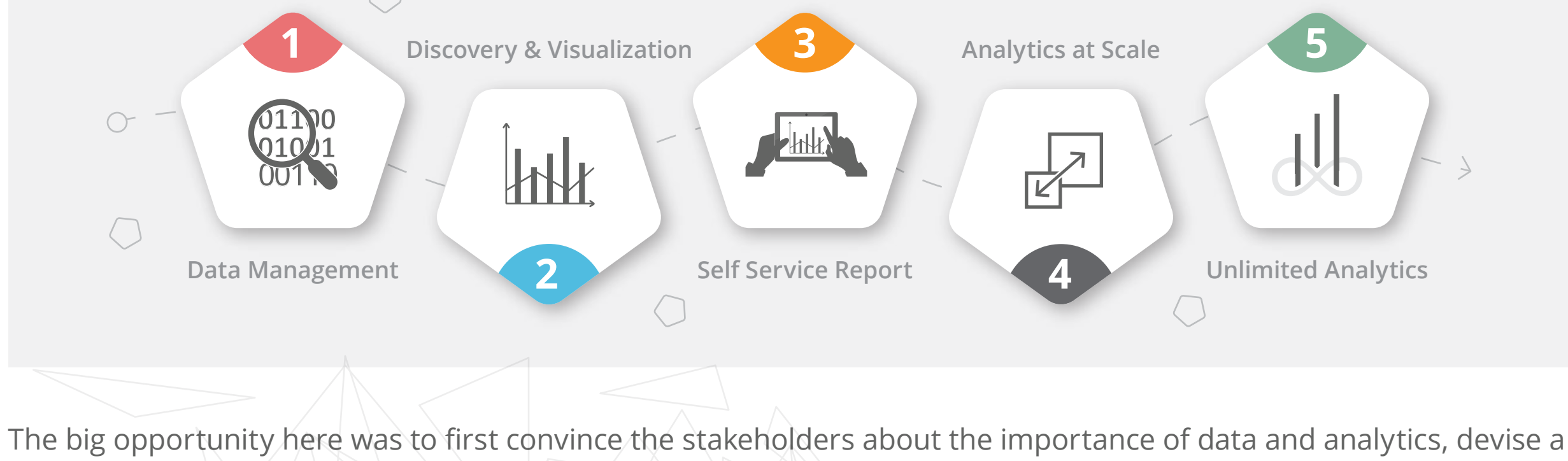


Retail Analytics using POS and Inventory Data

Retail industry, till very recently, was grappling to come to terms with getting digital. Companies wanted to emulate Amazon's success. The challenge for our client wasn't just the lack of data about who the consumers were and what they were buying, it was around the numerous retailers on the ground, and unavailability of a unified data portal in a standardized format. Therefore, they could neither share relevant data with their management teams at a regular frequency nor with the appropriate granularity to gather accurate insights from it. The data used to pour in, round the clock, from multiple systems, channels, and regions.



The big opportunity here was to first convince the stakeholders about the importance of data and analytics, devise a methodology to create a single view of the data and extract meaning from this portal for an informed decision making. Once we instilled confidence of the client leadership team in the data, they roped us in to build an E2E Retail analytics solution around it. Given that our client sells products through multiple third-party vendors, keeping them motivated to share data (timely and correctly) was a bit of a challenge. Moreover, due to the scarcity of capabilities at their disposal, most of the retailers remained overwhelmed with the vast amounts of data at their respective ends.

About the organization

Our client is an American multinational corporation that is engaged in design, development, manufacturing, worldwide marketing and sales of footwear, apparel, equipment, accessories, and services. It is one of the world's largest supplier of athletic shoes and apparel. Our client is well known for sponsoring many high-profile athletes and sports teams around the world.

Business Problem

The ancillary business questions:

- How to assess the performance of each franchisee?
- For how long could an account manage with its existing levels of inventory?
- How often do the retailers need to be replenished with different products?
- What is the optimal store size of new stores for maximizing sales?
- How to monitor, assess and optimize the discounts offered across various factory stores?

