

Interpret and Take Action on Experiment Results



OPTIMIZATION

is a


JOURNEY

not a

DESTINATION


Before we get started...

- Feel free to ask questions at any time!
- Engage in discussions.
- We will be using laptops for certain sections.
- We are recording this session and will email a link to the recording.
- We will follow up with an email containing resources.
- Please give us feedback in the survey at the end of this session.



During this session, you'll learn...

1. Why statistics are important in A/B testing
2. How to read the Optimizely Results page
3. How to take action on winning, losing and inconclusive results



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Statistical Significance


How confident can I be that the results I'm seeing are due to the changes I made, and not just random chance?



Statistical Significance

? STATISTICAL
SIGNIFICANCE
STATUS

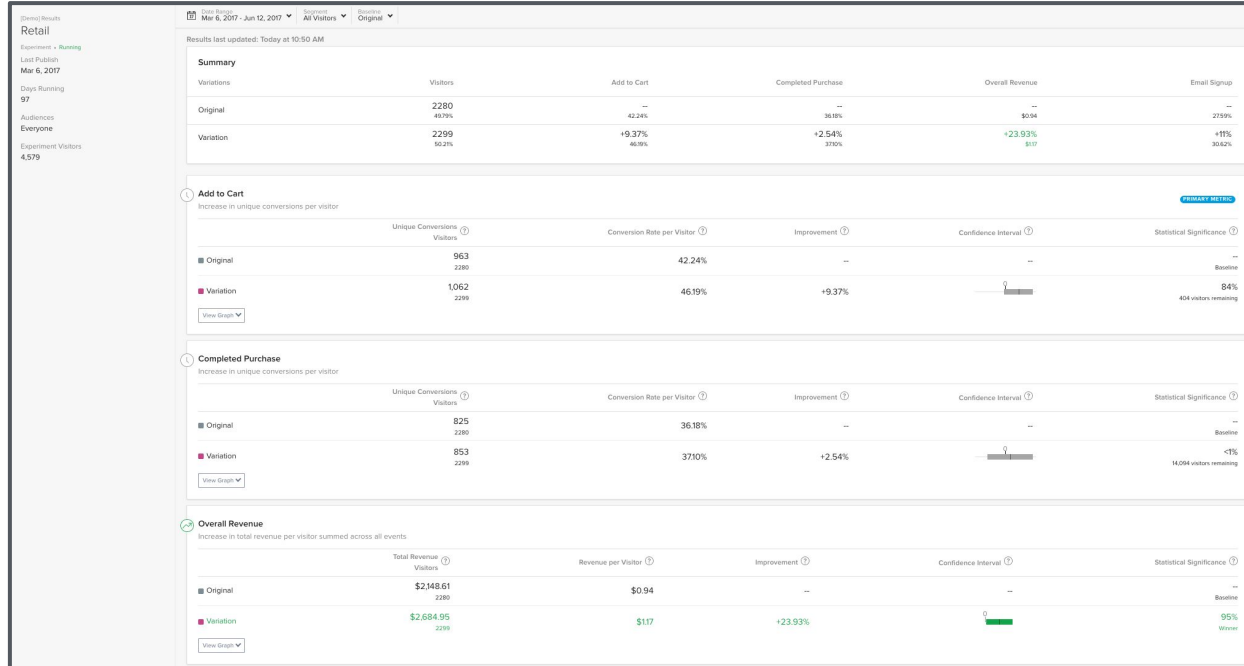
90%
winner




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In-Product Performance Summary





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Winning Variations





Winning Variations

1. Implement the winning variation



Winning Variations

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- Hard-code changes back to your site *or...*



Winning Variations

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- Hard-code changes back to your site *or...*
- Launch the test in Optimizely



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- Hard-code changes back to your site *or...*
- Launch the test in Optimizely
 - Pause the experiment



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 - Pause the experiment
 - Duplicate the experiment



Winning Variations

1. Implement the winning variation

- Hard-code changes back to your site *or...*
- Launch the test in Optimizely
 - Pause the experiment
 - Duplicate the experiment
 - Set 100% of your traffic to winning variation



