



SKIM's Conjoint Seminar Part 2

Going beyond the standard of conjoint analysis

April 2021

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| SKIM's Conjoint Seminar

1

Getting started with
conjoint

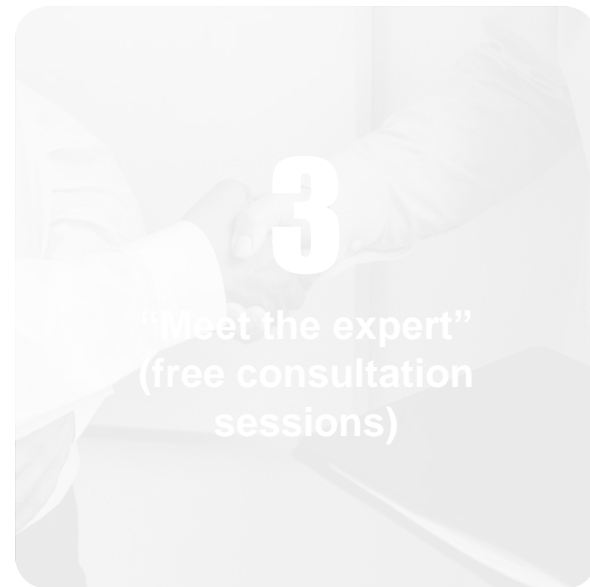
2

Going beyond the
standard of
conjoint analysis

3

“Meet the expert”
(free consultation
sessions)

| SKIM's Conjoint Seminar



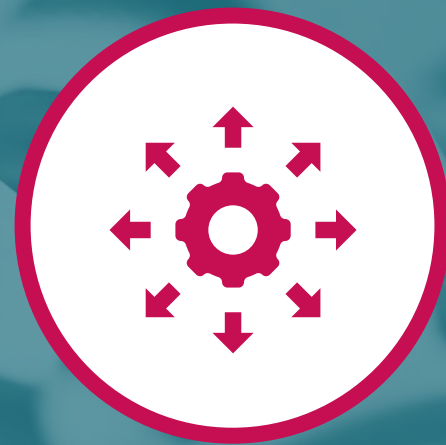
| Part 2 Content



Quick introduction



Latest conjoint
developments



Getting more out of your
conjoint

SKIM is boutique research agency with a global presence,
but is still small enough to offer customized solutions



| A little bit about us

SKIM | Data Science

Decision behavior
Experts since
1979

Team of **dedicated**
decision behavior
modelers and
conjoint **trainers**



McKinsey
& Company

**SIMON • KUCHER
& PARTNERS**

| Conducting a conjoint study - Start with the end in mind

A conjoint study starts with a clear description of the business questions and a concrete plan on how each question will be addressed



What is the client looking for? E.g. how will the product be offered in the market?



What are the desired outputs and how will they be analyzed?

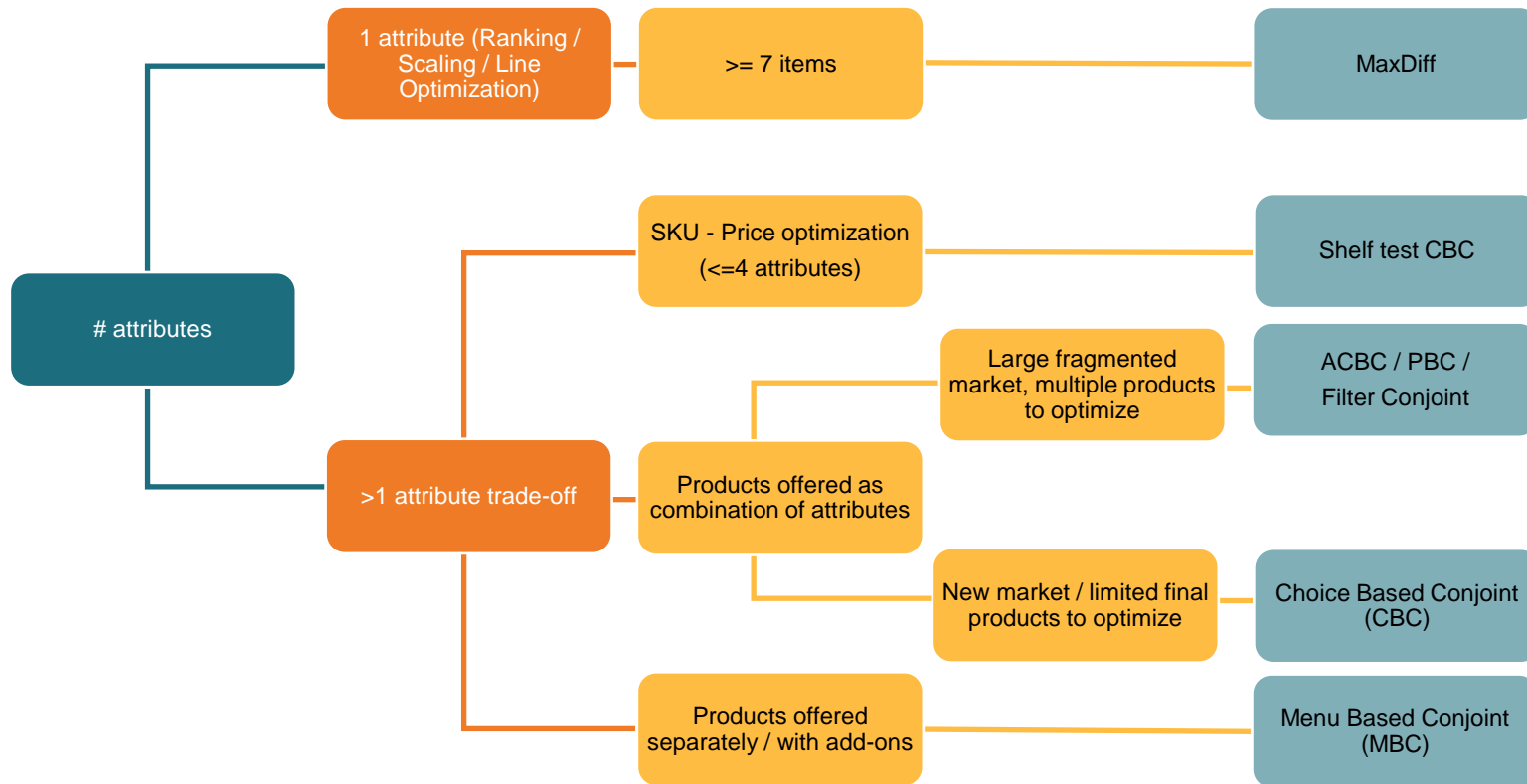


Are the specific scenarios to be tested that address some of the business questions directly? – Pre-define them!



