

Lean Metrics

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Synchronous Management has developed a series of operational performance measures which support accelerated material flow. Measures will differ for profit centers, cost centers, and individual departments. The intent for each measure is to identify opportunities for increasing throughput, and reducing inventory and operating expense at the organizational level, as well as for improving the ratios among the three. For each performance measure, it is important that trends be monitored (usually on a weekly or monthly cycle), and causes and corrective actions be identified and implemented as required. The following operational measures are, of course, in addition to financial performance measures already in effect.

METRIC	PROFIT CENTER	COST CENTER	DEPT
<i>THROUGHPUT</i>			
Total rate of sales	X	X	
Sales by product line		X	
On-time to customer requested ship date		X	
Delivery lead times by product line		X	
On-time performance to pull system			X
<i>INVENTORY</i>			
Total inventory dollars	X	X	
Annual inventory turnover	X	X	
Lead times by inventory account		X	
Lead times by product line		X	X
Value-added vs. non-value added by product		X	X
Material cost per unit by product line		X	
Purchased material lead times		X	
Vendor quality and delivery levels		X	
Purchase commitments in dollars	X	X	
Purchase commitments in weeks	X	X	
<i>OPERATING EXPENSE</i>			
Direct expenses by account	X	X	X
Allocatable corporate expenses by account	X		
Allocatable cost center expenses by account		X	
Cost of quality	X	X	
Scrap and rework		X	X
<i>RATIOS</i>			
Throughput dollars per employee	X	X	
Direct expenses by account vs. throughput by product line		X	X
Allocatable expenses by account vs. total throughput	X	X	
Pull system backlogs vs. rates of completion			X
Overtime cost per throughput dollar		X	
Weeks of inventory by product line		X	

MEASURES TO AVOID

1. *UTILIZATION* measures which drive non-bottleneck resources to utilize 100% of their capacity; these result in loss of flexibility and increases in inventory.
2. *EFFICIENCY* measures which amortize setup costs over the batch size, not recognizing the differences in value between bottleneck and non-bottleneck times.
3. *EARNED HOURS* measures which give credit for partially completed parts; these cause the production of inventory, not throughput.
4. *ON-TIME PERFORMANCE* to dates calculated by lower-level MRP explosions; use performance to actual pull system needs.