

CASE STUDY: SMART HOME

DATA KEY TO DELIVERING A COMPLETE SMART HOME EXPERIENCE

THE SMART HOME ISN'T VERY SMART..YET



mnuo

mnuo is an Internet of Things (IoT) company, providing Data Analytics solutions for connected Product Manufacturers and Service Providers. mnuo extracts business value from IoT data by delivering out-of-the-box insights, automated reports and advanced IoT data science. It offers a SaaS solution to connected product manufacturers to ingest, enrich and analyze their object data. mnuo's SaaS offering benefits customers in consumer, enterprise and industrial verticals – and analyzes billions of IoT data points every month. Find out more at www.mnuo.com

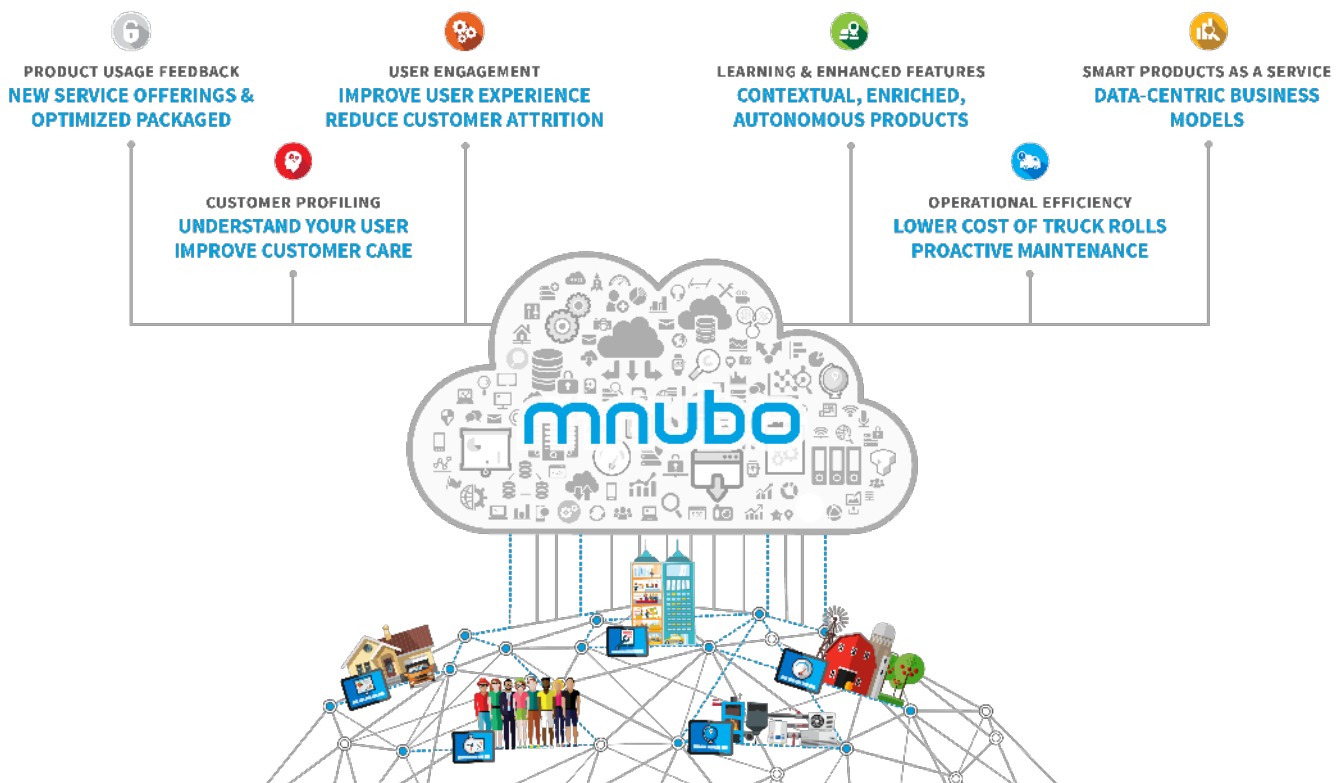
© Copyright 2017 mnuo inc. all rights reserved.

EXECUTIVE TAKEAWAYS

One in five North American homes has a 'smart home' product that connects the homeowner's physical environment to the Internet. By tapping into this ever-burgeoning home data, IoT analytics platforms, like mnubo's SmartObjects, will morph the traditional, basic connected home experience into a self-learning, adaptable and personalized solution. This opportunity gets more complex and compounded as the sheer variety and volume of sensor data increases, with more homes getting connected. In fact, it is predicted that by 2022, a typical family home could contain more than 500 smart devices.

