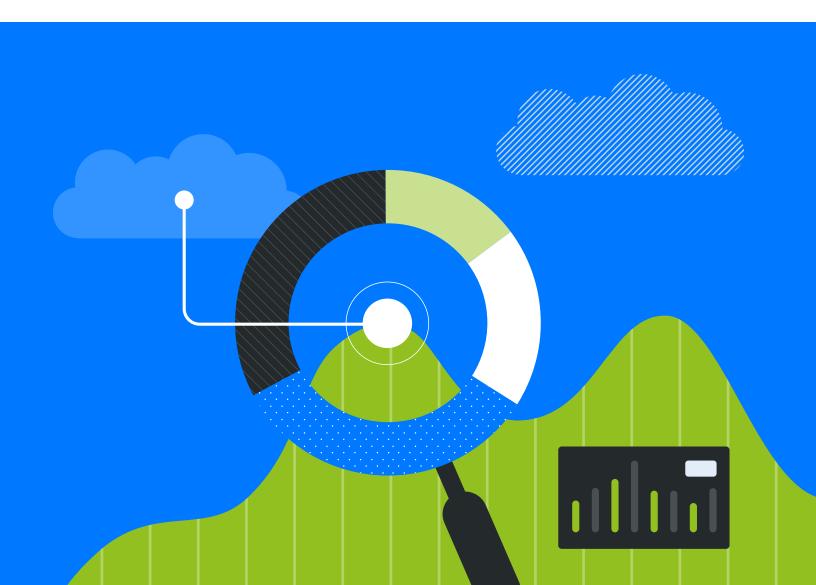
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## The case for Advanced Predictive Planning

A new business planning model for a volatile and rapidly changing world



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## Introduction

In this guide, you will learn why companies are augmenting their current planning solutions and how, through Advanced Predictive Planning, they can take advantage of market opportunities and avoid risks and miscalculations to create competitive advantage.

# Executive summary: The case for Advanced Predictive Planning

In today's volatile and uncertain world, being able to react quickly to changes is critical to creating a competitive advantage. However, wouldn't it be better to anticipate changes and plan for them before they arise?

What if an organization could be forewarned of external factors and changing market conditions in advance of these materializing? In such a case, the competitive advantage of proactively planning for, and executing on, changes as they occur would surely be much greater than simply reacting after the event has taken place.

The fundamental objective of Advanced Predictive Planning (APP) is to provide forewarning and enable companies to understand how external conditions will impact different operational aspects of the organization. In this guide, we explore the concept of APP, the key elements that drive it, and how it can add a layer of foresight and confidence to Connected Planning / xP&A.

"Forewarned, forearmed; to be prepared is half the victory."

Miguel de Cervantes



## The evolution of planning

Planning and forecasting solutions today allow people, data, and plans to interact directly so the planning processes at every level can be more responsive.

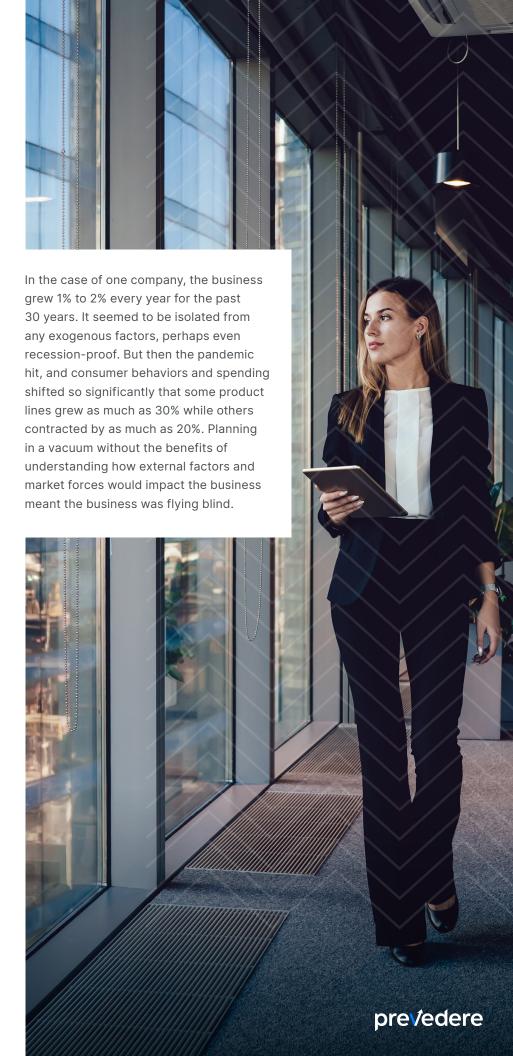
The concepts known as Extended Planning and Analysis (xP&A), Connected Planning, and Integrated Business Planning are all variations on one basic idea: transform the way an organization uses its data, people, and plans such that decision makers across the organization can plan and pivot with confidence when changes arise.

