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ENTERPRISE JOURNEY TO ELEVATED ACCURACY IN DEMAND FORECASTS

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INTRODUCTION

Enterprise demand planners are forced to look beyond the demand management module of enterprise application suites as they are incapable of dealing with the ever- expanding range of demand signals and have a limited capability to assimilate external views. With shortening product cycles, complex omni-channel distribution landscape and ever-increasing customer expectations – demand planners have been compelled to leverage specialized demand management software outside the traditional enterprise suites.

With the onset of the digital revolution, the metrics for enterprise demand forecasting have undergone a complete change. But underlining all these changes has been an unwavering focus on delivering high return on assets (ROA). While measuring the maturity of supply chain operations, research firms have ranked organizations for their continuous capability to deliver consistent ROAs even in tumultuous and volatile market conditions.

A quick look at the Gartner's 2018 Top 25 SCM leaders consists of CPG players that have delivered a ROA of 4% and above even when the three-year weighted average growth for the sector has been negative. Though the growth trends for automotive and hi-tech manufacturing sector have been disparate from CPG, the ROA trends across all the three segments have been congruent.

The success of Supply Chain Management (SCM) in imbibing such power packed performance driven rigor impinges on demand forecasting capabilities to deliver results with unwavering accuracy. The underpinning factors driving laser precision demand forecasting capabilities are difficult to achieve with software application driven only models.

A recent report by PS Market Research estimated enterprise investments in demand planning software were to the tune of $10.9 billion outperforming other software application segments by a fair share. The same report also predicted the market size of demand management applications to increase by 20.3% annually by 2023.

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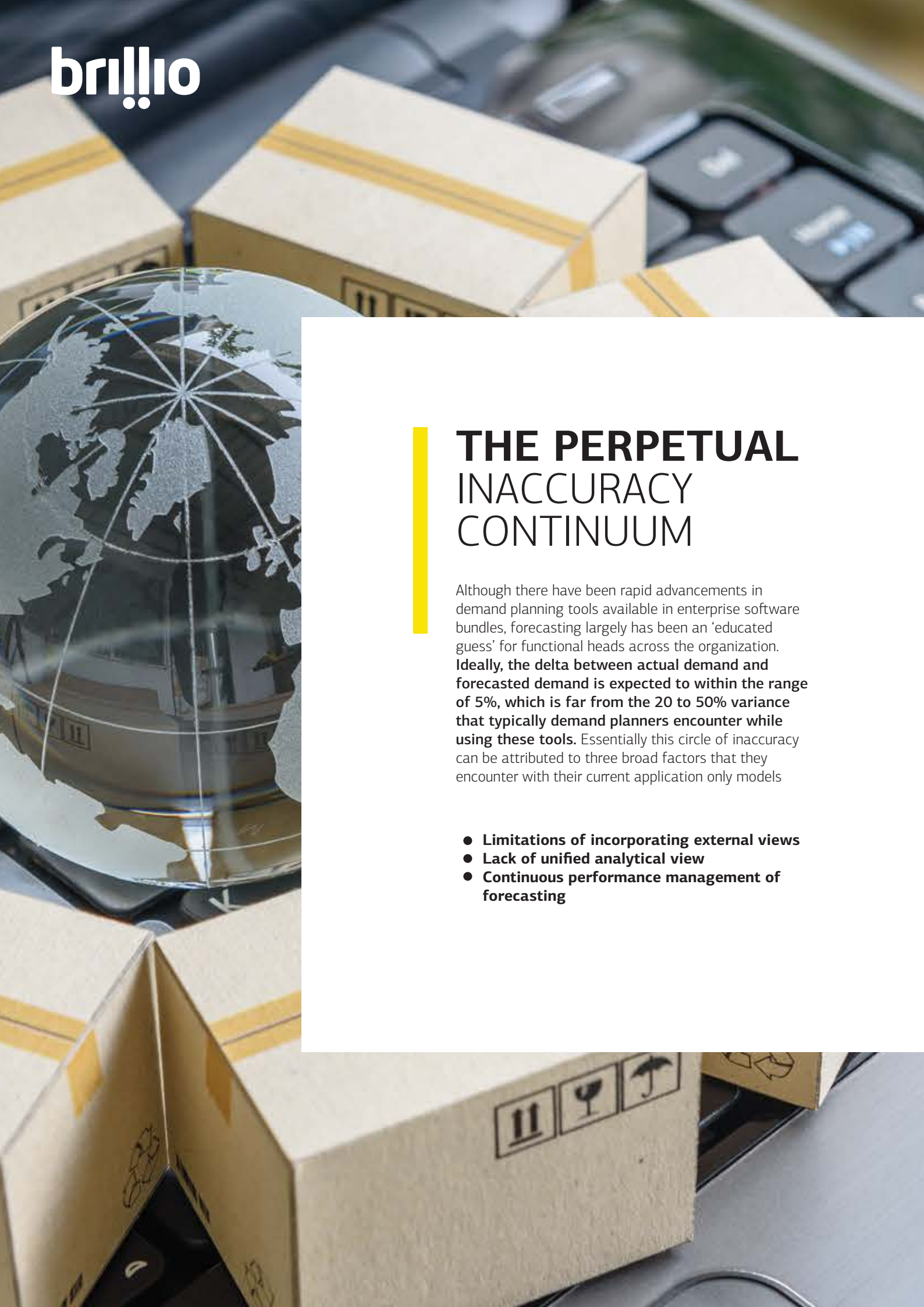
DEMAND FORECASTING - THE SCM TRANSFORMATION FULCRUM

