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# Strategy Path Modeling

An approach to model and assess strategy at all levels of the organization

*This white paper introduces Strategy Path Modeling (SPM), an evidenced based approach that allows business executives to model and assess strategy at all levels of the organization. SPM allows organizations to specify and test value chains—cause-and-effect models associated with strategy—to gain knowledge that is used for decision making. In developing this approach we have integrated and extended macro and micro approaches on performance management.*



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# Introduction to Evidence-Based Management

Intuition represents easily accessible ideas, accessed subconsciously to make decisions (i.e., “gut instincts or hunches”). Although based upon experience, intuition is nonetheless untested assumptions that may represent invalid knowledge. Surprisingly, 85% of doctor decisions are based on intuition and it is believed that organizational decision making is worse yet (Pfeffer & Sutton, 2006). In response, evidence-based medicine has gained momentum in the medical community; an approach that emphasizes the scientific method (e.g., randomized, double-blind, placebo-controlled trials) to provide doctors with knowledge about treating disease or illness. Evidence-based practices started in the medical community and have since been adopted by management scholars and leading organizations. Evidence-based management refers to the systematic development of valid knowledge to make important organizational decisions. There are two primary evidence-based management approaches: a macro approach (led by strategy scholars) and a micro approach (led by organizational behavior scholars). As of yet, the macro and micro approaches have not been integrated in a unified performance management approach.

## ***Intuition is not Evidence-Based Management***

Too often organizational decisions represent *intuition-based management*, decisions based upon intuition and satisficing (acceptable, but not optimal), instead of *evidence-based management* decisions that rely upon knowledge and optimization. For example, in our research, we worked with an international consumer packaged goods organization headquartered in Chicago where the culture was eroded, employees were jumping ship, and profits were plummeting. Although well intentioned, none of the executives could decide how to fix the culture. Instead, the executives relied upon intuition and the first acceptable solution was adopted: “let’s take the employees out to a Cubs baseball game to improve morale!” All the executives would agree this was not an optimal solution to an important problem. But as is often the case, knee-jerk responses often result from confused stakeholders, time constraints, and not knowing a better way; in such instance, managerial decision making is reduced to an exercise in applied intuition, where minimal acceptance, not optimal results represent the criteria for decision making.

### *Five Principles of Evidence-Based Management*

1. *Face the hard facts, and build a culture in which people are encouraged to tell the truth, even if it is unpleasant.*
2. *Be committed to "fact based" decision making -- which means being committed to getting the best evidence and using it to guide actions.*
3. *Treat your organization as an unfinished prototype -- encourage experimentation and learning by doing.*
4. *Look for the risks and drawbacks in what people recommend -- even the best medicine has side effects.*
5. *Avoid basing decisions on untested but strongly held beliefs, what you have done in the past, or on uncritical "benchmarking" of what winners do.*

*Source: [www.evidence-basedmanagement.com](http://www.evidence-basedmanagement.com)*

## Macro Approach

The essence of the macro approach is to determine why some organizations have high levels of success, why some organizations wallow in mediocrity, and why some organizations are colossal failures. Competitive strategy, which integrates multiple disciplines (e.g., economics, finance, marketing, sociology) is the primary academic label for the macro approach. Historically, the principle measure of organization performance was shareholder value, which in turn was considered a function of a few key financial indicators (e.g., share price, ROI, P/E ratio).

Porter (1980) had the insight to reimagine the value chain question, focusing it internally rather than externally. He focused on the multitude of internal means by which an organization creates value. In Figure 1, these are depicted as nine key components. Using Porter's framework, managers can map out the value creating activities in their organization.

Kaplan and Norton (1996) were similarly insightful in suggesting that, instead of measuring performance using a narrow set of financial measures, managers should view value with a wider lens. They should factor in both financial and non-financial measure of performance. In Figure 2, this is depicted as four broad categories, only one of which is financial. Kaplan and Norton also proposed strategy maps that would allow managers to examine how components of the balanced scorecard and certain of its subcomponents fit together to drive shareholder value.

These perspectives enriched strategic management, but all the mapping still occurred at a macro level, with little or no exploration of the individual and small group of analysis.

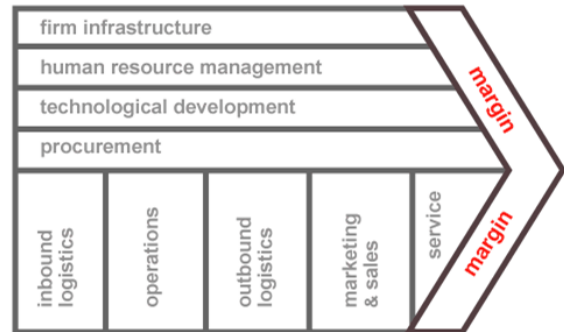


Figure 1. The value chain identified interrelated activities that determine performance

