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
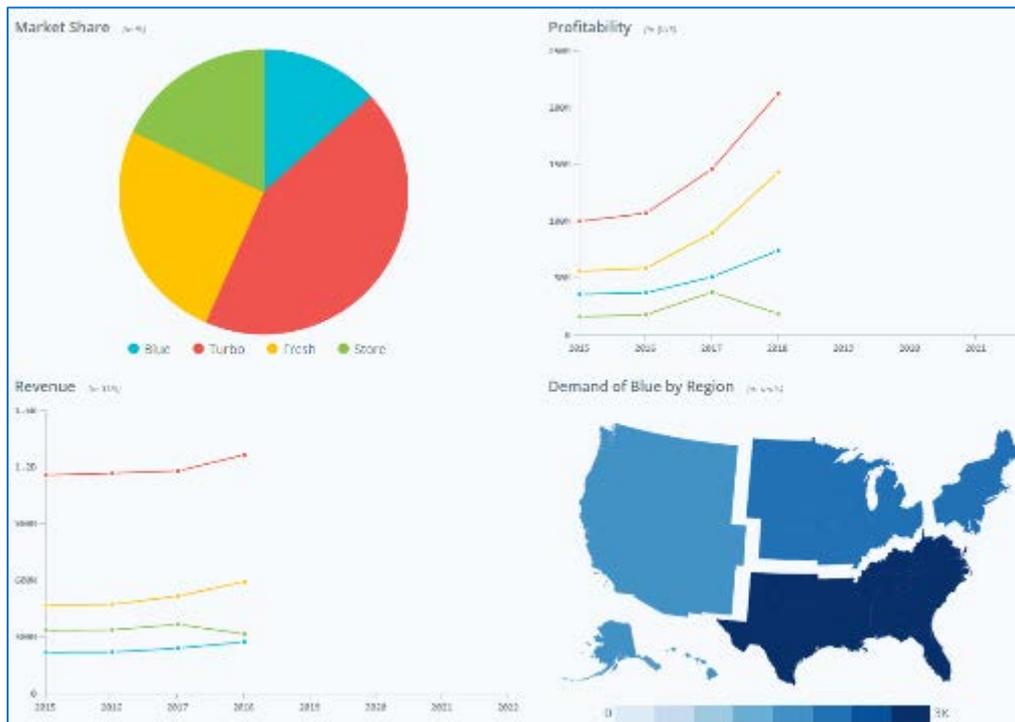
The **Dashboard** provides at-a-glance metrics:
- Market Share
- Profitability
- Revenue
- Demand of Blue by Region

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

Reports: Income Statement

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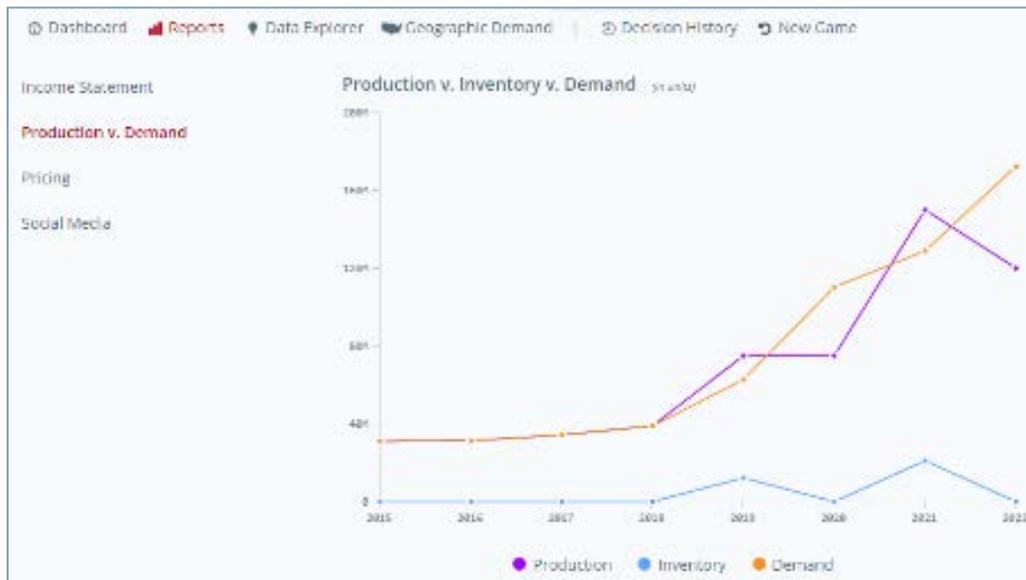
Production v Demand charts annual production, demand, and any excess inventory

