

Data Analytics Simulation: Strategic Decision Making

HOW-TO-PLAY GUIDE

Background

You have just been hired as a brand manager at Kelsey-White, an American multinational consumer goods company. Recently the firm invested in the development of K-W Vision, a series of systems and processes that allow the use of up-to-date data and advanced analytics to drive informed decision making about K-W brands. The year is 2019. The system is populated with 4 years of historical data.

As brand manager for K-W's Blue laundry detergent, you are tasked to lead the brand's turnaround. Use the Vision platform to develop your strategy, grow Blue's market share, and become more profitable over the next 4 years.

Your objectives

Use the K-W Vision dashboard, reports and data explorer screens to identify issues and opportunities for Blue in the U.S. market.

Make decisions that support the Blue brand:

- Predict market demand and set production
- Set channel price
- Make formulation decisions
- Determine promotional spending decisions
- Communicate your strategy to your managers

The simulation begins in 2019. Make decisions for 4 years, ending in 2022.

Blue and its Competitors in 2018

Blue

- Price per unit: \$7
- Market share: 11.0%

Fresh

- Price per unit: \$8
- Market share: 26.3%

Store

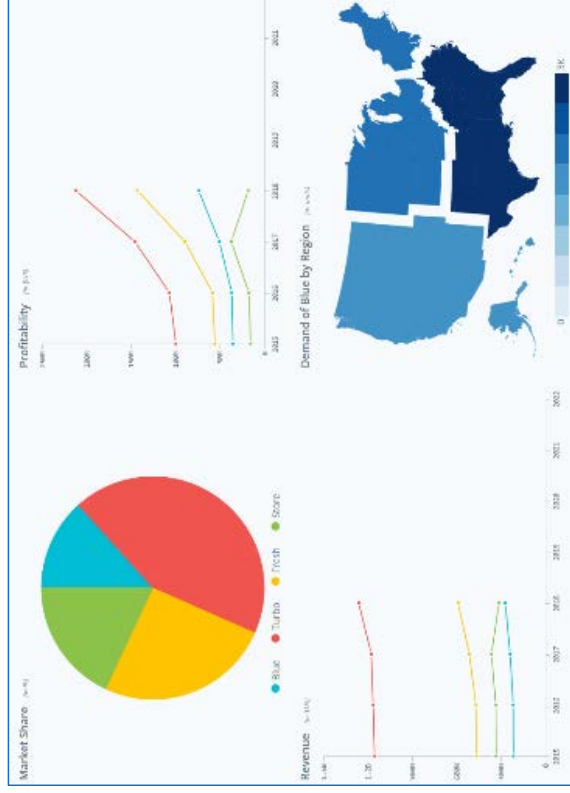
- Price per unit: \$6
- Market share: 18.6

Turbo

- Price per unit: \$10
- Market share: 44.1%



Dashboard



The **Dashboard** provides at-a-glance metrics:

- Market Share
- Profitability
- Revenue
- Demand of Blue by Region

On all screens, you can hover over any data point on the chart for more specific information.

Reports: Income Statement

Dashboard

Reports

Data Explorer

Geographic Demand

Decision History

Make Decisions

Income Statement

(in \$M)

Production v. Demand

Pricing

Social Media

	2015	2016	2017	2018	2019
Revenue	\$217.9M	\$219.7M	\$235.8M	\$273.1M	
Costs					
Variable Costs	\$65.4M	\$65.0M	\$72.0M	\$81.0M	
Fixed Costs	\$87.0M	\$87.0M	\$87.0M	\$87.0M	
Other Costs	\$38.8M	\$39.2M	\$33.0M	\$37.0M	
Total Costs	\$102.0M	\$106.1M	\$103.0M	\$106.5M	
Operating Profit	\$115.9M	\$113.7M	\$132.8M	\$167.1M	
Cumulative Operating Profit	\$35.5M	\$72.0M	\$135.8M	\$186.5M	

