

UNILEVER CASE STUDY

Groundbreaking In-Store Data Service Provides Unprecedented Visibility to Transform Shelf Management

Unilever utilizes Pensa Systems to improve On Shelf Availability and Share of Shelf to deliver a more Perfect Store





Unilever

Unilever is a leading global company selling some of the world's most recognized brands in personal care, cleaning and food. One in three people in over 190 countries use a Unilever brand every day.

Like many consumer goods producers, Unilever is constantly striving to maximize sales growth and enhance its customers' shopping experience by improving retail execution. To achieve this, it pioneered the concept of the "Perfect Store" in the late 2000s, which focuses on ensuring that every store has the ideal assortment of products, that those products are visible to shoppers, and that in-store tools, promotions, signage, etc., are executed flawlessly. While Unilever is leading the industry in using data and analytics to deliver the Perfect Store, real-time shelf visibility has been a blind spot, which is an issue that continues to challenge the entire industry. With limited ability to collect frequent and accurate data for product availability (On Shelf Availability, or OSA), or data about the relative portion of the shelf devoted to their products (Share of Shelf, or SOS), it becomes a huge challenge to ensure Unilever's 25 million retail sales outlets consistently deliver on the Perfect Store promise.

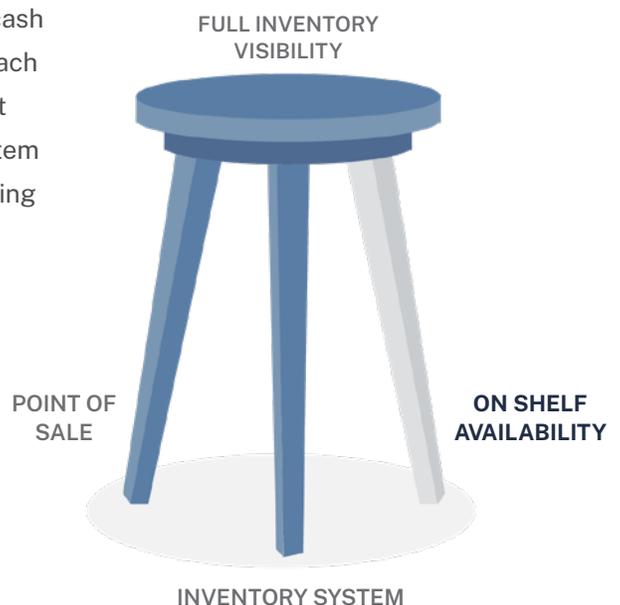


Universal Challenge

The retail store shelf is ground zero for both consumer brands and retailers. Yet today, neither consumer brands nor retailers have an automated way to monitor store shelves to assess how they are performing. While planograms define how a shelf should look, it is rarely what a customer actually sees given variances in compliance with the plan, stockouts, misplacements and other shelf-level changes. Actual on-shelf availability is monitored by an “eyeballs only” system that is manual, captured only for a point in time. Retailers ‘walk the floor’ to spot stockouts or incorrect placement of products. Brands send in third-party spotters to check on the same, but they visit infrequently, the data is manually processed, often inaccurate, and may take weeks or even months before the brands see it.

When brands finally get the reports, data for OSA and SOS is generally only high-level, averaged across individual items (SKUs), stores, and time, hiding potentially large fluctuations in execution between stores, products and times of day and month that could be driving down overall results. Planogram variability, stockouts, faceovers, tag compliance, and SKU substitution issues are easily hidden with today’s manual, sporadic shelf audits.

