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Getting from manual to algorithmic forecasting

It's 7:00 a.m., and you're thinking about the day ahead. By noon, you have to settle on a forecast about how your business will perform over the next quarter. And at 2:00 p.m., you need to tell that story to a dozen board members on a conference call.

In the past, your forecasting team would be pulling all-nighters for days before your meeting. They'd be grinding through spreadsheets, calculating growth percentages, chasing down anomalies, and drinking way too much coffee. That was then.

Today, your forecasting function is a well-oiled machine, with more than 80 percent of the work happening automatically. Every piece of financial data you could want is available on your tablet. All you have to do is ask—literally. Display the impact on profits if the cost of steel goes up 20 percent in the next month. You can drill down, roll up, set aside exceptions, and run a dozen more scenarios before your conference call. And you can do it all without an army of analysts scrambling to help.

Wondering how that could become a reality?

Every company will make its own unique journey from its current approach to planning and forecasting to an improved approach. That said, there are some things you'll want to consider on your path forward.

1 Identify the problem to solve

- Define scope and ambition
- Determine the level of business to work with
- Identify targets (geographies, products, customers, channels, etc.)
- Set a realistic time horizon

2 Think about how to proceed

- Decide if you want to build this competency in-house—or if outsourcing to a managed analytics service makes more sense
- Determine if algorithmic forecasting is a capability you want to provide as a service to the enterprise
- Make sure your organization has the talent and culture to embrace this

3 Identify the help you need

- Assess available talent and their abilities
- Determine if additional professionals are needed—financial analysts, data scientists, data visualization architects, or others—and how you'll get them
- Determine external vendor support needs
- Identify which tools you already have in place
- Ask IT what other tools may be needed

4 Prototype and scale

A Driver analysis and data cleansing

- Identify key revenue and cost drivers
- Collect and structure relevant data for analysis
- Align on an initial set of priority drivers
- Collect and clean required data inputs
- Test drivers for significance

B Predictive modeling

- Develop statistical models for P&L line items based on relevant drivers
- Consider using models that are easier for the business to understand, to build trust and adoption
- Include end users in the process of conceiving, designing, building, validating, and implementing forecasting models
- Test and validate the models
- Link P&L forecasts to the balance sheet and cash flow

C Dashboards and visualizations

- Develop dashboard views with key metrics
- Develop accompanying visualizations
- Enable scenario analysis functionality
- Elicit feedback from dashboard users
- Use A/B testing to optimize the effectiveness of dashboard displays

D Socialization

- Socialize results with key stakeholders all along the way
- Prepare detailed documentation for maintaining and managing the model
- Track results in parallel—keep score
- Train the organization to understand the value of this collaborative approach

E Ongoing

- Align on cycles required for refreshing your models
- Assess opportunities for machine learning and cognitive enhancements

Most clients we work with don't attempt a wholesale change to their forecasting approach from the beginning. Instead, they select a part of their business or a specific revenue, product, or cost element to use as a pilot or proof of concept. They often run algorithmic forecasting parallel to their human-centric forecast for a period to compare accuracy and effort.

Want to learn more? Read our guide, *Forecasting in a digital world*: **Deloitte.com/us/forecasting**