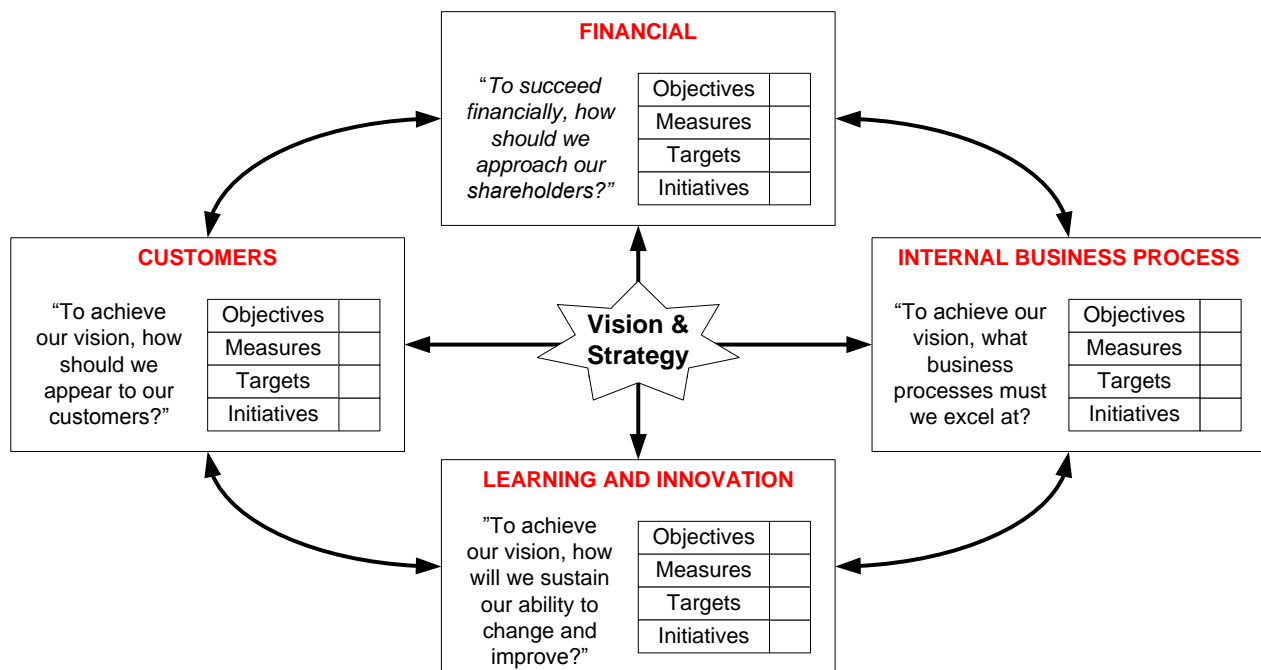


Figure 2. The balanced scorecard added comprehensive measurement to performance management

## Micro Approach

The micro approach is concerned with understanding the cause-and-effect relationship between needs, motivation, attitudes, behaviors, processes, and resources that impact the effective running of organizations. Organizational behavior, which integrates multiple disciplines (e.g., psychology, sociology, anthropology) is the primary academic label for the micro approach. Typically, research questions have been explored at different levels of analysis (see Figure 3).

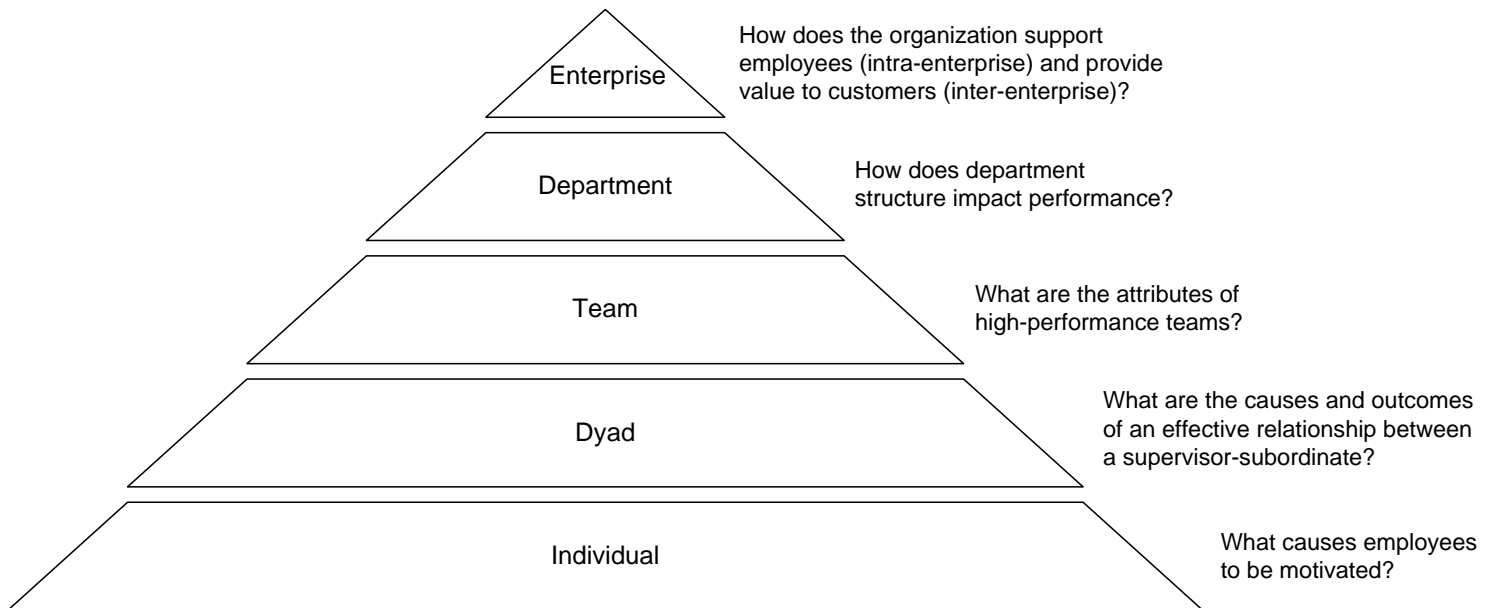


Figure 3. Levels of analysis and illustrative research questions examined in the micro approach

The micro approach has added precision to understanding performance drivers at different levels of the organization. Specifically, the micro approach is characterized by sound measurement, methodological rigor (e.g., study design, implementation), and appropriate analysis. For example, using meta-analysis (a statistical approach to combine together the results of multiple studies) a larger sample size is achieved, providing greater confidence in true effect sizes (e.g., means, correlations) than results derived from a single study.

Although the micro approach has answered important questions about performance management, emphasis has been placed upon finding answers that generalize across organizations; a primary drawback of the micro approach is that research questions are typically not examined in light of organization specific strategy.

## ***An Integrated Approach is Needed***

An approach that integrates macro- and micro-approaches toward evidence-based management is needed, an approach that is also cross-disciplinary in nature encompassing research from management, marketing, sociology and other behavioral-based disciplines. The essence of organization strategy (macro approach) is to find a unique competitive advantage. As already motioned, it would be beneficial if micro approaches considered organization strategy. Strategy scholars have provided insight into the unique mapping of value within and between organizations. Nonetheless, most mappings of strategy are “conceptual models” that are not empirically tested as “operational models” (cause-and-effect relationships, where each link is tested). Moreover, if strategy is tested, it lacks the measurement rigor associated with the micro approach toward performance management. For example, we have seen many balanced scorecards (a conventional macro-approach) that examine “employee performance” using a single item measure (“how well has each employee performed?”).