Like the central nervous system, which takes in sensory information, processes this information, and sends out motor signals to act, Connected Planning / xP&A solutions coordinate plans and actions across all aspects of the entity. And like any central nervous system, these solutions react quickly when an impulse is triggered. As in the human body when one part of the body is too hot or too cold, the nervous system triggers the brain to take steps to mitigate this. Likewise, in a business organization, if there is a spike in demand or a change in supply, an integrated business can react to this change once triggered.

The value of Connected Planning solutions is that they provide a means of understanding changes as they occur and rapidly re-assessing plans in response to these changes.

In short, these solutions enable companies to be agile – to react with speed. But the key word is react. What's missing with this model is the ability to predict when such events might occur in advance of them occurring. Rather than reacting, wouldn't it be better to be able to predict how external conditions will impact the entity well in advance so that steps can be proactively taken to seize opportunities and mitigate risks? This ability to see ahead is the fundamental concept of Advanced Predictive Planning.

For far too long, companies have simply assumed a steady and stable economic environment, leading their planning focus inward and driven off the things the company controls such as price, promotion, product, and the like.



## What is Advanced Predictive Planning?

As much as 85% of business performance is influenced by external factors. In today's volatile and uncertain economic and geo-political landscape, this has never been more true.

Many companies have leveraged Connected Planning and xP&A to transform how they plan and become more agile in reaction to changing conditions. But most of these companies are planning with very limited visibility as to what external factors will impact their business or industry, and in what ways the impact will be manifested. In short, most companies today are planning with a significant blind spot.

Prevedere Advanced Predictive Planning addresses this blind spot by providing advanced awareness. Effectively it allows the organization to know what external factors and forces will impact different parts of the business and how incorporating this knowledge proactively into the organization's planning processes and systems allows them to constantly monitor the factors and forces for the inevitable shifting of tides.

Advanced Predictive Planning allows companies to:



Know what factors will impact an organization and how



Incorporate this knowledge into actionable decisions



Constantly monitor leading signals as conditions evolve

### How does APP work?

As with most planning, Advanced Predictive Planning is based on looking at the past to project forward. However, APP is focused on understanding the lead-time and impact of external factors and market shifts vis a vis the downstream impact on a given industry sector or business.

This knowledge could be used to project forward the future impact of similar external changes. By doing so, APP provides advanced understanding to where and how different aspects of the entity will be impacted by external conditions.

There are three key elements to APP:

- 1. Accessing and understanding the external factors that signal a future impact.
- 2. Quantifying the impact on a given business or part of the business such that proactive actions can be taken.
- 3. Monitoring these factors on a constant basis to know when changes are occurring that will have a downstream impact.



#### The integration of external data

Typically, enterprises run annual, quarterly, and monthly forecasting based on internal data consisting of supplier and logistics costs, sales performance, and so on — with little to no external data. The first key element of APP is providing access to and an understanding of the external factors that signal a future impact.

APP solutions leverage the Prevedere Global Intelligence Cloud, a wealth of publicly available data across the globe to amass knowledge of macroeconomic, demographic, consumer behavior, trade, weather, and other factors that impact business performance. This data is then analyzed and correlated to determine leading indicators that can be used to predict downstream impacts.

