Palladium

Executing Strategy

Integrate and Conquer

River Logic's Enterprise Optimizer® Augments Balanced Scorecard System

November 2007

Balanced Scorecard Summary

The Balanced Scorecard system (BSC), developed by Drs. Robert Kaplan and David Norton over the last 20 years, is the first comprehensive system developed to help senior management improve their company's *execution* of strategy. Without such a system, typical corporate strategy departments worked in isolation. As a result, strategy had only spotty linkages to budget, incentive compensation, organization, and operational activities.

To address these gaps, the BSC approach emphasizes the need to *organize* all the sub-systems, activities, and interfaces that allow management to *develop*, *plan, execute and monitor strategies* on an ongoing basis. The goal of such a system is *excellent* execution, or better yet, business transformation through intelligent execution.

Overview

This paper summarizes Dr. Robert Kaplan's and Dr. David Norton's latest thinking on how best to configure and integrate strategy with operations to achieve breakthrough execution for both. This paper also introduces **Enterprise Optimizer® (EO)**, a new technology developed by **River Logic.** EO, in addition to linking strategy to execution, provides the corresponding financial impact across the entire enterprise, in a single, unified model.

Experience indicates that *organizing* strategy into a system was a productive starting point. Companies that have better organized their *strategy planning* using BSC guidelines (see Exhibit 1) have reaped significant rewards for the effort.

The digital revolution and globalization continue to shorten planning cycles while requiring greater agility. Therefore executives are under more pressure than ever to develop and implement strategies that keep their enterprise ahead of the game. Moreover, the stakes for ambiguity, being wrong or stumbling in execution are also higher than ever. To address these factors, and to synthesize lessons learned from BSC best practices, Drs. Kaplan and Norton have focused their efforts on linking the strategy and operations processes more closely and more clearly. This paper summarizes their latest thinking on how best to configure and integrate strategy with operations to achieve breakthrough execution for both. In addition, it introduces a new technology developed by River Logic[1] that links strategy to execution, and provides the corresponding financial impact across the entire enterprise – in a single, unified model.

[1] See River Logic on page 13.

Exhibit 1: Companies implementing BSC guidelines

Linking Strategy with Operations – The Balanced Scorecard Delivers

Today, many companies are investing in technology and consulting to enable Balanced Scorecard or other performance management systems**.** According to Gartner Research, corporate performance management (CPM) was one of the "hottest" software markets, growing at 20.6% in 2006 to over $1.5 billion in software sales alone, and Gartner expects continued high growth through 2010.[2] Forrester Research, another analyst firm that closely tracks this market, estimates the business performance solutions market will grow by 11% per year through 2011. More importantly, the strategy and performance management segment shows even higher potential with expected growth of 16% per year through 2011.[3]

John Van Decker, Research VP at Gartner argues that "performance management buyers want more integrated solutions and linkages between corporate performance management and operational performance management." Along with more integrated solutions, Van Decker identifies two other buyer

[2] Gartner, *WW CPM Suites Market Share,* August 9, 2007
[3] Forrester Research, The Forrester Wave: Business Performance Solutions, Paul Hamerman, Q4 2007

priorities of increasing importance: 1) greater emphasis on aligning business assumptions with plans, and 2) addressing implementation issues like change management.[4]

This groundswell is also yielding tangible results for many companies. For example, in a 2006 survey of 143 companies that use the Balanced Scorecard system (or a similar approach), respondents reported two to three times better execution of strategy. Of the 54 percent of managers reporting that they *had* a formal process to manage strategy execution, 70 percent said they were outperforming companies in their respective peer groups.[5] By comparison, 73 percent of those who reported they did *not* have a formal strategy execution system said they achieved only average to below-average performance of their strategies.

Companies Still Struggling with Disconnects between Strategy and Operations

Despite the popularity and proven success of the basic Balanced Scorecard approach, many companies report that they are still struggling with their performance management systems. While there are a number of ways that management can go astray at a more granular level (by using static forecasting, backward-looking metrics, or siloed budgeting, for example), perhaps the broadest challenges reside in three critical disconnects: 1) business leaders don't have a clear and robust strategy that provides sufficient insight into which areas and metrics deliver the highest returns; 2) companies can model a handful of pain points in silos, but fail to grasp the financial implications across the enterprise, and 3) a persistent disconnect occurs between strategy and operations.