From a micro approach employee performance can be examined in terms of in-role performance (e.g., consistent with the job description) and extra-role performance (e.g., going above and beyond). Extra-role performance often drives key outcomes with customers, but this information is hidden in conventional strategy assessments. Moreover, from a micro approach, extra-role performance can be examined in finer-grained ways for greater insight; altruism (e.g., helping others who have been absent), courtesy (e.g., consulting others before taking action), and civic virtue (e.g., keeping up with matters that affect the organization) and many other dimensions of extra-role performance have been identified (LePine, Erez, & Johnson, 2002).

# Strategy Path Modeling (SPM): An Integrated and Extended Approach

Building upon years of direct research and practice in macro and micro approaches of performance management, we sought to remedy the schism in performance management by developing an integrated and extended approach. We devised Strategy Path Modeling (SPM), an evidenced based approach that allows executives to model and assess strategy at all levels of the organization to achieve unparalleled performance clarity.<sup>1</sup> SPM is a bridge approach, in that it integrates macro and micro approaches on performance management. To this end, the first two authors of this whitepaper are trained PhDs in organizational behavior and strategy respectively. Additionally, the final two authors are trained PhDs in counseling and marketing respectively; further underscoring our belief that performance management should be inclusive of diverse yet highly related perspectives.

As depicted in Figure 4, SPM views performance management in terms of three sequential and interdependent dimensions that create performance clarity: **performance scope, conceptual model, and operational model and testing.**

The **performance scope (step 1)** represents the aspect of performance that the organization is interested in managing. The organization may be interested in a larger performance scope: e.g., organization or department strategy; or a strategic theme such as service orientation, growth, or employee development. Alternatively, the organization may be interested in a smaller performance scope: e.g., individual employee performance or a key project.

The **conceptual model (step 2)** represents the cause-and-effect mapping of the performance scope as viewed by the company. For example, Starbucks or Southwest Airlines, service oriented organizations, may emphasize a “trickle-down” service orientation strategic theme based upon the organization’s fair treatment of employees, and the employees’ fair treatment of customers leading to perceptions of employee fair treatment and customer satisfaction (See Figure 5 for an illustrative, but simplified, conceptual model of this important strategic theme).

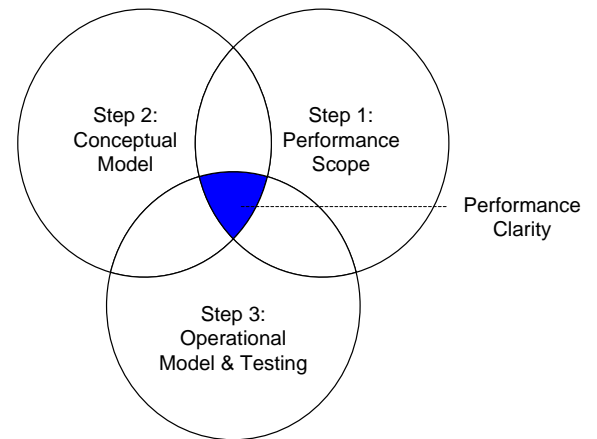


Figure 4. Three dimensions of performance clarity

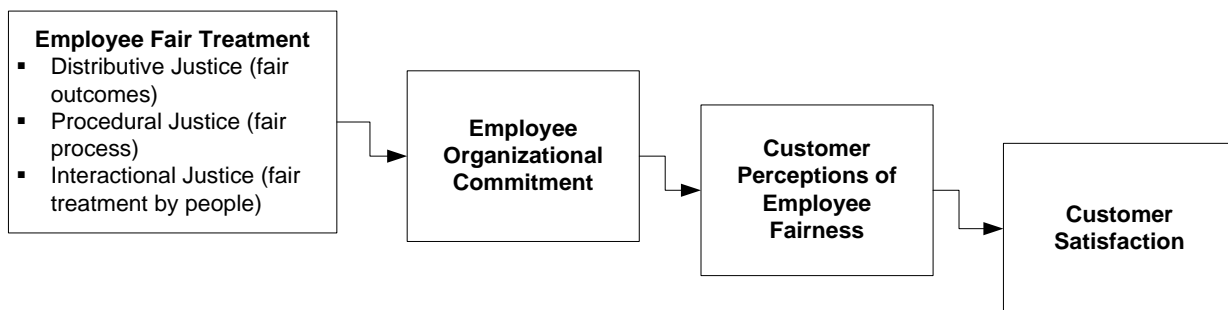


Figure 5. Illustrative conceptual model: trickle down model of employee fair treatment.

Note: Adapted from Masterson (2001)

<sup>1</sup> We deliberately refer to our approach as strategy path modeling, in lieu of performance path modeling to reflect the relative importance that is given to strategy. For example, often strategy is referred to as “strategic performance management” and micro perspectives on performance claim relevance by appealing to firm strategy (albeit, this connection is usually superficial).

The **operational model and testing (step 3)** represents development and validation of measures that are used to test the conceptual model, model testing, and analysis of results. Only by testing the service orientation strategic theme can Starbucks or Southwest Airlines know what links in the trickle-down service orientation model are strong (weak), and how the strength of links vary by division or department (all vital information and sources of performance clarity). Taken together, the overlap between the three dimensions provides performance clarity.

Viewed from a three dimensional lens, in Figure 6 performance clarity across approaches is compared. In our experience 25% of organizations have excellent vision (20/20). This represents conventional best practices—a combination of macro and/or micro approaches toward performance management that are applied separately. Consistent with our experience, one study of 157 organizations examining macro strategy found that only 23% of companies tested cause-and-effect linkages in their operational model (Ittner & Larcker, 2003). These 23% of companies, had 2.95% higher ROA and 5.14% higher ROE than organizations that did not test their operational models. It appears the vast majority of companies (~60%) utilize intuition (an absence of performance management), a broad band that is between 20/20 vision to 20/200 vision (the legal standard of blindness). In our experience, only 10% of organizations utilize SPM (or approaches that bear some approximation to SPM) in that they utilize conceptual models and operational models to specify and test strategy in an integrated manner; these organizations achieve 20/10 vision, the limits of the human eye. Extensive use of SPM is infrequently seen (~5%); these organizations achieve 20/6 performance clarity, the visual acuity of a hawk.

