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- For this specific case, we want to look at the final parts of the data analytics process: Interpreting & Communicating Results. In particular, best practices for presenting and storytelling!
- The company is Ferrero, the largest privately held chocolate and confectionary company in the world



- Let's learn more about the business context:
  - In 2018, Ferrero had recently acquired significant additional brands, including Nestle's US confectionary business and Kellogg's cookies and fruit snacks business

More info about AIAB's Analytics Accelerator and other real-world data analytics case studies: https://aiab.wharton.upenn.edu/students/student-analytics-accelerators/

- Let's learn more about the business context:
  - In 2018, Ferrero had recently acquired significant additional brands, including Nestle's US confectionary business and Kellogg's cookies and fruit snacks business
  - Given these acquisitions, there was a business need to better optimize the advertising spending across the brands

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- Ferrero wanted to solve the following business *objective*:
  - To build a *Marketing Mix Model* to understand if there are opportunities to test the re-allocation of advertising spend (specifically on TV advertising spend)
    - A Marketing Mix Model is a multivariate regression that uses marketing data to predict sales or volume outcomes



- Ferrero wanted to solve the following business objective:
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    - A Marketing Mix Model is a multivariate regression that uses marketing data to predict sales or volume outcomes
  - Ferrero was specifically interested in the existence of 'halo' interactions, or times in which one product's advertising benefitted another product
    - For example, if they saw a statistically significant increase in Tic Tac Mint sales when Tic Tac gum was advertised on TV

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- After completing the analysis, the student analysts interpreted and communicated their results in a presentation to Ferrero stakeholders
- What follows are some highlights from their final presentation to demonstrate some best practices for presenting and storytelling
- Following these best practices can:
  - Lead to a more effective and impactful presentation of a data analytics project
  - Help to convey the information clearly and engagingly to the audience



 A good agenda gives the audience a clear structure of your presentation and what's to be expected





 A brief background provides the audience with a contextual framework for better understanding the subject matter of your presentation

> Ferrero is the largest privately held chocolate and confectionary company in the world

**FERRERO** 



Founded in 1946 and family owned since creation



Product portfolio has grown significantly throughout multiple decades



Currently owns 4 brands of confectionary, with recent acquisition of



Headquartered in Switzerland, with dominant share in Italy and Germany

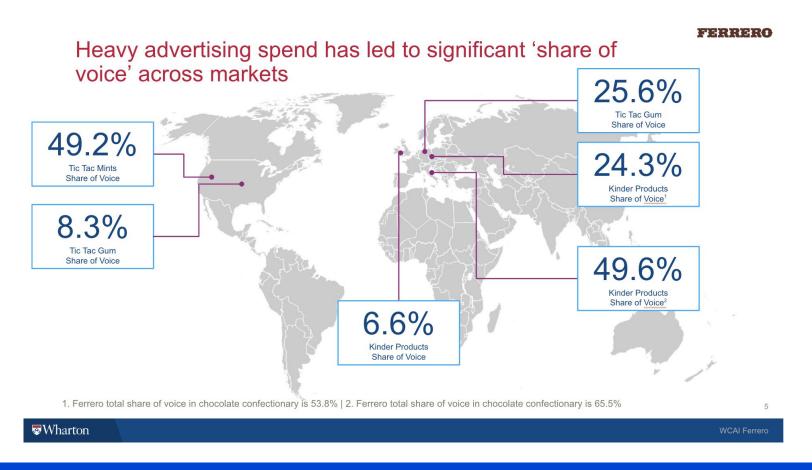
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 A brief background provides the audience with a contextual framework for better understanding the subject matter of your presentation

Recent acquisitions create need to optimize heavy advertising spend across brand portfolios



 Using maps as a visualization tool helps to effectively illustrate the geographical distribution