A Deeper Look into the Strategy and Operations Disconnects

Lack of Robust Strategic Insights—Management's decision-making capabilities are directly related to the information made available to them. For example, seeking to grow revenue, management may elect to add a new manufacturing plant. However, armed with the proper data and constraint information, management may discover a more economically feasible growth strategy, such as altering its product mix and revamping existing production methods.

Limited information and insight also lead to management challenges of understanding and prioritization. In typical management meetings, short-term operational issues dominate the agenda, leaving scant time or attention for long-term strategy. Or there is never any change in what is considered to be the short list of the company's most crucial performance drivers.

Some organizations are using performance management tools like Balanced Scorecard, but fail to develop an enterprise-wide strategy. Using these tools without a well-defined strategy as a starting point

[4] Business Finance Magazine, *BPM 2.0*, Tad Leahy, January 2007
[5] 2006 member survey of on-line community, www.thepalladiumbscol.com
Note: The 54% of companies having a formal process for managing strategy is considered overstated due to survey bias. (Members self-select and join the community because of their interest in using the Balanced Scorecard for strategy execution.)

is an exercise in futility. It's the equivalent of having a roadmap, but no target destination. You may be able to determine where you are, but not where you want to go, nor how you will get there.

Limited Modeling Capabilities that Fail to Span the Enterprise—Spreadsheet modeling, although better than a calculator and a No. 2 pencil, remains an arduous and time-consuming approach. Modeling specific pain points and conducting detailed "what-if" scenarios requires significant number crunching, programming, debugging, add-ons, and the like. Consequently, management, analysts and consultants are forced to limit their modeling to two or three variables at a time.

Organizations are typically complex entities with hundreds of inter-dependent relationships. As a result, modeling approaches designed for a single purpose fail to determine the financial impact one relationship may have on another. Specific, non-integrated metrics exacerbate the problem. For example, management may define a customer satisfaction strategy and elect to use the number of customer complaints, based on history, as a key metric. The target may be to reduce monthly complaints from 75 to 50. But what if customer acquisition doubles during the same period and monthly complaints jump to 80? In reality, the company has exceeded its target on a per customer basis. However, the original metric failed to consider sales growth and—without a more detailed review— the strategy could erroneously be considered a failure.

Other technologies (BPM Systems, ERP, Business Intelligence/Analytics, etc.) provide more value. Yet, each of these systems focuses on solving only one or two problems. Therefore, they fail to address the fundamental need to quantify the financial impact of strategic, capital and operational decisions across the enterprise quickly. This causes managers to myopically optimize planning within silos (finance, process management, manufacturing, marketing) while missing the larger, more important opportunity to maximize potential across the enterprise.

Disconnects between Strategy and Operations—This critical disconnect is evidenced by the absence of significant top-line growth. Another symptom is the production of just a few spreadsheets for strategic planning, as compared to the excruciating detail required for operations planning. Another is that, according to the 2006 survey (mentioned above) of 143 companies, 60 percent of organizations still do not link strategy with budgets, and 70 percent do not link management incentives to strategy. Yet another symptom is a persistently high and rising expense-to-revenue ratio.

A particularly damning sign that often eludes senior management is that no one below senior management even knows what the company's strategy is; let alone how to execute it. Companies are quick to develop scorecards and dashboards based on select criteria, without truly achieving a realistic understanding of their business. In this mold, measurements or targets are often developed without

knowing which areas and tasks will yield the greatest return. Since most companies don't use a single, holistic approach to modeling, they are relegated to a "that's the way we've always done it" mentality.

Even if there is a strategy and some good tools are in use, for strategy to get the attention it needs, it cannot be an insular function performed in a vacuum. And yet, in most companies strategy planning only occurs within its own orbit—one that runs *parallel* to that of operational planning, without ever intersecting with it. In many companies, strategy planners don't even have a seat at the table when it comes to serious, top team plenary sessions for steering the organization in new directions. Being once- or twice-removed from the action, even ambitious planners end up having hit-or-miss input to critical decisions and reporting.

Strategy management leaders can only be as effective as they are empowered to be, and to the extent that they have easy access to the resources and support required to execute the strategy. Experience indicates that, if designating, empowering, and equipping those performing this critical function occurs ad hoc—or worse, not at all—execution of strategy is bound to suffer.