- Unused inventory will be used in future periods where demand > production

- Sales = MIN(demand, production+inventory)

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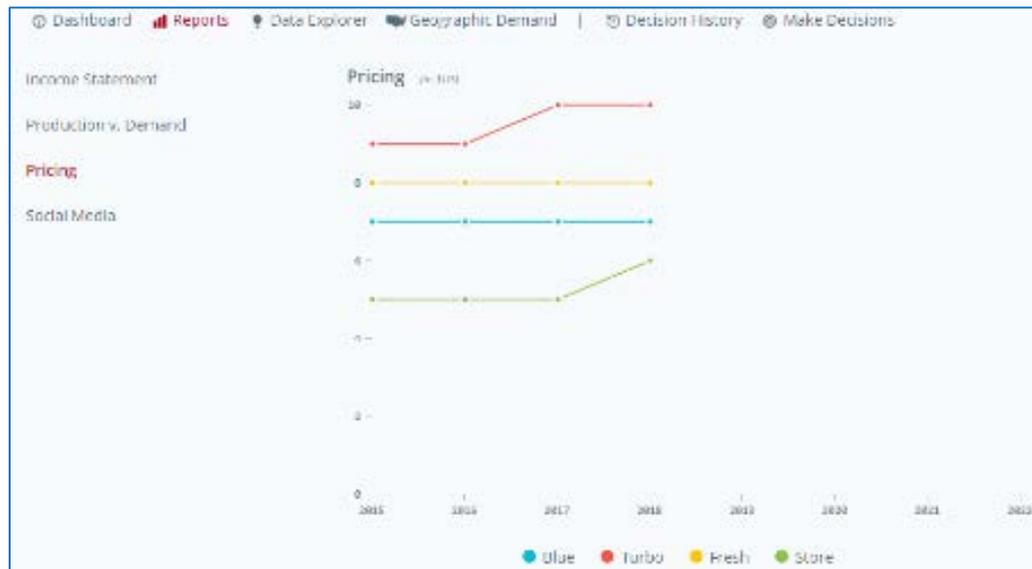
Pricing charts the price for each of the four competitors each year

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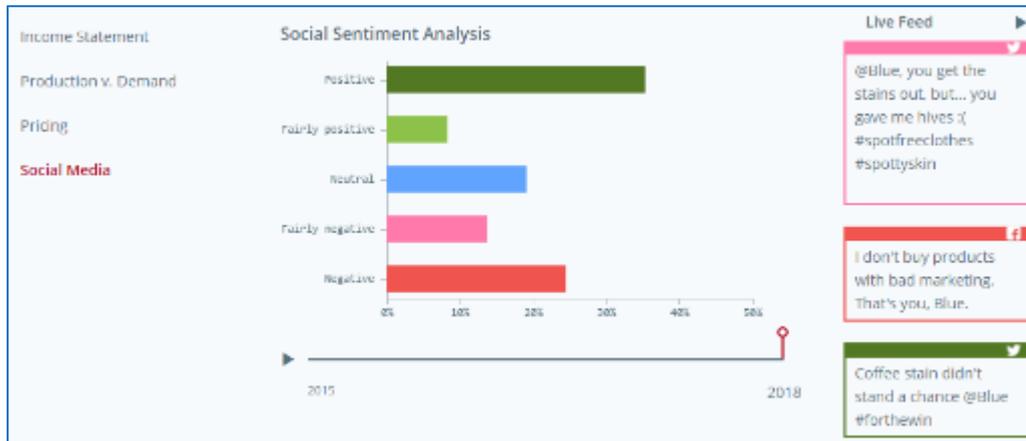
The **Social** screen allows you to monitor sentiment shared on social media channels.

