

Get competitive with supplier metrics

Aligning performance improvement drivers with enterprise objectives

a white paper from ZYCUS

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Until recently, Supplier Performance Management (SPM) had been notably missing from the array of technology solutions being developed for the procurement, sourcing and supply chain management functions.

Today, increasingly sophisticated and easy-to-use tools for building, automating, executing and expanding SPM systems are available, but the onus still falls to procurement and supply chain professionals to create effective metrics and processes for driving supplier performance in the directions they need it to move.

And, while the prospect of designing effective metrics and processes can seem daunting at first, it becomes less so when one begins to understand there is a lifecycle to supplier performance management. Nothing is etched in stone. Metrics and improvement targets can—and should—change over time. The only irrevocable mistake is failing to measure and manage supplier performance at all.

Stage 1: Define competitive framework

Lifecycle management for SPM begins, necessarily, with one question: How do we compete? The query forces procurement, sourcing and supply chain professionals to look past—even to reshape—their own narrower performance agendas, which typically comprise things like purchase price variance, cost savings or avoidance, reliable/on-time delivery, and consistent product and service quality. Focusing on how a company goes to market leads to metrics and processes for SPM that can make an enterprise more successful on the specific competitive terms set forth by its leadership.

So, for example, an enterprise that intends to win in the market on a combination of technology leadership, product features and style should generate very different supplier performance expectations and metrics than enterprises competing on things like low cost producer, legendary customer support, or high market share.

Likewise, companies that intend to compete by being best at product marketing will find different approaches to SPM—may measure and manage entirely different sets of suppliers—than companies that want to compete by being best at designing or building products.

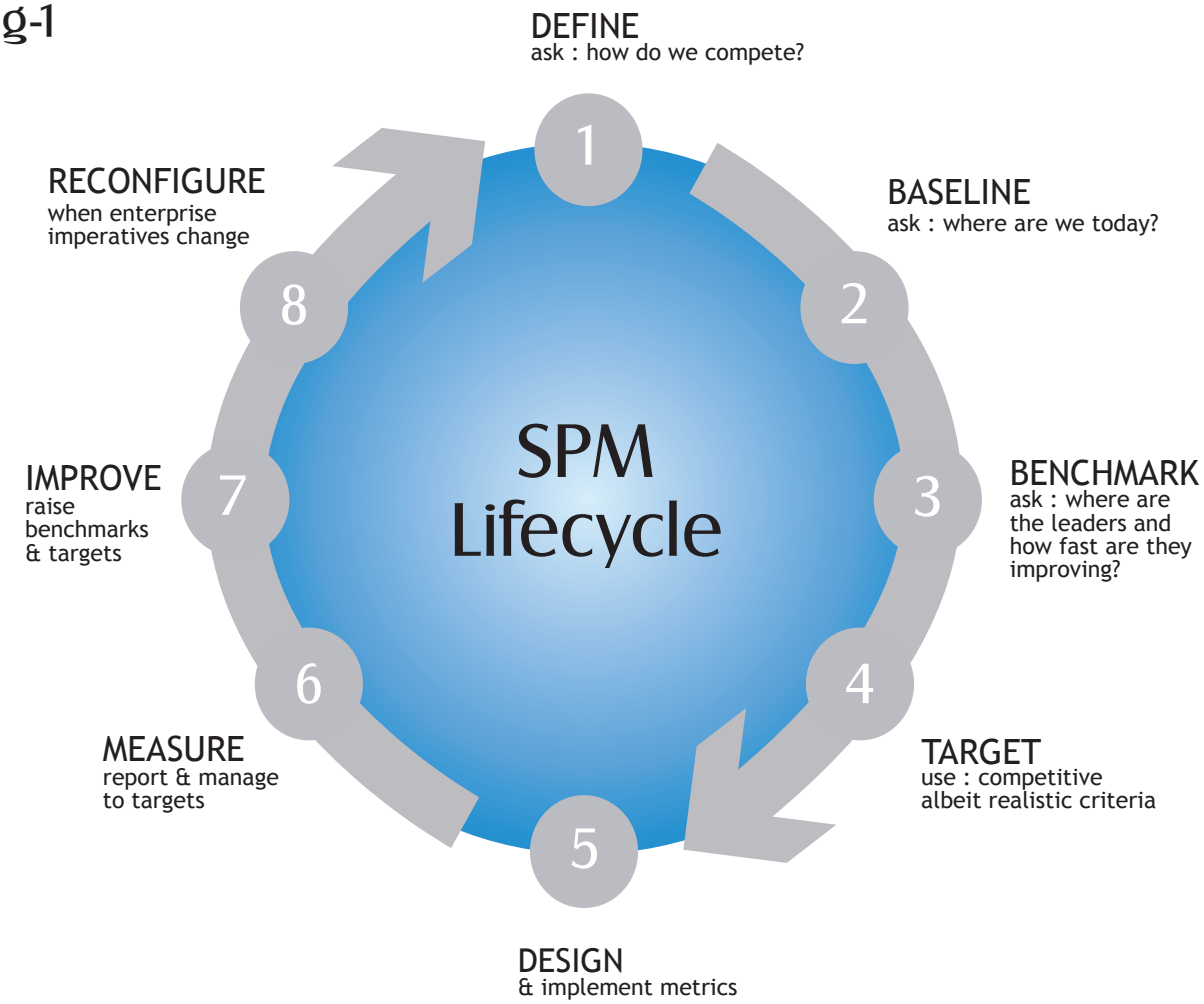
If, over time, procurement and supply chain management cannot move supplier performance in ways that make the enterprise more competitive and successful, it may indicate the business has chosen the wrong competitive approach or is not fully committed to the approach it has articulated.

