

Beyond the Hype: Combining Machine Learning with Operational Analytics

[This article first appeared on the OneStream blog by Scott Stern](#)

The COVID-19 pandemic has created ongoing challenges for CFOs and reshaped Finance teams. Finance teams are now assessing revenue, costs and cash flow on a weekly, daily and even near-real time basis to help guide current and future decisions. But financial data is only one piece of the puzzle. Why? Effective Finance teams know the numbers on the P&L, balance sheet and cash flow statements are driven by dozens, even hundreds, of decisions made across the Sales, Marketing, Supply Chain and Operations teams.

Across the globe, CFOs are being pushed to be more strategic – whether focusing on the longer ‘past quarter’ view or a more immediate pulse of the business – and to do so at an increasingly faster pace. [Financial planning and analysis](#) have also become more important than ever as organizations seek to survive and even thrive during the crisis. And while this fight continues, many CFOs and their teams are asking the same question: How do we take operational analytics to the next level?

– [Advanced analytics](#), such as machine learning (ML), have been touted as game-changers for Corporate Finance teams over the past 5 years or so. Why? At its core, ML enables Finance teams to combine macroeconomic factors like GDP and consumer preferences with internal data to determine correlations and add additional variables to enhance ML models. That combination helps the Office of Finance create better forecasts, increase collaboration and drive decision-making – all of which further pushes the vision of Finance Transformation into reality.

Moving Beyond the Hype

While not yet as widely accepted as the move to the cloud for the financial close and planning processes, the adoption of ML is already increasing according to the 2020 Data Science and Machine Learning Market Study by Dresner Advisory Services. In 2016, 40% of responding organizations reported using or actively exploring ML. That same metric was over 50% in 2020 (see Figure 1), showing a steady increase over the last five years.

The current economic uncertainties and rapidly changing business requirements will likely be a catalyst to drive that number up significantly over the coming years.

Deployment of ML & Predictive Analytics

2016-2020 Trends

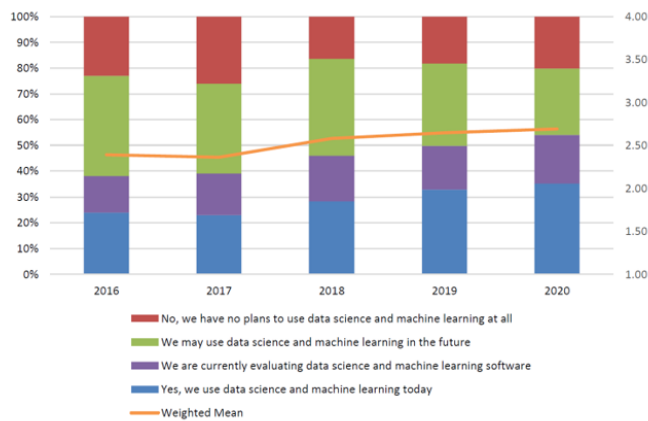


Figure 1: Dresner Advisory Wisdom of Crowds® Data Science and ML Market Survey

While IT and Business Units have led the way in adopting ML – far outpacing Finance, according to the research – the COVID-19 crisis demonstrates that Finance teams must also have rapid-response forecasting and decision-support capabilities to help manage through uncertainty.

The message is clear: Tapping into the [large volumes of data](#) available in the enterprise and combining ML with operational analytics represents a significant opportunity to increase forecast accuracy, drive performance and increase shareholder value.

Drive Performance with Financial Signals

With the right operational analytics applied to large volumes of transactional data, Finance teams can analyze their key financial signals and KPIs on a weekly or even daily basis, compare actuals vs. trends and work across the organization to take action. And combining ML forecasts with operational analytics empowers Finance teams to help their business partners pierce through the fog of



Figure 2: Drive Performance with Financial Signals

uncertainty.

The result manifests in better access to information on suppliers, customer orders and shipments, and core financial data around working capital metrics (see Figure 2).

These same signals could apply to anything that's critical to Finance, Operations, Sales, Marketing and Supply Chain teams. And by leveraging operational analytics and financial signals to drive critical dialogue and collaboration, CFOs and Finance leaders instantly elevate their credibility and their strategic value across the organization.

