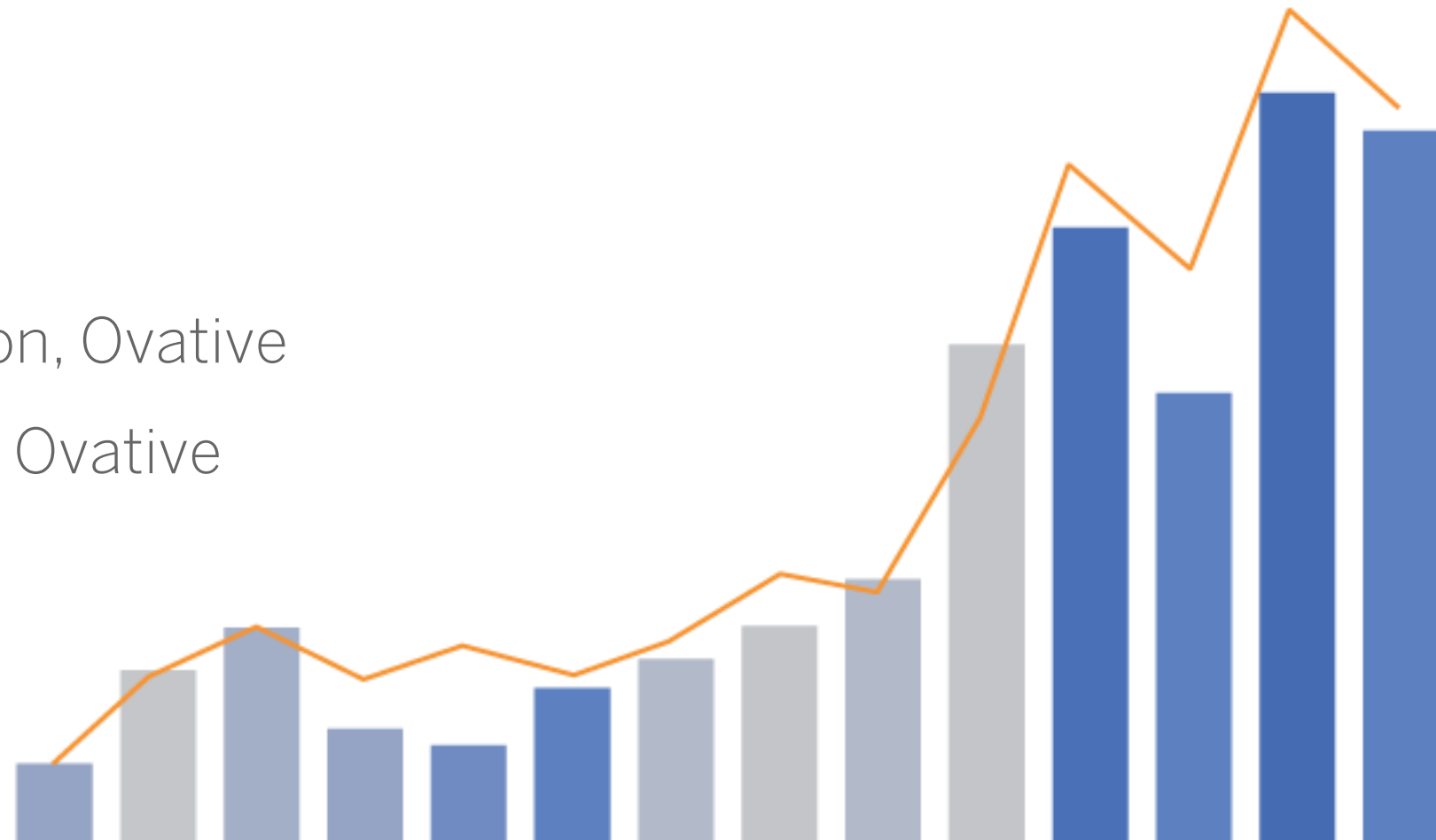




Ovative: Measuring marketing impact from online-to-store

Claire Wyatt | Manager of Data Visualization, Ovative

Rachel Rabaey | Manager of Data Science, Ovative



Thank you for attending today's webinar

Jeff Huckaby

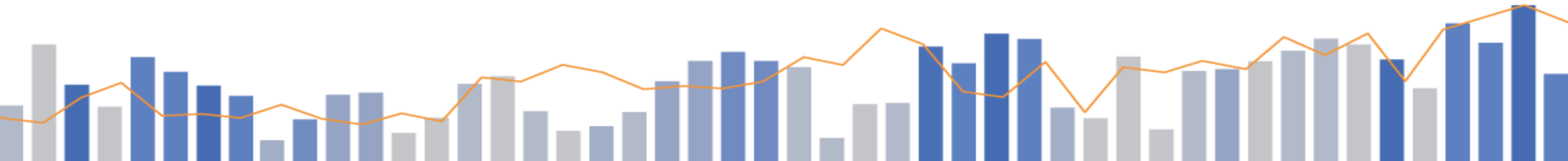
Global Segment Director, Retail and Consumer Goods, Tableau

Twitter: @huck5

Email: jhuckaby@tableau.com



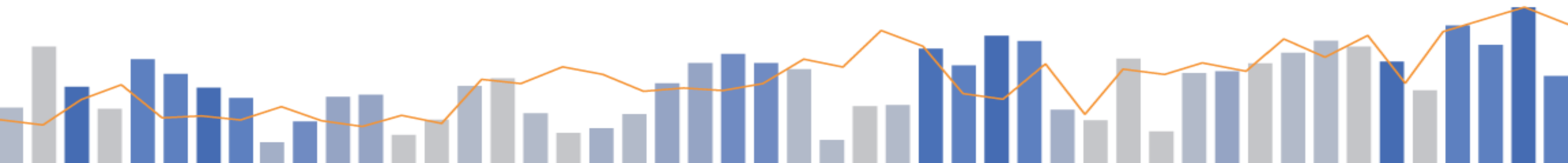
- 20 years in retail and advanced analytics.
- Passionate about driving business value and efficiencies with data.
- Experience within retail consulting, convenience stores/travel centers, specialty retail, department stores, quick serve restaurants,



Claire Wyatt

Manager of Data Visualization, Ovative

Claire is a data evangelist and proud nerd. A graduate of the University of Wisconsin Madison, Claire majored in Finance, Investments & Banking as well as History. After 3 years in the Financial