Winning Variations

1. Implement the winning variation

- Hard-code changes back to your site *or...*
- Launch the test in Optimizely
 - Pause the experiment
 - Duplicate the experiment
 - Set 100% of your traffic to winning variation
 - Start your new experiment



Winning Variations

1. Implement the winning variation
2. Expand your hypothesis



Winning Variations

1. Implement the winning variation
2. Expand your hypothesis
 - Can we further optimize this page along the same trend?



Winning Variations

1. **Implement the winning variation**
2. **Expand your hypothesis**
 - Can we further optimize this page along the same trend?
 - Can we apply this hypothesis elsewhere on the site/in the funnel?



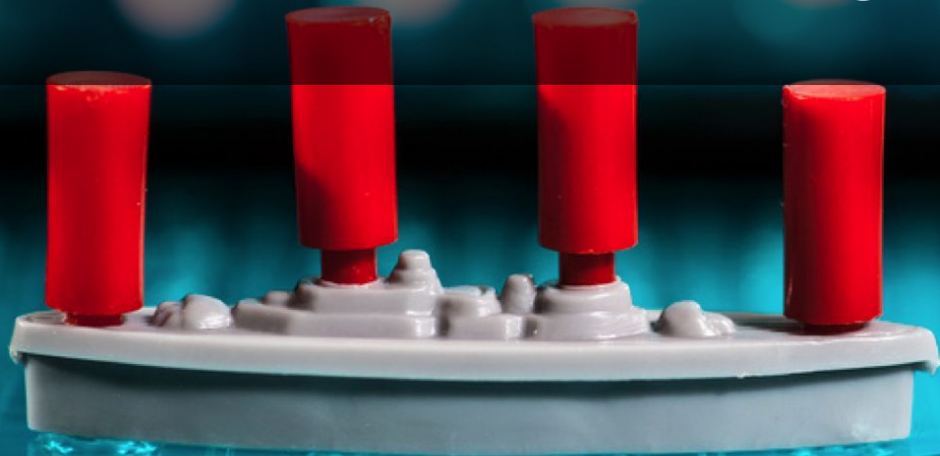
Winning Variations

1. **Implement the winning variation**
2. **Expand your hypothesis**
 - Can we further optimize this page along the same trend?
 - Can we apply this hypothesis elsewhere on the site/in the funnel?
 - Are there other sites or domains where we could test this idea?



- Clearly define your problem
- Validate it using quantitative and qualitative data
- Describe the proposed solution
- Propose a rationale as to why it will solve the problem
- Suggest metrics to measure for this experiment
- Set a criteria for success and failure

Test for learnings, not just for lift.



Losing Variations





Losing Variations

1. Segment your results





Losing Variations

1. **Segment your results**
2. **Consider that you were wrong.**



Losing Variations

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Losing Variations

1. Segment your results
2. Consider that you were wrong.
3. Ask yourself, “Why?”



Losing Variations

1. Segment your results
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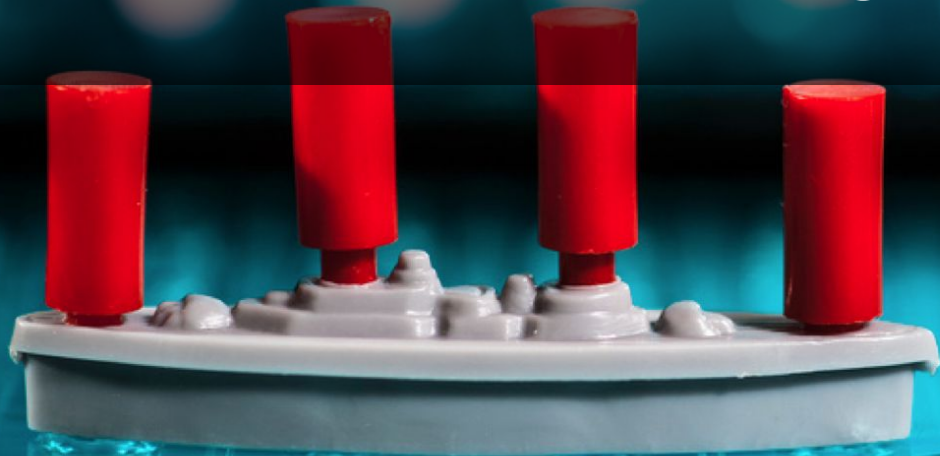
Why? because...
Why? because...
Why? because...
Why? because...
Why? because...