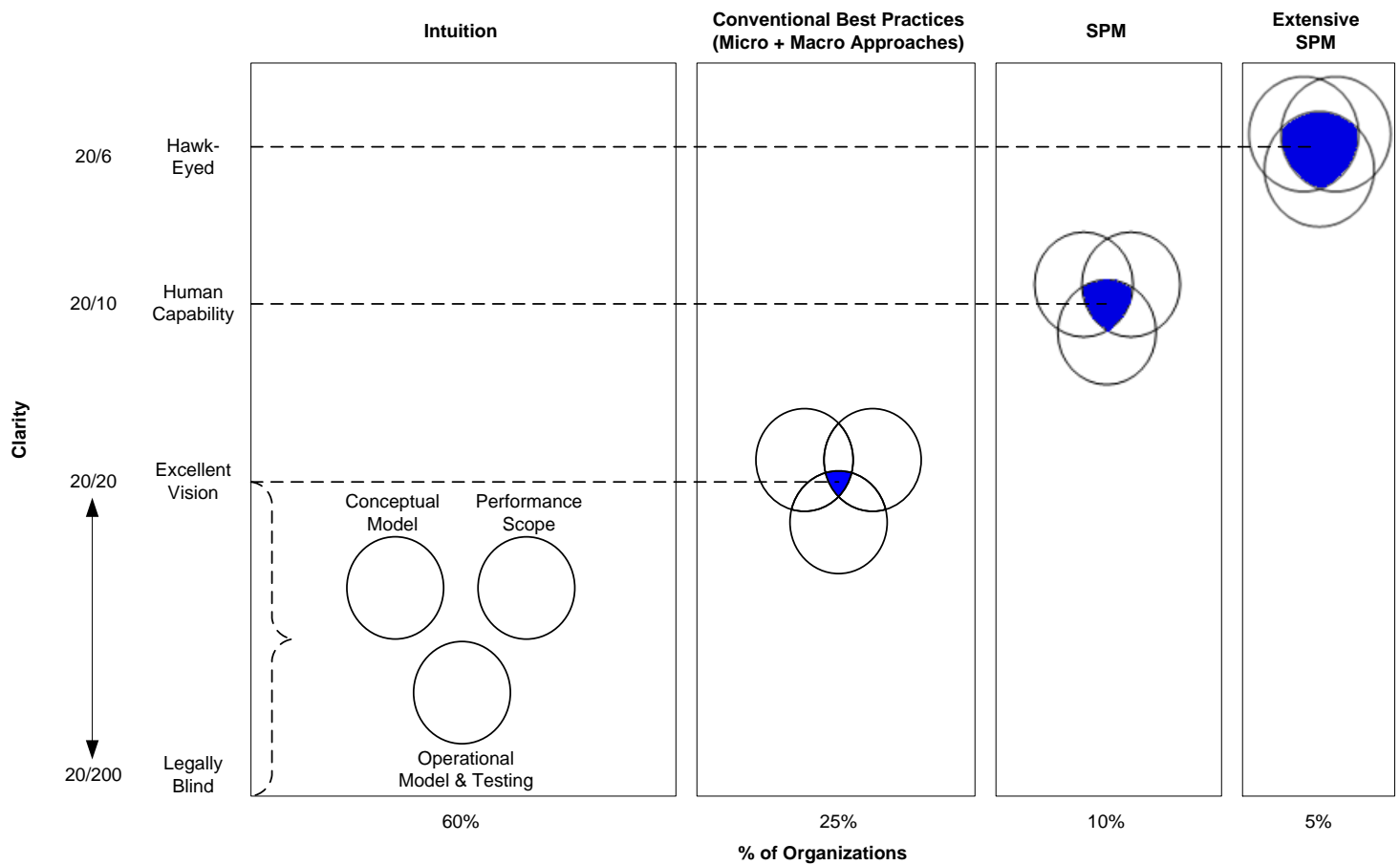


Figure 6. Improving performance clarity



## Performance Scope (Step 1)

The performance scope is the first and most important step toward performance clarity in that it constrains how performance is represented as a conceptual model; and the conceptual model in-turn constrains what is tested in the operational model. In other words, if the performance scope is viewed properly (improperly) then eventual performance clarity is possible (impossible). When the performance scope is viewed properly the “forest and trees are both visible” in that each performance scope is linked to strategy (the forest) while simultaneously considering the details (the trees). Unfortunately, macro and micro approaches separately focus on the forest and trees respectively. For example, Porter (1996) makes a distinction that strategy is the relationship between all activities that create competitive advantage (the forest) and he describes the optimization of a given activity as operational effectiveness (the trees). The strategy vs. operational effectiveness distinction has created a false dichotomy that limits the macro approach to a simplistic view of the whole and the micro approach to the details absent the strategic context; both views are to the detriment of performance management. These misleading views may be a method-bound artifact; strategy scholars are trained in methods that focus on the overall system (a macro-approach) as opposed to the subsystems associated with individual variables utilized in the methods of organizational behavior scholars. Under SPM, false distinctions between strategy (the forest) and operational effectiveness (the trees) are avoided. All aspects of performance are strategic and all details are considered.

### The role of performance scope in overall performance clarity

20/20 (Conventional approaches)	20/10 (SPM)	20/6 (Extensive SPM)
<p><b>Forest or trees perspective:</b> The macro approach focuses on strategy (the forest) and the micro approach focuses on the details (the trees); neither approach sees the entirety of performance management.</p>	<p><b>Seeing the forest and trees:</b> Performance is viewed as a whole, inclusive of macro and micro perspectives. The subsequent cause-and-effect mapping of the performance scope (i.e., the conceptual model) is more complete.</p>	

## Conceptual Model (Step 2)

The conceptual model is a cause-and-effect diagram that maps the performance scope into variables (e.g., attitudes, behaviors, needs, resources) that are linked together with arrows that indicate causal relationships (see Figure 7). There are relative differences in the size of the scope, but in absolute terms most performance scopes are large and inherently complex.<sup>2</sup> To map the value chain properly requires a sophisticated approach and an ability to create alignment between key stakeholders.