Stages 2/3: Baseline and benchmark

In Stage 2 of the SPM lifecycle, the enterprise establishes performance baselines —where are we today? This is followed closely by Stage 3 in which the enterprise undertakes competitive benchmarking—where are the market leaders and how rapidly are they improving? While a company may set a target of lowering its total bill of materials (BOM) cost by 10% in two years, its SPM efforts in that direction will be diminished, even canceled or negated, if it never succeeds at surpassing its competition, or, if its competitors improve at similar or more rapid rates.

Conducting SPM in a competitive vacuum runs the equally high risk of generating performance improvement targets that are much higher than they need to be. For instance, it would be extremely wasteful of both customer and supplier resources to pursue Six Sigma quality from suppliers in a market that would never demand such a high level of quality or durability. Examples include inexpensive plastic children's toys, footwear or clothing that would be quickly outgrown.

Fig-1



Competitive benchmarks might be difficult to obtain, especially at first. It's okay to delve into SPM without them. But they are the piece that confers true meaning to SPM, so should remain an ultimate goal and integral part of any SPM ecosystem. What is more, there are plenty of companies that succeed every day at gleaning competitive supplier performance information by,

- Investing in their own research and market intelligence operations,
- Ensuring they capture and structure latent competitive knowledge found within their enterprises (from their sales forces, for example), and
- Working with third-party information and service providers.

When competitive benchmarks simply can not be obtained, alternatives are to:

- Give suppliers creative incentives to offer and deliver better performance vis-à-vis any competing customers they may serve,
- Look at different sets of benchmarks—for example, what is best-in-class?—as this information may exist outside the primary industry, be easier to access, and be worth studying from a process standpoint.

Stages 4/5: Target and design

Stages 4 and 5 in the SPM lifecycle involve setting aggressive—yet realistic—performance-improvement targets and designing/implementing metrics that sys-

tematically and consistently drive supplier performance toward the improvement targets. While competitive benchmarks make target setting easier, other factors come in to play as well. For example, performance improvement targets for suppliers need to be high enough to inspire creativity, innovation, out-of-the-box thinking, but not so high as to be unattainable within a reasonable time period, frustrating, or wasteful of suppliers' resources.

Metrics design and implementation is a critical piece of the SPM lifecycle. Key challenges include:

- Creating ideal metrics that are (a) comprehensive enough to drive to desired results *without* creating unintended behaviors and (b) simple enough to be easily and cost effectively executed and interpreted as a basis for action and decisionmaking,
- Finding easy, cost effective ways to acquire, structure, store, and validate the data inputs required by the ideal metrics, and
- Creating meaningful connections between supplier, procurement/sourcing internal, and enterprise success metrics.

Procurement and supply chain management organizations have wrestled with these challenges for decades. The good news is that technology solutions are finally being engineered specifically to address these challenges and pain points, making it possible to create comprehensive—yet simple and cost effective—systems for supplier performance management.