Industry, Claire transitioned her analytical skills to the Marketing Technology world where she spends her days making big data look super sexy. Say "parameter" and her knees are going to get a little weak (she loves them). Also, make sure to ask her about her space helmet or where she got her shoes.



Rachel Rabaey

Manager of Data Science, Ovative

Rachel holds a Masters of Predictive Analytics from DePaul University and has over 15 years of experience in marketing and loyalty program analytics, wrangling data even before it was “big.” As a Manager of Data Science at Ovative/group, she conducts a variety of analyses including predictive modeling, customer segmentation, forecasting and campaign measurement. Her favorite Tableau feature is level-of-detail calculations.



Agenda

- The Context:

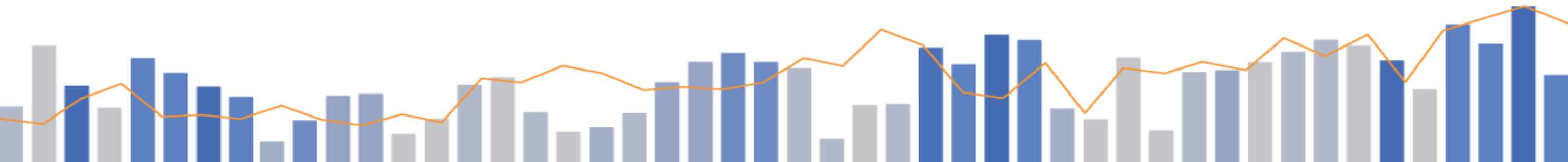
- Online-to-Store A/B Testing
- Why Didn't Other Calculators Work?

- What Makes the Sexy Calculator so Sexy?

