



How A Global Retailer Transformed Its Planning Capabilities With Data Engineering

To successfully leverage the full power of big data, companies must establish strong data foundations to consolidate, process and present their data in an optimised manner. Here's how Lynx Analytics created a data enablement solution for a global retailer, which allowed them to achieve a higher level of data automation, accuracy and efficiency and improve their sales and operations planning process.



From predictive analytics to graph AI, big data tools are helping companies solve complex problems and gain meaningful insights that allow them to make better business decisions.

An important part of this process – and, in fact, a precursor to fully unlocking the power of data analytics – is ensuring that the necessary data is synthesised and presented in a way that enables these analytical functions to be executed optimally.

However, many companies today grapple with inefficiencies when it comes to their data infrastructure. This may include storing data in disparate and incompatible formats; relying on time-consuming, error-prone manual efforts for data consolidation; and not having the right tools to present the data in a holistic, accessible, and easily digestible manner that caters to different organisational requirements.

Such were the issues facing a leading global fashion retailer that wanted to improve its sales and operations planning (S&OP) process throughout the United States and Canada. They thus enlisted Lynx Analytics to devise a data enablement solution that would help them overcome these challenges.

The inefficiencies of using manual, ad-hoc processes to gather data

Periodically, members of the global retailer's leadership team – spanning departments including finance, supply chain and operations – convene at an S&OP forum.

Its main purpose is for stakeholders to make strategic decisions regarding business-critical S&OP processes across six-month and annual time horizons: be it keeping distribution centres up and running, mitigating supply chain disruptions or optimising inventory management.

Previously, the data was being consolidated in a highly manual fashion.

Disparate information from across various regional teams was collected via manual pulls of data snippets and intensive Excel wrangling by a single person in each team.

This made the process prone to human error, given the lack of consistency when it came to data structure, and created issues surrounding data accuracy.

It was also a low value add and time-consuming activity, with the required data sometimes only coming in at the last minute.

Additionally, the dependency on individuals to gather the data resulted in a lack of contingency – for instance, if the designated person were to suddenly become unavailable.

Pain Points

Data collection and consolidation is 100% manual

Dependency on individuals is significant (lack of contingency)

Accuracy validation is at high level data

Clusters with different data processing methods

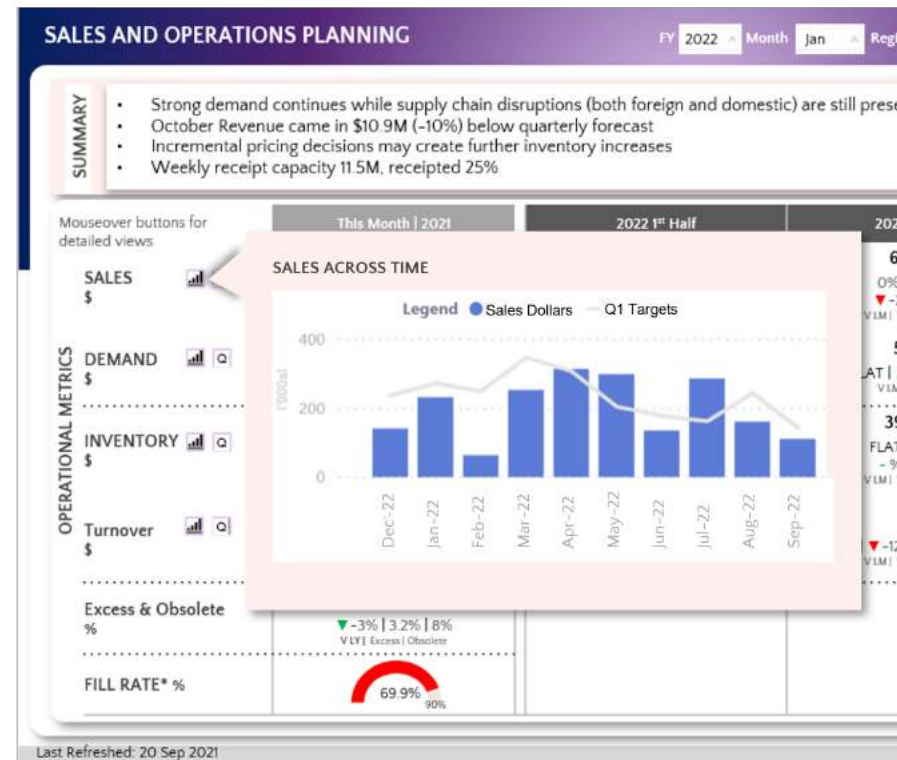
The lack of data access and reliability led to regional teams adopting different data processing methods to serve ad-hoc needs.