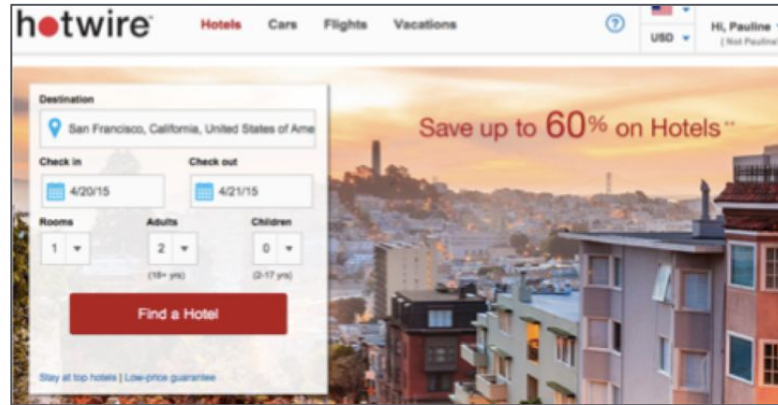
Losing Variations

1. Segment your results
2. Consider that you were wrong.
3. Ask yourself, “Why?”
4. Explore new hypotheses

Test for learnings, not just for lift.



Control



The image shows the Hotwire Hotels search interface. The header includes the Hotwire logo, navigation links for Hotels, Cars, Flights, and Vacations, a currency selector set to USD, and a user greeting "Hi, Pauline". The main search form is overlaid on a background image of a city at sunset. The form fields include: Destination (San Francisco, California, United States of Ame), Check in (4/20/15), Check out (4/21/15), Rooms (1), Adults (2), and Children (0). A prominent red "Find a Hotel" button is at the bottom of the form. A promotional banner on the right says "Save up to 60% on Hotels **". At the bottom left of the form, it says "Stay at top hotels | Low-price guarantee".

hotwire[™] Hotels Cars Flights Vacations

Hi, Pauline
(Not Pauline?)

USD

Destination
San Francisco, California, United States of Ame

Check in
4/20/15

Check out
4/21/15

Rooms
1

Adults
2
(18+ yrs)

Children
0
(2-17 yrs)

Find a Hotel

Save up to 60% on Hotels **

Stay at top hotels | Low-price guarantee

Control

The control version of the Hotwire hotel search interface features a white search form on the left side of a banner image showing a San Francisco cityscape at sunset. The form includes fields for Destination (San Francisco, California, United States of America), Check in (4/20/15), Check out (4/21/15), Rooms (1), Adults (2), and Children (0). A prominent red button labeled "Find a Hotel" is at the bottom of the form. The banner text "Save up to 60% on Hotels" is in red. The top navigation bar includes "hotwire", "Hotels", "Cars", "Flights", "Vacations", a help icon, a currency selector (USD), and a user greeting (Hi, Pauline).