Operational Analytics + ML = Intelligent Strategic Business Partnership

In fact, according to Accenture, 77% of CFOs (see Figure 3) believe that driving organization-wide operational transformation is within their purview



What's more, Gartner^[1] predicts that, by 2024, 70% of all new FP&A projects will have an extended scope beyond the Finance department. What are the implications of such an evolution? Clearly, intelligent, operational analytics are fast becoming a requirement to power extended planning & analysis (XP&A) processes. Here are just a few important factors to consider:

- The “lines” between operational planning and financial planning no longer exist.
- Finance teams are now serving as strategic business partners and helping drive Merchandising, Sales & Marketing, and Operations plans.
- Finance must intelligently align these granular operational plans with consolidated financial plans and do it seamlessly at speed and at scale.

The emergence of XP&A underscores why leaders are embracing ML-powered, operational analytics to drive performance across the enterprise – and not just in Finance.

Organizations that fail to adopt will ultimately struggle with forecast accuracy. Why? Because they'll be operating in silos without understanding how changes in operational plans align with financial goals. Financially, the impact can take many forms and impact both profit and cash generation.

Here are just a few examples:

- Excess inventory from over-forecasting, which impacts inventory holding costs and working capital.
- Lost sales and revenue from under-forecasting. To meet customer demand, products must be in the right place at the right time.
- Lost profit from under-forecasting and rush shipments. To meet customer demand, companies may rush product shipments at a higher cost than planned.

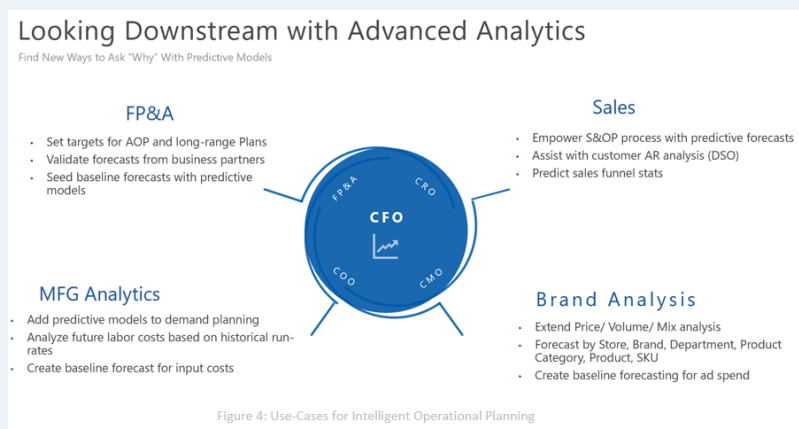
Practical Use-Cases

For organizations at the beginning of their advanced analytics journey, combining operational analytics and ML offers very practical use-cases and does much more than improve forecast accuracy.

ML-powered operational analytics enable cross-functional collaboration by providing decision-makers with new insights and new, innovative ways to ask why and drive performance (see Figure 4).

Here are just a few of the top use-cases for organizations thinking about adding ML into a wide variety of financial and operational planning processes:

- Assist with target-setting for strategic planning, annual operating plans (AOPs) and rolling forecasting.
- Create baseline predictive forecast scenarios for comparison with bottom-up forecasting from divisional Finance or Operational partners.
- Automatically seed all or portions of new forecasts with predictive models.
- Adjust baseline predictive forecasts with known business changes, such as new customers or products, plant shutdowns, acquisitions, etc.



Conclusion

As CFOs and Finance teams become more strategic within organizations, they will face a growing need to assess, model and predict future scenarios to support agile decision-making. Indeed, combining operational analytics and ML promises significant benefits to help Finance teams play a critical role in driving operational performance and increasing enterprise value.

The current crisis is a catalyst that will likely accelerate the adoption of these technologies to help organizations move away from siloed decision-making. Looking beyond the hype to practical use cases, ML-empowered organizations will be able to respond rapidly and effectively to the pace of change around them, no matter what the future brings.

Learn More

To learn more about how OneStream is supporting Finance teams on their advanced analytics journey, download our interactive e-book [here](#).

- [1] Gartner, 2020 Strategic Roadmap for Cloud Financial Planning and Analysis Solutions, Robert Anderson, John Van Decker, 21 February 2020.

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