What's needed is a *system* that truly weds strategy planning to operational planning and that also *coordinates* the use of powerful tools and techniques to grease the wheels for all the actions that must occur along the way.

The Optimized Enterprise

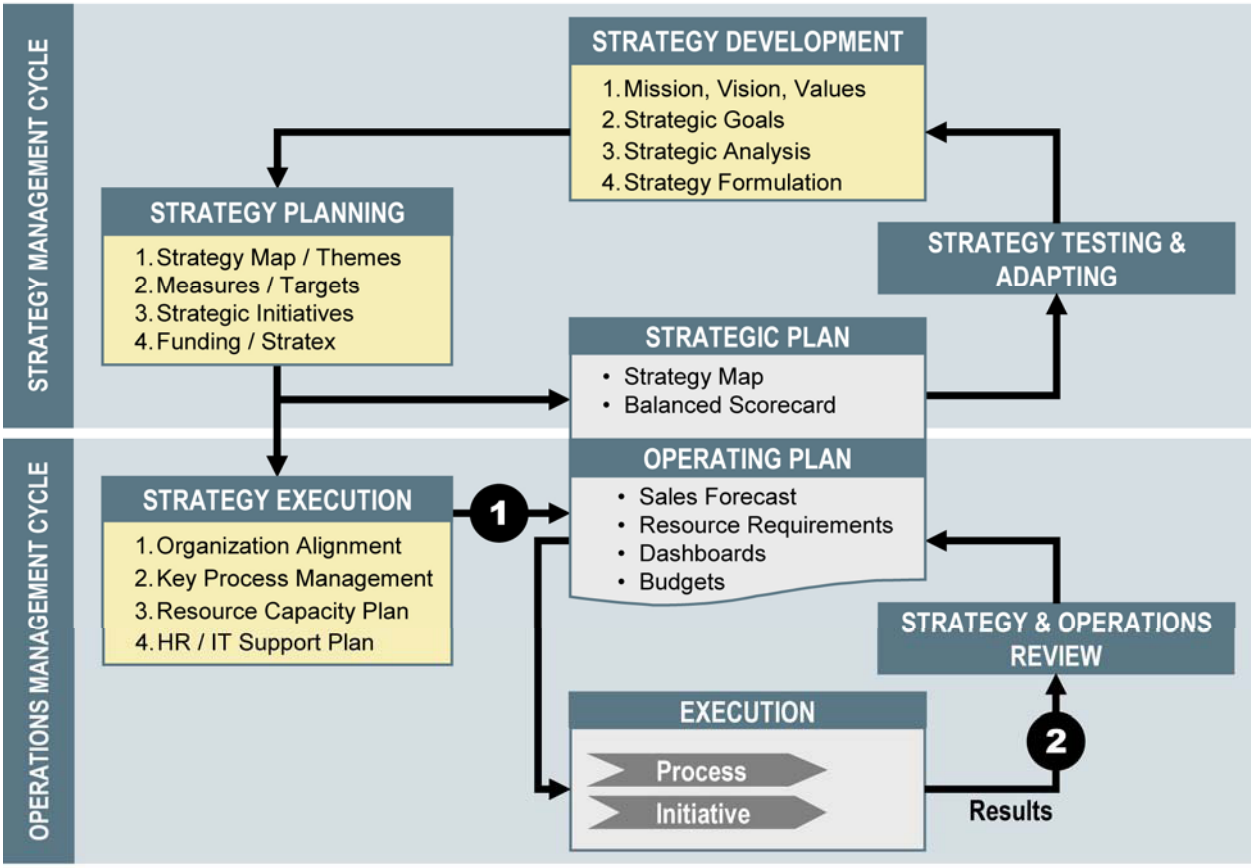
To address these concerns, Drs. Kaplan and Norton argue for a comprehensive, *integrated*, management system that funnels the key elements of strategy execution directly into operations (see Exhibit 2), in a highly choreographed manner. As the diagram indicates, this integrated, closed-loop system provides multiple intersections where each of the two management systems—strategy and operations—can inform the other to the benefit of both. This architecture also enables monitoring and continuous learning from the *outcomes* of activities that occur within, and across, the management cycles.

As indicated in the exhibit, there are two major bridges that connect the two cycles. The first, discussed in detail below, originates in the *strategy execution* module and is the artery that feeds the full list of execution requirements directly into the operating plan.