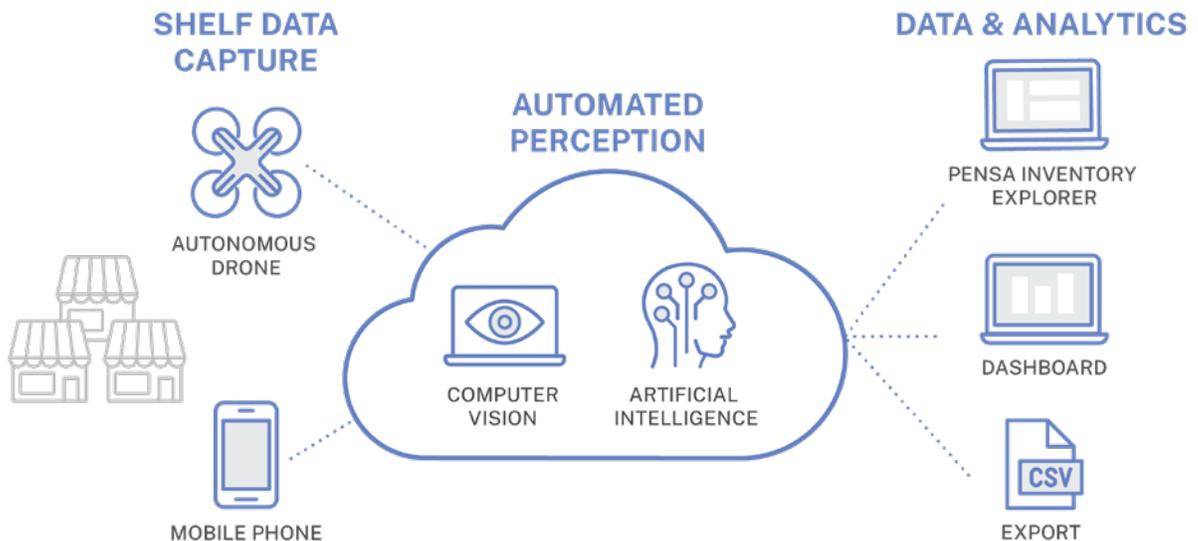
As a result, brands and retailers miss out on \$1 Trillion* each year because they don’t have what customers want on the shelf. Between “inventory in” and “sales out” there is a black box, making it virtually impossible for brands to know what is actually happening on the shelf and is available for sale in any given store on any given day. Inventory systems provide a view of what supply chain systems deliver to stores, while cash register point of sale systems record each purchase. In between is, in theory, what should be on the shelf, but with no system of record to actually know – thus creating the trillion dollar stockout problem.



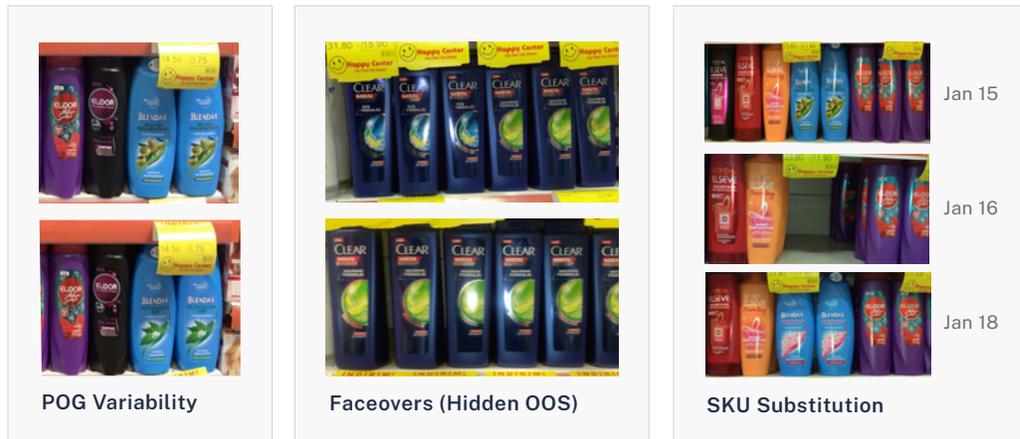
Solution

Pensa's data as-a service (DaaS) offering fills in the gap by giving brands like Unilever continuous visibility of the store shelf, with near-real-time reporting of OSA and SOS, by day, by SKU, and by store. Using continuous in-store monitoring that feeds the cloud-based “automated perception system,” brands gain unprecedented shelf visibility so they can pinpoint variability that impacts sales and profitability.

Pensa uses breakthrough patent-pending technology –including artificial intelligence and computer vision with visual data capture, which uses autonomous drones and mobile phones to see and understand what’s on store shelves.



The system visually “learns” as a person would, gaining a full “digital understanding” of each product on the shelf and what should be there. The system can quickly identify the many errors missed by human visual inspection. It identifies any variations –like products missing from the shelf, misplaced products, and planogram variances– that often account for 30%-40% of hidden stockouts and other sources of lost revenue.



With this view of the entire shelf, Pensa Data Services provides the missing link that can help brands and retailers minimize stockouts, optimize product planning, and boost revenues and profitability.

Unilever Implementation

To increase understanding of real-time shelf conditions and to support its global Perfect Store initiative, Unilever initiated a pilot in Turkey, its 5th largest geography, in December 2019, with a focus on the hair care category, measuring OSA and SOS across multiple stores in both the European and Asian portions of the country.

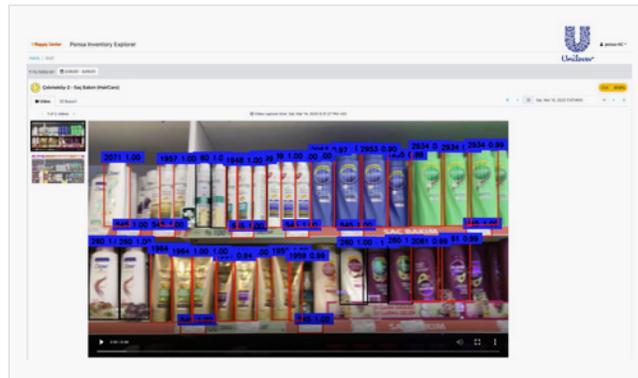
- **Scanning**

Pensa began onboarding the stores by scanning shelves and capturing data 3x per day with mobile phone and autonomous drones. These video scans were able to capture the view as if a person was seeing through the shelves, at all angles.