By identifying leading indicators from the largest possible data set — one that incorporates the fullest possible range of internal and external data — you gain the most relevant and accurate picture of the variables which truly determine your business performance.



#### Predictive modeling

Once the leading indicators are identified for a specific business, the second focus of APP is to quantify the impact of these factors in predictive models of company performance. To do this, APP platforms combine Al and ML with the power of cloud computing to build thousands of predictive models to identify the models that are most statistically predictive and robust.

Effectively, APP combines the relevant external indicators with the organization's internal data to quantify the impact each leading indicator, positive and negative, that indicator will have on future business performance.

In addition to base-line predictive models, APP scenario simulations are often added as an overlay to consider what will happen if leading indicators change in differing ways. As an example, what might the impact be on an organization's demand if future inflation is modeled at 8% versus 5% or 12% since differing inflation rates have pronounced impacts on how consumers act?

While planning solutions have a long history of leveraging the concept of 'what if' simulations, the focus is typically on building contingency plans in reaction to changes. APP enables companies to simulate how changes in external factors and market forces will impact future business performance. Ultimately, scenario planning is about developing different "realities" of what might happen in the future and applying planning guard rails by adding optimistic and pessimistic predictions to baseline forecasts.

#### Automated prediction monitoring and alerting

The third key element to APP is the always-on monitoring of external factors. Change is inevitable, especially when it comes to macroeconomic conditions. By constantly monitoring the external factors that signal downstream changes, APP provides an early warning system of shifts in headwinds or tailwinds that will impact the business.

APP also considers both the severity and lead time of the changing factors so that the predictive models can be revised well in advance of the impact of these factors on a specific business. This kind of monitoring completes the APP lifecycle by sustaining the use of AI-based predictive modeling on an ongoing basis to ensure enduring model quality.

By providing monitoring and alerting based on future market shifts and upcoming external changes, APP enables proactive planning pivots and reinforces strategic planning confidence.

## Why is APP important for today's environment?

The need for APP is more significant today than ever before. The tremendous amount of volatility and uncertainty in the global economy, geo-political landscape, and consumer behaviors is causing companies to re-plan at a faster cadence.

Connected Planning and xP&A solutions have improved the ability of companies to have more planning agility, but the basis of the plans is too often flawed.

These flaws arise from a false foundation of assumptions and bias. Traditional forecasting and planning approaches are often problematic due to factors such as:

- The false assumption of stability: planners assume this year's growth rate, or some other variable, as part of next year's modeled performance.
- Weighting based on cognitive bias: companies distort models by unknowingly factoring in the biases of planning staff or senior decision makers.
- Missing data: organizations use internal data as the predominant basis for their predictive planning. This completely omits the influence of market factors that have significant influence over your business environment.

A recent survey found that only 12% of executives feel "highly confident" in their business forecasts and 60% said that producing accurate and timely predictions is difficult for their company.<sup>2</sup>

And while planning at a higher frequency helps improve the confidence, the underlying planning assumptions remain flawed due to a lack of understanding what external factors will impact a given business and in what ways.

Leaving external data out of forecasting models radically reduces the accuracy and utility of the predictions. That's why 66% of C-level executives believe that incorporating external data will significantly improve forecasting, planning, and business performance.<sup>3</sup>

Simply put, it is time to re-think planning such that plans;

- 1. Include relevant external factors.
- 2. Quantify the positive and negative impacts of these factors on a given business, geographic region, or channel.
- 3. Incorporate this into the internal planning processes and systems to drive better actions and improve business performance.
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- 3. Source: https://prevedere.com/the-steps-cfos-can-take-to-gain-greater-economic-intelligence



### Practical use cases

Having better understanding ahead of time of what external factors and market forces will impact a given industry or business and in what ways enables companies to improve business forecasting and planning and drive better decisions and actions.

