![Arima logo]

Coca-Cola uses Synthetic Society to optimize vending machine site selection

The Problem: The 'Pick' or 'No Pick' Dilemma

As the biggest beverage company in the world, Coca Cola has a major presence in Canada with 25 different brands, over 50 production facilities and more than 5,700 staff servicing 38 million customers. Their most popular brands include Coca-Cola, Minute Maid, Dasani and Powerade - household names that virtually all Canadians recognize.

Vending machines are important outlets for the distribution of Coke products, and while they only represent 1% of Coke's total revenue, it's also the most profitable business unit and one of the few channels where the organization has full control of. As such, a crucial question is: *How can Coca-Cola improve their customer service through identifying ideal locations for placing vending machines?*


The Solution: Mobility Data

Coca-Cola underwent a thorough vetting process to ensure Arima's Synthetic Society datasets could help them achieve their goals of understanding how consumers move around locations, and creating accurate profiles of these consumers.

Before the commencement of the project, they expected 3 things:
- Mobility data has enough geographical and time granularity - that is, mobility data must be able to identify who has been physically near a vending machine and that they are an actual customer and not someone who walked by the area
- Mobility data can be tied back to Arima's Synthetic Society so that Coca-Cola can create profiles of each vending machine visitor
- The sample of both datasets must be big enough to draw statistically significant answers

The Synthetic Society is a very rich dataset with more than 25,000 variables about Canadians. Coca-cola had the luxury of picking the most key attributes about their potential customers. The analysis started with using 24 demographic variables, with a concrete plan to expand the number of features in subsequent analyses.

Finally, what made Arima really stand out to Coca-Cola's team was how easy it has been working together. "We always know there's someone at Arima who can answer our questions, help us work through issues, and be receptive to our feedback," emphasized Nikita Medvedev, Director, Advanced Analytics at Coca-Cola. "This really feels like a partnership; Arima offers a level of service you don't get with other vendors."

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The Result

Arima worked with the Enterprise Analytics team at Coca-Cola to develop predictive models based on their 1st party data (e.g., vending machine locations, machine type and revenue) and Arima's Synthetic Society.

5,000+
Variables

25
Surveys & Panels

38 million
Canadians

850,000+
Postal Codes
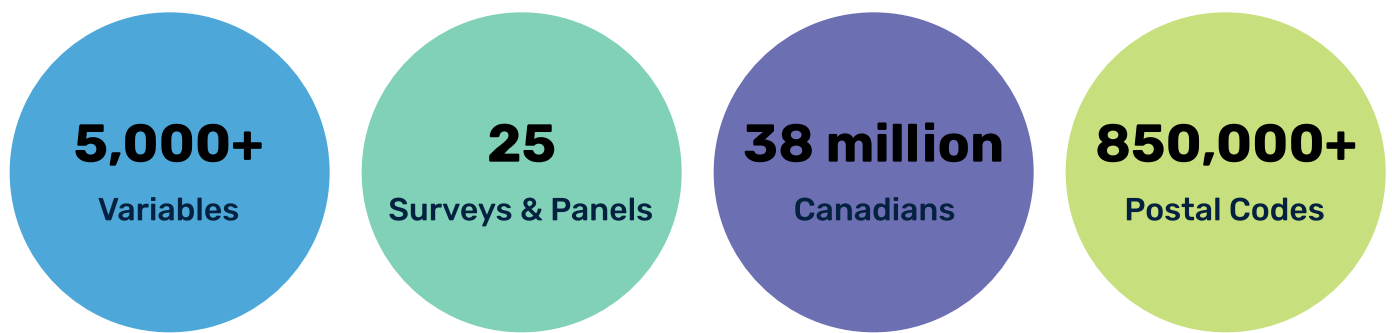
An Overview of the Synthetic Society

As a result of many brainstorming sessions and technical iterations, the team achieved the following results:

- The probability of picking a "good location" increases from 45% to 68%
- On average, a model selected location generates 43% more sales
- Locations picked by the model have a 76% higher sales index compared to the ones not picked

Expected Sales Index Of Each Cell			
	Not Pick	**Pick**	**Total Avg.**
Below Threshold	0.40	0.79	**0.51**
Above Threshold	1.37	2.02	**1.60**
Avg. Rev	**0.81**	**1.43**	**1.00**

		Predicted	
		Not Pick	**Pick**
Actual	Below Threshold	58%	32%
	Above Threshold	42%	68%

Actual	Below Threshold	55%
	Above Threshold	45%

Without the model, the probability of picking a good location was 45%

With the model, the probability of picking a good location increases to 68%, an increase of 23%

Coca-Cola used the more accurate consumer and mobility data to drive efficient placement of vending machines which in turn, led to higher revenue from relocating existing placements and adding new vending machines.

Interested in learning more about Arima?

Contact us to get a demo or start your own free trial today!