

IMPROVING PLANNING, BUDGETING, AND FORECASTING WITH ADVANCED ANALYTICS

August, 2014

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Report Highlights

p6

The Best-in-Class are 79% more likely to have implemented an EPM solution and 75% more likely to use predictive analytics.

p7

Organizations with predictive analytics are 3.6 times as likely to have the ability to include risk data in planning.

p8

Organizations with predictive analytics are 2.5 times as likely as those without to have the ability to incorporate business drivers into the ongoing forecasting process.

p11

Organizations with predictive analytics saw over twice the increase in operating margins and a 150% increase in productivity than organizations without predictive analytics over the past 24 months.

This report, based on a survey of 167 organizations of all sizes, uncovers the challenges that organizations face in utilizing performance data, the steps needed to create a base-line budget, tactics for taking planning to the next level through advanced analytics, and the benefits of predictive business solutions.

2

By utilizing advanced analytics, top performers can identify trends and connections between data, devise smarter baseline plans, and understand the lag between their actions and their actions' impacts. These organizations can pair the data contained within EPM and analytical software to utilize forecasts and other data to drive improvements across the business.

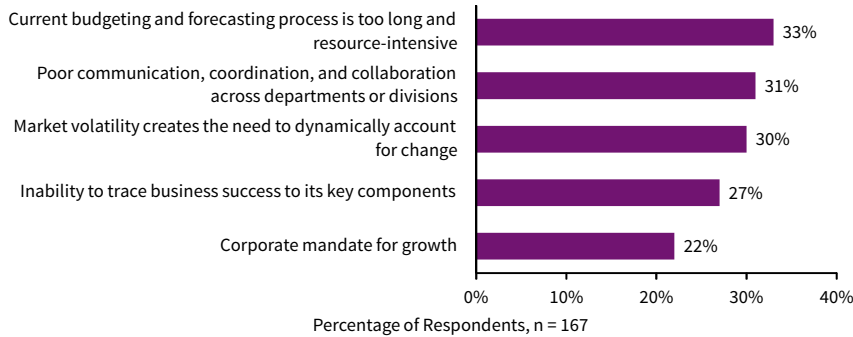
Accurate plans, budgets, and forecasts set the foundation for smart, confident decisions that can help businesses react to competitive threats, take hold of opportunities, and grow profitably. Of course, accuracy is a goal that is easier envisioned than achieved. It begins with providing relevant performance information to decision-makers so that they can get a better understanding of the factors that have impacted performance in the past. In fact, Aberdeen's *Beyond Budgeting and Forecasting: Organizational Improvement through EPM* found that Best-in-Class organizations are 79% more likely to have implemented Enterprise Performance Management (EPM) solutions. But just because you know where you've been, it doesn't necessarily mean you know where you're going. In today's volatile market, where adverse events can occur out of nowhere, top performers must tweak their plans, budgets, and forecasts to generate even greater accuracy. "Educated" guesses, manual adjustments, and contingency planning are good first steps, but Best-in-Class organizations are using an even better tactic. By utilizing advanced analytics, top performers can identify trends and connections between data, devise smarter baseline plans and understand the lag between their actions and their actions' impact. Further, these organizations can pair the data contained within EPM and analytical software to utilize forecasts and other data to drive improvements across the business. This report, based on a survey of 167 organizations of all sizes, uncovers the challenges that organizations face in utilizing performance data, the steps needed to create a base-line budget, tactics for taking planning to the next level through advanced analytics, and the benefits of predictive business solutions.

The Need for More

Data collected for Aberdeen's *Beyond Budgeting and Forecasting: Organizational Improvement through EPM* reveals the top challenges that organizations face in the financial planning, budgeting, and forecasting process (Figure 1).