Consumer focused brands are working in a hyper drive mode to transform the fundamental machinations of their supply chain to deliver the same level of customer experience as their digital native counterparts. Digital transformation of supply chains essentially meant moving away from a capex heavy, coverage confined, bulk distribution model to low cost, automated, agile and fragmented warehousing; irrespective of the framework demand forecasting is the fuel that essentially drives it.

Rolling back the clock by a few years, Apple plagued with supply chain havoc post the success of iPod decided to adopt a closed supply chain ecosystem effectively pulling the plug on Apple-owned factories and warehouses. The timing for this significant transformation coincided with the launch of their latest computing powerhouse iMacs, which further compounded the risks associated with this strategic change. The success of their decision is attributed to the game-changing move of buying $100 million worth of advance air freight cargo for holiday season, a direct outcome of accurately forecasting customer demands for the upcoming holiday season promotions.

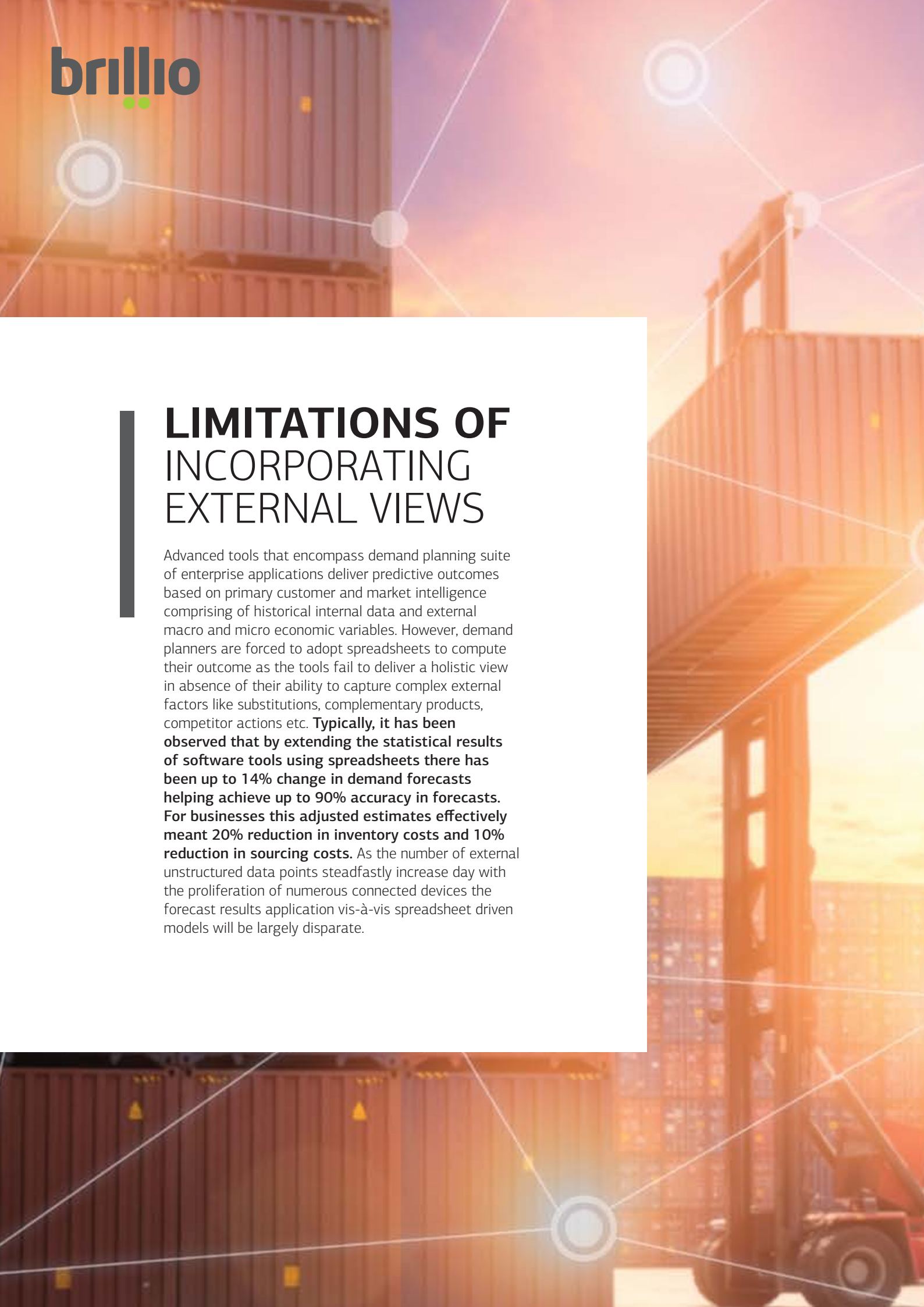
Over the years, as organizations have moved across different manufacturing models like MTS, JIT or MTO the value of demand forecasting hasn't eroded. In the present day and age when predictability, personalization, granularity, flexibility and customer experience driven supply chains are need of the hour, the significance of demand forecasting in SCM is at a new high.



THE PERPETUAL INACCURACY CONTINUUM