Which KPIs/metrics to focus on? – Maximize volume / revenue / profit?

Conjoint Decision Tree





Latest Conjoint Developments



SKIM

5 innovations for more realistic trade-offs

Conjoint for e-commerce

Filter CBC

DigiShop[®]

Adaptive conjoint innovations

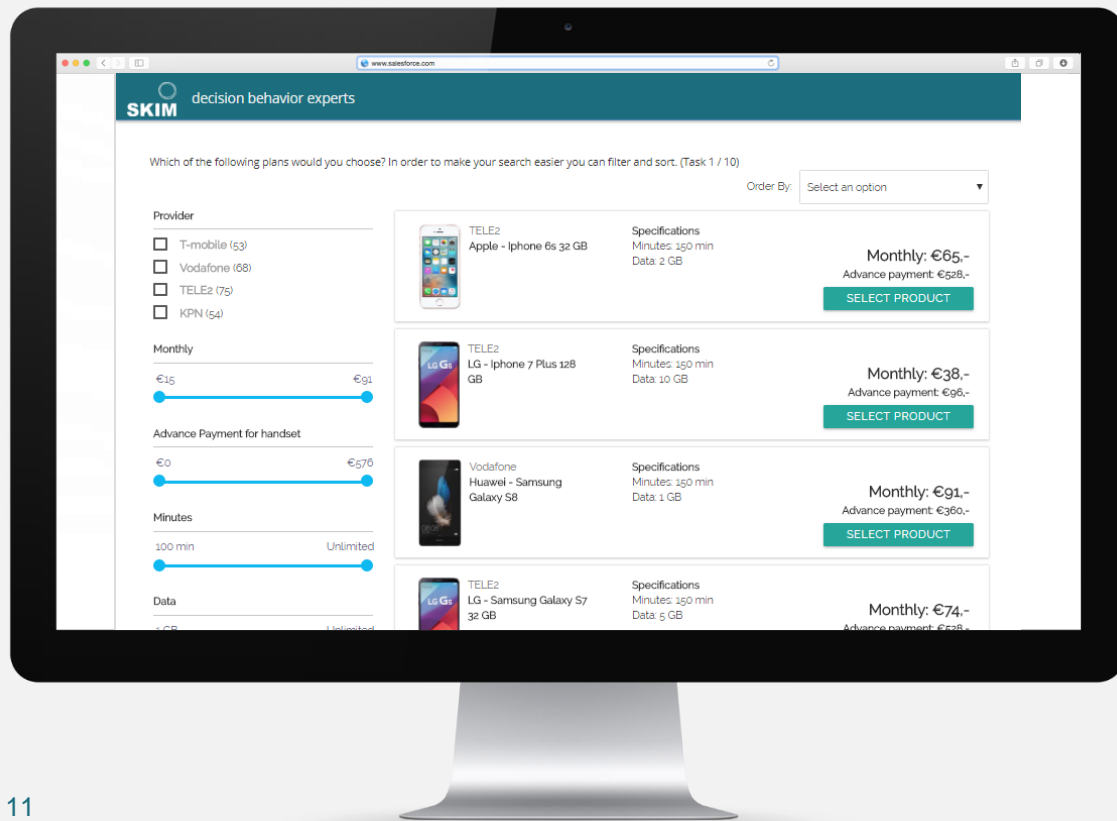
Preference Based Conjoint (PBC)

Adaptive Pricing Conjoint (APC)