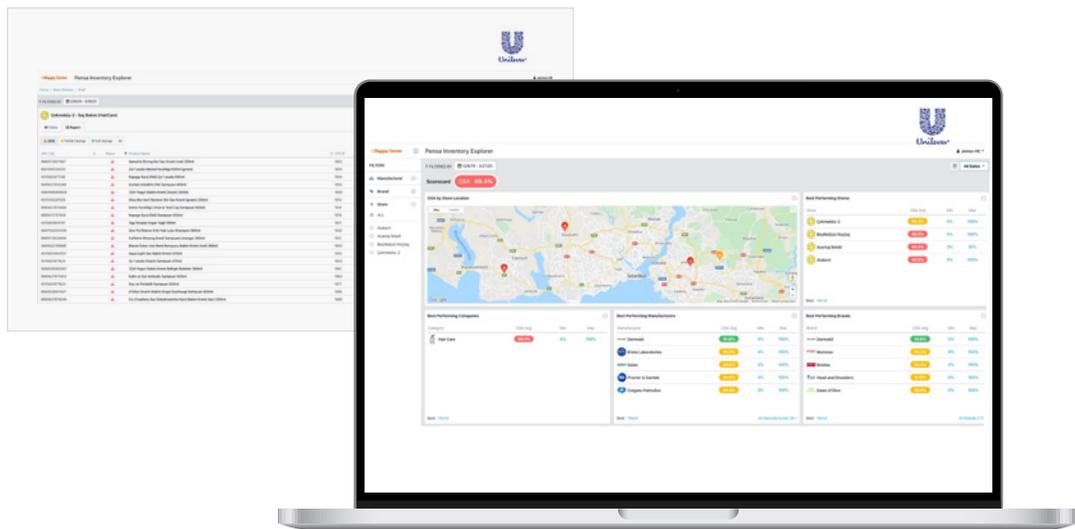
- **Analyzing**

Within minutes of the video scans, data was sent to the cloud where Pensa's automated perception system went to work, visually recognizing individual products, figuring out how the shelf was organized and automatically training it with high accuracy.



- **Real-Time Reporting**

Pensa was able to detect all of the variations to plan on the shelves, and within one hour, detailed reports were available in the Pensa Inventory Explorer. These reports showed which stores were performing the best and provided granular detail about stockouts or variances to planograms. Videos of the actual shelf scans were also made available so Unilever could look at exactly what was happening on every shelf in every store.



Results

Pensa Data Services granular level of key metrics data helped Unilever uncover root causes and identify improvement opportunities to further distance itself from competitors through improved OSA and SOS. With this continuous data from high frequency scans, they were able to expose cross-store execution inconsistencies, product transition challenges, and opportunities to become an even more Perfect Store.

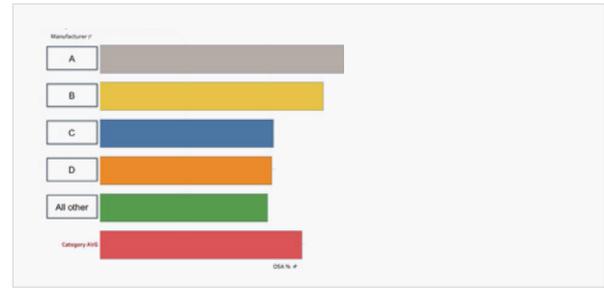
Pinpointing Areas for Operational and Shelf Performance Improvements

While looking at an overall “average” for on-shelf-availability showed that Unilever was performing okay, averaging across stores and different time periods hides the critical truths. Pensa found Unilever could be doing even better if it eliminated some of the variability it found in the details. Pensa Data Services was able to uncover negative variability during a particular timeframe, and then deep dive even further to uncover root causes that Unilever could fix for the future.

As Pensa Data Services reported daily OSA trends, it found that Unilever was outperforming the competition except in the month of January, when the company showed a significant stock out situation.

To better understand what was driving the January decline, Pensa Data Services provided detailed OSA data by store during this specific timeframe, which made it easy to pinpoint variability at individual stores.

