Test & Learn Markdown Optimization

Advanced analytics in pricing to maximize net sales and sell-through
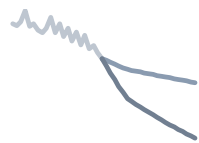
📋 Our assignment

Define **optimal markdown** price over time for maximized sales and sell-through, using advanced analytics modeling

◎ The impact

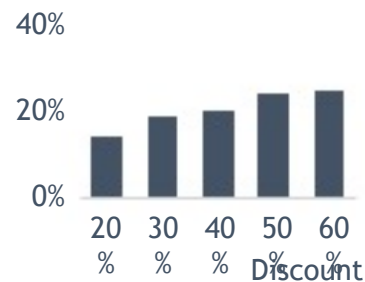**Baselining**
Forecasting sales quantity and **A/B testing**

Jan-14 Jan-16 Jan-18 Jan-20

Price elasticity
Sensitivity to discounts

Add'l sales

40%

20%

0%

| 20% | 30% | 40% | 50% | 60% |

Discount

Markdown strategy
Optimized discounts per product per week

	w.1	w.2	w.3
🧥👜	-30%	-40%	-50%
👖	-50%	-60%	-70%

Maximized sales

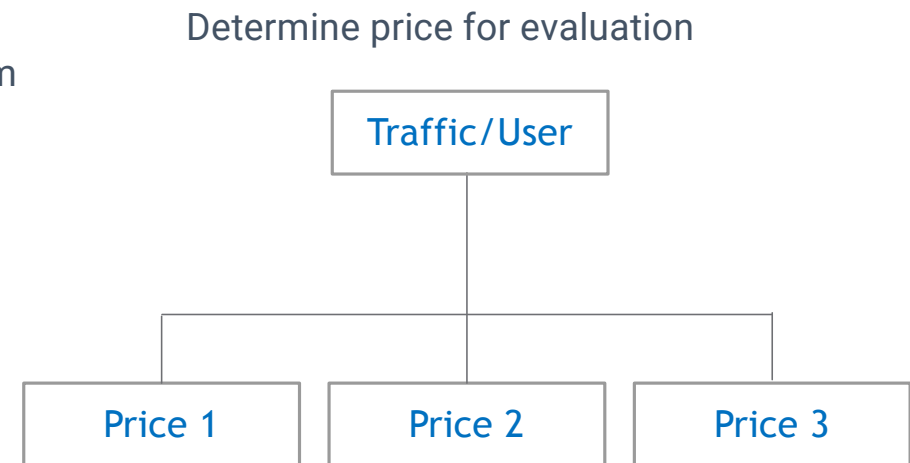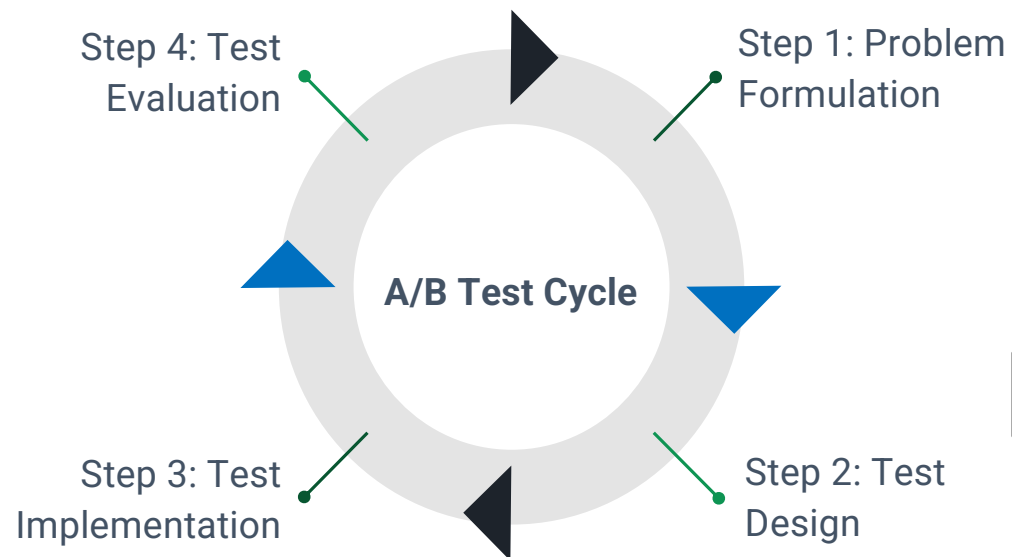Minimized average discount

Maximized sell-through

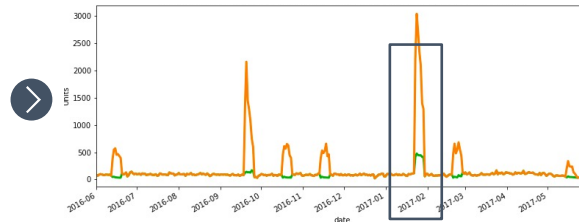# Determined test window and provided suggestion on test result and significance test

A/B Test Cycle

Step 4: Test Evaluation

Step 1: Problem Formulation

Step 3: Test Implementation

Step 2: Test Design

Determine price for evaluation

Traffic/User

Price 1

Price 2

Price 3

Two beberage examples: similar promo sales, large difference in incrementality and return on marketing investment
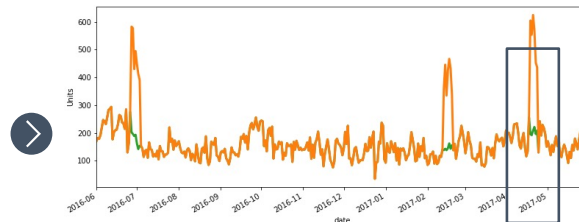
Example

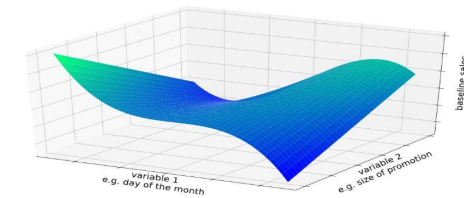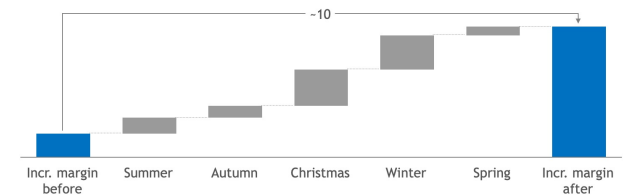**Two detergent promo examples...**   **...showing clear spike in volumes...**   **... Analysis and interpret model**

CocaCola Soda
Format: B2C

Machine Learning Elastic Net algo accounting for 50+ dimensions

Pepsi Soda
Format: B2B2C

Provide seasonal promotion effect with specific product insight

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