The second, a *continuous feedback loop* that monitors strategy and operational execution.

The bridge linking strategy execution to operation planning is based on an enterprise model of the business. It segments strategy execution requirements into three major inputs: *organization alignment*, *process management*, and *resource planning*. Drs. Norton and Kaplan also emphasize the use of a discrete budget accountability mechanism, called "*StratEx*," which feeds financial requirements from the strategy execution module directly into the operating plan.

The Strategy\Operations Management System



Two Major Bridges Connect Strategy with Operations:

1. Strategy execution linked to operating plan
2. Continuous feedback loop that monitors strategy and operational execution

Exhibit 2: The Strategy/Operations Management System

Building the Foundation: The Enterprise Model

At the core of this system is an enterprise model that accurately and realistically represents the company's situation. This model enables managers to make strategic, financial and operational planning decisions while considering their true financial and operational impact across the organization. In addition, the model provides unified, integrated visibility into company performance that facilitates continuous course correction. The model is unique because its analyses *simultaneously and realistically* considers market conditions (demand patterns, pricing scales, customer satisfaction), regulatory constraints (emissions, financial), operating processes (capacity, capabilities, constraints), and company financials (income, economic profit, cash flow). The model cuts across company silos by providing a holistic, enterprise-wide view of the business. The enterprise model delivers the following capabilities:

Strategy planning that considers all the relevant information. This includes determining the optimal strategy as well as translating the strategy into operational plans and ongoing management. Key considerations include:

- Important business constraints (market, skills, IT, financial, physical) that impact the ability to execute a strategy and that might call for additional resources to remove them.
- Accurately quantified financial and operational impact of strategic decisions across business units and functions.
- Ability to structure, run and analyze multiple forward-looking business scenarios and sensitivity analyses to understand key financial and operational performance drivers and select relevant targets.

Operational planning is linked to strategy via the guidelines, resources and constraints defined in the strategic plan. It is optimized for maximum enterprise-wide financial and operational impact. Key modeling capabilities include:

- Incorporation of explicit financial and operational guidelines from the strategic plans to include metrics and revenue targets (financial, market, operational), resource allocation (CapEx, StratEx, personnel), business constraints (minimum customer satisfaction, invested capital, capacity) and personnel incentives to quantify their impact on the operational plans.
- The right information for each manager, at the right time. Managers making operational plans have a full understanding of the financial impact and feasibility of each alternative. For example, marketing makes product portfolio decisions with full and accurate consideration within the model, which of course includes revenue and market share implications. But the enterprise model would also include sales and channel capacity, the associated skills required, the ability and cost of fulfilling additional demand, and the expected profitability.
- Optimization of each scenario for the best possible plan, which includes quantified interdependencies amongst multiple, complex options and the identification of the best combination of initiatives for the company as a whole.

Fast, accurate visibility on current and expected performance with a capability to map strategic metrics to operational root causes. This enables management to quickly react at all levels within the organization. This also provides the ability to find and apply the optimal course correction quickly and to identify when strategy changes are required.

Aligning the Organization to Execute the Strategy

While strategy is established at the top of the organization, it must be executed by the enterprise's various business units, functional and operating departments, project teams, and individuals. Employees ultimately improve the processes as they run the projects, programs, and initiatives required by the strategy. Therefore understanding the strategy is paramount. And their activities and outputs must be configured in such a way as to enable efficient execution. Any implications from their day-to-day activities that can impact the successful execution of the strategy must be introduced to the operating plan as often and seamlessly as possible.

Altering/Improving Processes to Support the Strategy

As noted above, the initiatives that comprise a strategy can be grouped into several strategic themes that lend themselves to more easily being managed by the executives accountable. For example, a strategic theme to "grow through innovation" requires outstanding performance from the new product development process; while a theme to "increase customer loyalty and retention," requires greatly improved customer management processes—all of which must be monitored and measured in meaningful ways.

Some process improvements reduce costs and achieve productivity gains, while others focus on addressing external issues, such as regulation or social trends. In either case, companies need to focus their *total quality management*, *six sigma*, and *reengineering* programs on enhancing, or maximizing the performance of every process that is critical to achieving the strategy.

