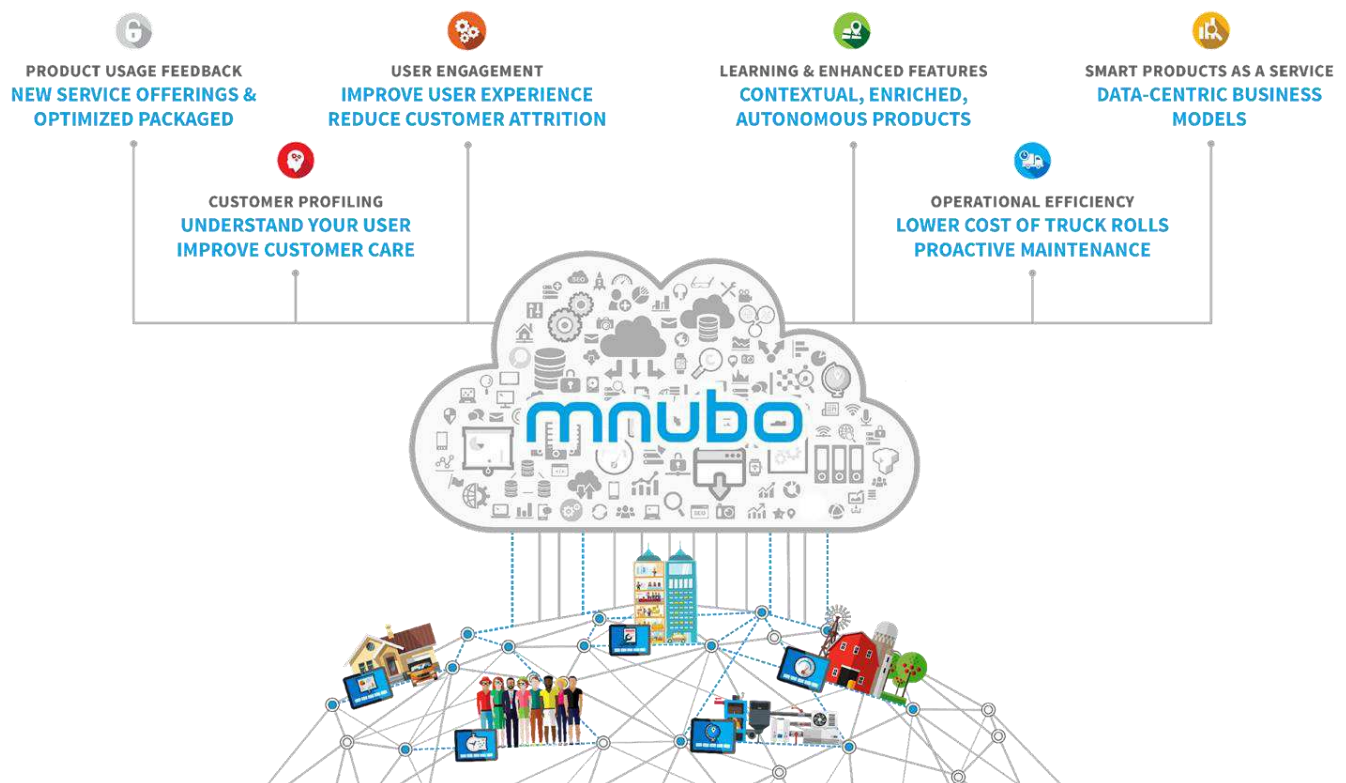


EXECUTIVE SUMMARY

One of the largest global beverage and consumer product brands is launching the world's first connected beer fridge to monitor consumption and build brand engagement. Leveraging its strategic ecosystem, the company was able to quickly, and securely deliver a robust, data-driven connected product.

INTERNET OF THINGS (IoT) SOLUTION PROVIDERS:

- **BEER FRIDGE MANUFACTURER (BFM)** designs and builds the connected beer fridges. Consumers can monitor their fridge through the paired mobile app.
- **CONNECTIVITY PARTNER** provides the connectivity module and device management platform to securely connect the fridges.
- **MNUBO** provides the data management and analytics platform to organize, store and analyze product usage & consumer engagement and deliver actionable insights to the brand.





CASE STUDY Consumer Appliance Brand

How to Use Consumer IoT Data to Drive Brand Engagement and New Revenue Services

HOW THE GLOBAL BRAND USED MNUBO'S INSIGHTS SOLUTION

Events and sensor data from the connected fridge and the paired mobile app are used to power compelling insights for the brand, some examples include:

1. Product Usage and Customer Profiling
2. Predictive Replenishment
3. Proactive Maintenance Services and Data-Driven Features

The raw, unprocessed events and sensor data from the fridge is posted to mnuvo from the connectivity cloud using standard APIs. The implementation was completed in quick time with insights available immediately. The IoT data is stored and organized in time-series databases - the resulting historical, real time and predictive insights are computed at scale. These business insights are presented in mnuvo's SmartObjects UI and automated reports, they are also made available via a restitution API to the customer's dashboards and business systems.