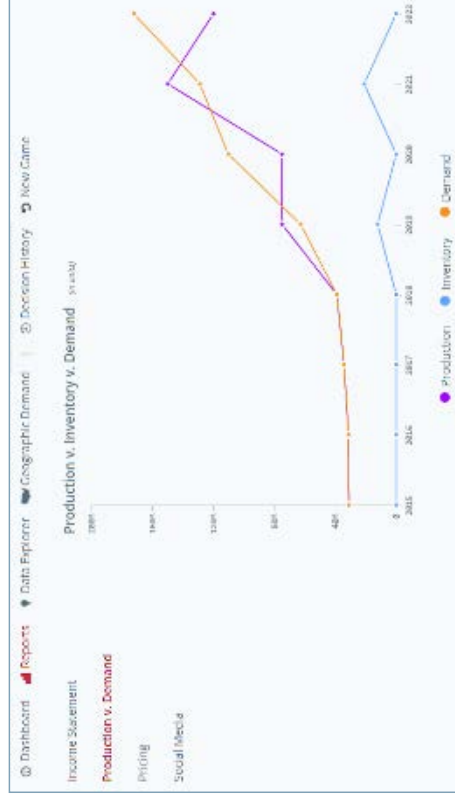
The **Reports** screen depicts four different reports:

- Income Statement
- Production v Demand
- Pricing
- Social Media

The **Income Statement** screen provides 4 years of historical data about Blue’s operating performance.

Note: Other Costs consist of promotional spending from Trade Channel and Media spends

Reports: Production v Demand



Production v Demand charts annual production, demand, and any excess inventory

- Unused inventory will be used in future periods where demand > production
- Sales = $\text{MIN}(\text{demand}, \text{production} + \text{inventory})$

Reports: Pricing

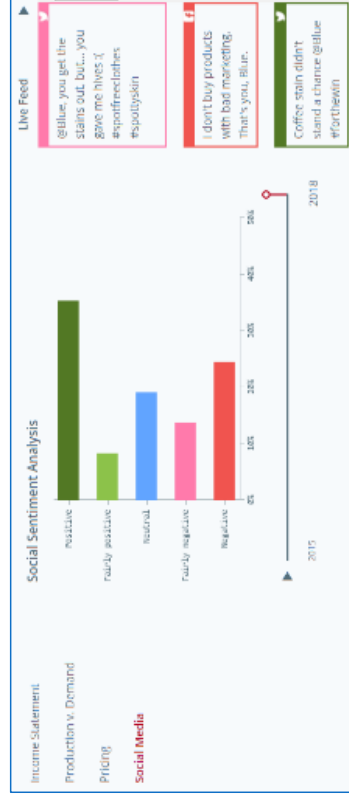


Pricing charts the price for each of the four competitors each year

The simulation starts after 2018 which had the following prices:

- Turbo: \$10/unit
- Fresh: \$8/unit
- Blue: \$7/unit
- Store: \$6/unit

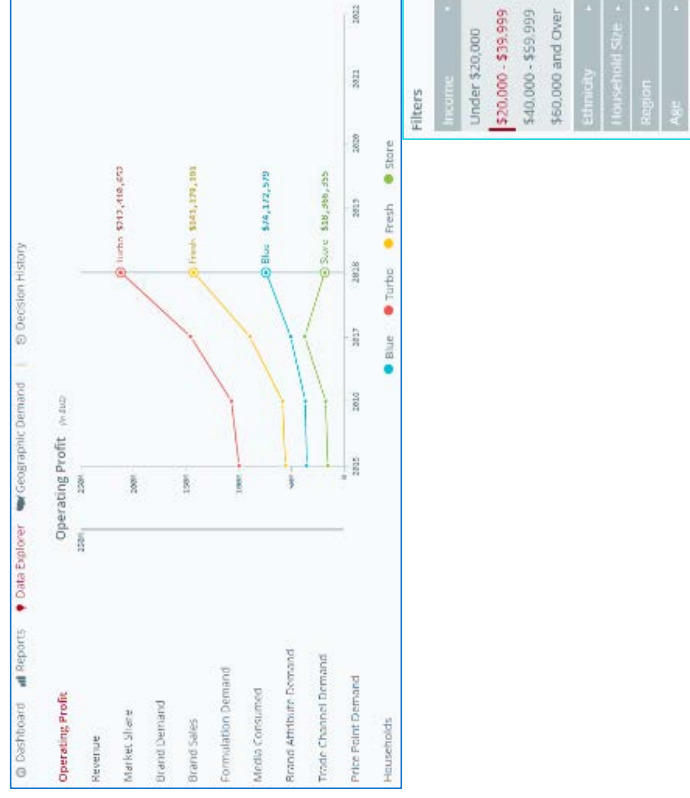
Reports: Social Media



The **Social** screen allows you to monitor sentiment shared on social media channels.