The enterprise model provides management with the understanding of which processes are under-delivering from a financial, quality or service-level perspective. The model should also go the next step of providing an understanding of the key constraints to improving the processes and what it would cost to fix them. The metrics are based on the project objectives and the removal of limitations, while the targets are based on what is feasible, according to resources and the nature of the constraints on the process. Once the organization understands which processes and metrics to invest in, management can provide focus and feedback to improve operational processes. This includes creating customized dashboards that feed from the model, which include key indicators for each respective area.

Introducing Strategy Resource Requirements to the Operating Plan

Together with process improvement plans, high-level strategic measures and targets on the Balanced Scorecard must be translated into the operating plan, which typically is created annually. The operating plan has three components: 1) detailed sales forecast, 2) resource capacity plan, and 3) budgets for operating expenses and capital expenditures. In the past, these components occurred sequentially: first, the company would draw up a sales target. Then it would allocate resources. Finally, it would translate the results into financial budgets and expectations by extrapolating unit costs from past periods.

The Integrated Operating Plan

Best practice today is radically different. The sequential, siloed approach no longer applies. Instead, management from sales, marketing, operations and finance all sit around the same table to create an integrated operating plan. This new plan takes into account the strategic guidelines in the form of target markets, process improvement objectives, and long-term resource availability. The managers create the operating plan within the strategy guidelines by finding the most profitable sales opportunities and allocating the resources to achieving them, while taking into account the market demand curves, input prices, and business and regulatory constraints. The exhibit below illustrates the integrated operating plan.

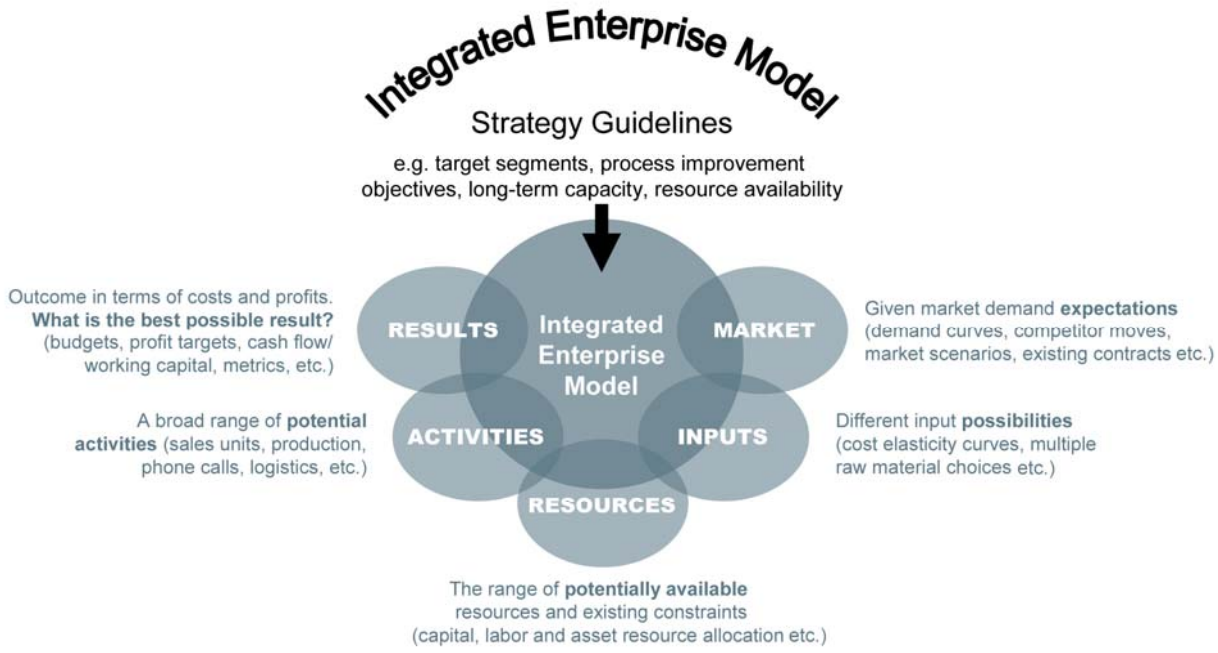


Exhibit 3: Integrated Enterprise Model

The integrated operating plan provides for simultaneous planning across silos including strong alignment with company strategy.

Since most companies have some kind of operating plan in place, a first effort to integrate *strategy planning* with operating planning will require a review of the existing plan to determine what changes are necessary in light of the new strategy.