Although there have been rapid advancements in demand planning tools available in enterprise software bundles, forecasting largely has been an 'educated guess' for functional heads across the organization. **Ideally, the delta between actual demand and forecasted demand is expected to within the range of 5%, which is far from the 20 to 50% variance that typically demand planners encounter while using these tools.** Essentially this circle of inaccuracy can be attributed to three broad factors that they encounter with their current application only models

- **Limitations of incorporating external views**
- **Lack of unified analytical view**
- **Continuous performance management of forecasting**



LIMITATIONS OF INCORPORATING EXTERNAL VIEWS

Advanced tools that encompass demand planning suite of enterprise applications deliver predictive outcomes based on primary customer and market intelligence comprising of historical internal data and external macro and micro economic variables. However, demand planners are forced to adopt spreadsheets to compute their outcome as the tools fail to deliver a holistic view in absence of their ability to capture complex external factors like substitutions, complementary products, competitor actions etc. **Typically, it has been observed that by extending the statistical results of software tools using spreadsheets there has been up to 14% change in demand forecasts helping achieve up to 90% accuracy in forecasts. For businesses this adjusted estimates effectively meant 20% reduction in inventory costs and 10% reduction in sourcing costs.** As the number of external unstructured data points steadfastly increase day with the proliferation of numerous connected devices the forecast results application vis-à-vis spreadsheet driven models will be largely disparate.