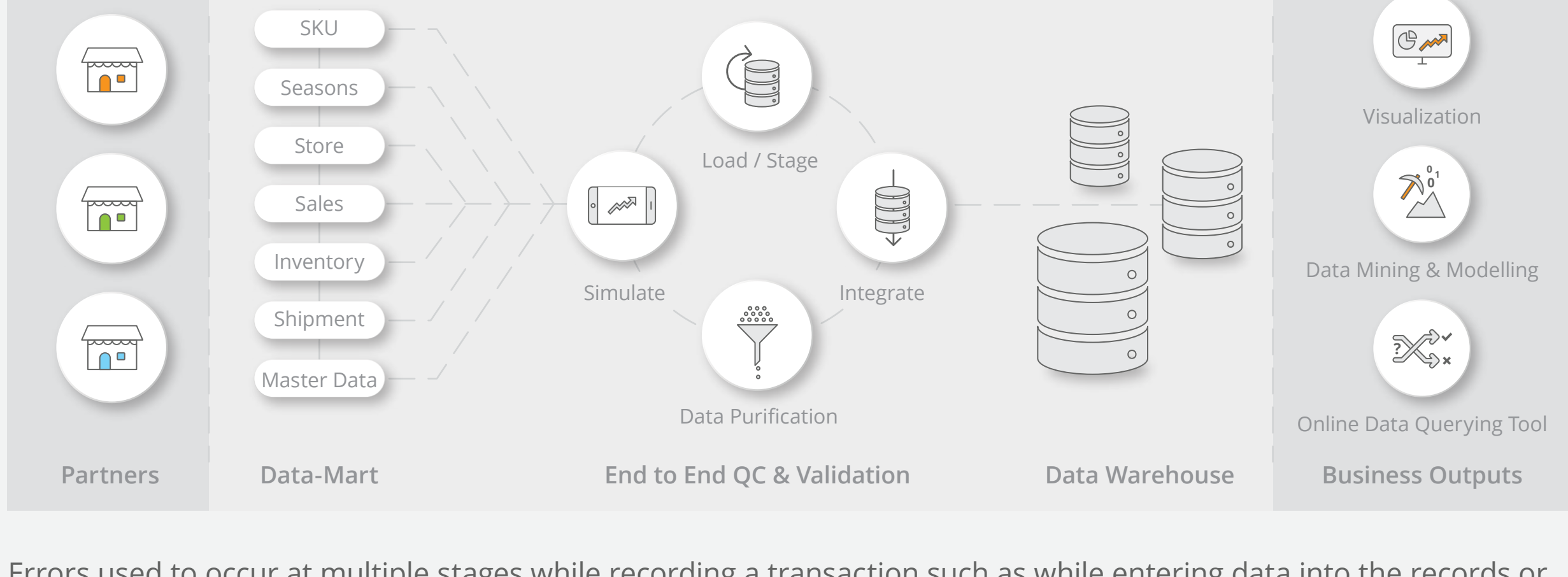
Client's primary concern was to gather the siloed data and use it to answer questions that the account, marketing, planning, and product teams had.

Our Approach

TEG followed a holistic approach to address client's problem. We started with building a unified data mart, reporting the data base on different team needs, providing and helping them with predictive and perspective solution.