Package customization with optional add-ons

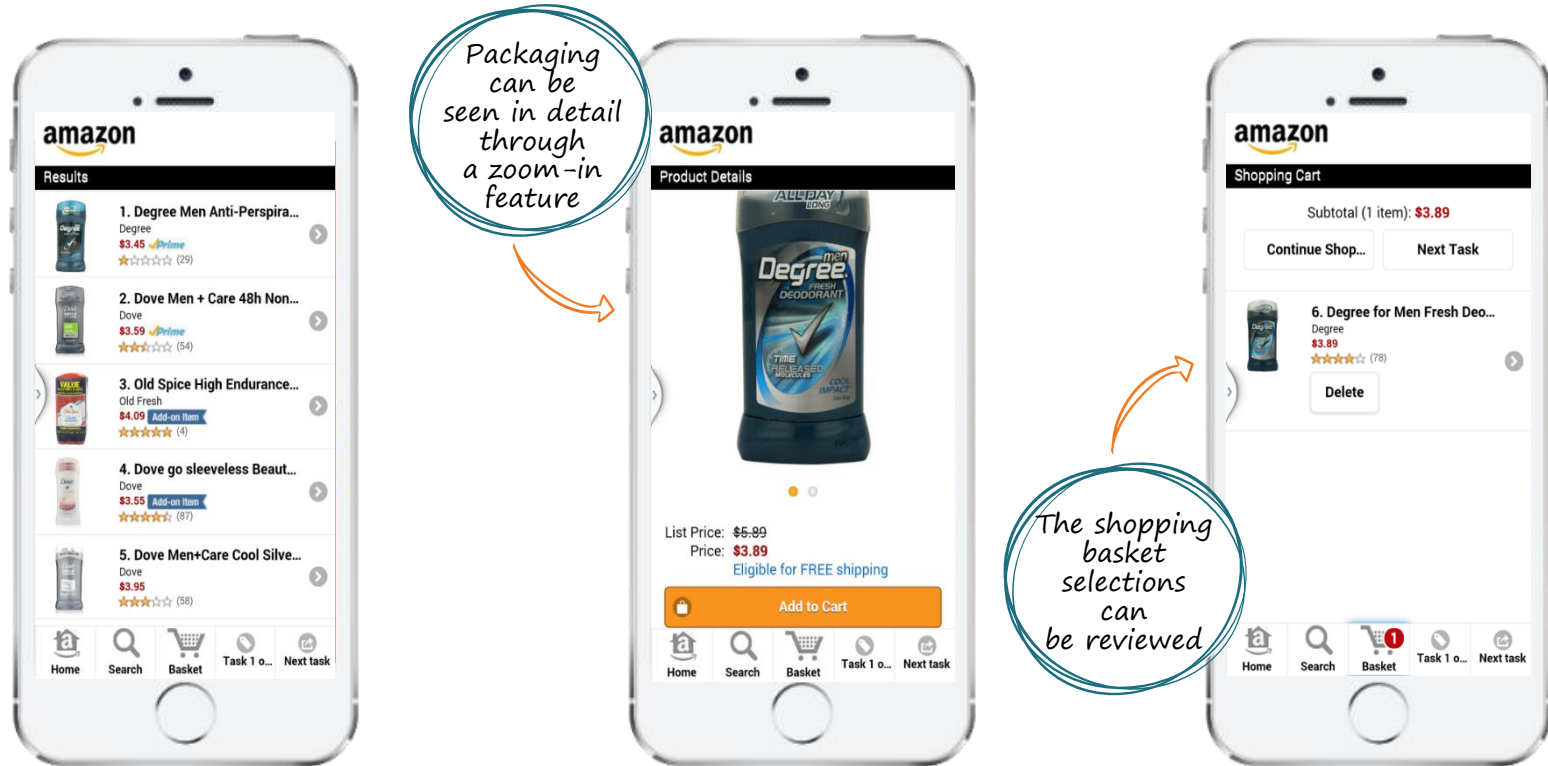
Hybrid CBC-MBC

Replicating online shopping journeys: Filter CBC



- Trim down big list of products with **filters** to select and deselect products.
- Filters are based on **attribute** levels to help reduce the choice set.
- Observe consumer choices from their **consideration set**.
- Better read on consumer preference leads to **more accurate predictions**.

SKIM's Digishop: Uncover online shopper behavior via realistic eCommerce environments



Preference Based Conjoint (PBC) as improvement of ACBC

Main idea

Choice-Based Conjoint learning on the fly:

- Tasks 1-3: 'balanced'
- Tasks 4-12: boosting chosen levels

Main Advantages over ACBC

Avoiding bias

No need to reveal prices per level

Respondent friendly

Not need of BYO / long screening section

Better insights

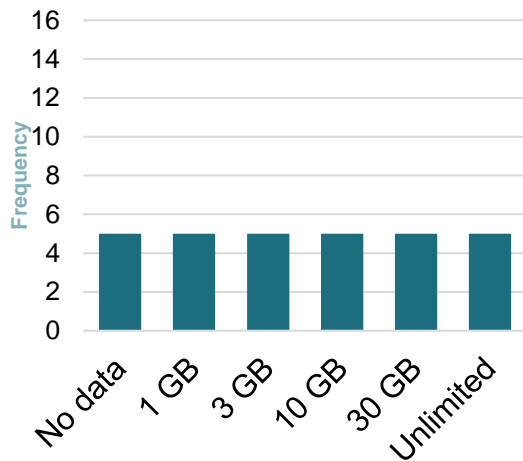
Flexibility in how many concepts to show per screen