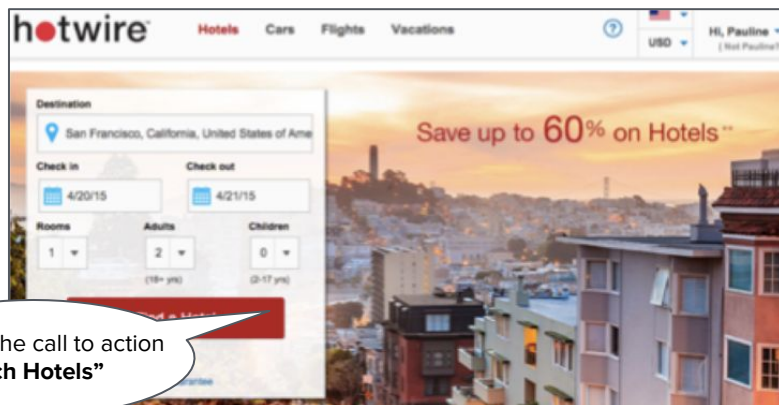
Variation 1

Variation 1 of the Hotwire hotel search interface is identical to the control version, featuring the same white search form, cityscape banner, and "Find a Hotel" button. A callout bubble points to the red button with the text: "Change the call to action to 'Search Hotels'".

Variation 2

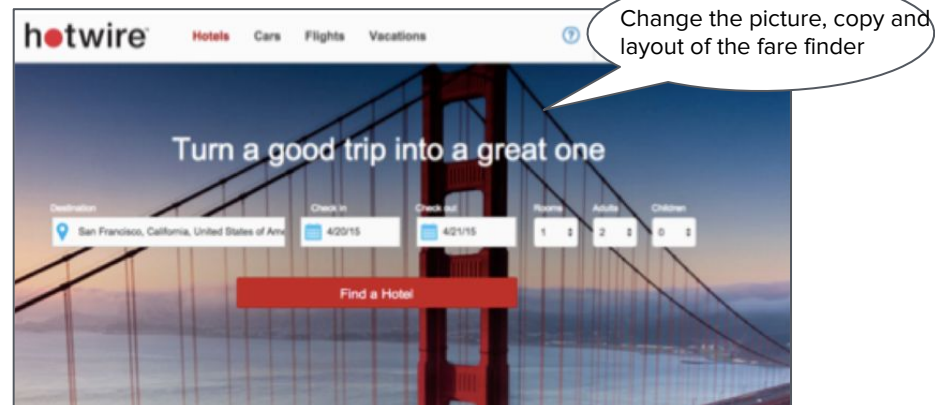
Variation 2 of the Hotwire hotel search interface features a different banner image of the Golden Gate Bridge at sunset. The search form is integrated into the banner with a semi-transparent white background. The headline "Turn a good trip into a great one" is centered in white. The search fields include Destination (San Francisco, California, United States of America), Check in (4/20/15), Check out (4/21/15), Rooms (1), Adults (2), and Children (0). A red button labeled "Find a Hotel" is at the bottom. A callout bubble points to the banner area with the text: "Change the picture, copy and layout of the fare finder".