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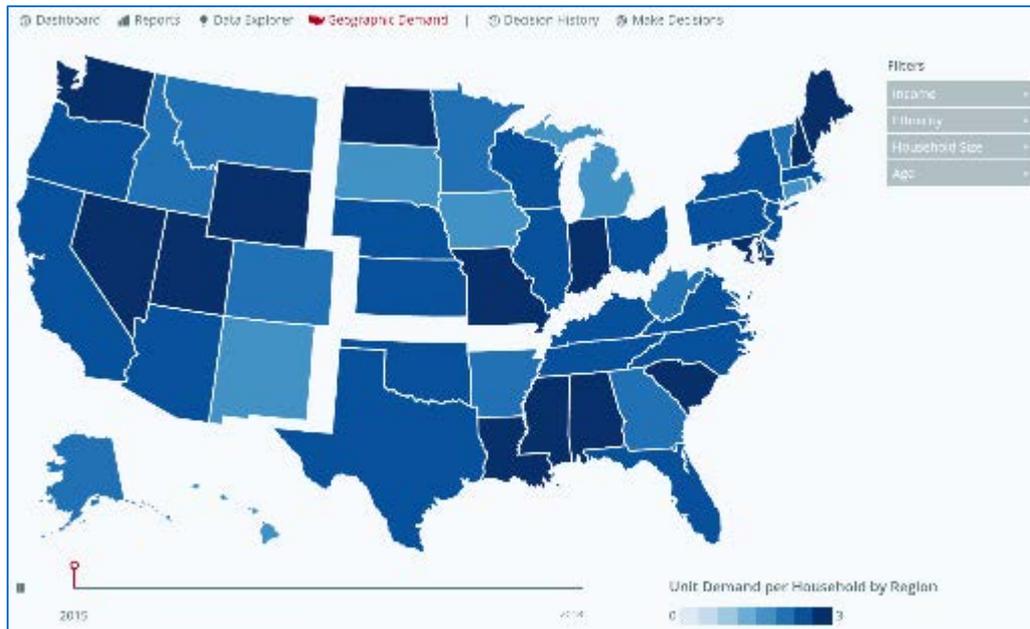
Geographical Demand provides a more detailed look at regional demand per household at the state level.

- 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.

Make Decisions

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

These decisions include:
- Units to Produce
- Channel Price
- Formulation
- Product Features and Positioning
- Trade Channel Spend
- Media Spend
- Target Market Segment for Decisions

Decisions: Production & Pricing

Units to Produce in 2022 ❓

| 43.0M | units | Forecast Demand ▾ |

Click here fill in the previous year value

Channel Price in 2022

| $8.75 | per 100 loads |

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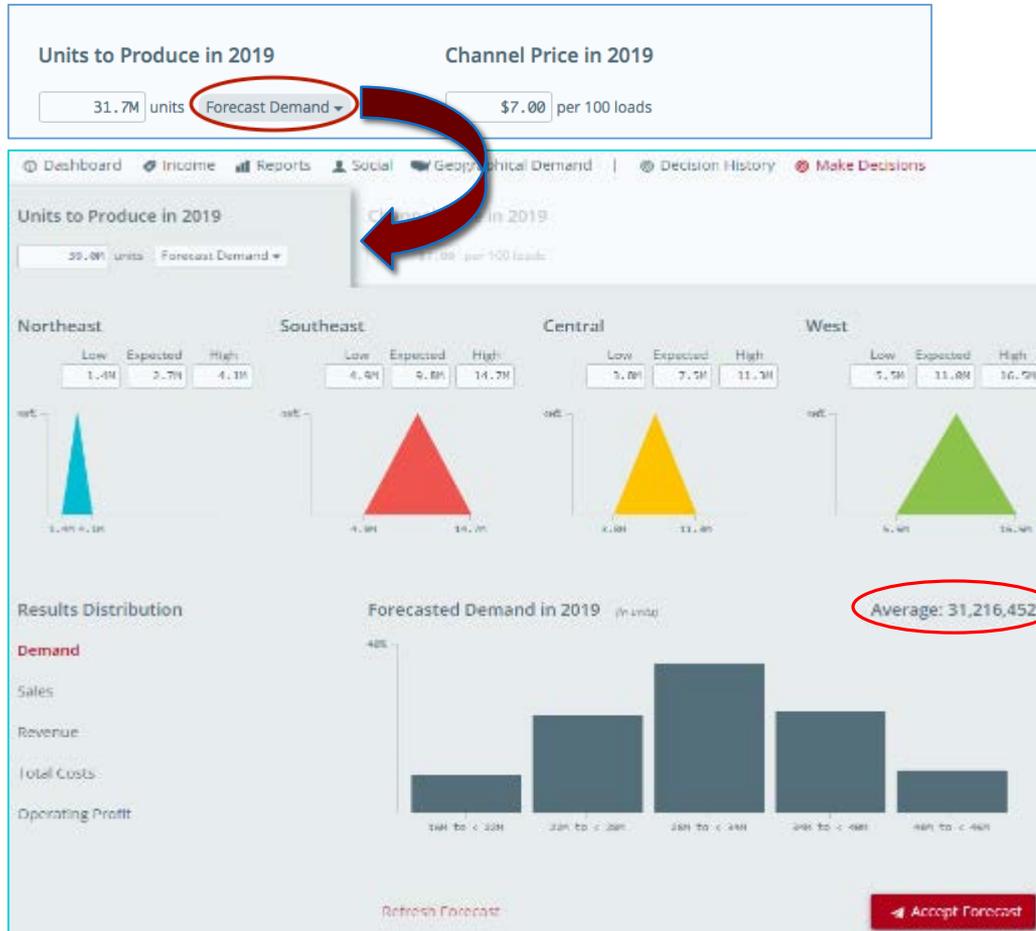
Use the **Forecast Demand** tool to help determine how many units to produce for the year.