3

Figure I: Problems in Planning



Source: Aberdeen Group, March 2014

Survey respondents from organizations of all sizes were asked to select their "top two" pressures. The top two pressures indicate that the process is just too difficult to complete. Thirty-three percent (33%) indicated that the budgeting process is too long and resource intensive. Further, 31% noted poor communication across departments and divisions. Not only are employees taking too long to complete the budget (rather than focusing on their everyday responsibilities), but organizations are having difficulty sharing, across functions, important information that should be used to inform the budget.

But the problems extend beyond just the difficulty in creating budgets and forecasts. Many organizations simply do not have access to relevant data when they need it for decision-making. Thirty-percent (30%) noted that market volatility creates the need to dynamically account for change. Without visibility into changes in performance metrics and other data, business leaders cannot update their forecasts to reflect current business conditions. A forecast made last month can very quickly become unfeasible. Even more shocking, 27% cited an inability to trace business success to its key components as a top business pressure. These organizations are not connecting the operational causes with financial outcomes.

The Aberdeen maturity class is comprised of three groups of survey respondents. This data is used to determine overall company performance. Classified by their self-reported performance across several key metrics, each respondent falls into one of three categories:

- **Best-in-Class:** Top 20% of respondents based on performance
- **Industry Average:** Middle 50% of respondents based on performance
- **Laggard:** Bottom 30% of respondents based on performance
- Sometimes we refer to a fourth category, **All Others**, which is Industry Average and Laggard combined.

4

In Aberdeen's *Beyond Budgeting and Forecasting: Organizational Improvement through EPM*, respondents were ranked on the following criteria:

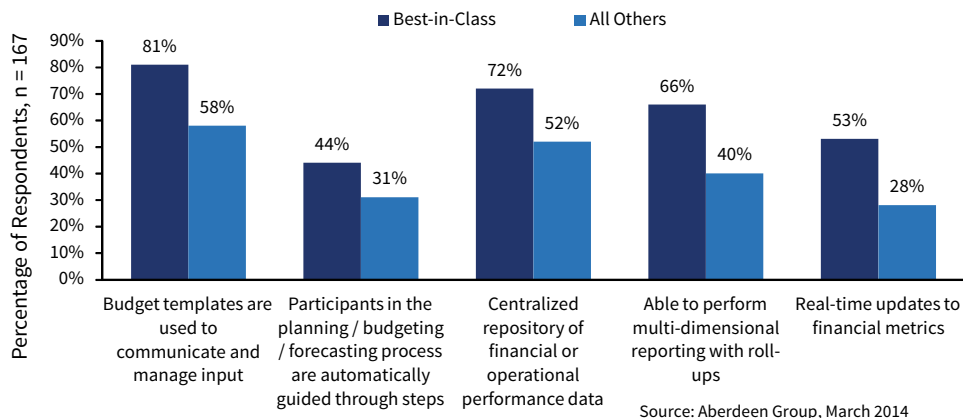
- **Percentage of financial reports delivered in the time needed for decision-making:**
 - Best-in-Class - 95%
 - Industry Average - 73%
 - Laggard - 60%
- **Percentage that actual costs are within budgeted costs (above or below):**
 - Best-in-Class - 4%,
 - Industry Average - 11%
 - Laggard - 31%
- **Percentage that actual revenue is within forecasted revenue (above or below):**
 - Best-in-Class - 4%
 - Industry Average - 12%
 - Laggard - 36%

Combined, these pressures indicate that not only do organizations need help completing the budgeting process itself, but they also do not have visibility into relevant data and the ability to utilize that data to make predictive decisions. The financial planning, budgeting, and forecasting process is one that features an escalating scale of competency. The next section outlines how Best-in-Class organizations begin to strive towards forecast accuracy.

The Base-Line

Best-in-Class organizations make it as easy as possible for employees to complete the early stages of the planning, budgeting, and forecasting process. This is accomplished by utilizing tools that provide guides on how to complete the process and enable as much automation as possible. For example, Best-in-Class organizations are 40% more likely than All Others to utilize budget templates, and 42% more likely to guide participants through the process automatically (Figure 2). These capabilities help to ensure that all necessary information is included and that the process is completed as quickly as possible, but where does this information come from?