Sales Forecast Companies typically translate their strategy's revenue targets into a sales forecast that must, in turn, be integrated into the operating plan. However, this practice treats forecasting as a linear process. In order to develop meaningful sales forecasts, management must fully understand the strategy guidelines, the activities impacting their resource requirements, and their financials. This requires integrated modeling tools, such as **River Logic's Enterprise Optimizer®**, so that the pertinent opportunities and constraints are addressed. The sales plan must be linked to strategy by targeting the right market segments. In addition, the plan must identify the best possible sales mix that will achieve the strategy guidelines, by taking into account demand curves, customer and product profitability and business constraints. These constraints include, but are not limited too, talent limitations, sales coverage, physical capacities, working capital, debt covenants and regulations.

Moreover, the beyond-budgeting movement advocates that companies continually respond to their dynamic environments by re-forecasting sales every quarter for five to six periods into the future. Whether done annually or quarterly, an operating plan must be launched on the basis of a sales forecast—a task facilitated by analytic approaches such as driver-based planning. Anticipating the need to derive a detailed operating plan, the sales forecast developed in the strategy execution phase must specify the expected quantity, mix, and nature of individual sales orders, production runs, and transactions anticipated.

Resource Capacity Plan Another key to integration is weaving strategy-driven resource capacity plans into the operating plan. Long-term capacity and overall resource availability are specified as strategy guidelines. Companies can then use a time-driven, activity-based costing (TDABC) model to translate the detailed sales forecasts into estimates of the resource capacities required to execute. Activity-based costing has been widely promoted as a tool to measure the cost and profitability of processes, products, customers, channels, regions and business units. But its "killer app" use is in resource planning and budgeting. TDABC models use capacity drivers, typically time, to map resource expenses to the transactions, products, and customers handled by each process. Similar methodologies exist for physical processes, such as supply chain planning software.

TDABC, when applied within an enterprise model, can accommodate: 1) constraints, input prices and consumption of resources, which are not linear and are often inter-dependent; 2) product/customer sales mix at different price level assumptions, and 3) financial implications, including cash-flow, balance sheet and profit. Once orchestrated, the enterprise model will coordinate sales forecasts with sales and process improvements, and the proper resource allocations needed to execute the plan.

Operating and Capital Budgets The traditional approach to optimizing operating and capital budgets focuses on the quantity and mix of resources needed to execute the strategy. Managers calculate the financial implications and then summarize these in a financial profit plan, along with operating and capital budgets. The company would estimate the cost of supplying each unit of resource. Management would then use this information to multiply the cost of each resource type by the quantity of resources it has authorized.

Today's business environment is too volatile and complex for historical, driver-based budgeting. This means that financials, sales and resources should all be outputs from the same holistic model and generated simultaneously.

This approach was the preferred method of yesteryear; however, it is no longer optimal. By leaving financials to the end, the company assures that profits and cash flows will not be optimized. In addition, the factors used in budget calculations are not linear, including batch-like resource availability and supply conditions, overtime labor, outsourcing capacity, supply chain and logistical constraints. Past costs hardly ever represent future costs accurately. Finally, the trade-off between working capital and profit effects sales, products and resources. Today's business environment is too volatile and complex for historical, driver-based budgeting. This means that financials, sales and resources should all be outputs from the same holistic model and generated simultaneously.

Introducing "StratEx"

Strategic initiatives are discretionary, limited-term programs that have a defined beginning and end, after which they are either completed or continue their shelf life as ongoing operations. Thus far, the discussion of how to integrate the requirements for strategy execution into a company's operating plan has focused on requirements attached to initiatives that can be accomplished *within* the organization's existing structures. This includes specific programs led by human resources, information technology, marketing, logistics, and operations departments. Therefore StratEx, or Strategic Expenditures, also requires accountability structures and cross-pollination with other functional areas.

One important solution developed to address this need is a new, enterprise funding mechanism that management can establish for this purpose. StratEx would be championed by managers in the organization who are ultimately assigned the responsibility for executing specific strategic themes. Supported by StratEx, any management tools and approaches—such as quality and process management, reengineering, process dashboards, rolling forecasts, activity-based costing, resource capacity planning, and dynamic budgeting—won't need to beg for support, despite straddling traditional operating boundaries. Similarly, expenditures can now be just as carefully tracked and subject to the same discipline as CapEx and OpEx.