Variation 1



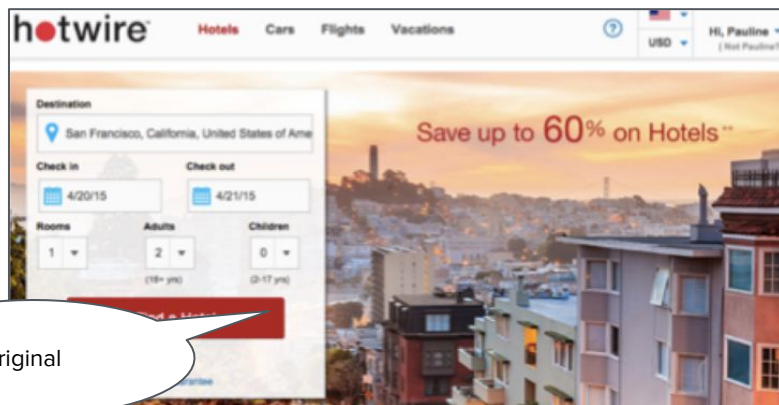
Inconclusive

Variation 2



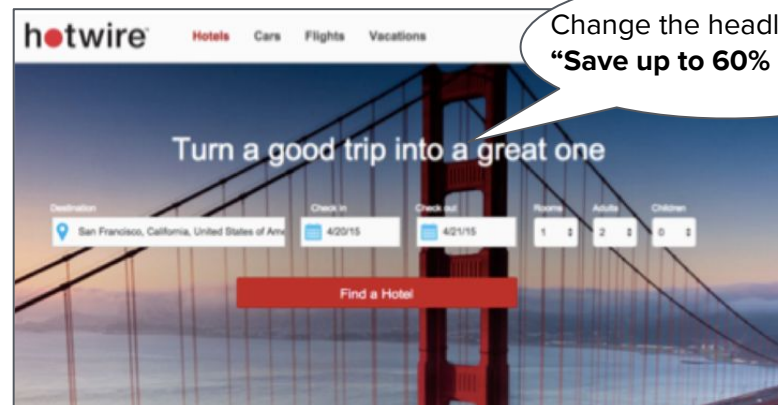
Loser

Control



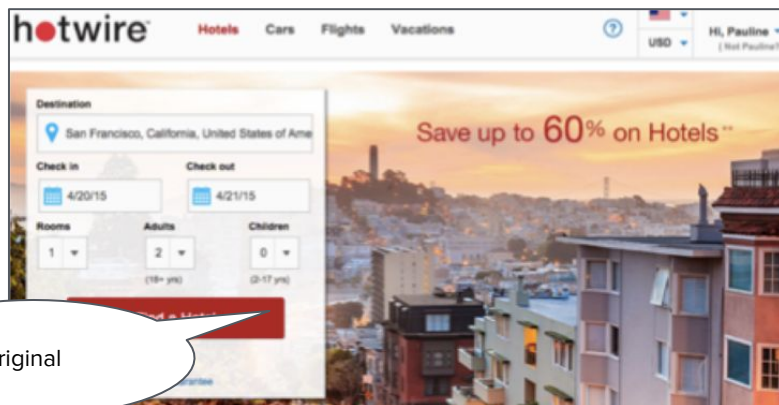
Original

New Variation

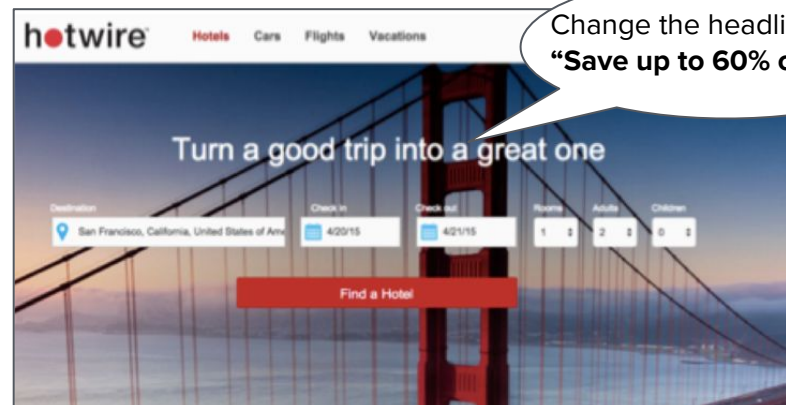


Change the headline to
"Save up to 60% on Hotels"

Control



New Variation



Winner

The background of the image is a collage of various colored, crumpled paper scraps. The colors include white, yellow, green, blue, red, and light green. Each scrap features a large, bold, black question mark and a smaller black dot, suggesting a theme of uncertainty or inquiry. The text "Inconclusive Variations" is centered over a semi-transparent dark grey horizontal band.

Inconclusive Variations



Inconclusive Variations

1. The sample size is too small



Inconclusive Variations

1. The sample size is too small



Inconclusive Variations

1. The sample size is too small

- Check Visitors Remaining

UNIQUE CONVERSIONS VISITORS	CONVERSION RATE	DIFFERENCE INTERVAL	IMPROVEMENT	STATISTICAL SIGNIFICANCE STATUS
1,061 46,217	2.30%	---	---	--- baseline
577 46,272	1.25%		-45.7%	>99% loser
1,160 46,187	2.51%		+9.4%	54% ~ 36,000 visitors remaining.