Figure 2: Establishing the Budget



Top performers are more likely to provide access to performance data. This enables

5

decision-makers to identify past performance and cut the data as they see fit with multi-dimensional reporting. Of course, it is essential that the data that employees are accessing is accurate and up-to-date. Best-in-Class organizations are 89% more likely to have real-time access to financial metrics. Therefore, organizations can make projections based on past performance. This also gives them the ability to make manual tweaks or use previously defined statistical models. For example, changes could be made due to the decision-maker's knowledge that a particular salesperson is leaving the business and will not be able to replicate performance from last year. This is a good start for organizations that are trying to promote budget accuracy, but it is relatively elementary and will not provide the superior results that are required in today's volatile market.

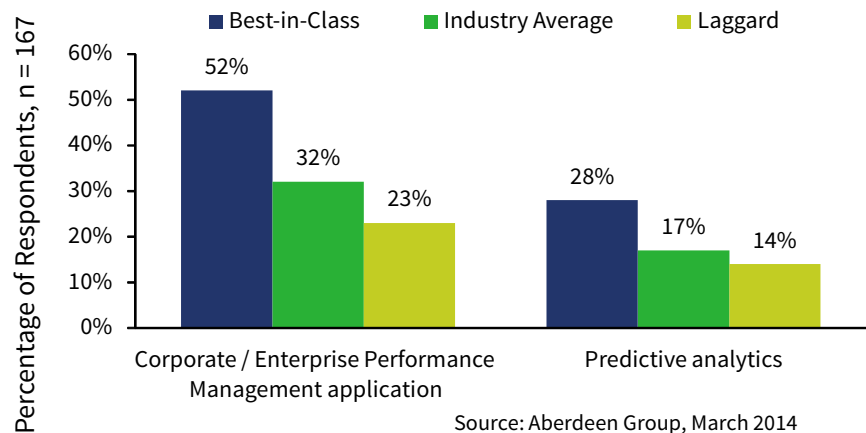
Advanced Financial Planning

It's been established that performance data is essential for starting the financial planning, budgeting, and forecasting process. Truly, the Best-in-Class are 79% more likely than All Others to have implemented an EPM solution (Figure 3). This is greatly preferred to a traditional spreadsheet-based approach. EPM tools enable business leaders to have visibility into the performance of the organization, financial or otherwise, for analysis, strategy and business planning. It enables organizations to set KPI goals and monitor performance on an ongoing basis to understand variances. This enables organizations to identify areas for improvement and/or strategies that are working effectively. Organizations of all sizes can benefit from this information; it is called "Enterprise Performance Management" because it contains performance data that stretches across the organization and is not limited to any specific function. But there is so much more that can be done with this data. By running advanced algorithms,

6

organizations can get a better view of where they may be in the future. It enables organizations to do more with the data that is available and make decisions that would be impossible based solely on manual analysis. Today, the Best-in-Class are 75% more likely to have implemented predictive analytics technology. Further, another 44% of the Best-in-Class plan to implement these solutions in the near future. Therefore, those that have not implemented these solutions will lag behind in their ability to create accurate forecasts and make informed decisions. For example, organizations without predictive analytics would not be able to determine when the impact of past initiatives will alter performance and create forecasts that are not fully informed.