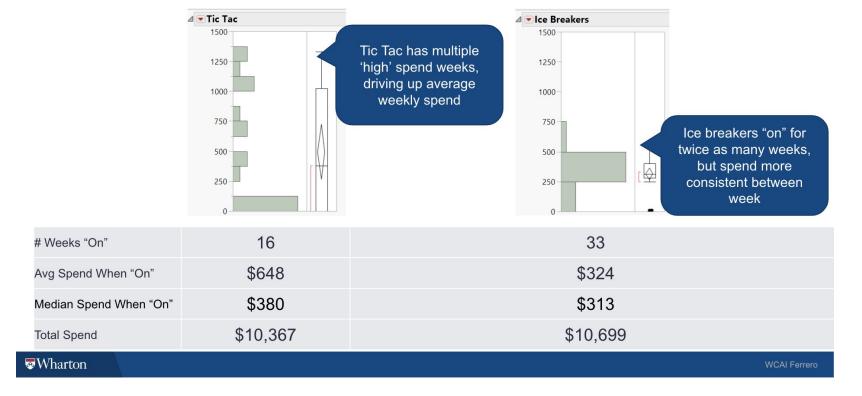




Simplify complex concepts for the audience

Tic Tac and Ice Breaker Mint total annual spend almost equal, though distributed differently







Highlight key insights

Kinder UK spend lower than other brands (driven by less weeks), even when considering total product count Kinder Other Ferrero Mars Mondelez Lindt Nestle Mondelez Lindt Nestle Ferrero, Non Kinder Mars €800,000.00 €800.000.00 Mars is highest total €700,000.00 €700,000.00 €700,000.00 €700,000.00 €700,0 less total weeks spend brand, with €600,0 €600,000.00 €600,000.00 €600,000.00 than other brands largest portfolio €500,000.00 €500,000.00 €400,000.00 €400,000.00 €400.000.00 €400,000.00 €400,000.00 €300,000.00 €300.000.00 €300,000.00 €300,000.00 €300.000.00 €300.000.00 €200,000.00 €200,000.00 €200,000.00 €200,000.00 €200.000.00 €100.000.00 €100,000.00 -€100,000.00 €100,000.00 €100,000.00 €100,000.00 €0.00 (€100,000.00) (€100,000.00) Num Non-Zero Weeks 23 48 52 35 37 16 Avg. Weekly Spend € 249,709 € 74,279 € 289,837 € 225,162 € 188,618 € 304,063 Total Annual Spend € 3,017,887 € 5,743,318 € 14,595,044 € 3,862,482 € 10,144,312 € 8,330,988 **Product Count** 14 6 6 **₩**harton

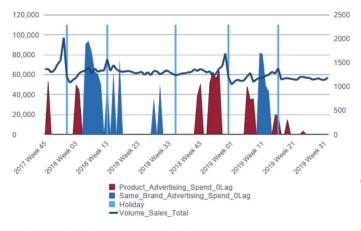


FERRERO

#### **Identify patterns and trends**

#### Tic Tac Mint benefits when both gum or mint are promoted





Tic Tac Mint sales are seen to increase with it's own advertising, as well as with gum's, making it a 'receiver' from any tic tac advertising.

The adjusted R-Squared is .14, which makes our confidence in this model lower than that of other products.



As the level of promotion increases in store, total sales expected to

#### Tic Tac Mint Advertising Spend (Lagged) 4.196 · Statistical significance at the .05 level

· As expected, Mint sales increase with Mint advertising (lagged by 3 week)

#### Tic Tac Gum Spend (Lagged 2) 2.359

1.289

· Gum appears to be a "donor" for Mint (lagged 2 weeks)

#### Tic Tac Gum Spend (Lagged 3)

• 3 weeks lagged gum spend also appears to confirm "donor" of gum for

22



FERRERO



#### **Provide insights and recommendations**

#### FERRERO

#### Other potential additions to the study

Study advertising interactions to determine significance

- · We recommend analysing the interaction of different variables to identify the impact
- The interaction effect is the multiplicative effect of two variables together at the same moment
- For example, having advertisement and promotions for the same product at the same time, might have a greater impact on sales than each one independently may have
- The same can apply to other variables not analysed yet, such as: The effectiveness of the advertisement campaign

#### Increase number of data points

- As we only studied over a ~2 year horizon at a weekly level, our number of observations are limited
- This number is further reduced when considering the proportion of weeks when advertising is "turned on" (sometimes as low as 10 weeks / year)
- · Hence the regression models might not capture the true effects of advertisement in sales
- Additionally, the limited amount of data does not allow for true identification of seasonality or autocorrelation, which may play a larger role than found in our study

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