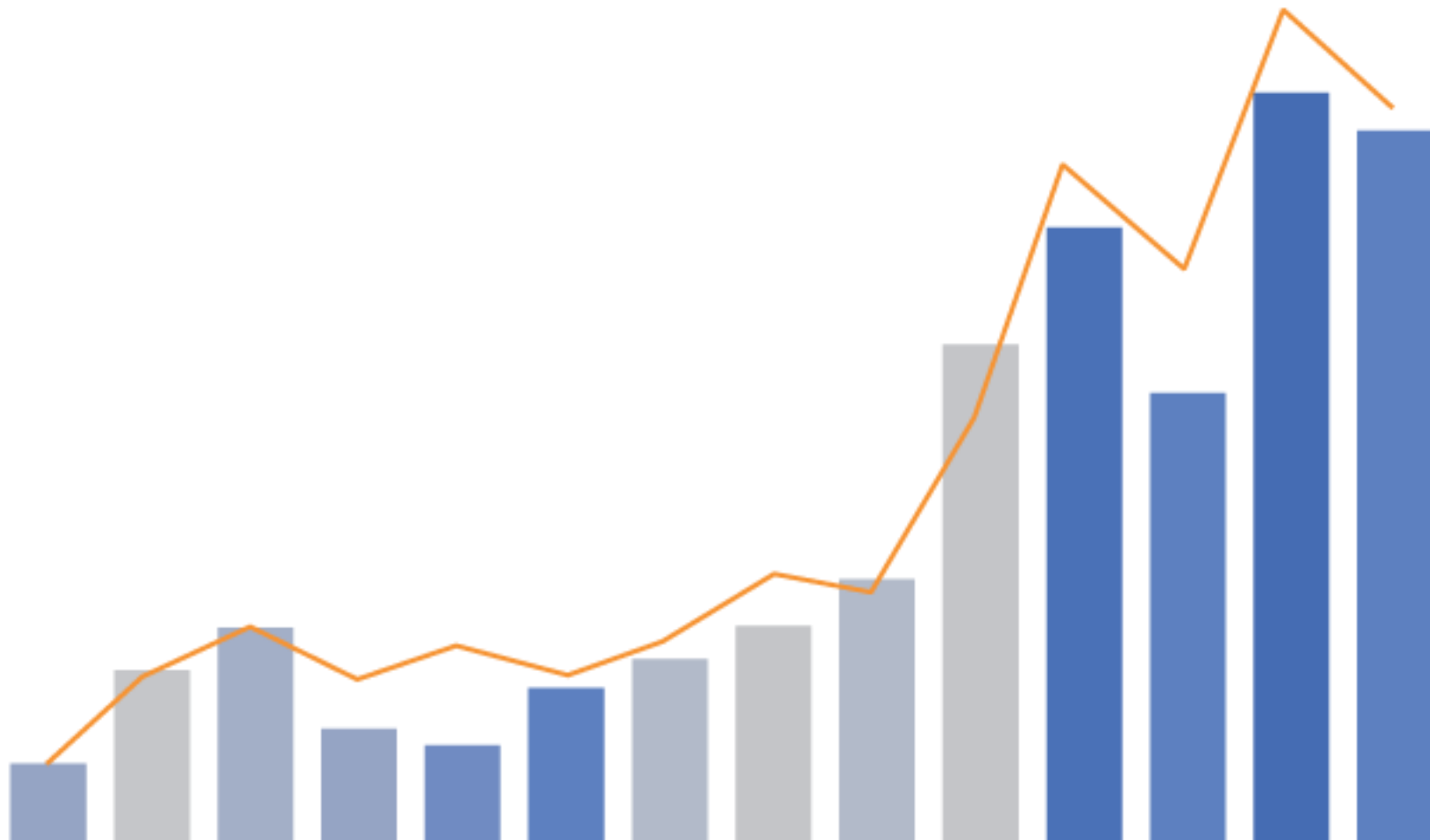
- How it Works
- What it Does

- The Sexy Calculator

- Results



The Context



Ovative/group | Introduction

A new type of integrated marketing partner

Mission fearlessly unlock potential

Founded
Location
Employees

2009
Minneapolis
120+

**TwinCities
BUSINESS**
Ovative/group named #1 in
20 Companies to Watch — 2017



**Inc.
5000**
Ovative/group listed as on of the
fastest-growing private
companies in America - 2017

Practice Areas

advanced marketing measurement & platform | site optimization | digital marketing

Clients

KOHL'S

GENERAL MILLS

UnitedHealthcare

LANE BRYANT

Marriott



maurices

**brightpeak
financial**

POLARIS

EDMC



What is A/B Testing?



