

Strategic Business Metrics

Key Performance Indicators (KPIs) That Guide Strategic Improvement Efforts

Strategic Business Metrics. Sounds like an oxymoron, doesn't it? Usually we associate business-process management metrics and KPIs with the tactical work of accomplishing day-to-day operations tasks. So at first it's not obvious how process metrics might be related to macro-level business strategy.

But that's exactly how one company (ALCO, to respect their privacy) began to look at their internal process metrics after determining that they needed to be better aligned with the strategic goals for best support of those goals.

This summarizes their strategy for continuous business performance improvement via process metrics included in the Key Performance Indicators used to manage the business.

Strategic Goals

ALCO had set ambitious goals to be achieved by 2010 based on market, product and operating strategies that were clear and supported by previous successes:

- 20% of Sales from New Products (less than 5 years old)
- Lean Sigma methods adopted by all Manufacturing units
 - On-Time Shipping increased to 100%
 - Inventory turns increased 400%
- 90% increase in EBITDA
- 60% increase in RONA

Concerns About Follow-Through

The CEO of ALCO said it simply: "We have made good progress, but the pace seems to be slowing and it seems that business culture differences between the operating units are getting in the way." The rest of the management team cited a host of other issues, but a common theme was in the metrics used to guide and track improvement efforts.

Rear View Metrics

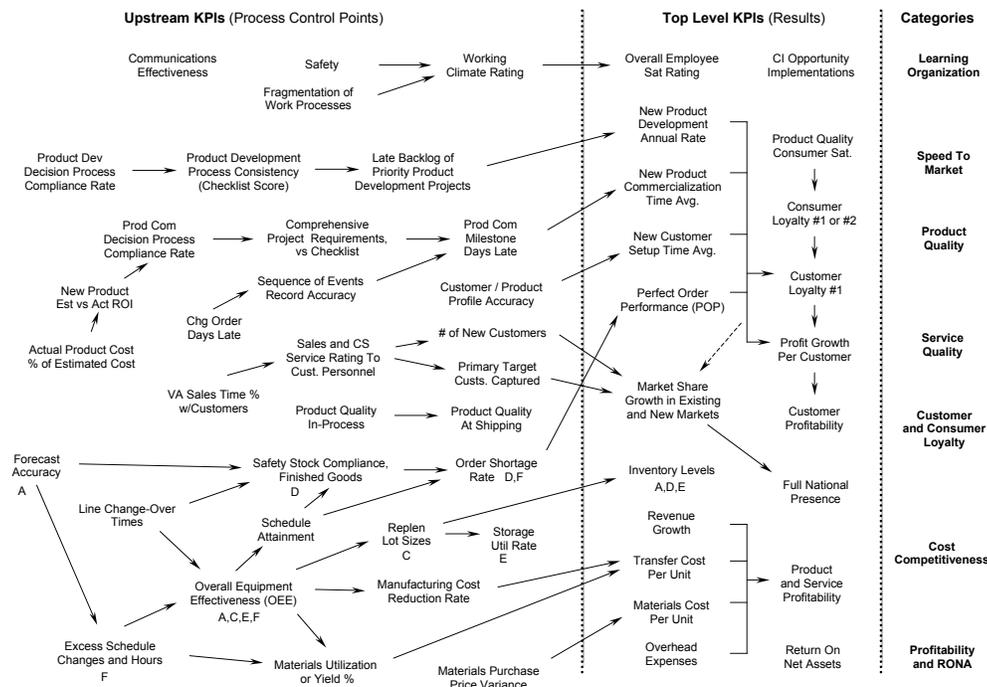
Current metrics at ALCO were a mixture of financial (EBITDA, DL% of Sales), customer service (On-Time Shipping %), and overall operations measures (Inventory Turns). And they had one thing in common — most were end-result measures, after the business work had already been done. So they were like looking in the rearview mirror in your car, and not very useful for diagnosing opportunities for better progress on the road ahead.