LACK OF UNIFIED ANALYTICAL VIEW

Across any enterprise there are multiple stakeholders of demand forecasting process having disparate systems under their stewardship ensuring the function is working towards driving their unique business outcomes. Disconnected systems with each department working in a data silo is symptomatic condition prevalent across enterprises that has been the major impediment in accomplishing the desired outcomes from their analytics investments. A quick look at the mandate of stakeholders and the systems under their ownership: -

Function	System Owned	Objectives	Demand Forecasting Mandate
Financial	Financial and Accounting System	Top down budgeting of organization and implementation	Monitoring business performance
Marketing	CRM, CMS	Driving success of products	Predicting performances of spends
Sales	Order Processing System	Revenue generation	Ensuring successful customer transactions
Operations	Supply Chain Management System	Capacity planning	Scheduling for optimum resource utilization

As each stakeholder builds insights distilled from their unique datasets, building an organization wide analytical view that delivers single point of truth is never a prioritized agenda.

CONTINUOUS PERFORMANCE MANAGEMENT OF FORECASTING

Unlocking the value potential of demand forecasting is highly dependant on the efficacy and accuracy with which enterprise forecasting framework ultimately actualizes. As simple as it may sound but organizations falter at administering this critical step in their demand forecasting practice either at inception or on an ongoing basis. Forecast process owners typically treat demand forecast as a one-off exercise based on operational, tactical or strategical planning requirements without defining the accountability metrics that measure the capability of the model and further tweaks required to achieve near accurate results. The true potential of forecasting can only be actualized by implementing an operational rigor that continuously monitors variances and adjusts the model based on new customer and market intelligence.