Office of Strategy Management

A fully integrated, closed-loop system that links strategy to operations has many moving parts and inter-relationships, requiring simultaneous coordination among all organizational line and staff units. Above, we allude to "management" leading the many component activities. But exactly who are these people? Existing processes today are run by different parts of the organization, each with its own *custodian*. For example, the chief financial officer is custodian of the budgeting process; the vice president of human resources is custodian of the employee performance management process; the vice president of quality is custodian of total quality management and six sigma improvement processes. Yet, all of these must be modified, leveraged, and coordinated in order to execute the strategy successfully.

As many companies running a BSC system have learned, this is easier said than done. Complex, enterprise-wide, organizational processes do not run by themselves. They must be assigned owners or *custodians* who will run them and have accountability for their performance. But few organizations identify an individual or department to run their strategy execution system, with its multiple and linked processes.

To address this challenge, we have identified the need for a new organizational function to be the custodian of the strategy execution system and its component processes.[6] We call this new function the "Office of Strategy Management" (OSM).

In high-performing companies, the OSM integrates and coordinates activities that align strategy and operations across all functions and business units. The OSM can be viewed as the designated manager of an intricate system, keeping all the various planning and control processes synchronized with each other, despite operating at different frequencies. For example, dashboard review and operational control meetings occur daily and weekly, while information on strategic measures and initiatives, and strategy management review meetings, occur monthly or quarterly. The organizational scan of the external environment and analytic studies are prepared for quarterly and annual strategy testing and adapting meetings. All these different cycles must be compatible and integrated with each other.

As conceived by Drs. Kaplan and Norton, the new Office of Strategy Management plays three generic roles. As ***architect***, the OSM designs the new strategy and operational management processes for the organization. It ensures that all the planning, execution, and feedback components are in place, and that they are linked together in a closed-loop, integrated system.

[6] R. S. Kaplan and D. P. Norton, *The Office of Strategy Management,* Harvard Business Review, October 2005

The OSM also serves as the *custodian* of the integrated planning and control system. This aspect is challenging because many components of the system already exist but operate independently of each other. Some traditional processes, such as the budget or departmental performance measures, reinforce traditional and hierarchical organizational structures. In contrast, the double-loop management approach requires that businesses and functions be *integrated* to achieve the targeted performance. As custodian, the OSM facilitates the execution of processes that cross business and functional boundaries.

Finally, the OSM ensures that strategy guides a diverse range of existing activities, including strategy communications, human resources planning and performance management, IT planning, initiative management, and best-practice sharing. Therefore the third role of the OSM is chief *integrator*; aligning all these diverse processes to the strategy.

River Logic makes Enterprise Modeling a Reality

Corporate executives utilizing common, driver-based financial budgeting and forecasting systems, steeped in spreadsheets, share similar challenges and grievances. The most frequently-cited frustrations include:

- Strategic planning process not directly aligned with the actual direction of the company.
- Inability to effectively allocate dollars and resources across strategic initiatives, business units and functions.
- Frequent surprises in the company's financial performance and how managers handle the unexpected.
- Managers making ad hoc decisions that effect other departments; and are often viewed as counterproductive to the company.

Case Example

Case Summary: A Large, U.S. Consumer Products Company Uses River Logic's Enterprise Optimizer® Tool

The company initially used *Enterprise Optimizer®* (EO) to model and drive decisions on internal changes deemed to be critical — tactical or strategic. The detailed model represented the entire system that brings all products to market, from purchase of raw material, through production — including major machinery components and capabilities, as well as intermediate materials created along the way — to distribution logistics.

The goal was to capture ripple effects by comparing steady-state futures, with and without a major change. Changes studied could be anything from building a boiler, altering product specifications, implementing a new technology roll-out, closing plants, and moving major machinery, to M&A or divestiture activity. *Enterprise Optimizer®* revealed both physical and financial impacts of such changes.

The modeling system was run by a half dozen people in the business development and finance groups, reporting to the CEO and CFO. Analyses were run for some projects in the $10-$50 million range, but mostly for those in the $50-$500 million range. Model analysis provided critical information and insights that management used to decide whether or not to invest.