No repetition of the same (or very similar) concepts

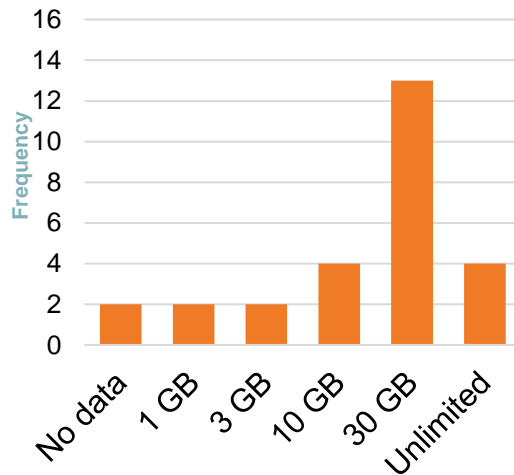
Better balance of tested levels

SKIM's PBC as a midway between CBC and ACBC

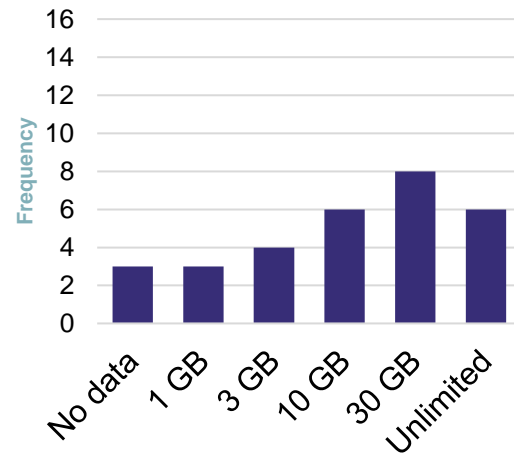
CBC



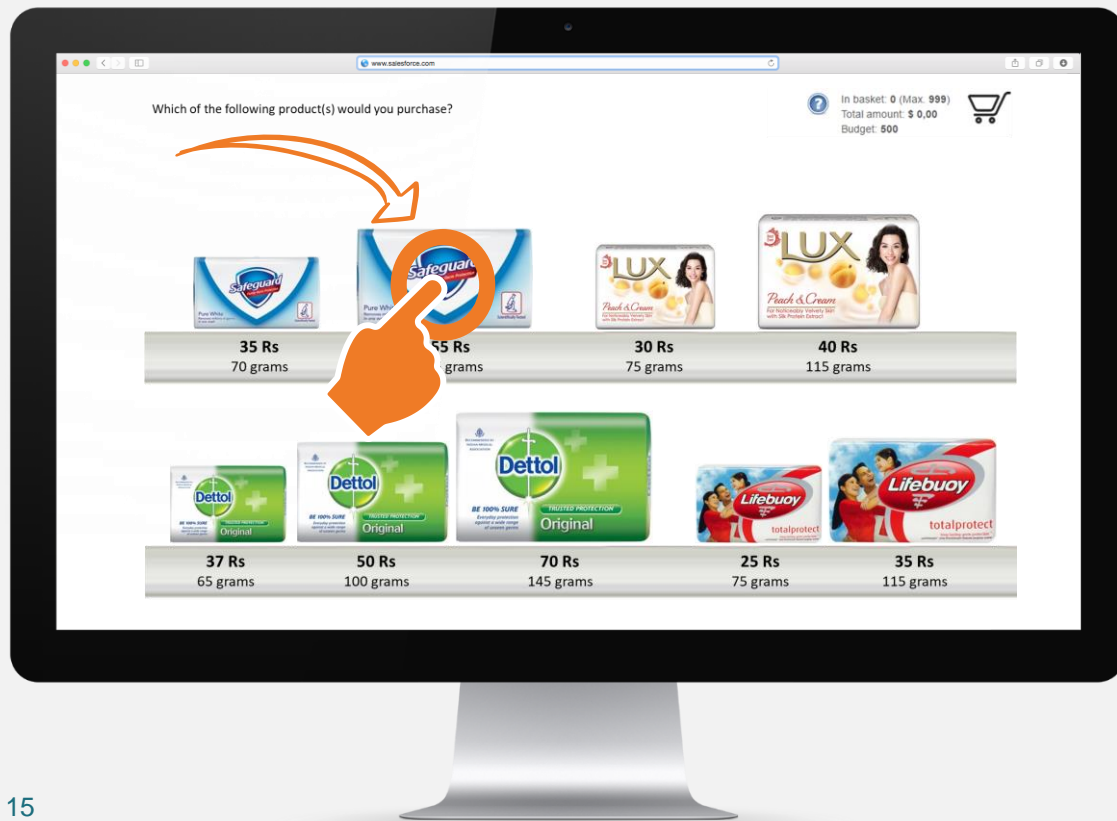
ACBC



*PBC
(for example)*



SKIM's Price Opportunity: adaptive pricing conjoint



When the product is selected, on the next screen either the price of this product will increase, or the price of all other products will be lowered in the next task

Hybrid CBC-MBC has become increasingly relevant

Select your car

CBC Choice

Basic model

Manual parking
Air conditioning
Hubcaps

€ 25,000



Advanced model

Manual parking
Climate control
Hubcaps
Dark glazing

€ 27,500



Premium model

Park assist
Climate control
Alloy wheels
Dark glazing
Navigation

€ 30,000



None of these



Select additional features

MBC Choice



Dark glazing
€ 2,500



Navigation
€ 2,000



Climate control
€ 2,000



Digital radio
€ 1,000



Alloy wheels
€ 2,000



Park assist
€ 2,000



Spare tire
€ 750



Cruise control
€ 1,000

Total price: € 31,250

**Getting more out
of your conjoint**



SKIM

Analysis...

Before...



Latent Class



Decision Trees



Perceptual Mapping

...and then what?

And after creating a simulator



Price Sensitivities



Switching



Level Change Report



Scenarios & Optimization

**Before creating a
simulator...**



Latent Class Analysis

Understanding the consumers

Explained

- Groups respondents based on preferences
- Segments represented by overall utilities

Benefits

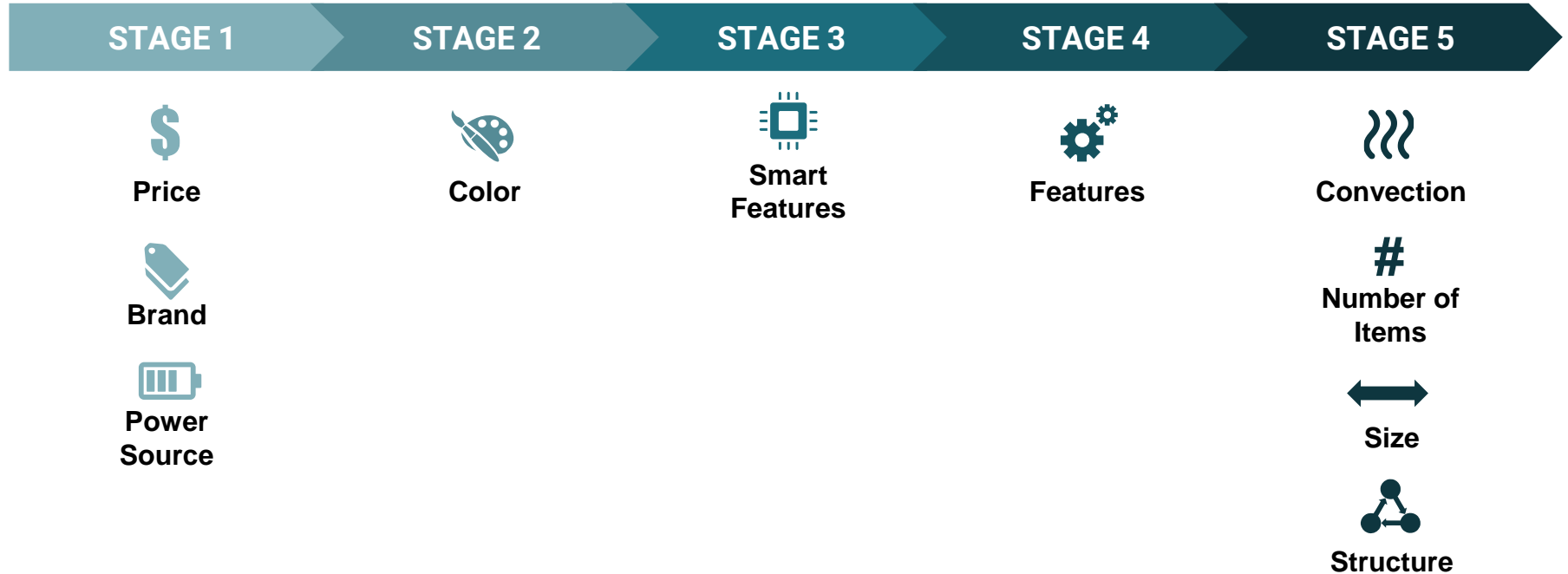
- + Insight in heterogeneity based on preferences
- + Input for creating targeted product(s)
- + Helps interpreting simulation results
- + Can be used as a filters