Stages 6/7: Refine and improve

Stage 6 in the SPM lifecyle involves executing metrics, reporting, and actively managing to improvement targets. Stage 7 is where the enterprise continually refines targets, benchmarks, and metrics in response both to what it learns through SPM and to external changes.

Performance targets need to be based firmly in reality but can and should trend upward over time with the objective of either obtaining or maintaining market leadership. If this year's goal for procurement is to move 60% of critical suppliers to a Level 1 performance ranking, then next year's goal might be to move 80% of suppliers there. The criteria and benchmarks by which suppliers achieve and maintain their Level 1 rankings should move up periodically as well.

Stage 8: Start over

Stage 8 in the SPM lifecycle is the complete reconfiguration of metrics if and when conditions within an enterprise or its market change substantially. For example, a change in corporate leadership might shift an enterprise's go-to-market strategy from technology innovator to market-share leader. While the ability to ramp production and distribution quickly following a product launch may have mattered little to the outgoing leadership, it would be a priority under the new regime. SPM metrics and systems need to be sufficiently flexible—and willing—to adapt to such changes.

Other shifts that should cause procurement and supply chain management professionals to revisit their SPM metrics and processes include:

- Advent of new competitors, especially when they come from different regions of the world that have never played before in a particular market,
- Technology innovation (in both primary and supplier markets), and
- Economic boom/bust and inflation/deflation cycles.

Even consumer and pop culture trends need to be watched closely. For example, might the growing consumer fondness for customizing cars and athletic footwear, comparing prices, or buying digital music and books over the internet spill into other industries and markets? How might that affect performance priorities and improvement efforts with suppliers? And can an enterprise get ahead of the curve—gain a competitive advantage—by redirecting SPM efforts sooner rather than later?

While it may not be necessary to rewrite supplier performance metrics right away, procurement and supply chain management organizations must always be looking ahead to understand what might need to change. They also need to be deploying flexible SPM processes and tools that easily accommodate changes and refinements throughout the SPM lifecycle.

Jumping in to SPM

Once one grasps the idea of SPM lifecycle management, it becomes easier to find a point of departure for creat-

ing the right set of SPM metrics, procedures, policies, and so forth for a given enterprise. Still, there is no getting around the inherent complexities of SPM. The following questions (and many more) will quickly arise:

- Who should be involved in the SPM process?
- How many suppliers should we measure? And which ones?
- How frequently should we measure?
- How can we cope with competing objectives and tradeoffs within our enterprise?
- How can we accommodate fundamental differences among spend categories, direct versus indirect, products versus services, and so forth?
- How will we obtain consensus on what SPM metrics and improvement targets should be?
- How can we balance objective/subjective or quantitative/qualitative data inputs?
- How can we consistently obtain accurate inputs?
- How can we measure the return on investment in SPM (or at least ensure our efforts remain cost effective)?
- And, how can we account for supplier complexity (for example, parent-child relationships), different supplier sizes, and complexity in our supplier relationships (for example, the fact that some suppliers may also be our customers)?

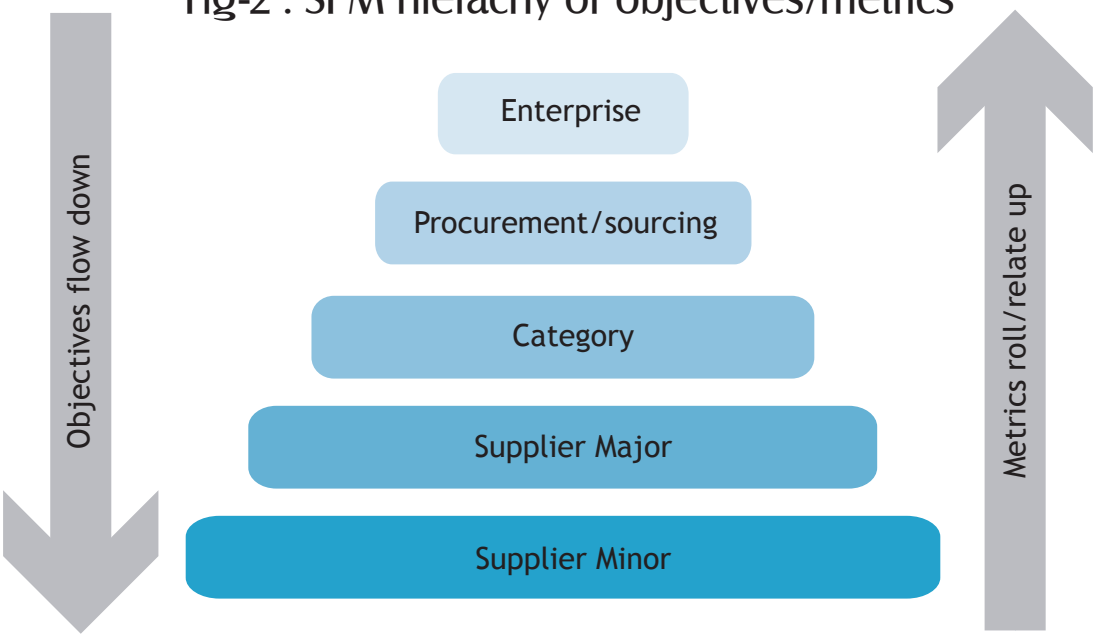
While it is beyond the scope of this paper to address every complexity, we will make a start by looking at such longstanding SPM obstacles as: creating meaningful linkages between supplier, procurement and corporate objectives; measuring dissimilar suppliers; combining quantitative with qualitative data inputs, and finding systematic ways to continuously drive supplier performance to world-class levels.