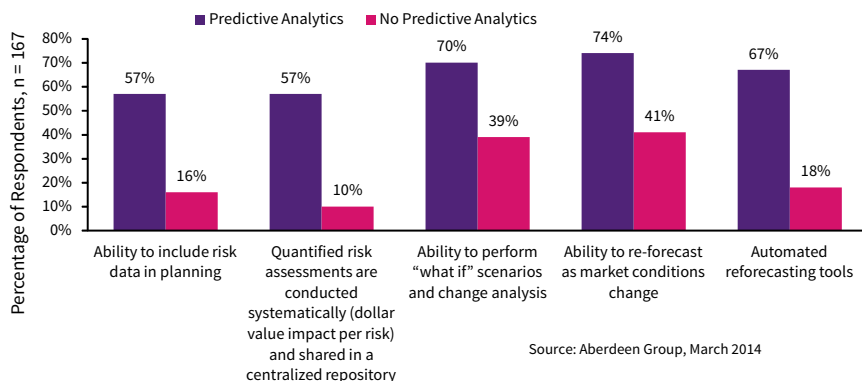
Figure 3: Taking it to the Next Level



The next level in planning, budgeting, and forecasting involves an organization’s ability to account for uncertainty and risk. By comparing organizations with predictive analytics to those without, it becomes clear that predictive analytics enables organizations to better understand the factors that may impact performance, calculate the potential impact, and prepare for change (Figure 4).

7

Figure 4: Risk-Embedded Planning

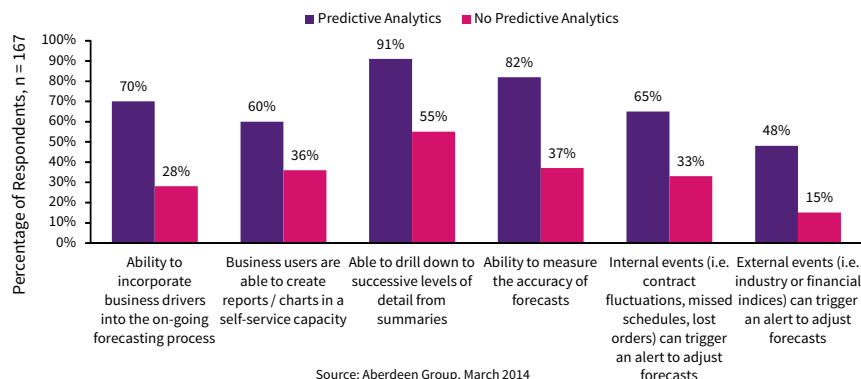


Organizations with predictive analytics are 3.6 times as likely to have the ability to include risk data in planning. They are able to do this because they are almost six times as likely as those without predictive analytics to perform quantified risk assessments on an ongoing basis. For example, these capabilities can enable an organization to uncover the typical variation around specific metrics and then utilize that information to inform forecasts. They can create ranges and perform Monte Carlo simulations to create credible range forecasts to get a better idea of how they could perform, rather than just taking averages. Also helpful is the ability to perform "what-if" scenarios, a capability that organizations with predictive analytics are 79% more likely to have. Decision-makers can mix and match potential scenarios, such as the release of a new product line, to tweak and update forecasts. These scenarios also enable the organization to create contingency plans to combat market volatility. So not only does risk embedded planning enable more informed forecasts going into a period, but it can also help to prepare the organization for reforecasting, which is essential for providing accuracy.

Organizations with predictive analytics are 78% more likely to have the ability to reforecast as market conditions change, and 3.7 times as likely to accomplish this goal using automated tools.

The highest level of planning, budgeting, and forecasting requires organizations to make the connections between different types of data, create advanced formulas, and understand the nature of impact due to specific business drivers. Once again, organizations with predictive analytics are better prepared to accomplish this more sophisticated approach (Figure 5).

Figure 5: A More Sophisticated Approach



Organizations with predictive analytics are 2.5 times as likely as those without to have the ability to incorporate business drivers into the ongoing forecasting process. Not only can they understand which factors are important, but they can also understand the impact changes to these metrics will have on the business. They can therefore begin to create formulas based on the relationship of each driver on other drivers. They can create more robust views of data in ways in which they had not previously understood. For example, time series data can be used to understand the lag between an event happening and the impact on the business. Organizations will then be more

9

prepared to take on challenges in the coming months or can conserve cash when they know that lean times are coming.

