HoverCar Report Overview

About the Presentation

- The presentation follows a mock sales report presentation, but is mostly being used to showcase the various visuals, slicers, cross-filtering, and calculation used in the actual PowerBI program should you not choose, or be able, to open and view the PBI file.

- The talking points and takeaways I have chosen are used primarily to showcase the cross-filter and interactivity of visuals, and are more "interesting findings" than "actual focal points". For the sake of the report, pretend they are focal points carrying over from a previous meeting/presentation.

- Customer Insights and Inventory were simply included to showcase these type of pages and ideas in PowerBI (pretend this is just part of the Sales Report, or maybe the SCM management/Customer Satisfaction teams are involved).

- These findings are purely fictional, based on the randomized/fictional data, and are in no way intended to represent any personal findings or beliefs related to any industry or groups of people in real life. See below for data details.

About The Data

- This report uses self-created Excel sales data based on a fictional vehicle company "Vince's HoverCars" that sells HoverCars (vehicles), along with Sidecars, custom windshields, and spoilers as accessory items. The Report reflects sales dates between 1/1/2023 and 5/14/2024, with the focus being 2023 sales. Most items and datapoints were randomly generated within set parameters, then adjusted to reflect a realistic dataset as noted below.

- Production cost for COGS was set at roughly 80% of sale price for vehicles (HoverCars) and 50% of sale price for sidecars and accessories to create a different markup and variance.

- 1500 customer names were generated from various online baby name lists and databases with several popular names being purposefully repeated for realism. Age was assigned between 18 and 100 at random. Gender was assigned based mostly on the original data source, with some carinae, and several omitted (O) for realism (used for non-binary or non-

identifying). Emails and phone numbers were created with 5-10% of entries being omitted for realism.

- Sales Data includes 1770 sales between 1/1/2023 and 5/14/2024 that are randomly generated and assigned to customers. HoverCar sales were kept at 1-per-transaction for realism, while accessories were generated at random between 1-3 per sale (for windshield, sidecar, and spoiler options). Time of Sale was randomly assigned between 0800 (8AM) and 1800 (6PM) assuming standard business hours.

- Inventory sets initial stock to 200% of QTY sold (after it was fully calculated for accurate sample purposes) for each HoverCar and SideCar, and 200% + 50 extra units for all accessory items to simulate more realistic stock between the vehicles and smaller accessory items. Stock was then either added or depleted at random at between 1 and 3 for each month to simulate inventory change. There is no dataset for incoming stock/inventory, as I believe the randomize data simulates that well enough.

- There are 203 products, broken down into 4 main categories, 8 subcategories, and various color options for each. Prices were generated to reflect popular color and package choices similar to the automotive industry (i.e. Black costs more than Orange, SS package is more than standard, etc.)

- A separate Date Table was added for Report Analysis modeling purposes.

- The Inventory Reference table was created as an unpivoted version of the regular table, used for an accurate summation of Cost of Production for each product.

- Dax Formulas used for Measures/calculations:
    - `Quarter = FORMAT('Date Table'[Date],"\QQ")`
    - `Birth_Month = MONTH(Customer_Information[Date_of_Birth])`
    - `Birth_Month_Name = FORMAT(Customer_Information[Date_of_Birth],"MMM")`
    - `Total Change = Inventory[Jan 24]-Inventory[Jan 23]`
    - `Profit = SUM('Sales_Data'[Total Revenue])-SUM(Inventory[Cost_of_Production])`
    - `Sales Margin = DIVIDE([Profit],SUM('Sales_Data'[Total Revenue]),0)`