Attribute	Level	LC group 1 Avg utils	LC group 2 Avg utils
Brand	Nike	0.77	0.81
Brand	Adidas	0.37	0.41
Brand	Puma	-0.26	-0.19
Color	Blue	0.88	3.33
Color	Yellow	0.67	0.92
Color	Pink	-1.55	-4.25
Price	\$20	0.93	0.44
Price	\$25	0.53	0.41
Price	\$30	-2.11	0.07

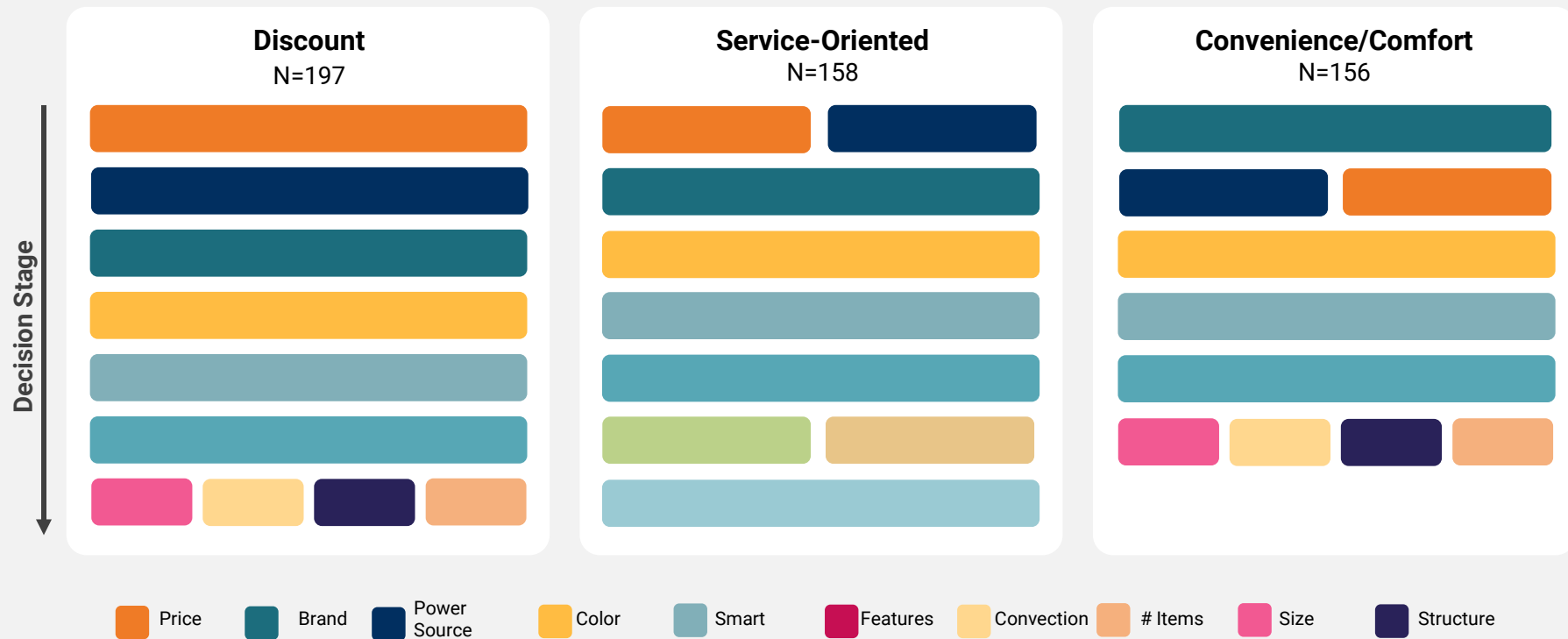
Attribute	LC group 1 importances	LC group 2 importances
Brand	30%	20%
Color	35%	70%
Price	35%	10%

