



## Analyst Perspective

David Menninger  
SVP & Research  
Director

## You Can't Plan on AI and ML

Artificial intelligence (AI) and machine learning (ML) are all the rage right now. Our [Machine Learning Dynamic Insights research](#) shows that organizations are using these techniques to achieve a competitive advantage and improve both customer experiences and their bottom line. One type of analysis an organization can perform using AI and ML is predictive analytics. Organizations also need to plan their operations to predict the amount of cash they will need, inventory levels and staffing requirements. Unfortunately, while planning begins with predictions, organizations can't plan with AI and ML. Let me explain what I mean.

Predictive analytics is a branch of analytics that uses various algorithms to predict the likely outcomes of data-driven situations about what has happened. AI and ML are techniques used to develop the models behind predictive (and other) analytics. With minimal human involvement, these "intelligent" models adapt, or "learn," based on the data. Hence the name.

AI and ML are delivering predictions across the enterprise; these predictions include behavior of customers and prospects in response to different offers, or "best next offer." A company might predict the likelihood that specific customers will stop using its products or services — customer retention. An organization might also predict the likelihood that machinery will require maintenance before it breaks down — predictive maintenance. And a business might predict which employees are likely to leave the organization — employee retention.

These predictions are valuable pieces of information, but they are not the same as planning. In the planning process, organizations look forward in time to understand the organizational implications of different decisions and scenarios. For example, an organization might want to know how much cash will be generated (or needed) if a portfolio of real estate holdings operates at an 87% occupancy rate. Another example would be determining how much raw material and staff is required to produce enough widgets if the marketing campaign achieves a 4% conversion rate. The predictive analytics models might help an organization achieve the desired occupancy or conversion rates, but they do little on their own to help it understand cash, procurement or staffing needs.

In contrast, driver-based planning can be used to anticipate various aspects of an organization's operations such as cash, procurement and staffing. These analyses use "drivers," or inputs to mathematical formulas that express the operations of a business. For



example, if each finished product requires 4 ounces of raw material and a company anticipates selling 100 items, it will need 100 times 4 ounces or 400 ounces. This is just one of many formulas that might be used to express the operations of a business. Typically, driver-based planning models involve hundreds or thousands of formulae. Unfortunately, our research shows that many organizations perform these types of analyses in spreadsheets. My colleague Rob Kugel has written about the [pitfalls of using spreadsheets for planning](#).

There are several options for a more disciplined approach to planning. Some vendors provide stand-alone planning software, which we cover in our [business planning](#) area of expertise. Others take a different approach. As indicated in our [Analytics and Business Intelligence Value Index](#), five of the 15 vendors we evaluated have planning capabilities in their portfolios in addition to more traditional visualization and reporting functionality.

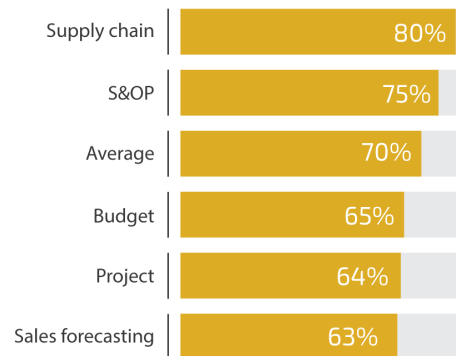
Planning capabilities are critical for evaluating the impacts of decisions and alternative scenarios. For example, a predictive model might show that the best offer for a particular customer segment is the XYZ widget. The model might show that more customers will respond to this offer than any other product. However, say the margin on the XYZ widget is significantly less than the margin on the ABC widget: Even though the response rate would be lower for ABC, the overall margins would be higher.

The other reason to consider planning capabilities in addition to AI and ML is to evaluate different scenarios by performing what-if analyses. Predictive models provide predictions, but the predicted results rarely match reality. For example, the response rate to an offer could be higher or lower than the model indicates. Organizations should be aware of how fluctuations would affect their operations. Higher-than-expected response rates might overwhelm the supply chain and production, diminishing customer experiences and possibly driving customers to a competitor. If the response rate is lower than anticipated, an organization must consider if the shortfall would cause a cash issue that could harm its financial health.

Planning and predictive models are two separate types of analytics; both are important and both are necessary. Don't get caught up in the AI and ML tidal wave without also considering the role of planning. Your organization needs to understand the implications of its activities and planning is a way to do the math and understand outcomes. Predictive analytics and planning should complement one another, and every organization should aim to deliver both types of capabilities. That's something you can plan on.

### Spreadsheets Dominate Planning Processes

Most planning functions use them



Source: Ventana Research Next-Generation Business Planning Benchmark Research © 2022 Ventana Research



Regards,

David Menninger  
SVP & Research Director

To read more perspectives by Dave, visit <https://davidmenninger.ventanaresearch.com/>

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**David Menninger – SVP and Research Director, Ventana Research**

David Menninger is responsible for the overall research direction of data, information and analytics technologies at Ventana Research covering major areas including Analytics, Big Data, Business Intelligence and Information Management along with the additional specific research categories including Information Applications, IT Performance Management, Location Intelligence, Operational Intelligence and IoT, and Data Science.