Identifying Metrics for Improvement Work

The current-metrics review determined that other measures were needed to facilitate operational diagnostics, guide improvement projects and track progress on factors that contribute directly to the strategic business goals.

In a work-session with the management team, several tasks worked through identification of other possible metrics for process management, alignment of them with the strategic business goals, and evaluation of their cause-and-effect ties to the end-result metrics. The management team's cross-functional views of the business processes were essential to finding metrics that have strong leverage toward the desired end results.

KPIs Flow Map



The KPIs FlowMap (illustration above) is a useful high-level view of the metrics relationships identified in such a session. The metaphor is of a network of streams and rivers that flow toward a lake. The lake represents the overall business results (RONA, customer loyalty, market share growth, etc.), and the streams and rivers represent the operations that produce the business results. In other words, the upstream operations flow to the downstream results. And if we want to change the downstream results, then we must change the upstream operations that produce them.

Aligning Process Metrics With Strategic Goals

Several methods can be used for aligning process management metrics with strategic goals. The diagram to the right is a typical “YX matrix” that allows weighting of the strategic goals and contributions from the process metrics to define the nominal group opinions

about which upstream metrics have the strongest downstream impacts. It’s not scientific, but when based on the experience of insiders it’s a reasonably accurate view that can be done quickly, even in situations where there are many possible upstream metrics so the selection process becomes complex making it more difficult to keep the combinations in mind and feel confident about which metrics have the most direct causal relationships to the downstream results.

KPI Selection Matrix Processes and KPIs	Current Weights						
	Learning Organization ¹	Speed To Market ²	Product Quality ³	Service Quality ⁴	Customer and Consumer Loyalty ⁵	Cost Competitive ⁶	Business Growth and Financial Results ⁷
External Indicators							
Consumer Loyalty	1				1		9
Product Quality, Consumer Sat.	2		1		2		18
Customer Loyalty	1				1		9
Prod & Service Quality, Customer Sat.	2		1		2		18
Profit Growth Per Customer	2						10
Customer Profitability	2			1	1	1	18
Market Share Growth	2				1	1	16
Full National Presence							2
Revenue Growth							2
Product Commercialization							
Comprehensive Project Requirements	2	2			1	1	24
Change Order Timeliness	1	2					12
Sequence of Events Record Accuracy	2	2			1	1	24
Prod Com Milestones On Time	1	2	1	1	1	1	26
Prod Com Average Lead Time		1			1	1	12
New Customer Development							
Value-Added Sales Time w/ Customers		1		1	2		12
Sales and CS Rating From Cust Empls	2			2	2		18
Number of New Customers						2	4

A more rigorous approach is statistical analysis of the cause-and-effect relationships between the upstream and downstream factors. That requires sufficient data for statistical calculations so there may be none currently available for new upstream metrics under consideration. However, in very complex situations that may be the only way to identify upstream metrics that have true causality rather than merely coincident correlations that aren’t distinguishable with human observation.

Simpler methods include nominal group techniques (NGT) that tally the relative values of the factors involved in the opinions of people experienced in those areas. Such methods work very well in situations where the range of factors is not extreme, the factors each are unique enough that they don’t overlap much, and the group is able to share their individual views so that there is a base of common knowledge about all the factors.

The simple NGT method was used in the ALCO strategy session since the range of factors was not extreme and they wanted to “get in the ballpark” quickly for some immediate decisions about how to accelerate their progress toward existing strategic goals that the team thought could be reached faster than the current pace. More rigorous methods can be used later if needed.

After considerable debate, the management team identified fourteen upstream metrics that, if improved, would yield direct downstream results that would show up in the key strategic goals metrics.

Critical Process Improvements Required

At this point the upstream metrics were beginning to illuminate operating process improvement opportunities — some new, and many long known — that, if captured, would show improvement in the upstream metrics, and therefore lead to the desired downstream strategic results. However, after further discussion the management team realized that many of those opportunities could not be worked independently; that they had to be coordinated with other opportunities elsewhere in connected business processes to prevent accidental sub-optimization of one to the detriment of the overall. Indeed, it may have been similar subconscious realizations by managers in the past that kept them from acting on opportunities that looked good when viewed locally, but somehow didn't feel like slam-dunk chances for success when viewed company-wide.