Overall Decision Factors

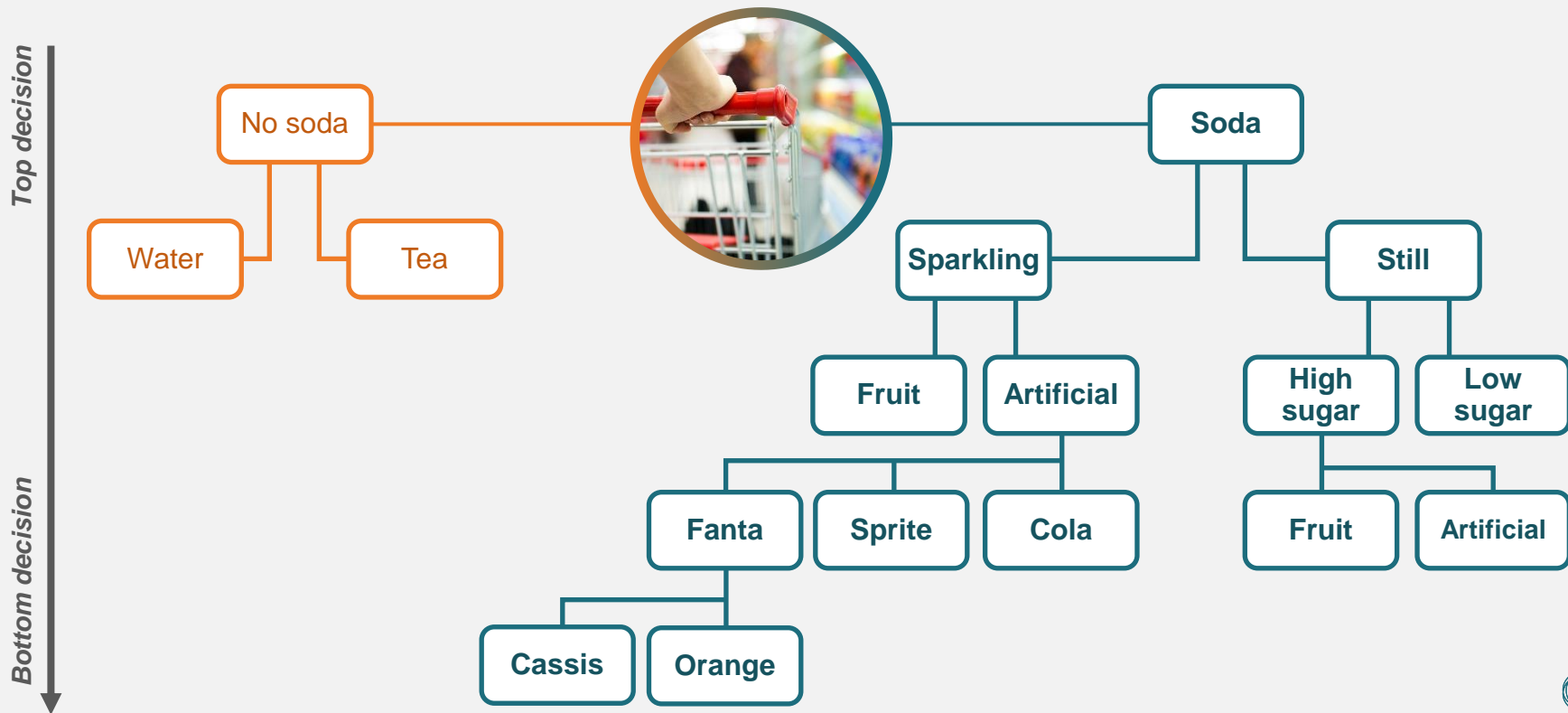
What are the main drivers



Shopper Segment Decision Tree Overview

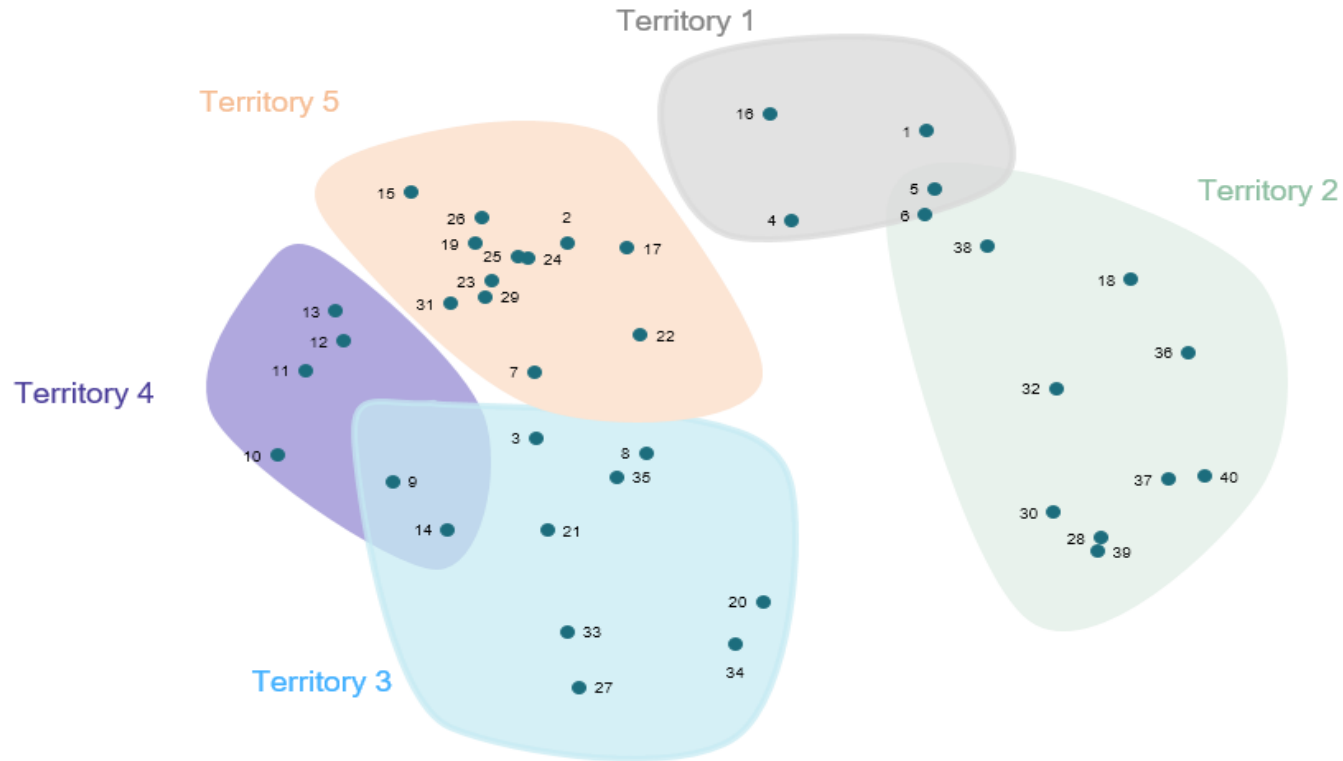


Shopper Decision Tree SKU-price



Multidimensional Scaling to explain Brand segments

Especially relevant for MaxDiff and SKU-price conjoints



Market simulator insights...



Conjoint Market simulator

Filters

Supporting Buttons

Dashboard

Change features and even add or remove products

Metrics / KPIs

The screenshot displays the 'Example Market Simulator | Simulator Page' interface. It includes a 'Client Brand logo' section, a 'Main Brand analyzed' section, and a 'Filters' section with 'N = 500'. The 'Filters' section shows 'Gender: All', 'Age: All', and 'Region: All'. Below the filters are buttons for 'Save as Base Case', 'Reset Indices', 'Return to Base Case', and 'Reset Filters'. The main content area features a table of products with columns for 'ON/OFF', '#', 'Brand', 'Resolution', 'Optical zoom', 'Battery life', 'Image stabilizer', 'Price', and 'Tested Price Range'. To the right of the product table is a table showing 'Preference Share', 'Base Share', and 'Index' for various brands.