This meant that a significant portion of the information was contained in incompatible and spontaneous formats, which required additional translations when performing further analysis across different granularities.

This added yet another layer of complexity, as even more manpower was needed to reformat and standardise the relevant data.

Finally, the client's existing deck for the monthly forum represented the data in numerically heavy formats.

This can be slower and harder to digest compared to data visualisations, therefore requiring more time to interpret for the generation of insights during S&OP meetings.



Automating, streamlining, and optimising the process

To engineer the appropriate data enablement solution, Lynx Analytics began by assessing the global retailer's data sources, pipelines and collection process, carrying out user interviews and creating a series of prototypes.

This was done in close collaboration with the client until landing on the best solution tailored to their unique business needs.

First, Lynx Analytics tackled the reliance on manual processing by redesigning the organisation's end-to-end business workflows for data consolidation.

This was done by building automated data pipelines on Google Cloud Platform and creating a centralised repository for users to drop files containing data in a standardised format. The data was validated and reconciled through the relevant checks, then cleaned and structured.

Once this stage was completed, the data was fed into an interactive and strategic dashboard hosted on Tableau.

This new tool was designed specifically to evaluate key S&OP metrics and offered a centralised data source that could be accessed and used by various stakeholders.

Besides simplified navigation and engaging visualisations, it included a wider range of features – such as the ability to toggle between different granularities including time dimensions, channels, brands and other S&OP facets.

Complementing this was a customised feature for users to input commentaries on the dashboard without having to exit the platform.

To ensure uptake and adoption, Lynx Analytics conducted user training to acquaint users with the tool, so they could easily integrate it into their existing workflows.

The benefits of the new data infrastructure

The new data enablement solution has allowed the client to successfully streamline its data consolidation efforts, achieve greater data accuracy and improve data availability.

With the semi-automated system that consolidates, checks, and cleans the data in a standardised format, the client is now far less reliant on manual processing.

This removes a significant degree of human error and provides improved data consistency, accuracy, and reliability – enabling stakeholders who rely on this data to make more confident calls.

By reducing the manual effort involved in data collection, the client has freed up a substantial amount of valuable manpower.

This additional time saved on data consolidation can be repurposed for more high-value tasks, such as analysis and the generation of insights to be discussed at the monthly S&OP forums.

The company has also improved their ease of data access and analysis, and now has structured and centralised data available at their fingertips.

Indeed, the new dashboard tool provides a central repository of consolidated data in a single, easy-to-use interface, which gives them much better data availability compared to the former system.

Additionally, the global retailer can draw on enhanced representations of data points to drive insights and facilitate more effective decision-making conversations.

For example, the provision of different dashboard dimensions – such as viewing data according to monthly, quarterly, and annual time windows – allows for greater flexibility of reference.

Stakeholders can dive into specific granularities with a few simple clicks, making it seamless to attain cross-functional perspectives.