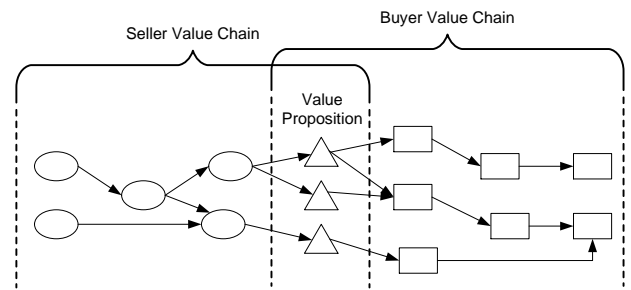


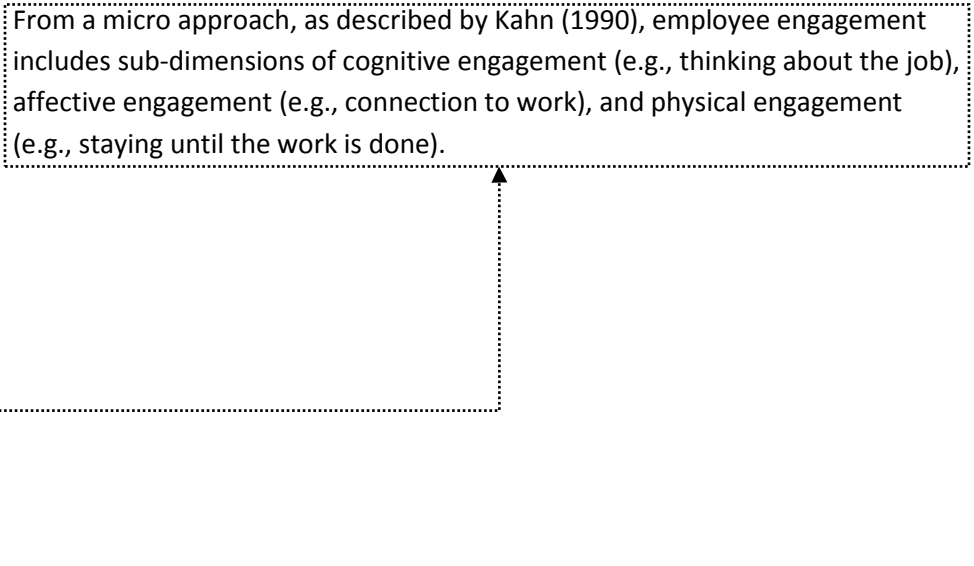
Figure 7. Seller and buyer value chain system

Macro approaches typically follow an outsider framework. For example, Kaplan and Norton's (1996) Balanced Scorecard Framework uses 4 perspectives to map strategy: financial, customer, internal business, learning and growth. Although outsider frameworks are informative, insider frameworks that reflect how the value chain is really segmented in the eyes of the insiders is ignored, or forced to fit into an external framework. As a result, strategy follows an external paradigm (often espoused by a consultant) that does not reflect the insider perspective on strategy. If conceptual models are tested (in the operational model), results do not shed light on implicit mental models that actually guide daily activities. Theories of learning and change are clear that both will only occur if original assumptions and implicit models are first dismissed as incorrect. In contrast, we advocate using insider frameworks for the basis of developing models of strategy. In contrast to contrived outsider frameworks that model strategy into preconceived categories, we help organizations model the knowledge, assumptions, and internal hypotheses as understood within the organization.

Once an insider model is specified, an organization should take advantage of expert knowledge to add proven evidence-based perspectives to the conceptual model. Strategy approaches often fail to consider micro theory that is relevant to the model (e.g., motivation theory, job design theory, communication theory) because micro theory is outside the scope of the strategy disciplines macro approach.

<sup>2</sup> Consider the complexity of creating a conceptual model of the overall organization. To model the overall organization value chain would involve the simultaneous consideration of all subordinate value chains (e.g., departments, teams, dyads, individuals). An organization with 1000 employees may be divided into 10 departments (e.g., Accounting, Finance, Marketing, Sales...) representing 10 distinct value chains. Moreover, each department may be divided into 10 teams, representing 10 distinct value chains at this level. Additionally, each team may be comprised of 10 people that represent 45 unique dyadic value chains (e.g., a supervisor and subordinate represent 1 dyadic relationship). Finally, at the individual employee level, within each team there are 10 employees, representing 10 separate value chains. Using this simple example, to optimize the enterprise value chain would require all 4 subordinate levels to be considered simultaneously (10 departments x 10 teams x 45 dyads per team x 10 employees per team) representing 45,000 value chains. This analysis is complicated to millions of value chains, when a) assumptions of independence are relaxed (departments interact, teams interact between and within departments, etc.) and b) additional dimensions of analysis are examined (e.g., strategic themes, job families, projects).

## The role of conceptual models in overall performance clarity

20/20 (Conventional approaches)	20/10 (SPM)	20/6 (Extensive SPM)
<p><b>Outsider frameworks:</b> organization strategy is forced to fit into third party frameworks (e.g., Balanced Scorecard). This provides order, but organization context and uniqueness are lost, limiting potential insights.</p>	<p><b>Top management framework:</b> Organization strategy as viewed by top management is modeled.</p>	<p><b>Complete stakeholder framework:</b> organization strategy as viewed by all stakeholders is modeled. Differences between perspectives are incorporated and integrated as a unified whole.</p>
<p><b>Underspecified models:</b> Macro approaches on performance can't explain with precision the drivers of strategy. In long run underspecified models (important omitted variables) limit the ability to predict and influence goals (e.g., profitability, job performance).</p> <p>For example, we have seen executives convinced that employee engagement was important to organizational performance. However, when pressed, the executives could not provide compelling details as to what this meant.</p>	<p><b>Comprehensive models:</b> The micro approach provides better explanations, and ultimately predictions, by fully considering the relevant content domain.</p> <p>From a micro approach, as described by Kahn (1990), employee engagement includes sub-dimensions of cognitive engagement (e.g., thinking about the job), affective engagement (e.g., connection to work), and physical engagement (e.g., staying until the work is done).</p> 	

### *Operational Model and Testing (Step 3)*

Too often, strategy is specified as a conceptual model, but not actually developed into an operational model that is tested. Actual model testing is required to confirm, disconfirm, or respecify strategy over time. A primary reason that strategy is not tested is that approaches on strategy simply don't emphasize testing operational models. When operational models are tested, the testing may not be rigorous (e.g., exclusive reliance on qualitative interviews); testing is not integrated across the organization (e.g., HR and organizational strategy assessments are separate); measurement is questionable; and reporting may be limited. In our experience strategy scorecards, do not keep track of all relevant variables and metrics. Many times strategy approaches are limited to a simple reporting of descriptive statistics (e.g., averages, ranges, variances); the all important impact metrics (e.g., multiple regression scores) are not reported. If an independent variable does not impact a dependent variable, then the independent variable is not relevant to the value chain! Absent impact analysis, metric creep occurs; more and more metrics are "added to the list" as quantity of metrics is mistaken for clarity. True clarity regarding the variables to track and discard can only be achieved if scorecards are based upon impact metrics.

