**Letter of Engagement**

**Executive Summary**

Paws and Whiskers Inc. is a pet product retailer that sells pet food, toys, and other pet-related products to owners of a variety of household pets. Our products are classified by product categories, which include food, toys, collars, beds, leashes, treats, tanks, cages, grooming supplies, and ID tags. Paws and Whiskers was founded and began its sales operations in 2018 and has been selling pet products since. We operate solely online and serve the entire U.S, including Washington D.C. Customers from around the country can easily shop with us through our online retail site. We enable a simple and seamless shipping process, as all shipping prices are included in the retail price, as opposed to being tacked on to the customer’s price during checkout.

Because we offer a wide range of products for a variety of pet species, we are interested in understanding the data and trends around our product sales. Specifically, we are interested in understanding how sales vary by time, product and product category, supplier, and employee. We also want to better under the demographics of our consumers and which products appeal most to which consumer groups. To answer these questions, we will be designing, creating, and implementing a data warehouse and data mart to allow for easy and fruitful analysis of our sales data. Although the focus of this project is on our product sales, we will require information about the products themselves, our customers, employees, and our suppliers to gain a rich and comprehensive view of our sales trends.

**Business Requirements**

* The store manager would like to know how product sales are distributed by employees. They would also like to know whether there is a correlation between total sales and the employee’s salary.
* The VP of Product Quality wants to know what the average product ratings are associated with the most profitable products.
* The VP of Finance would like to understand whether there is seasonality within their sales. To understand this, they want to know what the revenue and profit are for each quarter.
* The Chief Operating Officer would like to know what the products with the highest revenue and highest profit are by supplier and product category.
* The VP of Corporate Strategy would like to know how profit is broken down by state and, specifically, which state generates the most profit. They would also like to know how the customer base is distributed by state.

**Business Questions**

To better understand our product sales trends, we want to answer the following questions:

1. Who’s the employee with the highest sales in 2023? Is there a correlation between salary and total sales per employee?
2. What are the average ratings of the top 5 most profitable products?
3. What are the revenue and profit per quarter? Are there seasonal products?
4. What are the products with the highest revenue and profit by supplier and product category?
5. Do customers from a particular state generate the most profit? If so, which state is it?