

Web Optimization: The Good, The Bad, and the Inconclusive

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Conversion Rate Optimization or "CRO"

Leveraging user research, data analysis, and split testing to identify and implement statistically proven ways to generate more growth





What is Web Optimization?

An actual test I'm running right now



A Side (Original Baseline)

RV Mattress RV Mattress & Camper Mattress High Quality Replacements at Affordable Prices We have all common RV bed sizes are available, including the popular 60 x 75 short queen! We can do camper beds in any size or shape! Even those odd shaped Airstream size mattress replacements and the short pop up camper mattress! Need a custom mattress size, a cut corner, or a radius corner? Give us a call for pricing! 1-888-488-1468. SEDONA ELATION LUXURY Affordable 5.5" supportive foam RV Popular 5.5" gel foam RV mattress Premium 8" gel foam RV mattress mattress with organic cotton with organic cotton ***** 4.9 ***** 4.9 ***** 4.9 (112 Reviews) (145 Reviews) (231 Reviews) PLUSH PLUSH PLUSH STARTING AT \$199.00 STARTING AT \$299.00 STARTING AT \$469.00 Shop Now Shop Now SKU: RV55P-3878-BOC SKU: RGL55-2875-0C SKU: RGL8-2875-00 \$ Free Fedex Shipping No Tax 121 Day No Risk Trial Money Back Guarantee If you're in the 48 contiguous United States If your shipping address is outside of Because you're buying a mattress sight We want you to be happy with your your shipping is free! Contact us for orders to Colorado (where we're located), your order unseen, we offer you up to 121 days free purchasel We offer a money-back guarantee HI, AK, and Canada. on all non-custom products. won't be charged taxes. Only good through trial. See individual products for details. Dec. 2018.

B Side (Redesign Variation)



Why should you invest in CRO?

CRO is the best friend of **SEO**





Why should you invest in CRO?

User Acquisition





Why should you invest in CRO?

CRO perpetuates a virtuous cycle





How do you optimize?

The Testing Cycle

- Problem/Question
- Hypothesis/Prediction
- Testing
- Analysis





How do you optimize?

That test I'm running right now, again



A Side (Original Baseline)

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B Side (Redesign Variation)



Step 1: Identify a problem

Category page conversion funnel



SUMMI

Step 1: Identify a problem



Search page conversion funnel



Step 1: Identify a problem

Category Funnel

- 54.3% initial dropoff (12,580 users)
- 1.4% order conversion (332 users)

VS.

Search Funnel

- 30.2% initial dropoff (4,138 users)
- 3.3% order conversion (451 users)





Problem: When compared to the search page, the category page is underperforming at moving users onto product pages and overall conversion.

Question: Can category page flow into products and conversion be lifted up to match search page performance?



Step 2: Formulate a hypothesis

What is a potential reason/cause for the problem? Let's investigate...

Category Behavior

- 1:04 average time on page (19s longer)
- 8,927 entrances (37.4% of unique pgviews)

Search Behavior

- 0:45 average time on page
- 824 entrances (6.9% of unique pgviews)

Pageviews 🕐 🤟	Unique Pageviews ?	Avg. Time on Page ⑦	Entrances ?	Bounce Rate	% Exit 🕐	Page Value 🥐	
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						1	
	Unique	Avg. Time on	Entrances	Bounce Rate			
Pageviews 🕐 🗸	Unique Pageviews ?	Avg. Time on Page ⑦	Entrances	Bounce Rate	% Exit ?	Page Value ?	



Step 2: Formulate a hypothesis

What is a potential reason/cause for the problem? Dig a little deeper...

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Category Page Scrollmap



Search Page Scrollmap



Hypothesis: Category pages are a much bigger site entry point. Users are getting caught up in the page content and not moving on to product pages.

Prediction: Visually emphasizing the products and reducing text content density will reduce distraction points and encourage users to move on to product pages.



That test I'm running right now: last time, I promise



A Side (Original Baseline)



B Side (Redesign Variation)



Goal: Clicks on Product Blocks

Was doing well but something changed recently





Goal: Order Conversion

Looks good for the last couple of days





Step 4: Analyze the result data

Goal: Revenue

Oh no, it's been down the whole time...





Step 4: Analyze the result data

Goal: Revenue

Ah, but there's a reason why!





Inconclusive

Analysis: Continue running test because goals are not at 95% confidence, and trendlines are not stable. Endpoint goals (conversion & revenue) look good, but primary goal (product engagement) has gone down recently; warrants further investigation.