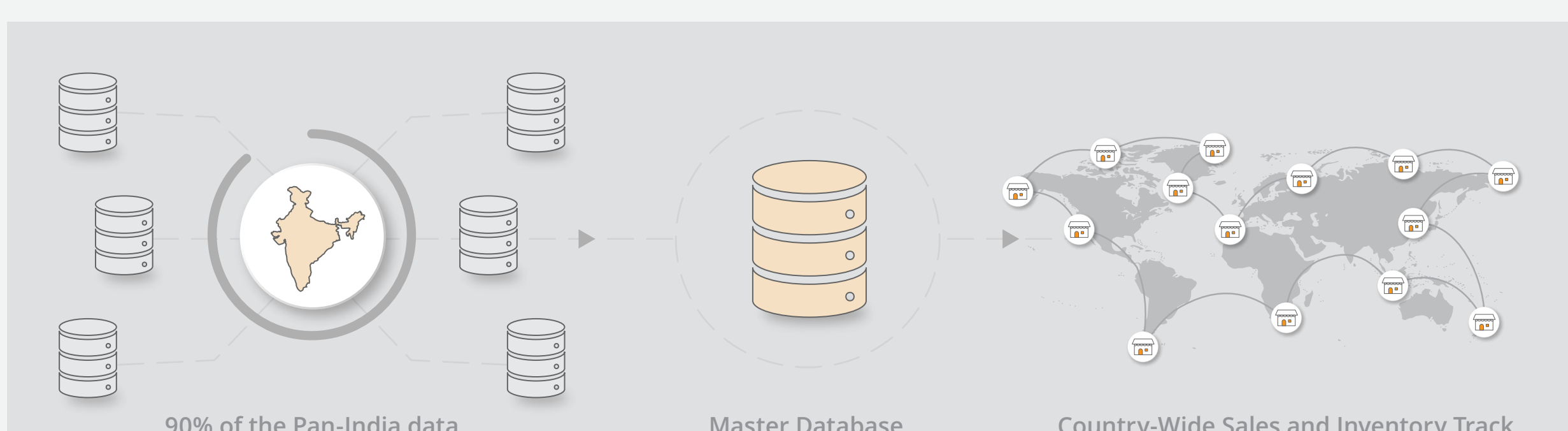
1. Building a Unified Data-Mart

In a semi-digital world and a developing country like ours, the complexity arose with the absence of an organized, standardized and a unified data mart. What made it even more formidable to deal with was to enable the stores at disparate locations to feed sales, inventory data and share it digitally through a wide range of systems. Irrespective of data collection tools, our team at TEG Analytics was involved in unifying and standardizing the information so that the next set of analysis and reporting could become seamless. This unification involved liaising with the retailers and carrying out numerous quality checks to capture the accurate data.



Errors used to occur at multiple stages while recording a transaction such as while entering data into the records or collating data from multiple stores or missing out on a simple entry at any of the store. For example, a store notified availability of sufficient stock of a product till the previous day and then suddenly showed zero stock for it without any sale. At times, these were true scenarios and not a miss from the retailer because of an inter-store transfer happening over that period. The catch therefore was, to be able to capture such instances of deviation in data with clarity on all possible fronts.

Thus, collection, standardization and addition of 90% of the Pan-India data to the master database was a herculean task and as with every analytics related project the data management part formed the base of the pyramid. It eventually helped our client to keep a tab on the country-wide sales and inventory details from each brick and mortar store to each online portal.



2. Visualizations & Reporting

Once the data mart was built, the client wanted to get answers to a set of questions mentioned above. To gain significant tactical insights for faster and effective decisioning, Reporting Analytics came into purview. Providing a real-time visibility into sales and inventory data to client's leadership team was the first task which TEG accomplished. TEG implemented a seamless view for the client to analyze the data by creating impactful visualizations and dashboards.

The client's reporting requirements were met in 3 phases as mentioned below:

- | Phase I | Phase II | Phase III |
|---|---|---|
| <ul style="list-style-type: none"> ● Enabling real-time accessibility of data, be it in office, in store or on-the-go through FutureWorks platform ● Carrying out week-to-date, month-to-date or year-on-year data comparison ● Generating sales trend report based on SKU performance | <ul style="list-style-type: none"> ● Simplifying reports to stop wading through scores of pages before getting to the real issue ● Analyzing non-performing products and vendors to manage inventory accordingly ● Visualizing retail transactional data for analysis and planning purpose | <ul style="list-style-type: none"> ● Categorizing top-performing and non-performing stores ● Managing operations across all channels by exceptions and alerts to apprehend problem areas at the earliest possible |

The data was put to work to enable the client to take better decisions and thereby streamline the functioning of their retail chains across India.

3. Self-Serve Analytics

The dashboards, used across several departments now, offer numerous dynamic capabilities such as:

- Providing a good understanding of the current pulse of the business
- Identifying the root cause behind a spike or a trough in sales and inventory
- Helping the client in analyzing replenishment scenario across various stores at an SKU level for the entire South-East Asia region
- Dashboard-cum-optimization tool helps the client to redistribute products among different stores in the same region so that no store remains overstocked/understocked

Visual self-service tool dramatically changed the way our client approached its business.