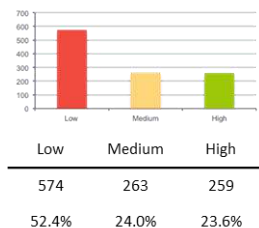
PRODUCT FEATURE USAGE AND CUSTOMER PROFILING



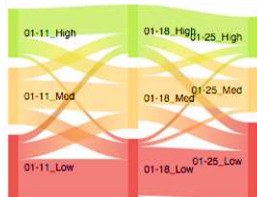
mnuvo integrates the fridge data, and the anonymized consumer data (such as gender, age, location etc.) to monitor usage & consumption. The beverage brand can then rapidly gain comprehensive install base reports to understand *how*, *when* and *where* their products are being used. mnuvo also applies data science to build engagement profiles to group consumers based on their usage behaviour which helps the brand tailor its marketing and products to each group.

ACROSS INSTALL BASE

NUMBERS BY GROUPS

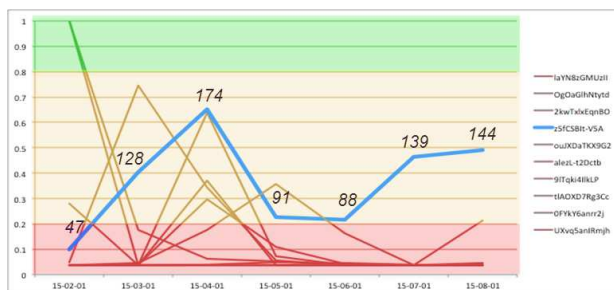


EVOLUTION OF GROUPS OVERTIME



AT EACH CONSUMER PRODUCT LEVEL

CONSUMPTION SCORE OVER TIME (ACROSS 10 FRIDGES)

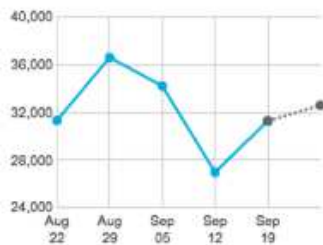


PREDICTIVE REPLENISHMENT

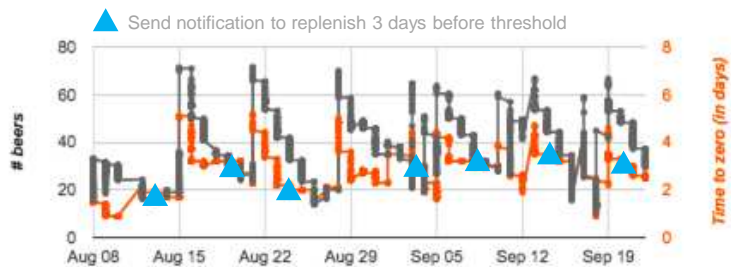
Over 18 sensors on the interior and exterior of the fridge monitor the changes in stock levels, temperature, user interaction (incl. app), scheduled fridge events and other data. mnuvo further enriches this data with geo-location, weather and other pertinent contextual data, such as sports game schedules. The brand can now get powerful insights on consumption behavior to enable service and marketing actions e.g. increase sales revenues by promoting auto-order replenishment when the forecast stock level is below threshold, in context of weather, location or upcoming games. Also, usage reports as it relates to:

- Individual and aggregate consumption
- Sports team preference and game nights
- Variation across consumer profiles, etc.

Predict Consumption
Forecast consumption for next period



Predictive Replenishment
Prediction of when fridge will be empty



PROACTIVE MAINTENANCE SERVICES AND DATA-DRIVEN FEATURES

In addition to the usage and consumption data, mnuvo stores and analyzes the fridge's diagnostics data to determine trends, patterns and highlight potential issues. The brand is notified of software, connectivity and pairing issues, product anomalies, as well as operational issues e.g. temperature fluctuations and component failures. Over time, mnuvo can apply data science to empower the brand's customer support and services teams by highlighting issues *before* they occur. The company can take proactive measures to address product problems, improve customer experience, and build data-driven after-market services (e.g. usage-based warranty)

In summary, valuable business insights from the connected fridges helped the brand drive broader market understanding and enabled business-wide product and operational strategies. Product managers can use this comprehensive view of *actual* usage insights to boost consumption and foster customer loyalty.