So the management team stood back from the processes they each managed and identified several cross-functional processes that contained related opportunities that could be effectively captured with a coordinated approach. Charters for several critical process teams (CPTs) were written to define the necessary participation, preparations, structure and support to ensure fast start-up and sustainable follow-through.

With that detailed view of the project requirements, they realized that limited internal resources would preclude launching any more than two or three such projects at one time.

That last realization was a breakthrough of sorts. Prior to the strategy work-session, all of the team members had expressed some concerns about conflicts between the many urgent activities and the few truly critical, strategic activities. There was some sense that project priorities were in conflict with overall workloads. Then, in the work-session it became clear that to achieve the most important, critical process improvements it would be necessary to focus limited resources on them, avoid assigning key resources to multiple projects, manage workloads, and not launch new projects until current projects are completed and resources become available.

Project Charter
Xxxxx Critical Process Improvement
• Key Goals
• Scope of Subject Process
• Team Composition
• Project-Related Education
• Team Practices Development
• Project Management Methods
• Support Systems & Resources
• Sponsor Role and Responsibilities
• Team Launch Week Actions
• Follow-Thru and Sustainability Issues

ALCO decided that four major cross-functional projects were feasible in the near term:

- Sales & Operations Balancing Process to reduce schedule non-linearity costs
- Overall Equipment Effectiveness (OEE) Pilot at Plants 2 and 3
- Rationalization of Manufacturing Overhead functions at Plant 2
- KPIs Tracking System Design and Implementation

Sustaining Continuous Improvement (CI) Business Culture

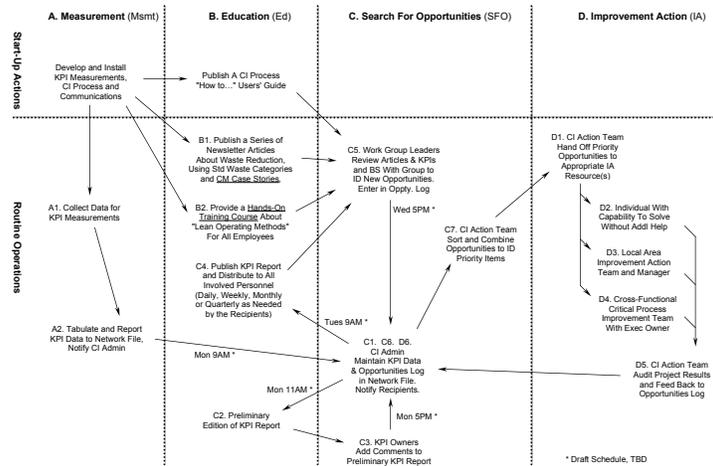
One objective for the strategy work-session was to define a process to accelerate progress toward the strategic goals by engaging the entire organization in continuous improvement efforts. The now-identified upstream process metrics would help focus attention for those efforts. And the cross-functional project-team methods would rationalize the major efforts on critical process improvements. Still needed was a process to keep it going naturally, with minimal administrative effort and no gaps in the flow.

Companies with active processes for continuous improvement generally practice four CI sub-processes:

- Measurement — of current performance, desired performance, progress, etc.
- Education — about quality and productivity, and development methods
- Search For Opportunities — engaging everyone, using education and metrics
- Improvement Action — by individuals, local teams, cross-functional teams

The diagram below is a typical CI process including the four sub-processes. The details take many forms, depending on what is already in place in each organization. Generally, it's best to keep it as simple as possible to ease the learning stages. However, one fact is obvious from the companies that have tried and failed: that is, that a business culture of continuous improvement practices is rarely sustainable without management attention to the CI process elements.