Make SPM work for the enterprise

A popular approach for contending with SPM complexity is to devise hierarchical systems of objectives and metrics (see Fig-2). Each level in the hierarchy rolls up or at least relates meaningfully to the level above, ensuring that each metric implemented lower down in the hierarchy contributes clearly and systematically to realization of the top-level objectives. One way to make sure that meaningful relationships get codified in the SPM system is to borrow a software engineering approach known as Goal-Question-Metric[1] where:

- Goal is conceptual, establishing the purposes of measures, objects or issues to be measured and the viewpoints from which the measures are to be taken,
- Questions are operational, breaking issues down to their base components and figuring out how to best

Fig-2 : SPM hierachy of objectives/metrics



Data inputs for Supplier Major metrics—those to be used as a basis for awarding business or taking it away—should be accurate, objective, and capable of being validated. Supplier Minor metrics can be based on less accurate, subjective or less easily validated data inputs and used to detect risk, isolate root causes of performance problems, identify process improvement opportunities, support supplier performance reviews, and so forth.

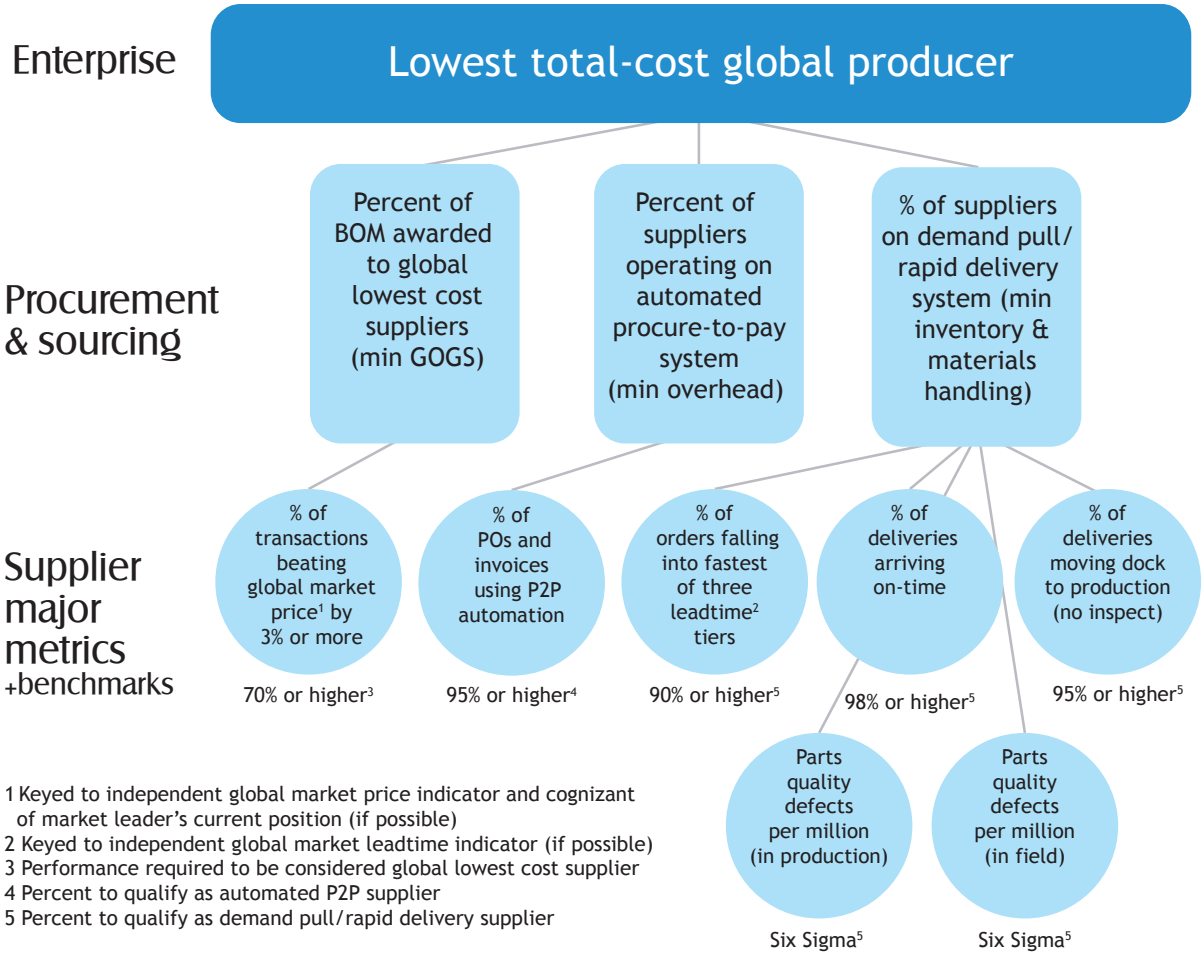
[1]Victor R. Basili, Gianluigi Caldiera, H. Dieter Rombach, *The Goal Question Metric Approach*