Brand	Preference Share	Base Share	Index
Shoot	28.8%	28.8%	100.0
Kadok	9.2%	9.2%	100.0
Nosy	37.4%	37.4%	100.0
Olympiad	10.0%	10.0%	100.0
Sonic Pan	2.0%	2.0%	100.0

ON/OFF	#	Brand	Resolution	Optical zoom	Battery life	Image stabilizer	Price	Tested Price Range	Preference Share	Base Share	Index
ON	1	Shoot	8 MP	8x	400+ photos	Yes	\$200	\$133 - \$228	7.0%	7.0%	100.0
ON	2	Shoot	12 MP	10x	300-400 photos	Yes	\$195	\$137 - \$234	21.8%	21.8%	100.0
ON	3	Nosy	12 MP	4x	200-300 photos	No	\$135	\$105 - \$156	37.4%	37.4%	100.0
ON	4	Kadok	5 MP	6x	200-300 photos	No	\$150	\$105 - \$156	0.6%	0.6%	100.0
ON	5	Kadok	12 MP	8x	200 photos	Yes	\$160	\$116 - \$198	8.6%	8.6%	100.0
ON	6	Olympiad	3 MP	4x	200-300 photos	Yes	\$145	\$112 - \$192	0.4%	0.4%	100.0
ON	7	Olympiad	8 MP	6x	400+ photos	No	\$180	\$123 - \$210	9.6%	9.6%	100.0
ON	8	Sonic Panna	8 MP	10x	200 photos	No	\$210	\$130 - \$222	0.4%	0.4%	100.0
ON	9	Sonic Panna	12 MP	10x	200-300 photos	Yes	\$240	\$158 - \$250	1.6%	1.6%	100.0
ON		None							12.6%	12.6%	100.0

Price Sensitivity / Elasticity

Identifies psychological and competitive price barriers



Volume share



Revenue



Deliverables: Sourcing

Price
elasticity

See the
interactions
among the
products

Type of change

Price change

Price

10%

Type of switching matrix

Delta share

Run Switching Matrix

Product	Grouping	Base Share	Price elasticity	Product 1	Product 2	Product 3	Product 4	Product 5	Product 6	Product 7	Product 8	Product 9
Product 1		4.5%	-2.61	-1.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%
Product 2		0.4%	-0.72	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Product 3		1.5%	-0.81	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Product 4		4.1%	-0.33	0.6%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Product 5		0.8%	-2.27	0.2%	0.0%	0.0%	0.0%	-0.2%	0.0%	0.0%	0.0%	0.0%
Product 6		5.5%	-1.28	0.0%	0.0%	0.0%	0.0%	0.0%	-0.7%	0.0%	0.0%	0.0%
Product 7		2.0%	-0.57	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%	0.0%	0.0%
Product 8		2.7%	-1.56	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	0.0%
Product 9		0.9%	-1.05	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%

	Variant 1	Variant 2	Variant 3
Client Brand A SKU 1	21% / 2.1	19% / 1.9	31% / 3.1
Client Brand A SKU 2	32% / 1.8	29% / 1.6	36% / 2.0
Client Brand A SKU 3	7% / 1.4	6% / 1.2	12% / 2.4
Client Brand B SKU 1	4% / 0.8	6% / 1.2	3% / 0.6
Client Brand B SKU 2	6% / 0.7	8% / 0.9	5% / 0.6
Competitive SKU 1	10% / 1.2	8% / 1.0	7% / 0.8
Competitive SKU 2	14% / 1.6	16% / 1.8	5% / 0.6
Competitive SKU 3	6% / 0.8	8% / 1.1	1% / 0.1

Level Change Report as a premium alternative to average utilities and importance scores

Importance Scores

- + Quick insight
- + Estimated on respondent and overall level
- Inconsistent with simulations
 - Not taking into account difference in ordered / nominal attributes
 - Not taking into account none values
- Highly depend on attribute ranges

