

Kevin Towner

INFO T780-900

Capstone II, Milestone 1

(Mock DOE Document/Test Design for Digital Optimization)

Design of Experiments

Description:

- Round 1 is the first round of optimization testing on 'Violet Airlines' insurance panel content. 4 factors at 2 levels (including baseline factors) will be tested for statistical significance in conversion at 5% lift.
- Round 1 is forecast to run for approximately 3 months (domestic), and 3.5 months (international), and will be broken up into two tests (1.1 and 1.2) to test on both domestic and international user segments. 1.1 and 1.2 will have their own activities due to the differentiating timelines.
- 48% of the traffic will be allocated to the test, and 52% of the traffic will be routed to the baseline (Default) offer. Baseline offer will be included in the same activity as the test cells and routed with traffic allocations being managed manually via Adobe Target.

Considerations:

- This test will run on both desktop and mobile user segments. As per business requirements, we've included both Partner IDs, for desktop and small devices, in the audience configurations.
- Due to the differentiating traffic amounts test 1.2 (international) will likely run for a longer duration of time than 1.1 (domestic).

- Panel content between international and domestic segments are identical. Baseline offer is designed to legally comply with domestic and international users.

Audience:

- Domestic
 - Partner ID: VA-BF-D-02 & VA-BF-M-02
 - Underwriting Country: US
 - Language: EN
 - Flight Type: Domestic
- International
 - Partner ID: VA-BF-D-02 & VA-BF-M-02
 - Underwriting Country: US
 - Language: EN
 - Flight Type: International

Breakdown (B = baseline):

	Test 1.1	Test 1.2
PartnerID	VA-BF-D-02 & VA-BF-M-02	VA-BF-D-02 & VA-BF-M-02
Length	~12 weeks	~14 weeks
Factors	4	4
Levels	2	2

Lift	5%				5%			
No. experiences	16				16			
Type	Multivariate				Multivariate			
Traffic to test	48%				48%			
Traffic to each cell	3%				3%			
Experiences (1 = Baseline, 2 = Level 2)	F1	F2	F3	F4	F1	F2	F3	F4
Baseline (52%)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Exp 1 (3%)	1	1	1	1	1	1	1	1
Exp 2 (3%)	1	1	1	2	1	1	1	2
Exp 3 (3%)	1	1	2	1	1	1	2	1
Exp 4 (3%)	1	2	1	1	1	2	1	1
Exp 5 (3%)	2	1	1	1	2	1	1	1
Exp 6 (3%)	1	1	2	2	1	1	2	2
Exp 7 (3%)	1	2	2	1	1	2	2	1
Exp 8 (3%)	2	2	1	1	2	2	1	1
Exp 9 (3%)	2	1	1	2	2	1	1	2

Exp 10 (3%)	1	2	2	2	1	2	2	2
Exp 11 (3%)	2	2	2	1	2	2	2	1
Exp 12 (3%)	2	2	1	2	2	2	1	2
Exp 13 (3%)	2	1	2	2	2	1	2	2
Exp 14 (3%)	1	2	1	2	1	2	1	2
Exp 15 (3%)	2	1	2	1	2	1	2	1
Exp 16 (3%)	2	2	2	2	2	2	2	2

Sample Size for 1.1

- Assuming the relative detectable conversion rate difference of 5% at the factor level, 48% of the domestic segment will be directed towards the test for 12 weeks.

Sample Size for 1.2

- Assuming the relative detectable conversion rate difference of 5% at the factor level, 48% of the international segment will be directed towards the test for 14 weeks.

Hypotheses:

- Factor 1's second level will result in a positive difference in conversion
- Factor 2's second level will result in a positive difference in conversion

- Factor 3's second level will not result in a difference in conversion
- Factor 4's second level will not result in a difference in conversion

Test Factors:

Test Factors

Factor 1

Include the protection of travel insurance for your trip

Peace of mind for only \$36.90 per traveler.
If your trip is cancelled or disrupted for reasons such as inclement weather, baggage complications, specific job related cancellations, or missed connection flights, you may receive reimbursement for your purchase. Travel insurance coverage is offered by TGI Group, [terms & exclusions](#) apply. Please read [Important Disclosures](#) and [Policy of Insurance](#) documents.

Factor 2

Insurance plan includes coverages for:

- Lost, stolen, or damaged luggage/baggage
- Weather emergencies or disruptions
- Missed connections or connecting flights

Factor 3

Selection Required *

☐ Yes, I would like to purchase travel insurance for \$36.90.
Travel insurance coverage is offered by TGI Group, terms & conditions apply. Please read Important Disclosures and Policy of Insurance documents.

☐ No, I would like to proceed without travel insurance.

Highly recommended

Factor 4

Total Cost

\$246.00
Insurance not included ▾

Factor 4

Factor 1 (Header)

	Factor
Level 1 (Baseline)	Include the protection of travel insurance for your trip
Level 2	✈ Don't let unexpected events spoil your trip

Factor 2 (Details)

	Factor
Level 1 (Baseline)	Insurance plan includes coverages for: <ul style="list-style-type: none"> • Lost, stolen, or damaged luggage/baggage • Weather emergencies or disruptions • Missed connections or connecting flights
Level 2	Insurance plan includes coverages for: <ul style="list-style-type: none"> ✂ Lost, stolen, or damaged luggage/baggage ✂ Weather emergencies or disruptions ✂ Missed connections or connecting flights

Factor 3 (Insurance Option)

	Factor
Level 1 (Baseline)	<p>Selection Required *</p> <div> <input type="radio"/> Yes, I would like to purchase travel insurance for \$36.90. Highly recommended <small>Travel insurance coverage is offered by TGI Group, terms & conditions apply. Please read Important Disclosures and Policy of Insurance documents.</small> </div> <div> <input type="radio"/> No, I would like to proceed without travel insurance. </div>
Level 2	<p>Selection Required *</p> <div> <input type="radio"/> Yes, I would like to purchase travel insurance for \$36.90. <small>Travel insurance coverage is offered by TGI Group, terms & conditions apply. Please read Important Disclosures and Policy of Insurance documents.</small> </div> <div> <input type="radio"/> No, I would like to proceed without travel insurance. </div>

Factor 4 (Shopping Cart)

	Factor
Level 1 (Baseline)	<div> <input type="radio"/> No, I would like to proceed without travel insurance. </div> <div>  </div> <div> Total Cost \$282.90 <small>Including insurance option ▾</small> </div>

Level 2

trip

ific job related
ranchise coverage
nce documents.

Highly recommended

nce documents.

Breakdown

One Way (1 Traveler) EWR to ORD

- October 24th
- Newark, NJ - Chicago, IL
- 11:15 am to 2:10 pm
- 1 stop (no connections)

Fare	\$221.00
Taxes & Fees	\$25.00
Trip Insurance	\$36.90

Total \$282.90

Most Complicated Test Cell (Exp 16):

Exp 16

Insurance Option

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Weather emergencies or disruptions

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Complicated Cell Functionality:

<https://www.figma.com/proto/HnAo6GqDCzUjQLqQXoijb7/panels?page-id=0%3A1&type=design&node-id=625-4801&viewport=-3437%2C-1784%2C0.43&t=QhyzBF6nmjmnUsAB-1&scaling=contain&starting-point-node-id=625%3A4801&show-proto-sidebar=1&mode=design>

Figma Assets

<https://www.figma.com/file/HnAo6GqDCzUjQLqQXoijb7/panels?type=design&node-id=0%3A1&mode=design&t=yaz9nYlwE3us2VGh-1>