achieve the goals, and
- Metrics are sets of data that answer each question quantitatively. The data can be either,
  - Objective if the question can be answered regardless of viewpoint (for example, was the delivery on time?), or
  - Subjective if viewpoint is considered relevant (for example, was the supplier responsive?)

Say, for instance, that a corporation's competitive objective for a particular product line is to become the lowest total-cost producer in the world and the enterprise is intent on measuring and managing performance among its critical direct materials suppliers. The resulting SPM hierarchy might look something like Fig-3.

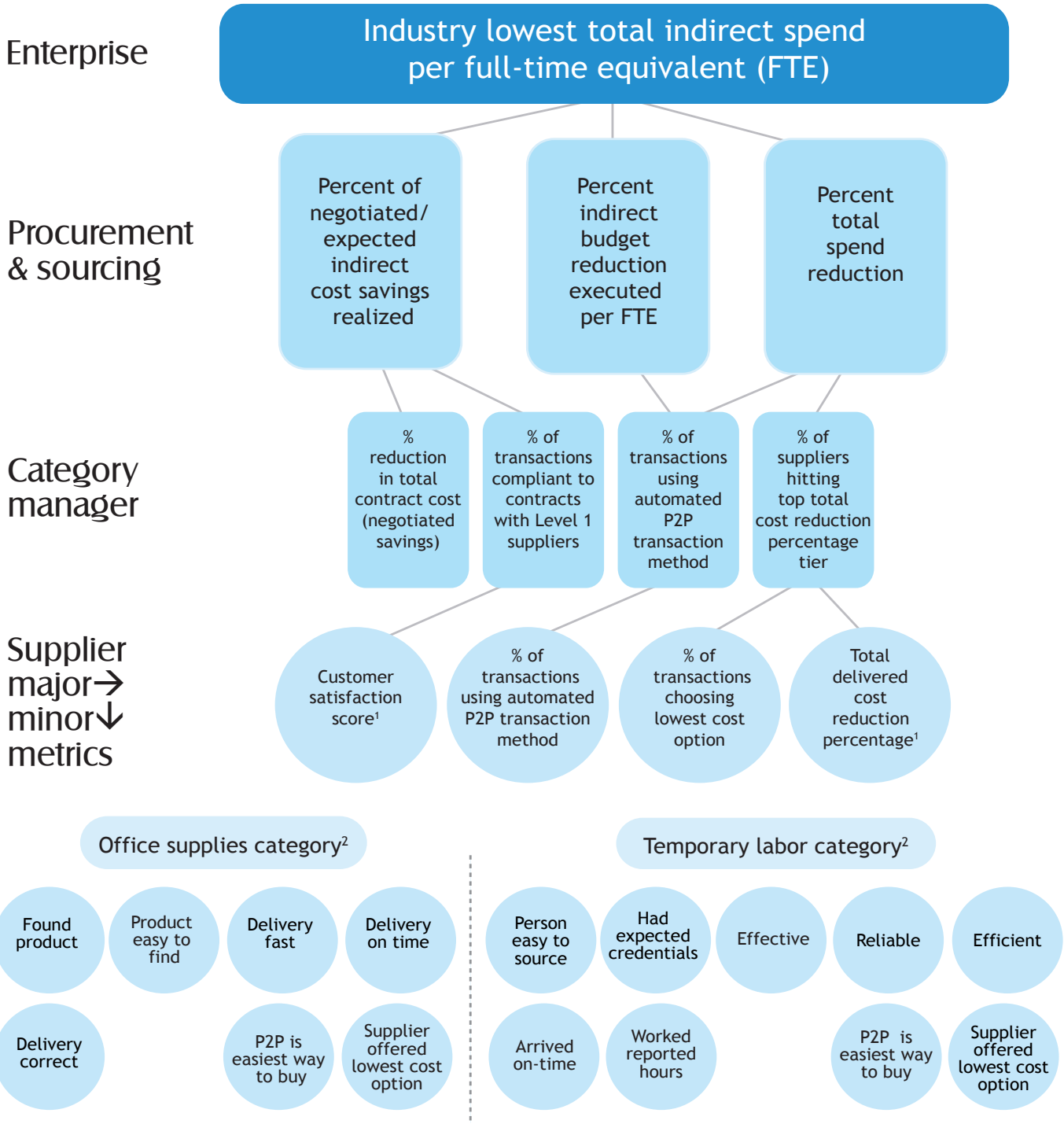
Addition of spend category-level and minor supplier metrics tiers to the hierarchy (Fig-4 on the next page) enables dissimilar indirect goods and services suppliers to be measured and managed within a single SPM system. It also makes room for more subjective data inputs, which may be seen as less accurate, and, therefore, less reliable for sourcing decision making. Minor metrics would be developed in collaboration with

Fig-3 : A direct materials example



1 Keyed to independent global market price indicator and cognizant of market leader's current position (if possible)
2 Keyed to independent global market leadtime indicator (if possible)
3 Performance required to be considered global lowest cost supplier
4 Percent to qualify as automated P2P supplier
5 Percent to qualify as demand pull/rapid delivery supplier

Fig-4 : An indirect goods & services example



1 Mapping to one of three benchmark performance levels: Level 1=preferred/lowest cost, Level 2=approved, Level 3=not approved
2 Defined jointly by sourcing/procurement and end users and captured via customer surveys.