- An animated graph tracks favorability changes over the years.
- A live stream displays and categorizes incoming Blue related social media posts.

Data Explorer

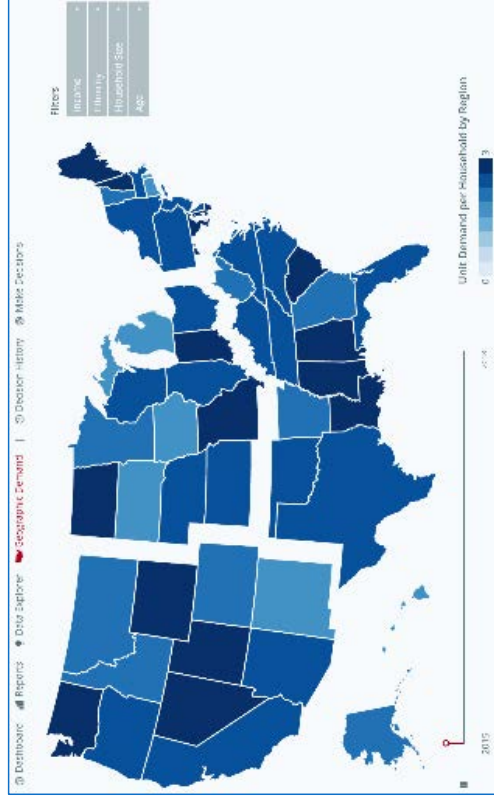


The **Data Explorer** screen allows for a deeper dive into the data. There are 11 customizable charts providing deeper analysis of available market data.

Click on one or more of the demographic filters to drill into and customize the data by:

- Income
- Ethnicity
- Household Size
- Region
- Age

Geographical Demand



Geographical Demand provides a more detailed look at regional demand per household at the state level.

- An animated timeline shows changes in unit demand per household by region year over year
- This data can also be filtered by demographics.

Scroll over the each state to view its specific demand per household for the selected year.

The **Make Decisions** screen contains all the inputs needed to make your decisions each year.

- Units to Produce
- Channel Price
- Formulation
- Product Features and Positioning
- Trade Channel Spend
- Media Spend
- Target Market Segment Decisions

Decisions: Production & Pricing

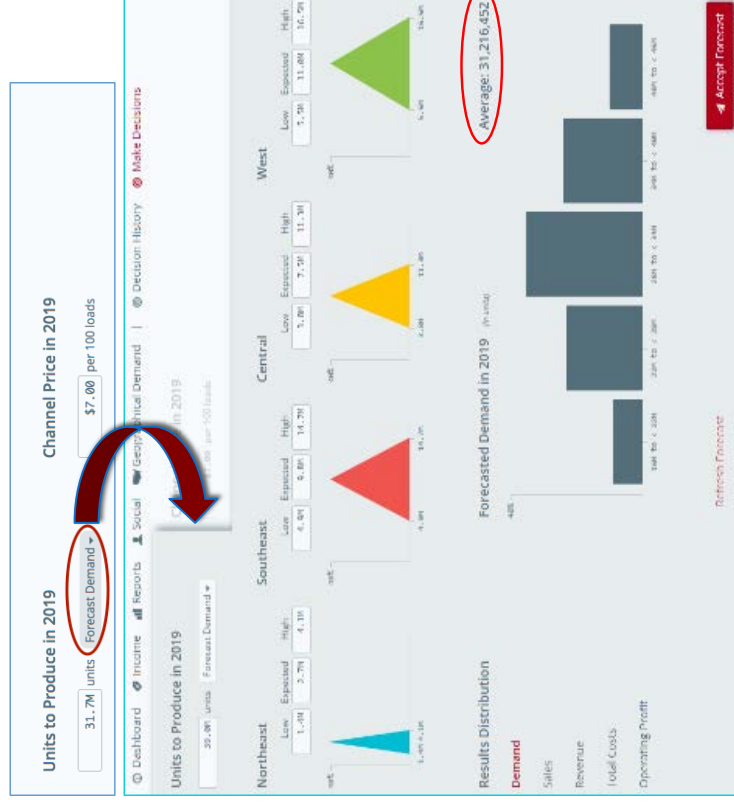
Units to Produce in 2022 ?	Channel Price in 2022
<input type="text" value="43.0M"/> units	<input type="text" value="\$8.75"/> per 100 loads
Click here fill in the previous year value	Click here fill in the previous year value

For **Units to Produce**, enter the number of units to be produced in the coming year.