## The role of operational models and testing in overall performance clarity

20/20 (Conventional approaches)	20/10 (SPM)	20/6 (Extensive SPM)
<p><b>Echo chamber testing:</b> It is common for strategy testing to be based on interviews; prone to the echo chamber effect—no actual testing occurs, but instead key project sponsor opinions tend to be amplified. Second, companies often fall short of actually testing strategy—that is they fail to test the full complement of cause-and-effect relationships including all leading, target, and lag indicators related to achieving strategy and business goals.</p>	<p><b>Comprehensive testing.</b> Micro approaches toward model testing can add rigor to macro approaches toward strategy. For example, in our experience strategy is not tested using structural equation modeling—a model testing approach (common in micro approaches) that allows researchers to simultaneously test all paths in a strategy, to test causal relationship and provide metrics to statistically quantify the overall fit of the strategy (see Kline, 2005 for a background on structural equation modeling). Without rigorous measurement and analysis, it is difficult to determine what is most important and what is missing.</p>	
<p><b>Silo assessments:</b> Too often performance assessments occur in parallel. For example, the HR organization may conduct the annual employee health survey (often from a micro approach), and elsewhere strategy will be examined using KPIs.</p>	<p><b>Integrated performance management:</b> Parallel assessments reflect differences in researcher and consultant backgrounds (micro and macro). However, all assessments should be integrated and linked to an overall performance management approach.</p>	
<p><b>Uncertain measurement:</b> Little emphasis is given to measurement (e.g., reliability and validity are not considered). Results are weakened, inconclusive, or misleading.</p>	<p><b>Validated measurement:</b> Validated measures from the academic literature are used; results can be trusted.</p>	<p><b>Custom content &amp; measurement:</b> Statistically valid development of organization specific measures. For example, the organization value proposition is quantified and tested; or “core competencies” are quantified and tested.</p>
<p><b>Benchmarking emphasized:</b> Reports are focused on benchmarking (variable averages). No emphasis is given to cause-and-effect models (impact metrics).</p>	<p><b>Cause-and-effect reporting:</b> A full complement of metrics is reported; emphasis is placed on cause-and-effect models (impact metrics).</p>	<p><b>Evidenced based management culture:</b> SPM reporting becomes the spine of decision making.</p>

# Lessons Learned

What are the key takeaways from this whitepaper?

1. **Intuition-based management is the norm.** Intuition is reliance upon pattern recognition, experience, and traditions; potentially true, but nonetheless untested assumptions that are vulnerable to errors in judgment. By our estimate 60% of organizations manage by intuition; others have suggested this percentage is greater than 85% (Pfeffer & Sutton, 2006).
2. **Evidence-based management is an important, but currently limited alternative.** Evidence-based management refers to the systematic development of valid knowledge to make important organizational decisions. There are two primary evidence-based management approaches: a macro approach (led by strategy scholars) and a micro approach (led by organizational behavior scholars). As of yet, the macro and micro approaches have not been integrated in a unified performance management approach. This division has rendered current evidence-based approaches incomplete. Not surprisingly, the majority of important decisions are divorced from the evidence generated. Organizations assess performance, question the insights, and often regress back to intuition to determine company direction and actions.
3. **Strategy Path Modeling (SPM) is the future of evidence-based management.** We have developed Strategy Path Modeling (SPM) as an approach to integrate and extend the macro and micro approaches on evidence-based management. SPM allows organizations to specify and test value chains—cause-and-effect models associated with strategy—to gain knowledge that is used for decision making. Performance clarity is a result of the intersection of three considerations: (a) a well defined performance scope, (b) mapping the cause-and-effect model (i.e. the conceptual model), and (c) the development and testing of the operational model. Managing these three dimensions is central to evidence-based decisions.

# Case Studies

## Case Study #1: Financial Services Company Value Proposition

In marketing, Jaworski and Kohli's (1993) seminal work measured an organizations market orientation as the extent to which a firm generated intelligence about its customers' current and future needs, disseminated this information across the firm's departments, and an organization's responsiveness to this information. As depicted in Figure 1, organizations that have higher market orientation, which is driven by such factors as top management's emphasis on this approach (path a), attain higher business performance (path b). Underscoring the importance of market orientation, Jaworkski and Kohli (1993) found that product quality (path c) was significant in only one of the two samples examined and the other control variables (path d) were not significant predictors of business outcomes in either sample.

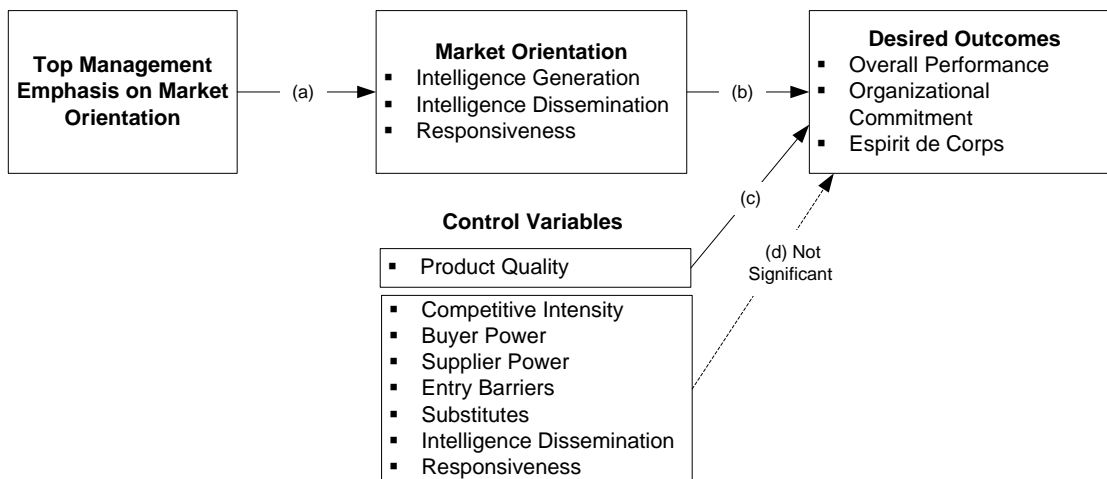


Figure 1. The Critical Role of Market Orientation in Driving Desired Outcomes.