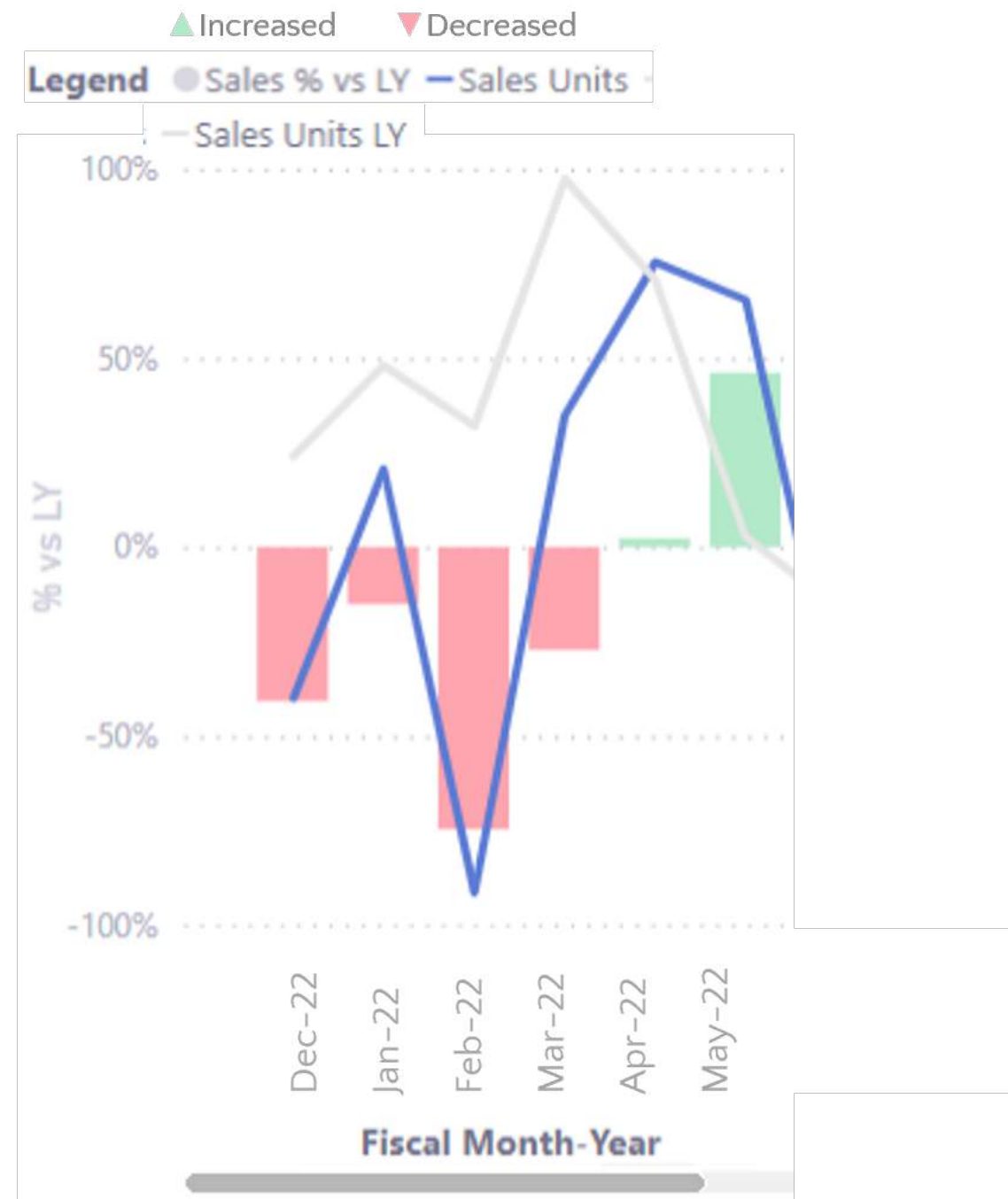
This comes in particularly handy during the S&OP meetings, as users can quickly pull up and easily reference distinct granularities without having to go back and consult separate Excel files, thereby minimising the need for additional touchpoints and creating greater efficiency.

Another aspect that improves the user experience is data visualisation.

By presenting the data in the form of colourful and interactive charts, graphs and tables, the new dashboard offers a more engaging and readily digestible experience than the previous format, which was relatively table heavy.

On the whole, Lynx Analytics' solution has empowered the global retailer to refine its business workflows and data illustrations, allowing for an enhanced and more streamlined user experience.

This Year vs Last Year



Key Success Metrics



Future developments and wider applications

Lynx Analytics continues to innovate with the solution based on the client's needs. The company is looking at expanding the use of this solution to other major markets and further automating the data consolidation stage for even greater accuracy and efficiency.

As with the case of the global retailer, organisations that may be facing similar issues with overlapping teams and spontaneous formats that have crystallised over time could benefit from a similar overhaul of their data infrastructure.

This is an all-important step in enabling companies to leverage the full potential of data analytics to achieve their business goals.