Basically, predictive analytics makes it easier for employees to view and manipulate data contained within tools such as EPM and apply predictive intelligence to them for improved forecasting and decision-making. Note that organizations with predictive analytics are more likely to enable chart manipulation, report generation, and visualization without reliance on IT, as well as have the ability to drill down to details from summaries. Also note the capabilities that Best-in-Class organizations have when understanding the relationship between data sources that are outlined in the sidebar. Predictive tools enable enhanced forecasting capabilities as well as the ability to automate decisions based on these formulas through the use of capabilities such as automated alerts. These capabilities provide the highest level of sophistication within planning, budgeting, and forecasting.

Now What?

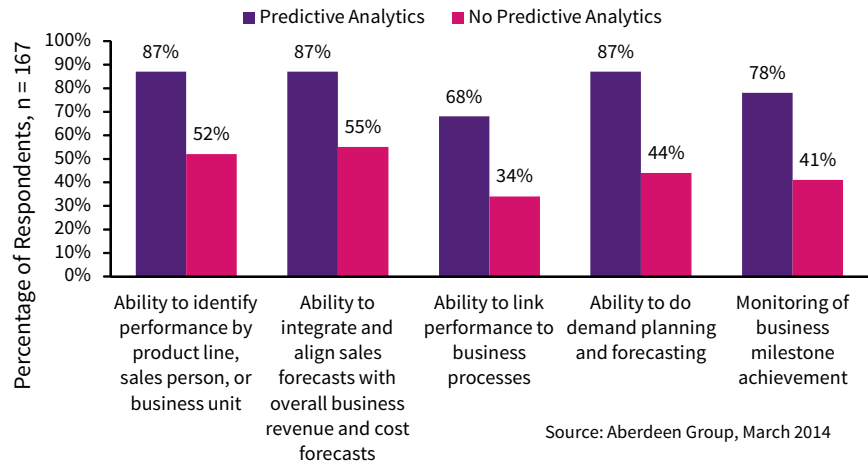
But accurate plans, budgets, and forecasts, as well as predictive analytic capabilities, are most useful when used to drive improvements to the business beyond finance. Simply put, predictive analytics, when paired with EPM, enable greater visibility and analysis across the organization (Figure 6).

Figure 6: Beyond Budgeting: Organizational Improvement

Data collected for Aberdeen's *Financial Analytics: Six Steps to Profit and Cash Flow*, illustrates that Best-in-Class organizations are more likely to understand the relationship between data sources:

- **Open exchange of operational data across business functions:**
 - Best-in-Class - 68%
 - Industry Average - 50%
 - Laggard - 28%
- **Selecting part of a visualization provides a pop-up window showing detailed information:**
 - Best-in-Class - 32%,
 - Industry Average - 20%
 - Laggard - 5%
- **Ability to explore potential new analytics data sources with data exploration / data discovery tools:**
 - Best-in-Class - 36%
 - Industry Average - 21%
 - Laggard - 5%

10



For example:

- ➔ Organizations with predictive analytics are 67% more likely to have the ability to identify performance by product line, sales person, or business unit. The organization could analyze the performance of their marketing efforts based on sales numbers. Many organizations have taken this even further and analyze operational data, such as the performance of physical assets like machinery or production lines.
- ➔ Or the organization could improve collaboration between sales forecasts and budgeting for costs, helping to ensure profitability.
- ➔ Further, organizations with predictive analytics are twice as likely to have the ability to link performance to individual business processes. By linking these metrics, continuous improvement teams can uncover new best practices, since they can determine when changes in operations result in changes to financial metrics.
- ➔ Demand planning and forecasting is also enabled by predictive analytics. This will help to ensure that

11

inventory holding costs are avoided or time-sensitive opportunities are secured.

- Lastly, organizations with predictive analytics are 90% more likely to be able to monitor business milestone achievement. This ensures that forecasts can be updated in an agile manner or that decision makers can make adjustments when things go off course.

These are just a few of the operational improvements that can be enabled through predictive analytics. Top performers will gain significant improvements by using this information intelligently.