UNLOCKING VALUE AND ENHANCING POTENTIAL THROUGH COLLABORATIVE ECOSYSTEMS

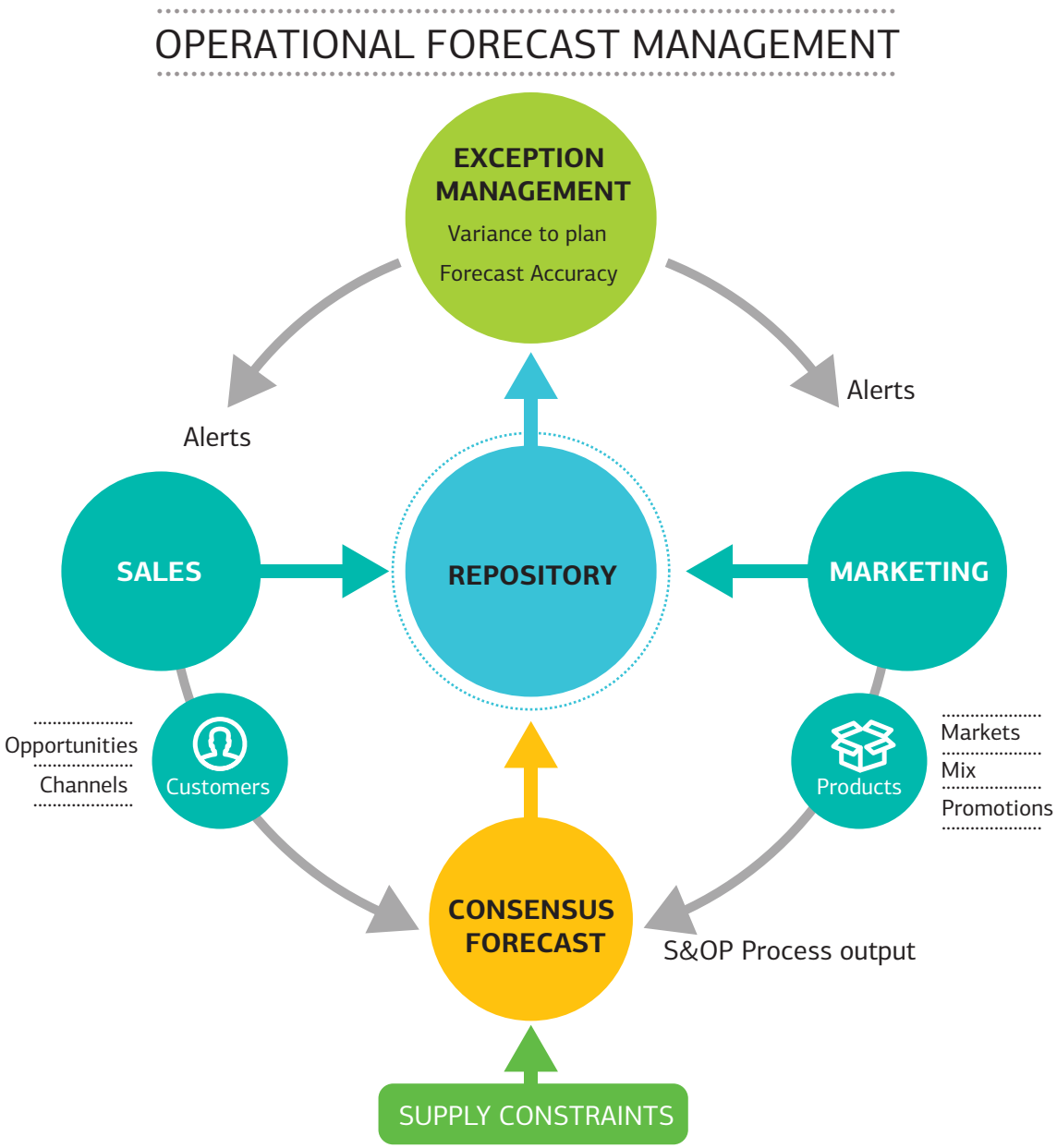
Considering the intricate landscape of present-day business operations and an increasingly complicated technology ecosystem that they own the problem of achieving accuracy in demand forecast model cannot be eradicated with software application implementation alone. Traditional businesses today face competition from their digital native counterparts and a collaborative forecasting ecosystem that creates cohesion between internal and external intelligence is the key to their success. The crucial components required for building this collaborative ecosystem are: -

Datasets with interrelated information – Repository to store both structured as well unstructured data that allows slicing and dicing of data from different perspectives and helps in formulating a forecast.

Statistical forecast logic – A core logic comprising of statistical algorithms combinations that help incorporate a level of adaptability into the forecast model that are susceptible to changing demand drivers.

Operational platform – Unified view that allows you to run simulations and pass on information to all stakeholders and build a cohesion in outcomes that demand forecasting drives. This also provides an analytical view that maps the projected KPI's and metrics to the actual outcomes enabling demand planners to bring in the process of continuous improvement.

Exception management – Rule-based mechanism to alert supply chain manager on variances which potentially impact the predicted outcomes.



According to a Gartner study, enterprises that enable demand forecasting by leveraging such collaborative environment are operationally set to improve their revenue predictability by 10 to 25% and decrease the inventory carrying cost by 30% over a 3-year period. In addition to these solid benefits the organization have a further potential to leverage low hanging fruits like improved procurement costs, dynamic pricing and improved utilization of resources. The biggest benefit of transitioning to this model is minimum disruption to the technology landscape and being a low impact transition the change management process is relatively smooth and seamless.

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FINAL THOUGHTS

The value potential of demand forecasting can never be realized with one size fits all method of off the shelf commercial software. To fully maximize the investments into demand forecasting& management practice enterprises must work with specialized technology partners to extend the capabilities of software applications by building an all-inclusive forecasting environment and combine it with a rigorous adaptive development model. The definite advantage will be with businesses where their technology partners can bring in the speed element into the overall technical and functional machinations of a collaborative forecasting environment.