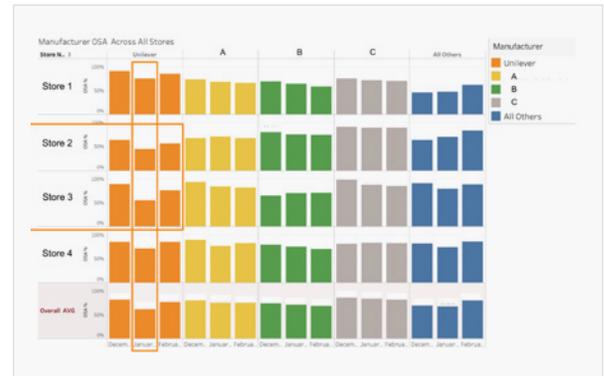
Within those stores, Pensa Data Services analyzed individual SKUs to pinpoint that the root cause was actually a product transition that caused some unintended extended stock-outs.



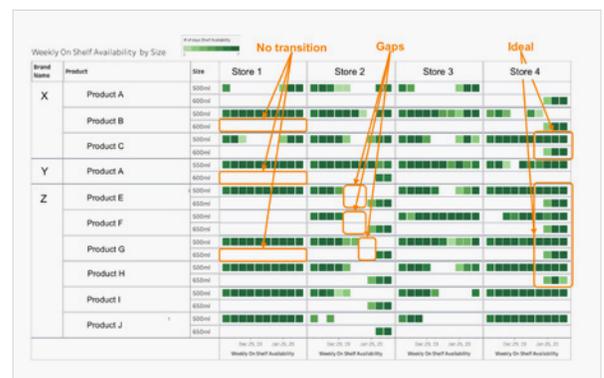
On Shelf Availability (OSA)



Daily OSA Shows Unilever Challenges in January



Store View Shows Clear Disparity in Store Performance



Varied SKU Size Rollover Execution Hurt OSA

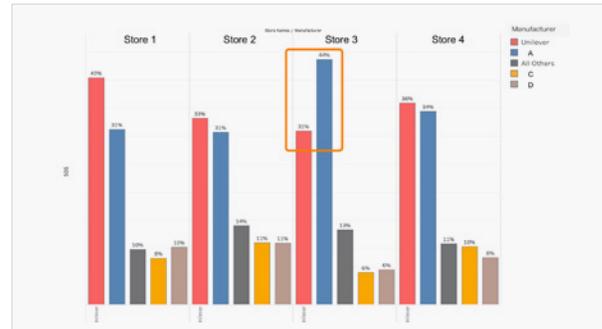
Uncovering Competitive Share of Shelf Opportunities

When reviewing Share of Shelf data, Pensa Data Services again found that at the aggregated, “average of average” level, Unilever was competing effectively against the competition.

But after diving deeper into the store level data, Pensa Data Services found that Unilever was trailing significantly in one store. This is likely due to a planogram issue that can be easily resolved now that there is visibility to the opportunity. If this was to be corrected, the overall average of averages would give Unilever **a four percentage point lead over the next closest competitor.**

Pensa Data Services then analyzed daily individual brand SOS compared to their competitors, and found that there were significant variances by brand. Even though the Unilever brands were generally trending above their stated KPI, Pensa was able to uncover opportunities for Unilever to further exceed goals and separate itself from the competition by understanding and eliminating the daily variance.

Pensa Data Services was able to dive even further into the data to see how specific SKUs were performing and uncovered another hidden opportunity to dramatically improve SOS for their customers. As a part of Unilever’s Perfect Store initiative, it was important to ensure the company’s “core” SKUs were always available to customers. Pensa found that although brand level data showed they were trending above KPI levels, it wasn’t being driven by the critical “core” SKUs consistently across stores. Shelves were being filled and refaced to appear full to the customer, but were actually stocked with largely non-core items. This created hidden stockouts of the top movers, extending the time customers weren’t able to buy their favorite brands and potentially reducing total sales.



Store Level Data Shows Variations and Areas to Improve



Dramatic Differences in Share of Shelf - by Brand & Time



Detail Shows Low SoS for “Core” Perfect Store SKUs



4%

**INCREASE IN
SHARE-OF-SHELF**

9%

**REDUCTION
OF STOCKOUTS**

Impact

With Pensa Data Services and the innovative Unilever Turkey sales and marketing team, the region was able to diagnose opportunities to potentially increase competitive share-of-shelf up to four percentage points and reduce stockouts up to nine percentage points during critical shopping periods. This can translate into an up to four-and-a-half percent increase in revenue.

Taking these learnings globally holds the promise and potential for Unilever to serve its customers better, work with their retailers toward a "more Perfect Store," and continue to be an innovative global leader in the consumer goods industry.

“With Pensa's data as a service, we were able to uncover hidden issues and pinpoint opportunities to improve our OSA and SOS.”

Veysi Armağan Kesen, Transformation Director, Unilever Turkey



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