Solution

Simulations to
derive attribute
importance

Level Change Report

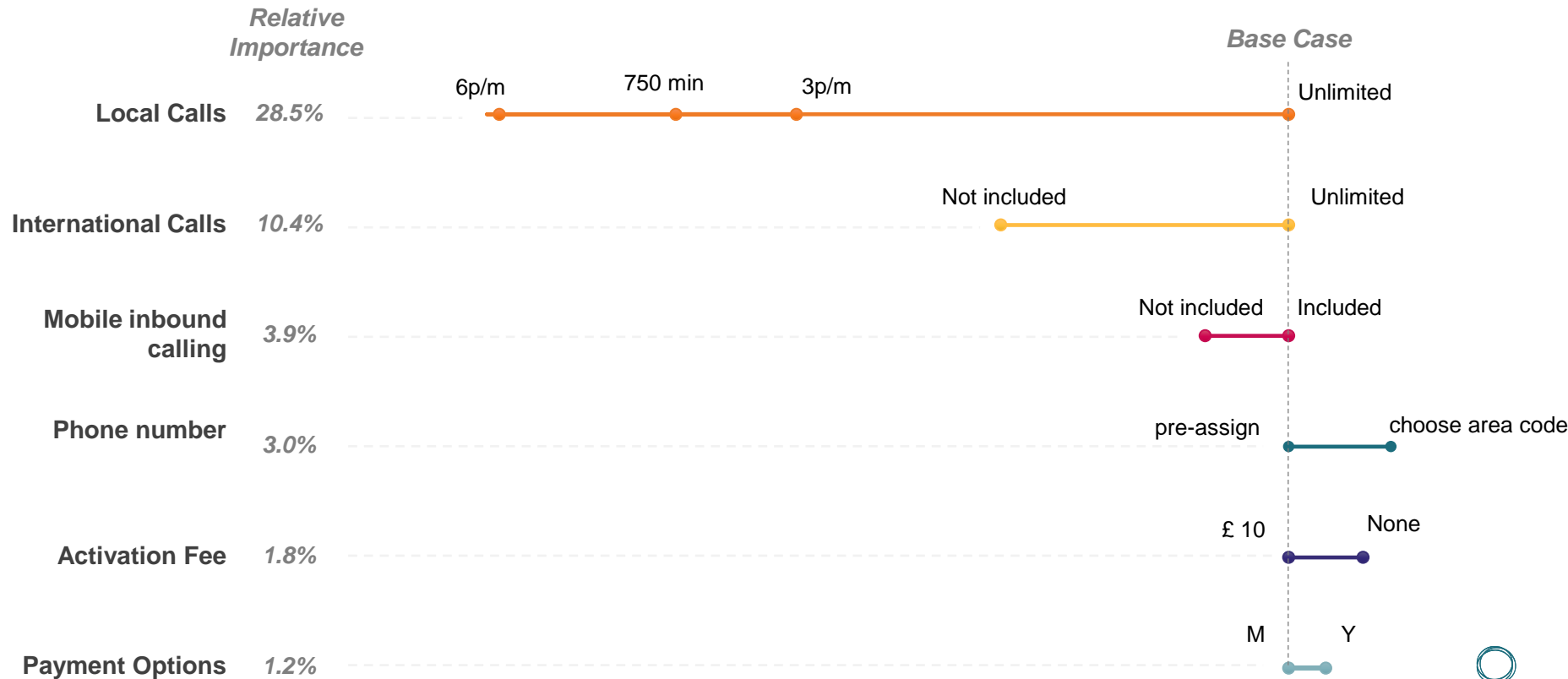
Product share


Brand	Nike	25%
Brand	Adidas	20%
Brand	Puma	15%
Color	Blue	30%
Color	Yellow	25%
Color	Pink	10%
Price	\$20	30%
Price	\$25	25%
Price	\$30	15%

Relative Importance (by share)

Brand	22%
Color	44%
Price	33%

Displaying Importances



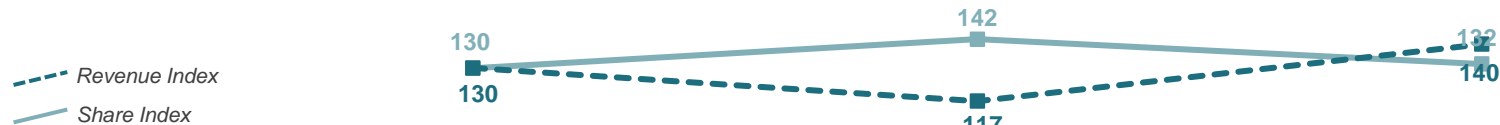


Market simulator - Running scenarios...

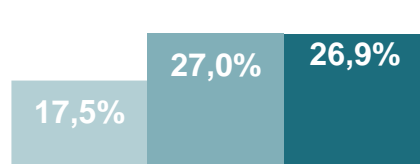


Scenario analysis

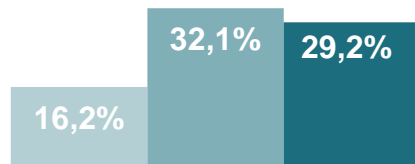
Testing scenarios and simulator and reporting main KPIs



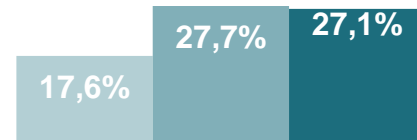
Individual Share of package



A-content	Full package	B-content
€ 14.90	€ 19.90	€ 9.90
No add-on	With add-on	No add-on



C-content	Full package	D-content
€ 12.90	€ 16.90	€ 9.90
No add-on	With add-on	With add-on



C-content	Full Package	D-content
€ 14.90	€ 19.90	€ 9.90
With add-on	With add-on	Without add-on

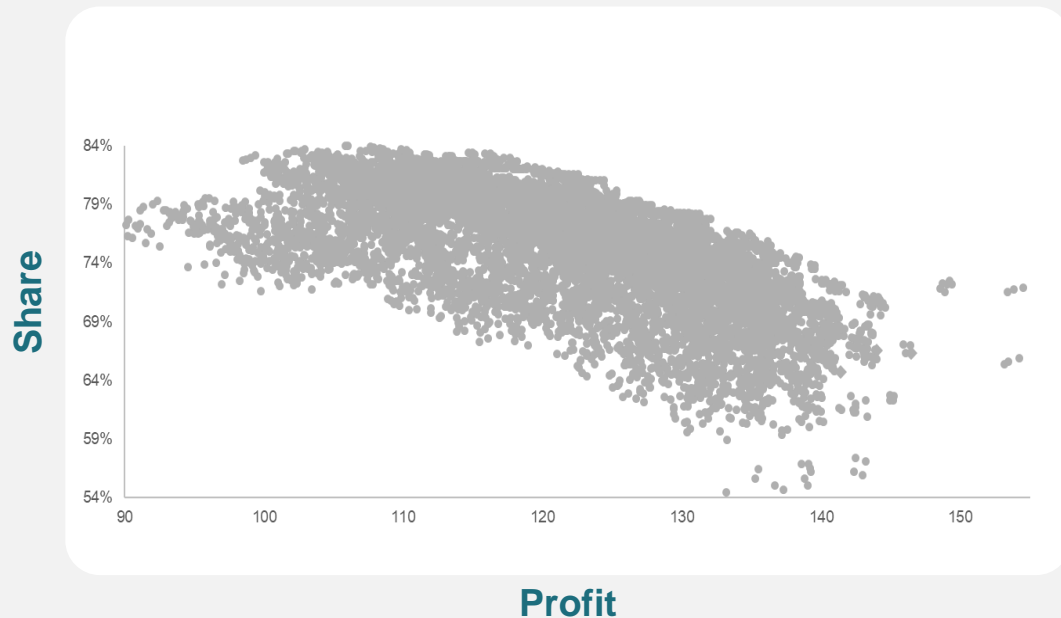
Total Client Share

71.3%

77.5%

72.4%

Genetic Algorithm for optimization



If possible

Run **all scenarios**

If too many

Genetic Algorithm optimizing
selected KPIs

Key take-ways



| Key take-aways

1

Conjoint is a very powerful tool

2

Always start with the end goal in mind

3

Decide on whether to use conjoint and if so, which methodology fits best

4

When analyzing results, consider different ways of interpreting and visualizing the data to enrich the insights



| Thank you



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