Vanguard Software
CORPORATION

Advanced-analytic forecasting + Advanced workflow design = ROI across the enterprise

The Promise of Forecast Accuracy: Operations, Finance, Sales/Marketing

Every management team strives to get the most out of the money and effort pumped into various investments. Question is: which parts of these investments will drive the biggest, and surest, returns?

Take corporate IT spending. It's no secret that companies large, small, and across industries are betting very large sums on Enterprise Resource Planning (ERP) systems. This makes sense. ERP has evolved beyond the manufacturing arena to become the operational and transactional backbone of the modern enterprise. Despite this impressive evolution, returns on investment in ERP systems remain notoriously low for lack of one fundamental enabling technology — advanced-analytic forecasting.

We posit that increased forecast accuracy adds more value to enterprise management and financial returns than any other technology investment. Research analysts and ERP consultants support this stance, describing advanced-analytic forecasting as the "essential building block," the "keystone," and the "cornerstone" of enterprise performance improvement.

Leading-edge firms get this. "A best-of-breed forecasting system is almost self-explanatory," writes Bryan Ball, senior expert for Aberdeen Group. Aberdeen conducts and publishes research on supply-chain management and information technology. "It's no surprise that best-in-class start with the best (forecasting) tools they can find, whether part of their ERP or best-of-breed." The underlying precept here is that among all possible IT investments, increased forecast accuracy is the single biggest (and surest) driver of direct savings, revenue, and total return on investment.

Let's see how it plays out across three major functional areas: Operations, Finance, and Sales/Marketing.

Operations

The largest returns and shortest payback horizons often follow forecasting investments in inventory and supply-chain management.

Winzer Corporation, an industrial parts supplier and Vanguard Software client, saw inventory drop last year by $1 million, or about 10%, within just five months of implementation. Fill-rate stability meanwhile increased across all warehouses. And these results are modest.

Large inventory carriers such as distributors and make-to-stock manufacturers reduce finished-goods inventory by 10% to 25% within nine months of forecast implementation. That's a lasting, cash transfer from safety stock to the bottom line. These same clients meanwhile maintain or boost customer service levels. That's direct revenue, goodwill, and savings from fewer stockouts, emergency orders, and error-related expenses.

For many clients, these returns dwarfed those earned from their investments in tier-1 ERP systems. The message? Forecast accuracy, more than BI, drives efficiency gains, savings, and revenue.

The same benefits are true in manufacturing and supply chain management, where returns come from optimized raw materials inventory, staffing, and equipment usage. We start with an exceptional sales (or demand) forecast and explode that back into all required components and resources. The result is streamlined supply-chain and fulfillment processes, lower operating costs, and improved customer service and profits.

To make a go at it, some ERP makers have embarked on the years-long process of building certain forecasting capabilities into their systems. They have a long way to go. Others are integrating third-party forecasting tools and systems. Of these tools and systems, (and this is true) only one complements advanced-analytic forecasting with state-of-the-art advanced workflow design. But that's another story…

The point is that the marketplace is slowly learning: ERP alone will not determine optimal service levels, safety stock, reorder points, and order quantities? Nor will it factor product and product-line profitability in ways that yield maximum efficiencies?

Finance

Let's switch from units to dollars. Take cash-flow forecasting. This is traditionally a time-consuming, error-prone, and manual process that happens either monthly or a few times a year. What happens when you cut that production and reporting time from weeks to minutes? Based on our experience (and depending on the size and complexity of the client), labor hours dedicated to forecasting drop by as much as 90% — a potentially huge return from an investment that is a fraction the size of an ERP outlay.

In terms of accuracy, the difference is night and day. That's because advanced-analytic forecasting combines seasonality, inflation, product-life-cycle effects, and statistically-tested assumptions in the mix. Hands down, this will generate a more accurate pro forma, cash-flow projection, and roll-up than is otherwise possible. Again, it starts with statistically-tested inputs, not a new data management and reporting system.

Additionally, advanced forecast automation and workflow enable continually rolling knowledge. This speeds responsiveness to sudden changes in liquidity need, investment opportunity, and market conditions. That's money. Indeed, one of our clients, the Kansas Department of Transportation, realized a two-fold return netting millions annually — just from enhanced financial management.

1. Working cash: KDOT was suddenly able to make optimal use of financial markets, including optimally-termed interest accounts that met liquidity requirements and generated returns. This was simply not possible with the agency's previous system.

2. Strategic capital: KDOT was able to invest in new projects and enterprises with sharper timing and truer calculations around risk and reward.

In total KDOT enhanced all facets of capital management, from resource allocation to project funding and scheduling. The primary result was a shift in focus from process management to top-line and bottom-line performance improvement. KDOT's forecasting investment continues to return millions of dollars annually.

Sales & Marketing

As with other parts of the organization, forecast automation helps Sales & Marketing generate substantial savings from reduced labor and error. This is especially true in organizations where sales reps and managers are called on to produce demand forecasts. In such cases, sales teams cut labor hours by more than 75%.

The biggest returns, however, grow straight out of forecast accuracy. Improved demand forecasts mean improved everything else. Sales targets, marketing-budgets and media allocations are no longer guesses, or simple averages. They're based on real trends and patterns identified in product items, customers, sales reps, campaigns, and aggregated data sets. These data are especially valuable when combined with the ability to easily test multiple 'what-if' scenarios. Unlike organizations with standard BI systems, forecast-driven enterprises determine (statistically) optimum levels for pricing, channel distribution, staffing, performance incentives, media spending, and so on. These enterprises can measure every ad, package design, and product promo and build a history of metrics to reveal the relationship between leading and lagging indicators. What effect does the number of sales calls per week have on the number of sales? How does lead follow-up time, ad spending, or individual-to-peer-average performance affect gross margin, or new customer growth?

In terms of returns, think of both dollars saved and dollars made. Safe to say neither is possible (surely not to the same degree) without accurate, statistically-derived baseline values and an intelligent workflow system that leverages data with human insight. No longer are forecasts based solely on history. No longer are assumptions woefully incomplete. Our goal is to drive returns by complementing digital mastery with your human understanding.

The Vanguard Forecast

Vanguard has invested over 20 years of R&D into improving how businesses forecast. Our methods were refined by culling the best-of- the-best business processes gleaned from work with thousands of customers and merging those processes with advanced analytics.

A good forecast starts with a thorough statistical analysis of historical data. Our software can automatically extract seasonal patterns, growth trends, and product lifecycle effects from historical data. What's more, we can use relationships between similar products, leading indicators, promotion plans, and other influencing indicators to improve the baseline statistical forecast. However, statistics only answers half of the question — the statistical forecast tells you what will happen if nothing in your business or market changes.

The next step is to apply judgement and insight. Events such as the introduction of new products, competitor actions, and other drivers are often impossible to pull from historical data. How you incorporate knowledge of these events into the forecast without introducing bias is a science. Even how you extract this knowledge from individuals throughout your organization and manage the forecasting workflow is a science. It is important to understand that forecasting is as much about social mining as it is about data mining.

Vanguard's Forecast Server is an enterprise-scale system for managing your entire forecasting process. You will not be forced to abandon your insight in favor of a statistical black box; nor will you be forced to guess what will happen. Vanguard strikes a balance between proven business process and advanced analytics to make forecasting easy, timely, and, most importantly, accurate.

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