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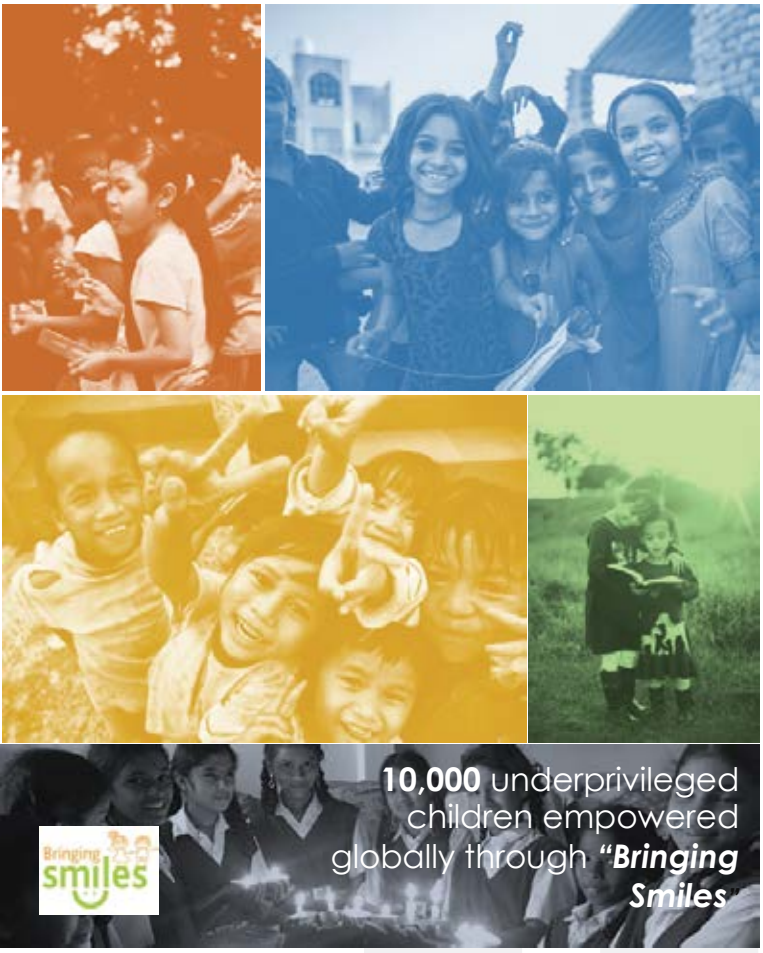

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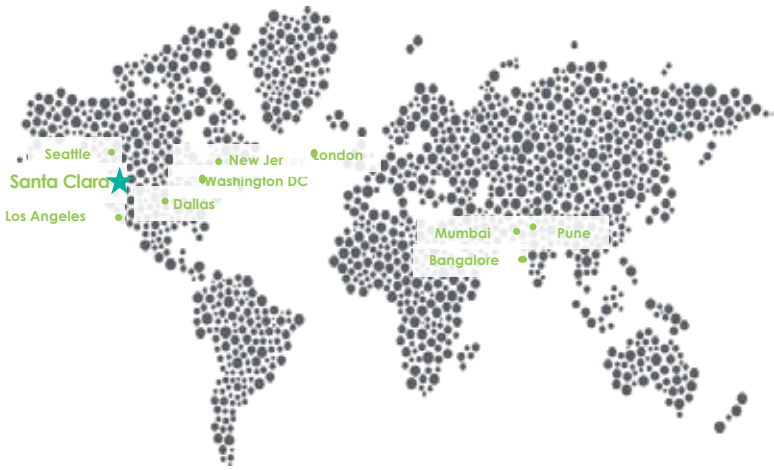

About Brillio

Brillio is a global technology consulting, software, and business solutions company that enables the successful transformation of businesses facing significant disruption fueled by technology and cultural change. It leverages emerging technologies to create new customer experiences, achieve efficiencies, and gain differentiation & competitive advantage for its clients. This, along with its key technology partnerships and investments in areas such as analytics, security, cloud, mobile, and machine learning, delivers innovative solutions and capabilities that result in driving significant market impact.

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