Note: Adapted from Jaworkski and Kohli 's (1993) two sample study. Note: paths (a) and (b) were significant in both samples, path (c) was significant in only sample 1, and path (d) was not significant in either sample.

## Value Proposition Clarity

Central to market orientation is value proposition. Few companies know with precision why their clients buy from them or why business is lost. One of our clients, a 100+ year old financial services company had just completed their best financial year to date. Despite their success, they realized they did not understand with precision why their customers bought from them. As depicted in Figure 2, Strategy Path Modeling (SPM) outlines three steps to achieve performance clarity. In step 1, value proposition represented the performance scope they were interested in improving.

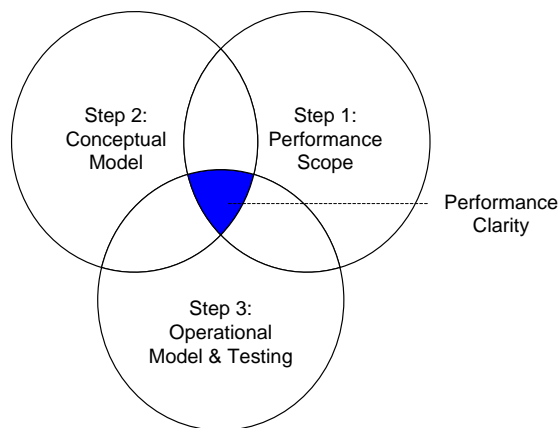


Figure 2. Strategy Path Modeling (SPM) Steps

Seeking clarity on their value proposition, we conducted interviews with employees and customers (step 2) that reflected value as described by all stakeholders (e.g., clients, prospects, sales, marketing, management team). All interview results were content analyzed revealing 8 dimensions of value (e.g., product attributes, reliability). Additionally, we examined Foa and Foa's (1974) resource theory to assure that we adequately tapped the content domain of value. Foa and Foa (1974) developed resource theory as an exhaustive account of resources exchanged interpersonally in therapy settings. Building upon Foa and Foa, Glibkowski et al. (2008) extended resource theory to the work setting; support was found for 7 types of resources exchanged at work within and between organizations (see Figure 3).



<b>Money (Economic Anchor)</b>	currency and standardized value
<b>Goods</b>	tangible products, objects, materials
<b>Information</b>	advice, facts, opinions, instructions
<b>Meaning</b>	fulfilling and meaningful job related activities
<b>Services</b>	Giving of time, talent, energy
<b>Status</b>	prestige, admiration, respect, confirmation of self-worth
<b>Involvement (Social Anchor)</b>	positive feelings, warmth, friendship, camaraderie, togetherness

Figure 3. *R7<sup>TM</sup>: An exhaustive account of 7 resources exchanged at work (within and between organizations)*

In step 3, the operational model was developed and tested. To assess the 8 dimensions of value proposition identified by the organization 45 items were written. Company insiders served as expert judges to assess the content validity of the written items. Surveys were then conducted with customers and all items were subjected to factor analysis to determine the statistical fit of the data to the 8 dimensional model of value. In total, 30 items were found to be valid and reliable measures of 8 dimensions of value provided to customers. Moreover, the established measure of value proposition (as depicted in Figure 2) was statistically compared to the developed measure of value to assure that the content domain was adequately tapped; in short, adding the established measure did not improve the fit of the model; in other words, the newly developed measure adequately assessed value provided to customers.

Next, multiple regression analysis was used to determine which of the 8 dimensions of value was driving outcomes such as customer loyalty, objective sales, and customer satisfaction. Two major findings were reported: First, product attributes had no statistical impact upon any outcome in one of the divisions. In other words, if customers rated products low or high, it made no difference on outcome variables (such as their level of satisfaction or objective sales). Not surprisingly, this finding sent shock waves within the affected division, leading to a redesign of products. Second, in a different division sales representative negotiations had a negative impact upon outcomes. In other words, sales representatives were destroying value, not creating value when they negotiated with customers! Negotiation training was conducted to remedy this gap. Generally, the results indicated that different dimensions of value were responsible for different outcomes; moreover, the result varied by segment such as geography and product type. The results revealed strengths, weaknesses, opportunities, and threats that guided future sales strategy and decision making.

## Case Study #2: Pharmaceutical Go-to-Market

Suppose a pharmaceutical company develops a new go-to-market model, including a full taxonomy to map its innovative strategy. What next? Having built it, a logical next step is to implement. But if it truly is something nobody has ever done before, the implementation risks are high. New and novel approaches generally provide the standard risk-reward tradeoff, and there is no reason to believe this situation would be different. A new go-to-market strategy implemented on a blank slate marketing and sales force has a high risk of failure but also a high reward if successful.

Fortunately, there are ways to lower the probability of failure, while leaving the magnitude of potential returns the same or higher: **Strategy Path Modeling (SPM)**. SPM refers to a management approach that utilizes cause-and-effect model development and testing to provide evidence and objectivity to complex phenomenon such as the pharmaceutical go-to-market. As depicted in Figure 1, SPM outlines three interdependent dimensions to achieve performance clarity. The go-to-market represents the performance scope to be optimized. The conceptual model represents the cause-and-effect mapping of the go-to-market, which is operationalized and tested to achieve performance clarity.