Problem: One of our manufacturers had to increase their cost of product production, significantly lowering our profit margin for that line of products.

Question: Can we maintain the current margin somehow?



Hypothesis: Price comparison analysis indicates that our prices are already significantly lower than most of our competition, but we are not branded as the "discount" or "cheaper" option. It may be possible to raise prices.

Prediction: Raising the price by \$50 for the affected product line will maintain a similar margin and still be under competitor's price, keeping us as the price leader.



Time for some math & statistics... How long should you run a split test?

Factors that determine runtime

- Representativeness
- Conversion rate of primary KPI
- Minimum Detectable Effect
- Statistical Significance
- Sample size



Representativeness

- A sampling of site traffic that will adequately represent totality of site traffic
- 1 or 2 business cycles
- Every day of the week
- Multiple traffic sources (unless targeting a specific source)
- Content marketing schedule

Conversion Rate of Primary KPI Minimum Detectable Effect (MDE)

• the relative minimum improvement over the baseline that you're willing to detect in an experiment





Statistical Significance

- Likelihood that the difference in conversion rates between a given variation and the baseline is not due to random chance
- Risk tolerance
- 95% is the standard

Sample Size

• Minimum acceptable amount of visitors per variation to provide significant result data



x 2 variations = 12,868 total visitors



How long should this test run for?

- Representativeness
 1 month of traffic, approx. 10,000 unique visitors
 - Conversion Rate 2.2% order conversion
- Minimum Detectable Effect **33.71%**
- Statistical Significance
- Sample size

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- 95%
- 6434 unique visitors per variation



Step 4: Analyze the result data

Goal: Order Conversion

Oooh, that doesn't look good...





Step 4: Analyze the result data

Goal: Revenue

Yikes, pull the plug!



Mar 10

Mar 11

Mar 14

Mar 15

Mar 16



Bad

Analysis: We got scared and ended the test too early. The level of risk was higher than what was acceptable. Scale back degree of change and re-test.

- Representativeness: 1 month of traffic
- Conversion Rate: 2.2% order conversion
- Minimum Detectable Effect: 33.71%
- Statistical Significance: 95%
- Sample size: 6,434 uniques per variation

Ran for 14 days (Mar. 5 – Mar. 19) 2.2% order conversion on baseline -43.00% 99.59%

Baseline: 2,731 unique visitors Variation: 2,694 unique visitors



Problem: The more times a user returns to the site, the lower their RPV is.

Question: Can we encourage conversion earlier in the viewing cycle and get a higher RPV?



Hypothesis: Returning shoppers do not have an easy way to get back to the products they were previously interested in.

Prediction: Relocating the "recently viewed" feature higher up the page and wrapping it in a mobile-friendly UI will remind the user about products the they are interested in, making them more likely to engage and convert.



A different test, finally some new screenshots



A Side (Baseline)



B Side (Redesign)



B Side (Mobile Detail)



Step 4: Analyze the result data

Goal: Order Conversion

Consistent behavior over the planned timeframe coupled with statistical significance





Step 4: Analyze the result data

Goal: Revenue Success!





Other Funnel Goals

Everything positively favors the variation

VISUALS/GOALS	PAGEVIEWS: PRODUCT	ITEM ADDED TO CART	PAGEVIEWS: CART	PAGEVIEWS: CHECKOUT	MULTI-ITEM ORDER	OFFER CODE APPLIED TO ORDER
CONV. RATE	(33.84%)	(16.18%)	(18.72%)	(12.91%)	(9.81%)	(10.48%)
CONVERSIONS	4,770	2,281	2,638	1,819	1,383	1,477
CONV. RATE	+3.00% (35.02%)	+3.00% (16.62%)	+1.00% (18.92%)	+3.00% (13.25%)	+7.00% (10.51%)	+5.00% (11.00%)
CONVERSIONS	5,003	2,375	2,703	1,893	1,501	1,571



Good

Analysis: Test ran long enough to achieve planned parameters. Primary KPI and secondary goals were all positive, with significance. Area ripe for optimization has been identified, and additional tests should be run to achieve maximum optimization.

- Representativeness: 3 months of traffic
- Conversion Rate: 10% order conversion
- Minimum Detectable Effect: 8.71%
- Statistical Significance: 90%
- Sample size: 14,858 uniques per variation

Ran for 83 days (Dec. 20 – Mar. 12) 10.44% order conversion on baseline +5.00% 91.75% Baseline: 14.094 unique visitors

Baseline: 14,094 unique visitors Variation: 14,288 unique visitors



Tools for Optimization







Thank You!

CorvusCRO

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