KEY TAKEAWAYS FROM THIS CASE STUDY ARE THAT

- **Inter-product Connections:** Smart homes function on a broader scale than single connected objects; their applications rely on inter-product connections and leverage data from multiple objects to transform the quality of life.
- **Purpose-built IoT Analytics Platforms:** Empower smart home product manufacturers with 360° insights on how their products are being used.
- **New Business Opportunities:** By effectively extracting value from sensor data, IoT analytics could spur new business opportunities across the entire smart home value chain
- **Value Across Stakeholders:** Each of the stakeholders will be able to leverage the relevant insights to derive real business value for themselves as well as for the home owners transforming today's connected homes into tomorrow's smart homes.



CASE STUDY:**Smart Home Product Manufacturer****Delivering a Smart Home Experience***Think Smart, Use Data***HOW DATA TRANSFORMS THE 'CONNECTED HOME' INTO A 'SMART HOME'**

Smart home products and appliances are continuously generating usage and interaction data. By applying IoT analytics, smart home players can detect trends and patterns and use these insights to drive personalization, segment and engage usage profiles, promote data-driven services, and lower the cost of operations.

I. NEED FOR PERSONALIZATION

The benefits of IoT analytics can cater to both ends of the value chain. Homeowners are interested in valuable individual insights that help them get the most out of their smart home, whereas product manufacturers are more focused on aggregated product usage feedback and operational efficiency. Moreover, smart home solutions are used differently based on the consumer personas – some use it for automation, others for security or energy efficiency. By scoring, clustering and classifying users based on their product usage data, smart home product manufacturers and service providers can build dynamic profiles, analyze user engagement and help homeowners maximize value from their solution by enabling personalized offerings.

II. DATA-DRIVEN SERVICES

Most smart home platforms overlook the potential of the bilateral connection between homeowners and providers of smart home applications. While the home is connected to the application cloud to enable monitoring and control actions, smart home platforms must leverage the cloud-to-home connection to enable the delivery of customizable, data-driven services to the home. For example, comparative benchmarking and energy saving reports.

III. SEAMLESS EXPERIENCE

Smart home data management and analytics platforms can aggregate data from multiple products within the home providing a unified perspective of homeowners to enable seamless cross-product experiences. For example, by learning interactions between objects from different manufacturers, mnuvo can dynamically suggest automation rules that will streamline the homeowners experience.

HOW MNUVO IS EMPOWERING SMART HOMES GLOBALLY

mnuvo's SmartObjects service is a complete solution for IoT data. The platform offers a suite of IoT Big Data Analytics services that facilitate the development and deployment of Smart Home applications.

Using sensor and event data, the SmartObjects platform powers compelling insights, some examples include: The raw, unprocessed event and sensor data is posted to mnuvo using Rest APIs, the data is stored and organized in Big Data clusters, and the insights are computed on real-time analytics engines. The outcomes are presented in mnuvo's web UI or posted to the brand's dashboard application using Rest APIs.

I. ENGAGEMENT USAGE AND PROFILING

There is no winning 'value proposition' for the smart home. Instead, different consumers identify with different smart devices based on their current needs. mnuvo's SmartObjects service integrates object data, usage events data and consumer data (gender, age, location, etc) and monitors usage, consumption and interactions. Object makers can perform flexible queries to understand how, when and where their products are being used. mnuvo also applies data science to build usage and engagement profiles to group consumers on their usage behaviour which helps object makers tailor their products and services to each segment.

II. PRODUCT FEEDBACK & SERVICE MAINTENANCE

The smart home is the next major opportunity for premium support. Opportunities for smart home support include setup and enablement services, services related to device malfunction, and security and privacy protection services. An essential part of the smart home experience is product feedback and customer service. mnuvo's SmartObjects service stores and analyzes diagnostic data to determine trends, patterns and highlight potential issues. Object makers are notified of connectivity and pairing issues, anomalies and abnormal product behaviour, as well as operational issues such as temperature fluctuations and component failures.

III. SECURITY SCORING

Security is a key driver in smart home adoption. Smart home systems with a wide range of safety and security features hold the greatest appeal among consumers. The SmartObjects service does not monitor the home in isolation. In addition to smart home data, the SmartObjects platform monitors both environmental (neighborhood crime rate, proximity to police station, etc) and behavioral (alarm response times, how frequently the door is unlocked, etc) patterns to construct security scores unique to each connected home. Real time security scoring not only allows homeowners to set up, and monitor, threat detectors but it provides insurance companies with a tool to assess household security.

By effectively extracting value from sensor data, IoT analytics allow object makers to create data-driven differentiation and deliver richer applications. Insights from object data drive broader market understanding, empower operational efficiencies and boost consumer engagement. mnuvo's SmartObjects service transform connected objects into 'smart objects'.