The Benefits

Organizations with predictive analytics perform better than organizations without across a variety of metrics (Table 1). These statistics show that predictive analytics help to drive faster decisions because more useful information flows to business leaders more quickly. Note that 86% of the time in organizations with predictive analytics, data is delivered in the time needed for decision-making in comparison to 76% of the time for organizations without predictive analytics. This has led to a 14% improvement in time-to-decision for organizations with predictive analytics. By utilizing capabilities such as enhanced algorithms, time series charts, relationship modeling, and simulations, these quick decisions can be even more accurate and drive improvements to the business. Organizations with predictive analytics are more accurate when budgeting costs, budgeting revenue, and making financial forecasts. They are also able to use this information to alter processes and strategies. Organizations with predictive analytics saw over twice the increase in operating margins and 150% the increase in productivity of organizations without predictive analytics over

the past 24 months. This is because they are able to eliminate rework, scrap, and manual steps within processes due to enhanced performance data, in addition to better financial forecasting.

Table 1: The Benefits of Predictive Analytics

Average Performance	Predictive Analytics	No Analytics
Percentage of reports delivered in time needed for decision-making	86%	76%
Decrease in time to decision over the past year	14%	6%
Percentage within budgeted revenue of actual revenue	13%	16%
Percentage within budgeted costs of actual costs	10%	14%
Percentage within forecasted revenue of actual revenue	12%	14%
Increase in operating margins over the past 24 months	7%	3%
Increase in productivity over the past 24 months	6%	4%

Source: Aberdeen Group, March 2014

Key Takeaways

Volatile markets make it extremely difficult to determine future performance prospects, as well as the impact of business decisions. Unfortunately, pure guesswork and sticking to the norm will just not cut it in today's business environment. Accurate forecasts enable business leaders to have confidence when making decisions that will grow the business. Therefore, top performers achieve the next level in planning, budgeting, and forecasting by relying on their historical data contained within EPM and supplementing that data with predictive

13

analytics capabilities. The following steps provide a path for adding successive levels of sophistication to the budgeting and planning process:

- ➔ **Use historical data to set your baseline.** The number one pressure facing organizations today is that the budgeting process is too long and resource intensive. In order to combat this pressure, Best-in-Class organizations are more likely to automate the process with templates and step by step guides. This takes care of the problem functionally, but the first step towards preparing an accurate forecast begins with setting a base-line. This is accomplished by using statistical models to create a baseline automatically from historical performance data and then make manual adjustments based on human judgment.
- ➔ **Identify and quantify risk factors.** To take the next step in preparing accurate plans, budgets, and forecasts, organizations must utilize predictive analytics solutions to determine the risk factors that can very quickly make previously defined forecasts unrealistic. Organizations can then begin to simulate different scenarios to determine likely outcomes.
- ➔ **Create contingency plans.** As a result of scenario planning, organizations with predictive analytics can understand when certain actions will impact the business. They can therefore plan ahead in order to immediately alter forecasts or make agile decisions.
- ➔ **Provide more robust analysis.** With predictive analytics, it becomes easier to understand the relationships between multiple business drivers. New formulas can be created, since organizations with predictive analytics are

14

71% more likely to enable users to create reports, charts, and visualizations in a self-service capacity.

- **Use forecast accuracy to make decisions that will grow the business.** Ultimately, predictive analytics is designed to enable more intelligent forecasts. Organizations can then utilize this information to react in a more agile manner, make changes to processes, identify new opportunities, or make an infinite amount of other decisions.

Predictive analytics is the key to taking a more advanced approach to planning, budgeting, and forecasting.

For more information on this or other research topics, please visit www.aberdeen.com.

Related Research

[Mobile EPM: Improving Decision-Making when](#)

[Time is of the Essence](#); June 2014

[Beyond Spreadsheets: The Next Level in Planning,](#)

[Budgeting, and Forecasting](#); May 2014

[Beyond Budgeting and Forecasting:](#)

[Organizational Improvement through EPM](#); March 2013

[Become a Forecast Marksman with Best-in-Class Ammunition for Planning, Budgeting, and Forecasting](#); March 2014

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15

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