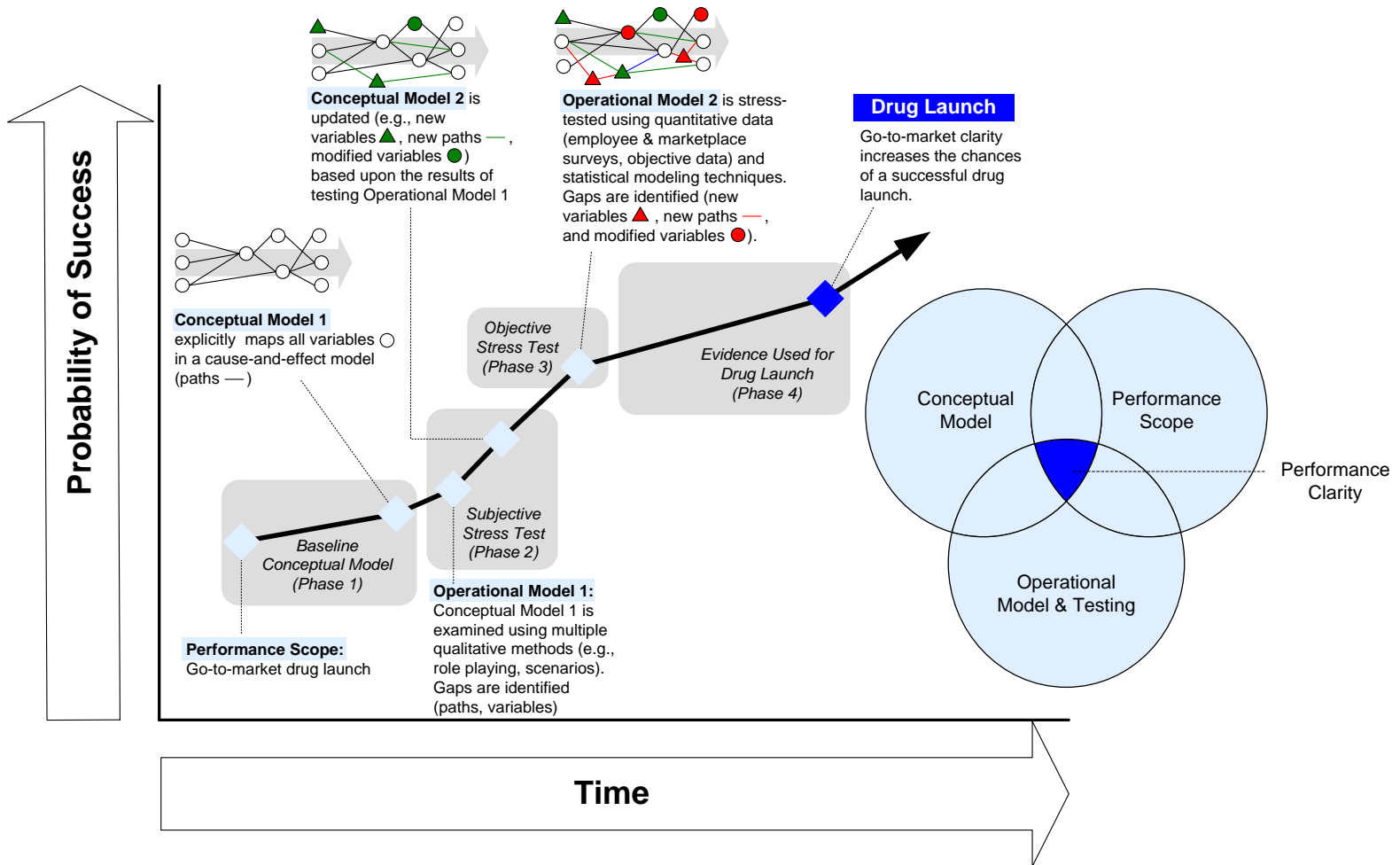


Figure 1. Strategy Path Modeling (SPM) Pharmaceutical Go-to-Market



## **Phase 1: Baseline Conceptual Model**

Phase 1 would involve taking the information from the strategic plan and developing a baseline conceptual model. Conceptual models represent cause-and-effect relationships between variables that reflect all aspects of the value chain (e.g., operations, human capital, financial, customer). Note that conceptual models are qualitatively different from strategic plans. The purpose of developing a strategic plan is to allow executives to step back from day-to-day operations and ask key questions such as “where should the business be headed?” The purpose of a conceptual model is to specify strategy for testing purposes.

## **Phase 2: Subjective Stress Test**

What are the ways to test a novel approach before that approach is fully implemented? We refer to this as a “Greenfield” situation because the proposed go-to-market approach has never been tried and due to the absence of hard data (from customers) it is difficult to test the go-to-market approach before-hand. Developing overly elaborate, stand alone decision models could be an exercise in building a substantial edifice on shifting sand. Nonetheless, in light of the sizable financial investment inherent in a go-to-market, it is imperative to test the go-to-market model early, as knowledge gained from early tests has the highest degree of leverage (in terms of positive corrections to the go-to-market). Without a compelling singular testing approach given the Greenfield situation, the pharmaceutical company should pursue a suite of “subjective” data collection testing methods (e.g., interviews, what if analysis, ask industry experts, decision making simulations, short prototypes with a small handful of professional sales people). The subjective stress test will confirm points of agreement, expose assumptions, and resurface divergent opinions—all for the purpose of developing a more comprehensive model of the go-to-market. More comprehensive models, coupled with subsequent testing and implementation, allow for several keys to go-to-market success: (i) making mistakes faster and learning lessons from those mistakes, (ii) making fewer mistakes over time, (iii) structuring efforts in a way that minimizes the costs of mistakes, and (iv) taking advantage of calculated risks.

## **Phase 3: Objective Stress Test**

Phase 3 would involve data gathering for model testing and analysis. Established model testing techniques will be employed that rely on measuring variables and paths using quantitative data and appropriate statistical techniques. Emphasis will be placed on using sources of data best suited to test Operational Model 2. The data will be derived from insiders (e.g., employees) and outsiders (e.g., hospitals, industry experts). After data is collected, it will be analyzed. Metrics that will be reported include variable metrics (e.g., means, ranges), path metrics (impact analysis; e.g., correlations and regression coefficients), and model metrics (overall fit statistics for all variables and paths). All results are segmented based upon identified groups (e.g., employee results could be segmented by job function, job type, experience, education, and age). Additionally, all results and recommendations are reported in a straightforward manner using intuitive color coded indicators (red, yellow, green light).

## **Phase 4: Evidence-based Management Drug Launch**

In Phase 4, the results from the objective stress test (Phase 3, Operational Model 2) are examined in combination with practitioner knowledge (i.e., pharmaceutical company experiences and judgment) to launch the drug. Using evidence, the pharmaceutical company can go to market with a smaller sales force, exceed revenue targets, and lower costs; in short, evidence-based management is a way to increase the probability of a successful drug launch. Moreover, SPM represents an evidence-based upward spiral that can be used post-drug launch for ongoing improvement.

# Acknowledgments

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