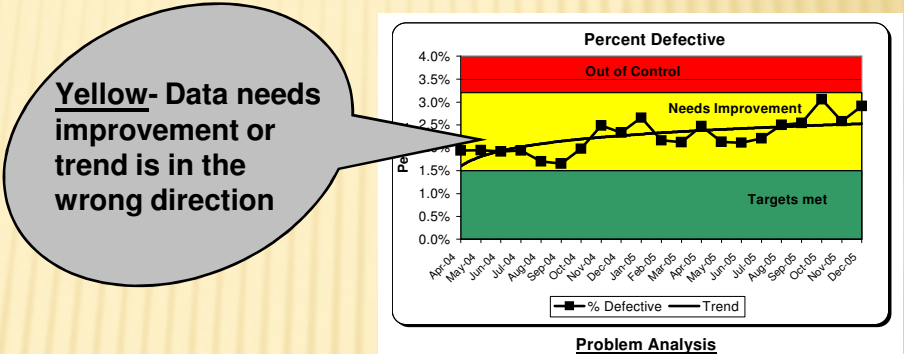
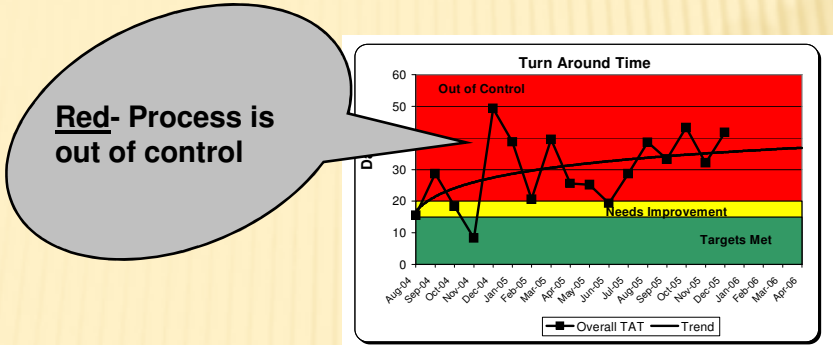
Legend
Green: Targets are Met
Yellow: Needs Improvement
Red: Trend in wrong direction

The metrics have “Zones” that determine the stoplight color on the Balanced Scorecard.

The trend for the last 6 months determine the stoplight color.

Legend

- Green:** Targets are Met
- Yellow:** Needs Improvement
- Red:** Trend in wrong direction

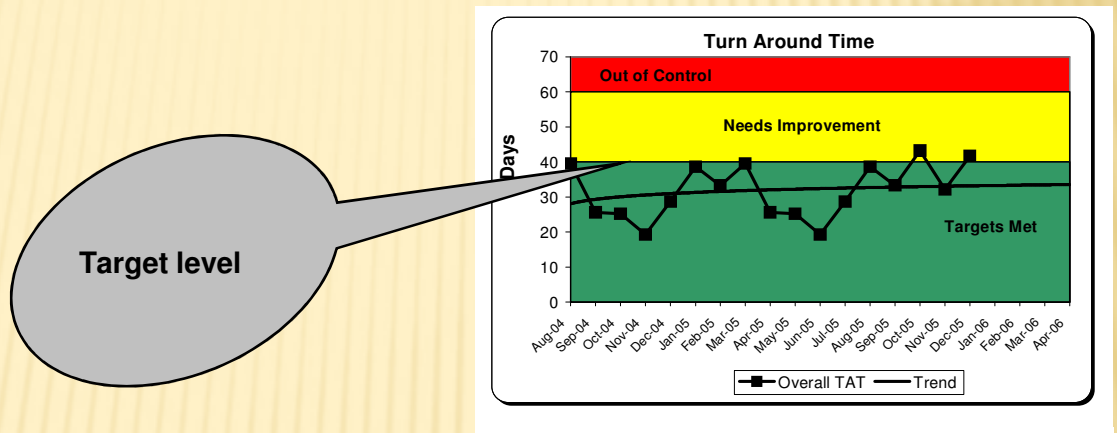



How are the targets determined?

Definition: A “target” is a level that the company wants to achieve as part of our continuous improvement process. This is different from a “goal” which is the ultimate level. For example our target for the warranty metric is 1.5% but the “goal” is always zero defects.

There are two ways that the “Target” is determined:

1. Based on customer requirements – i.e. 40 day turnaround time for returns.
2. Based on the data- The average is 1.0% and we determined that we can reduce the defects by 30% in the following year. Therefore, the new target is .7%.



There are two ways that the “Control Limit” is determined:

Definition: A control limit is the level at which the customer will complain or the level in which the data is showing a condition that is not normal. Action needs to be taken when the data is in the “yellow” zone and before it reaches the “pain point for the customer” or “Red Zone” on the metric.

1. Based on customer requirements – i.e. The Sales department has determined that if we are over 20 days turn around time for repairs then the customer will complain.
2. Based on the data and statistics- Three standard deviations of the variation is calculated. The average is 1.0% and the calculated control limit is 3.2%. If a data point is above this limit, than something unusual occurred.