The entire functionality of the portal was built upon FutureWorks platform (One only needs to logon to the portal and specify which fields do they want to include from various levels of aggregation available such as city, product and gender among others) which simplified the entire data churning process.

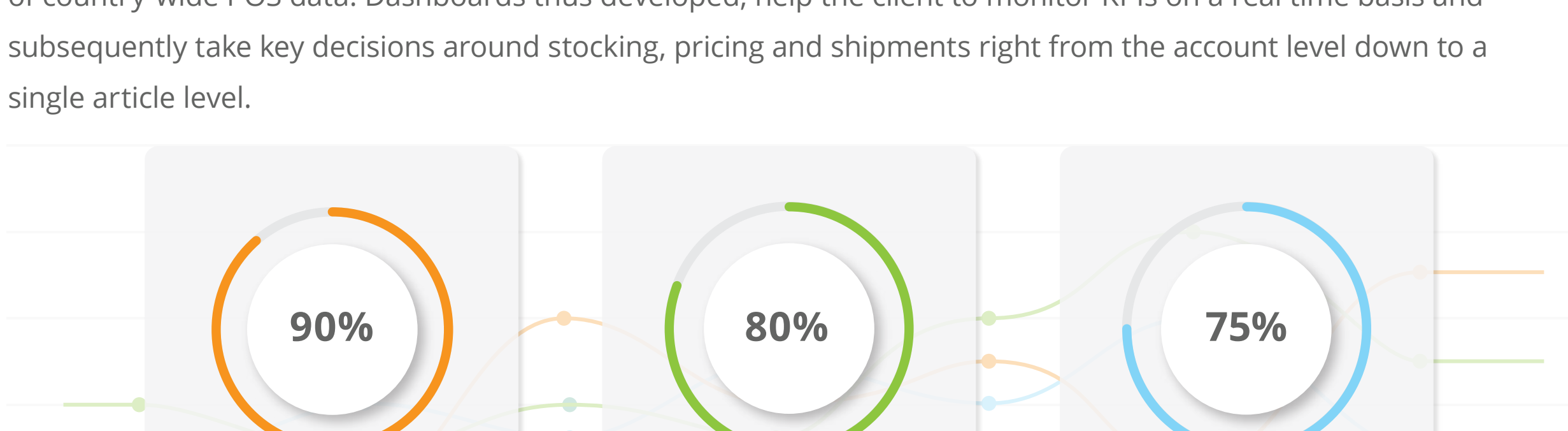
4. Advanced Analytics

TEG has also helped client with solutions in the Advanced Analytics space such as Store Size Optimization and Discount Optimization. For Store Size optimization, TEG transformed historical sales, inventory, geography/demographics and store related data into a size-demand intelligence and thereby came up with the apt size that a store should be of to adequately display its inventory. This leads to smart allocation at the size level to match customer needs at each store.

Similarly, Discount Optimization helped client understand the optimum price at which different products should be sold to garner the maximum profits across different stores for each retailer.

The TEG Impact

With TEG's expertise in data management and analytics, the client is now able to gain visibility and insights into 90% of country-wide POS data. Dashboards thus developed, help the client to monitor KPIs on a real time basis and subsequently take key decisions around stocking, pricing and shipments right from the account level down to a single article level.



In line with the current trend, TEG has also migrated to the Big Data environment and has brought down the time required for churning out data from 20 hours to 5 hours, i.e. a whopping 75% reduction. Over the last 5 years, as the relationship with the client progressed and data volume increased at an exponential level, Big Data has made the process faster and thereby has made decision making quicker. Smart marketers are now relying on data more than ever to stay abreast with the latest trends and further to devise and ratify their strategies. Migration to the Big Data system and Tableau has made the entire process seamless and thus it continues to pay dividends. Our client now gets to assess larger datasets and gain more insights to improve their supply chain, sales and marketing management among other factors, which eventually helps it expand its business.

Insights@Speed of Business

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