At first there was skepticism, but over time, on seeing the quality of the output, managers throughout the enterprise began recognizing the value of EO. As a result, projects began to get tested earlier to determine financial impact; thereby providing intelligent prioritization of projects, activities and resources. Additionally, communication (pre- and post-testing) improved over time as users learned to temper the various levels of detail and related constraints.

A side benefit was that the information used in the model became the company's single repository of system-wide, tested, highly-detailed and internally consistent information. It was also learned that the EO solution could make highly accurate, marginal calculations for sloped, supply and demand projections. The results were sometimes surprising, given the firm's inelastic demand environment.

- Incentive metrics fail to connect the company's strategy to the organization's financial performance.
- Planning process is inefficient, inconsistent and sometimes contentious.
- Deployment of a linear, sequential approach that fails to identify or interpret the impact of critical interrelationships between operational and financial entities.

These are just a few of the symptoms corporate leaders have voiced when their planning process fails to link strategy with finance and operations, as well as ongoing execution.

Until recently, systems could not accurately represent a business. Therefore emphasis was placed on addressing strategic planning or financial budgeting and forecasting at a functional level. Without a viable integrated approach, business leaders simply opted to zero in on specific pain-points in operational areas. Managers were left trying to build a puzzle using pieces from different sets; with each set missing a few pieces. This, of course, was layered on top of their existing responsibility of managing the business.

River Logic, creators of integrated Enterprise Planning and Optimization, has successfully addressed these issues with Enterprise Optimizer® (EO). EO is a ***super-model*** of a business and delivers a proven and affordable solution for delivering a platform for end-to-end business planning. EO enables optimal scenarios that align strategic planning with operational execution.

EO is the only performance management software that aligns metrics, targets and execution requirements with strategy and financials. EO quickly identifies decisions that have the greatest impact on financial performance by providing a unified model of the entire enterprise.

EO, with more than $30 million and over 1,000 person-years invested in R&D, is River Logic's flagship product. EO, having successfully delivered more than 100 solutions, is rapidly becoming the preferred solution for consultants and business leaders in industries such as financial services, healthcare, manufacturing, retail and supply chain management.

River Logic's EO has delivered a number of benefits to its clients and partners, including:

1. Visibility into performance with accurate understanding of root causes.
2. Perfectly aligned strategy with financial plans.
3. Operational plans developed around financial outcomes, and linked to strategic initiatives.
4. True performance drivers that deliver unique business insights and leading indicator targets.
5. Quantified business constraints with strategy execution requirements and interdependencies.
6. Optimal allocation of CapEx, OpEx, StratEx and personnel resources across strategic and operational plans.
7. Clear understanding of market, supply chain and regulatory risks, and the resulting financial trade-offs.

Business users and consultants generally deploy a few linked, EO models to address the needs of a company. The exhibit below highlights EO's key advantages that enable individual executives to make sound planning and managerial decisions, while understanding the impact of their actions across the enterprise. In addition to linking their decisions, EO aligns them with the company's strategy.

Exhibit 4: Enterprise Optimizer, Integrated Super-Model

EO's ***super-modeling*** planning platform delivers the highest value through greater insights and linkage throughout the organization, thereby connecting strategy with financial and operational planning.

Specific characteristics of Enterprise Optimizer® include:

- Consideration of financial, operational, market and regulatory variables in a simultaneous representation.
- Scale to model an enterprise with the right level of financial information, market variables and business constraints.
- Accurate, realistic and fast 'what-if' scenario planning.
- Automated, intelligent sensitivity analyses.
- Optimization to any variable or ratio.
- Interaction via dashboards, reports or tables using pre-existing data management and business intelligence systems.

Colin Snow, Research Analyst at Ventanna Research, specialists in performance management, recently stated:

"Current business performance management software cannot deal with performance trade-offs as most products focus on solving only one or two problems myopically… In contrast, EO delivers the kind of enterprise-wide integrated decision-making capabilities that have been talked about for years." 6/8/2007 | Article ID: M07-34

An EO ***super-model*** can be configured to deliver value in weeks and without significant investment. Once value is established, the platform can be extended throughout the enterprise according to the company's needs, priorities and timelines.

River Logic's EO model, which provides immediate insights and understanding, has delivered significant ROI for its clients, ranging from 100% to more than 2,000%.

For more information on River Logic and Enterprise Optimizer®, please contact John Oldham at 214.393.4654 or via email at joldham@riverlogic.com.

Enterprise Optimizer® is a registered trademark.