internal end users of goods and services and data inputs may be gathered using customer satisfaction surveys or similar. In the example, minor metrics could roll up to a major-level customer satisfaction score for the supplier and/or can be used to diagnose problems appearing at major metrics and spend category levels—for example, low customer satisfaction, poor contract compliance, poor compliance with preferred transaction methods, and so forth.

Scoring, ranking, and rating suppliers

Relating suppliers' raw performance data to both scores and scoring benchmarks enables procurement and supply chain organizations to view supplier performance across spend categories and the entire supply base in ways that can inform future sourcing and procurement decisions.

Going back to the example in Fig-3, where one of the procurement and supply chain metrics is 'percent of BOM awarded to global lowest cost suppliers,' what follows is a simplified example of how this might be executed using scoring and benchmarks. The example makes an idealistic assumption that the benchmarks can be derived using competitive intelligence to understand both what is possible or likely to achieve in the current marketplace and what it would take from a performance perspective to assume a market leadership

Fig-5 : A supplier scoring and rating example

Supplier Number →	1	2	3	4	5	6	7	8	9	10
Transaction 1	2	2	1	-2	2	2	0	-2	-2	0
Transaction 2	2	2	1	1	2	1	0	-2	-2	0
Transaction 3	2	-2	1	-2	2	1	0	-1	-2	0
Transaction 4	1	0	1	2	2	1	0	-1	1	
Transaction 5	1	1	1	0	2	1	0	-1	1	
Transaction 6	0		1	1	2	0	0	0	1	
Transaction 7	-1		1	1	2	0		0	1	
Transaction 8	0		0	0	0	0			1	
Transaction 9	-1		1		0	0			1	
Transaction 10	1		1		0	0				
Total points	7	3	9	1	14	6	0	-7	0	0
Number of qualifying transactions	10	5	10	8	10	10	6	7	9	3
Perfect possible score	20	10	20	16	20	20	12	14	18	6
Percent of perfect possible score achieved	35%	30%	27%	6%	70%	30%	0%	-50%	0%	0%