There are many, many practical use cases of how better foresight of external factors can drive competitive advantage. Here we provide a few examples of how companies can improve strategic business decisions and drive competitive advantage:

- · Knowing which geographic regions will experience headwinds versus tailwinds allows companies to pull levers to accelerate top line growth in regions of tailwinds and, perhaps, pull different levers to sustain the top line but grow market share in a region of tailwinds.
- Understanding what is happening with the labor market, employment, and wages enables better workforce planning.
- · Foreseeing consumer sentiment and behavior as well as the consumer wallet size and share enables significant advantage as more than 70% of the US economy is driven by consumer spending. By knowing what the consumer is likely to do, and to know this by demographic and regional sectors, companies can be better prepared with the right products in the right channels to maximize capture of the consumer wallet.

- Having insight to commodity prices and where these are heading allows companies to plan ahead with regards to costs of materials thereby optimizing the cost structure.
- Understanding the macroeconomic factors that will impact a business sector or specific business enables CEOs, CFOs, and Investor Relations to be more prepared to talk about the risks and opportunities ahead and speak to the actions being taken to address these.

All these examples as well as many more are real-world cases in which APP is enabling companies to remove the external blind spots to plan for and drive improved business performance.

## **Getting started**

Having identified the need for and value of Advanced Predictive Planning, how does a company put such a solution in place? How much time and effort does this take? What solutions exist? There are really two options: build a solution or buy a solution.

On the surface, building a solution by collecting external data from a variety of sources seems like a reasonable approach. After all, there is a tremendous amount of external data that is publicly available, so why not gather it and build an analytical engine to process it? In many, probably most cases, this is a potentially costly mistake, for the following reasons:

- Lack of skills: building econometric prediction models and using them to create accurate forecasts is a highly specialized skill for which it is difficult and expensive to recruit.
- Massive data effort: identifying the right data sources, collecting the data, and preparing the data for modeling is time-consuming and labor-intensive.
- Assessing data relevancy: given the massive amounts of data available, understanding which data is relevant is a challenge in itself. Understanding which factors are correlated and relevant and omitting the many factors with spurious relations requires computing power and human intelligence that is unique to this problem.

- Missing the right technology: quantifying the impact of many different data combined with a company's data is a highly complex problem requiring highly sophisticated analytics processing. Specifically developing a robust and accurate econometric modeling
- Inability to integrate: for the data and predictive models to be useful, bi-directional integration with corporate performance management and other planning systems is highly useful, and again this can be a highly complex task.

engine takes years of work by a highly

specialized team.

• Delayed time to value: building these systems, integrating the data, and producing the models from scratch, even if you can do it well, can take between one to two years.

For this reason, most companies find they are far better off working with a predictive-planning specialist which already has the technology, the skills, and the data sources. Moreover, as APP insights are employed as an additional layer to existing planning intelligence, a ready-made solution is quick and easy to deploy, which means relevant models and insights can quickly be operationalized.

## A final word

Strategic planning and forecasting have evolved with Connected Planning and xP&A solutions enabling companies to be more integrated across functions and agile in reacting to changing conditions. However, these solutions are reactive as they miss the insights that can be gleaned from understanding external factors and forces ahead of when these factors will impact a given business or industry sector.

By knowing the relation between external signals and downstream business impact, and by being able to quantify the impact these external factors will have, companies can be proactive in planning for and executing on the impact, both opportunities and risk, that external factors portend. This concept of seeing ahead is Advanced Predictive Planning, and it is driving significant competitive advantage for those companies adopting it, especially in today's highly volatile and uncertain economic climate.

To learn more, connect with Prevedere or visit prevedere.com

## Contact us

Prevedere is the world's leading provider of global data and technology for Advanced Predictive Planning.

The Prevedere Advanced Predictive Planning platform is a patented market-leading technology for identifying relevant external factors and creating forward looking econometric models. With millions of model-ready data sets from thousands of external sources, the Prevedere Global Intelligence Cloud augments internal data to drive Advanced Predictive Planning.

Prevedere is trusted by world-leading companies to generate strategic intelligence with planning and management tools that enable better risk mitigation and greater opportunity development. To learn more, connect with Prevedere or visit prevedere.com

Learn more about how Advanced Predictive Planning makes business forecasting and planning more holistic, robust and actionable.