- 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			Product Features and Positioning in 2019			
Pods	Liquid	**Powder**	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

Trade Channel Spend in 2022 ❓

Convenience	Club	Grocery	Mass	Total	Total Trade Channel Budget: $22.3M
26.9%	26.9%	22.4%	22.4%	98.7%	

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

| Media Spend in 2022 ❓					
Print	TV	Radio	Digital Ads	Total	Total Media Budget: $11.1M
22.5%	22.5%	27.0%	27.0%	99.1%	
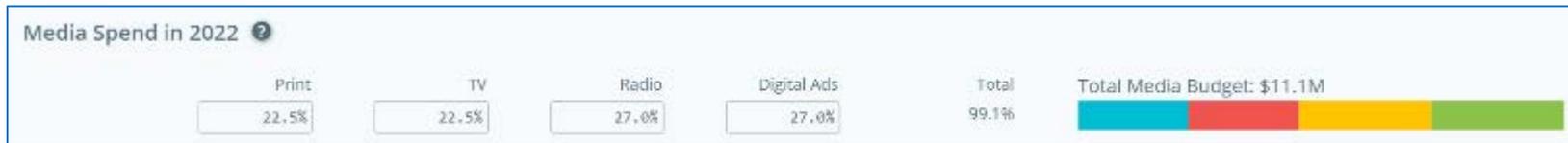
Determine the allocation of your promotional budget for **Media Spend** (2019 budget: $12.5M) among the following media channels:

◦ 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	Strategic Plan Executive Summary
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+			

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 *(units)*	31.9M	35.0M	35.0M	32.0M
Channel Price *(per 100 loads)*	$7.00	$7.00	$7.00	$7.00
Formulation	Powder	Powder	Pods	Pods
Product Features and Positioning	Cold water	Odor elimination	Odor elimination	Odor elimination
Trade Channel Spend				
Convenience	$5.0M	$8.0M	$8.0M	$8.0M
Club	$5.0M	$5.0M	$5.0M	$5.0M
Grocery	$5.0M	$2.5M	$2.5M	$2.5M
Mass	$5.0M	$4.5M	$4.5M	$4.5M
Total Trade Channel Spend	$20.0M	$20.0M	$20.0M	$20.0M
Media Spend				
Print	$2.5M	$3.5M	$3.5M	$3.5M
TV	$2.5M	$2.5M	$3.0M	$3.0M
Radio	$2.5M	$1.0M	$1.0M	$1.0M
Digital Ads	$2.5M	$2.5M	$2.5M	$2.5M
Total Media Spend	$10.0M	$9.5M	$10.0M	$10.0M
Target Market Segment		Southeast West	Southeast West Under 35 35 - 44	Southeast West

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