Global benchmark market price = 7¢/each in minimum lot sizes of 100K items. Scoring: 3%+ below market price = +2, 0-3% below market price = +1, at market price = 0, 0-3% above market price = -1, 3%-plus above market price = -2. Supplier performance benchmarks: Global lowest cost = 70%+ of perfect possible score, global lower cost = 1-69% of perfect possible score, global average cost = 0% of perfect possible score, global higher cost = -(1-69%) of perfect possible score, global highest cost = -(70%+) of perfect possible score.

position. The resulting supplier ranking and proposed set of actions might look something like this:

Rank	Supplier No.	Rating	Action
1	5	Lowest cost	Increase awards
2	1	Lower cost	Keep/negotiate
3	2	Lower cost	Keep/negotiate
4	6	Lower cost	Keep/negotiate
5	3	Lower cost	Keep/negotiate
6	4	Lower cost	Rationalize
7	7	Lower cost	Rationalize
8	9	Avg cost	Rationalize
9	10	Avg cost	Rationalize
10	8	Higher cost	Rationalize

By adjusting scoring parameters and benchmarks over time, the sourcing and supply chain teams can drive systematically to higher levels of performance at realistic rates. So, for example, assume the baseline exercise finds global lowest cost performance to be at an overall score of 21% or 33 points out of a possible perfect score of 156 across 10 suppliers and 78 transactions. Based on competitive intelligence, the organization may set its initial benchmark to a target of 70% (points scored out of possible perfect points). Once that goal is achieved consistently—and depending on how competitive benchmarks and/or markets move—the group may decide to revise its scoring parameters; now suppliers must beat market by 5% rather than 3%. Or, it might raise the supplier's benchmark target from 70% to 80%. Either way, suppliers and procurement would need to work harder to achieve the top level of performance, making certain that the enterprise moves purposefully to its goal of being global lowest cost producer.

Balancing scorecards

Of course, overemphasis on a single metric such as global lowest cost supplier could easily lead other important supplier performance parameters—like product quality—to go haywire. Weighting metrics to create balanced scorecards for suppliers is a popular approach that has gotten substantially easier now that dedicated technology solutions for SPM are moving the process out of electronic spreadsheets and into rich platforms where weighting can be created, evaluated and refined throughout the SPM lifecycle and in response to learning and knowledge acquired in the SPM process.

Still, the burden of actually setting weights that are correct for a given enterprise must always fall to a person or team of people and, therefore, should be approached carefully and in context of open and robust debate among all of the various stakeholders who will be affected by the SPM system.

Several other questions to consider in the design of any SPM metrics/systems include:

- Can we organize SPM data into time series (daily, weekly, monthly, quarterly, or annual reporting) so we can monitor trends and spot emerging risks?
- What processes are needed to ensure accurate data collection, data validation, and dispute resolution should suppliers disagree with our findings? Can we include suppliers in these processes?
- How will we communicate to the enterprise and to our suppliers about the SPM system? What incentives will there be for robust and thorough participation?
- Are we prepared to act in response to the SPM data we will generate? And what processes will we put into place to help suppliers find and fix root causes for performance problems or failures to improve? (Hint: If you can not be prepared to fix a problem, it is probably not worth measuring).

Start small, keep it simple

While technology tools make it much easier to deploy rigorous systems for supplier performance management, there is no getting around the fact that SPM is complicated and requires skills that may not be readily available in procurement and supply chain organizations today. Nonetheless, consider two possible reasons that one cannot easily find examples of truly successful SPM systems today: either they do not exist or the people who have them are reluctant to relinquish their competitive advantage by sharing what they know. Either way, the opportunity to achieve competitive advantage through SPM is ripe for the picking. Embrace the SPM lifecycle. Understand that you don't need to be perfect. You don't need to get it all done on the first try. Start small. Keep it simple. Focus on the areas that matter most. Solicit healthy debate about what you are doing and how you are doing it. Study, evaluate, and evolve from there!

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