- There is an additional tool, *Forecast Demand*, to help predict the unit demand.

For **Channel Price**, enter the price that customers will pay per unit in the coming year.

Decisions: Forecast Demand



Use the **Forecast Demand** tool to help determine how many units to produce for the year.

- Adjust your estimates for demand per region
- Review the resulting distributions which show the probability of expected outcomes

Tip: After setting your regional demand estimates, experiment with Units to Produce until the average value for your chosen distribution is maximized.

Note: You still need to manually enter the production units for the year. This is just a tool to help inform your decision.

Decisions: Formulation & Features

Formulation in 2019

Pods

Liquid

Powder

Product Features and Positioning in 2019

Odor elimination

Cold water

Scent

Softness

For **Formulation**, select the detergent format to be produced. In addition to the marketing impact, your selection also impacts Blue's Income Statement:

- Pods: 15% cost increase to variable costs
- Liquid: 7% cost increase to variable costs
- Powder: baseline variable costs (i.e. no cost increase)

For **Product Features and Positioning**, select the primary product attribute emphasized for both formulation and in product marketing. The options are:

- Odor elimination
- Cold Water
- Scent
- Softness

Decisions: Trade Channel Spend



Determine the allocation of your promotional budget for **Trade Channel Spend** (2019 budget: \$25.1M) among the following strategic channels:

- Convenience
- Club
- Grocery
- Mass

Your budget will adjust each year based on prior year performance. You can change your allocation each year and are allowed to spend less than the total budget if desired. You will receive an error indication and will not be allowed to submit your decisions if you attempt to go over budget.

Decisions: Media Spend



Determine the allocation of your promotional budget for **Media Spend** (2019 budget: \$12.5M) among the following media channels:

- Print
- TV
- Radio
- Digital Ads

Your budget will adjust each year based on prior year performance. You can change your allocation each year and are allowed to spend less than the total budget if desired. You will receive an error indication and will not be allowed to submit your decisions if you attempt to go over budget.

Decisions: Strategy Communication

Target Market Segment for Decisions

Income	Ethnicity	Household Size	Region	Age
All Incomes	All Ethnicities	All Household Sizes	All Regions	All Ages
No Income Focus	No Ethnicity Focus	No Household	No Regional Focus	No Age Focus
Under \$20,000	Asian	1	Northeast	Under 35
\$20,000 - \$39,999	Black	2	Southeast	35 - 44
\$40,000 - \$59,999	Hispanic	3	Central	45 - 54
\$60,000 and Over	White	4	West	55 and Over
	Other	5+		

Strategic Plan Executive Summary

For **Target Market Segment for Decisions**, communicate your strategy to your manager. Select any and all filters for the demographics that you chose to target.

In the “Strategic Plan Executive Summary” box, provide a more detailed written explanation of your strategy for the year.

Decision History

Decision History					
	2019	2020	2021	2022	
Units to Produce <i>(units)</i>	31,000	35,000	35,000	32,000	
Channel Price <i>(per 100 hours)</i>	\$7,000	\$7,000	\$7,000	\$7,000	
Formulation	Powder	Powder	Pods	Pods	
Product Features and Positioning	Cold water	Odor elimination	Odor elimination	Odor elimination	
Trade Channel Spend					
Convenience	\$5,000	\$8,000	\$8,000	\$8,000	
Club	\$5,000	\$5,000	\$5,000	\$5,000	
Grocery	\$5,000	\$2,500	\$2,500	\$2,500	
Mass	\$5,000	\$4,500	\$4,500	\$4,500	
Total Trade Channel Spend	\$20,000	\$20,000	\$20,000	\$20,000	
Media Spend					
Print	\$2,500	\$3,500	\$3,500	\$3,500	
TV	\$2,500	\$2,500	\$3,000	\$3,000	
Radio	\$2,500	\$1,000	\$1,000	\$1,000	
Digital Ads	\$2,500	\$2,500	\$2,500	\$2,500	
Total Media Spend	\$10,000	\$9,500	\$10,000	\$10,000	
Target Market Segment					
	Southeast West	Southeast West	Southeast West	Southeast West	
		Under 35	Under 35	Under 35	
		35 - 44	35 - 44	35 - 44	

The **Decision History** table will populate with the decisions you submit for each year on the “Make Decisions” screen.