CI Process



Some companies may appear to have successful CI cultures just by luck of having a cadre of leaders who naturally practice CI behaviors that encourage similar behaviors from the entire workforce. Even in those situations some probing below the surface will find all four of the CI sub-processes in active use, although they appear informal after years of entrenchment in the culture. Generally, the effort has to be more formal in companies trying to make CI more active in the business culture. And it requires more discipline to maintain a new CI process during the early years, until it becomes second-nature.

During the strategy work-session the ALCO management team decided to start with a simple CI process consisting of three of the sub-processes:

- Measurement is focused on the Strategic KPIs Report
- Search for Opportunities is an output of Monthly Metrics Reviews
 - Review and comments by CI coordinator from each operating team
 - Executive team review of KPIs and opportunities, and, if necessary, requests for additional analysis to the parties involved.
 - Involved parties perform further analysis to answer questions posed by the executive team.
 - Executive team reviews the additional analyses, debates the feasibility of potential improvements, and charters development projects if justified.
- Improvement Action project mechanisms typically include:
 - Individuals — if someone can effect changes independently
 - Small Kaizen — for local-area projects needing team-based action
 - Cross-Functional Critical Process Team — for major business process improvements; especially when innovative quantum-leap improvements appear to be possible and need cross-functional collaboration.

The management team decided to not include the fourth CI sub-process, Education, because it was adequately covered in a Lean Sigma initiative already in operation. And it would now reflect the CI process mechanisms in it's view of how Lean Sigma was positioned to support process improvements targeted in the KPI metrics.

Back to Metrics

Measurement may be the most fundamental of all the principles of quality, productivity and high-performance business cultures. So it was appropriate that the ALCO management team came back to the KPIs at the end of the strategy session. They knew that the mere act of measuring those key upstream factors would trigger hundreds of small and big improvements to add energy to their corporate flywheel (thanks to Jim Collins' Good To Great for the metaphor). So one of the critical projects chartered was to establish the metrics tracking and reporting system, similar to the illustration to the right.

		KPI							
Process, KPIs, UIM		FY Base Period *1	Current Actual *1	Current Target *2	FY End Target *3	Variance Current vs Target *4	Var % Currmt vs Target *5	Corp Goals Supprtd *6	
	*1 Running Year Ending:	FY02	M5FY03	M5FY03	FY03				
Marketing and Sales Processes									
Promotions, Total, % of Sales vs. Budget		1.20%	1.10%	1.12%	1.00%	-0.02%	-1.49%	CC	
Project 1: (Largest current)		2.00%	2.20%	2.00%	2.00%	0.20%	10.00%		
Project 2: (2nd largest)		2.00%	2.00%	2.00%	2.00%	0.00%	0.00%		
Project 3: (3rd largest)		3.00%	3.00%	3.00%	3.00%	0.00%	0.00%		
Order Fulfillment Process									
Order On-Time Ship Rate		98.0%	98.4%	98.3%	98.8%	0.1%	0.07%	SQ, CL	
Materials Procurement Process									
FN2 Raw Material Inventory, Co-Wide, \$M		\$6.90	\$8.40	\$7.07	\$7.30	\$1.33	18.9%	RA	
Kent		\$2.30	\$2.80	\$2.30	\$2.30	\$0.50	21.7%		
Hopkinsville		\$1.10	\$1.60	\$1.27	\$1.50	\$0.33	26.3%		
Pendleton		\$3.50	\$4.00	\$3.50	\$3.50	\$0.50	14.3%		
Production Process, Plants									
Overall Equipment Effectiveness (OEE)		63.0%	64.7%	64.7%	67.0%	0.03%	0.05%	CC	
Kent Plant		60.0%	63.2%	62.5%	66.0%	0.70%	1.12%		
Hopkinsville Plant		60.0%	62.8%	62.9%	67.0%	-0.12%	-0.19%		
Pendleton Plant		70.0%	73.4%	73.3%	78.0%	0.07%	0.09%		