Inconclusive Variations

1. The sample size is too small

- Check Visitors Remaining
- Continue running your experiment



Inconclusive Variations

1. The sample size is too small

- Check Visitors Remaining
- Continue running your experiment
- Broaden your URL targeting



Inconclusive Variations

1. The sample size is too small
2. The impact is too small



Inconclusive Variations

1. The sample size is too small
2. The impact is too small

Go Bigger!



Inconclusive Variations

1. **The sample size is too small**
2. **The impact is too small**
 - Increase the “degree of drama”



Inconclusive Variations

1. **The sample size is too small**
2. **The impact is too small**
 - Increase the “degree of drama”
 - Test more than one element at a time



Inconclusive Variations

1. **The sample size is too small**
2. **The impact is too small**
 - Increase the “degree of drama”
 - Test more than one element at a time
 - Move on to other ideas

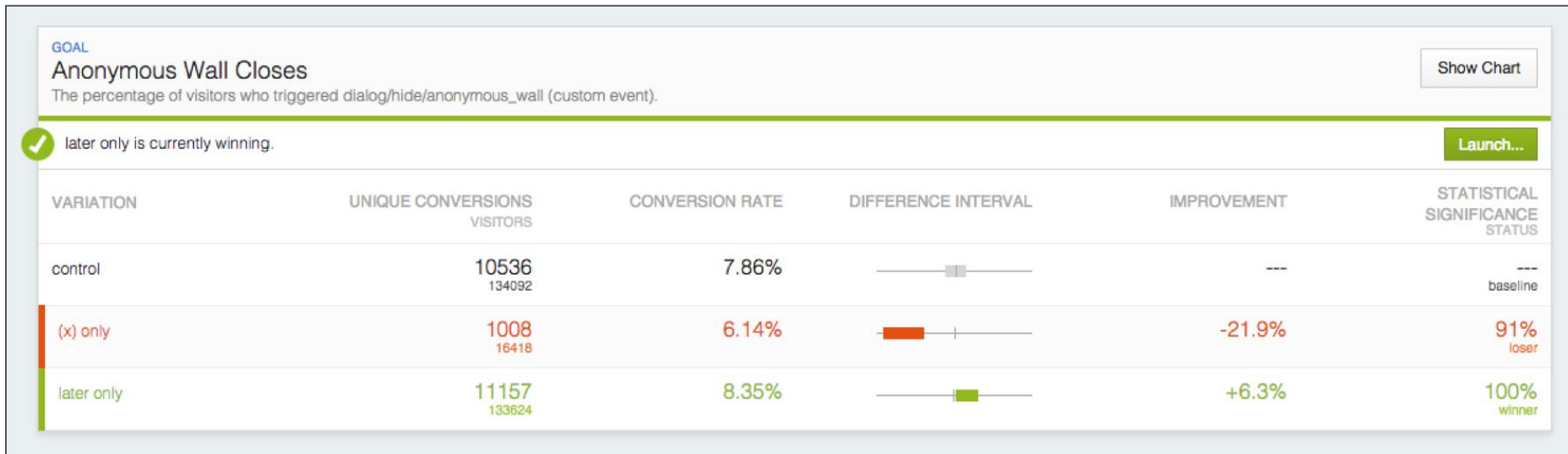


Inconclusive Variations

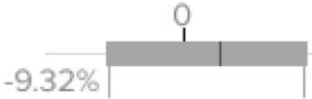
1. The sample size is too small
2. The impact is too small
3. The data is unclear
 - Look for trends and patterns

Confidence Interval - Optimizely X


Gives you a range of values where the difference between the baseline and the variation actually lies.



Confidence Interval - Optimizely X

Unique Conversions Visitors ?	Conversion Rate ?	Improvement ?	Confidence Interval ?	Statistical Significance ?
978 4,281	22.85%	--	--	-- Baseline
993 4,151	23.92%	+4.71%	 -9.32% 0 15.49%	<1% 12,881 visitors remaining

If you implemented this inconclusive variation, you'd likely see an improvement between -9.32% and 15.49%



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Q&A