Customer A



Customer B



Comparing two versions of a web page to see which one performs better

You compare two web pages by showing the two variants (let's call them A and B) to similar visitors at the same time

The one that performs better for your defined success metric wins

traditionally, these tests are measured using ecommerce metrics only

Why Enterprise Measurement?

Online Purchases

\$

In-Store Purchases

\$ \$ \$ \$ \$
\$ \$ \$ \$ \$
\$ \$ \$ \$ \$
\$ \$ \$ \$ \$
\$ \$ \$ \$ \$

While website optimization undoubtedly influences online sales, websites also play a role in driving sales to a store

For many retailers, the percentage of online sales is only a small fraction of total enterprise sales

As a result, website optimizations need to focus on an enterprise view of the store versus just an online focus



Why Enterprise Measurement? (cont.)



Test Type	Effect on Ecommerce Sales	Effect on Enterprise Sales
<i>ecommerce metrics</i>	(+) positive results	(-) negative or (+) positive results possible, but <i>unable to measure</i>
<i>enterprise metrics</i>	<i>measurable</i> (-) negative or (+) positive results possible	(+) positive results and optimizations; any negative ecommerce results could be offset by positive store results

Measuring tests at the enterprise level allows a business to make the best choice for a company as a whole

CHALLENGE:

How can we optimize our A/B testing program to drive enterprise sales?



Existing Sample Size Calculators

Sample Size Calculator

Conversion Rate Metric

RPV Metric

a

Confidence Level

95 %

b

Baseline Conversion Rate (Control Offer)

11.8 %

c

Total Number of Daily Visitors

10000

Statistical Power

80 %

Number of Offers Including Control











5

Daily Number of Visitors per Offer

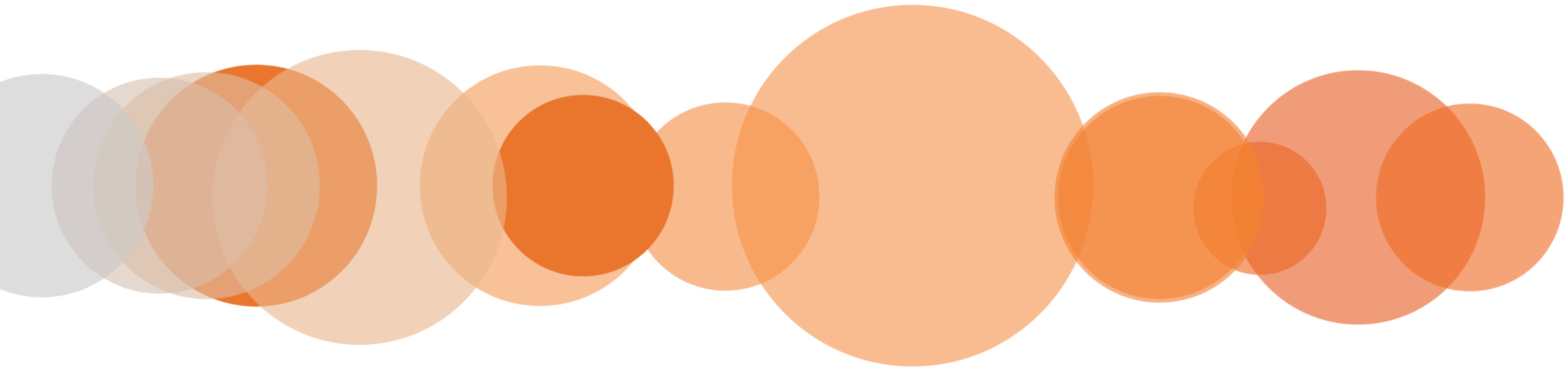
2000

Lift (that can be detected with power (80%) probability)	5%	10%	17.5 %
<div><div>d</div><div>Absolute Difference in Conversion Rate (that can be detected with power (80%) probability)</div></div>	0.59%	1.18%	2.07%
Conversion Rate of Alternative (that can be detected with power (80%) probability)	12.39%	12.98%	13.87%
Sample Size per Offer (# of visitors)	47,942	12,234	4,114
Sample Size per Offer (# of conversions)	5,657	1,444	485
<div><div>e</div><div>Days to Complete Test</div></div>	24	7	3
Weeks to Complete Test	4	1	1

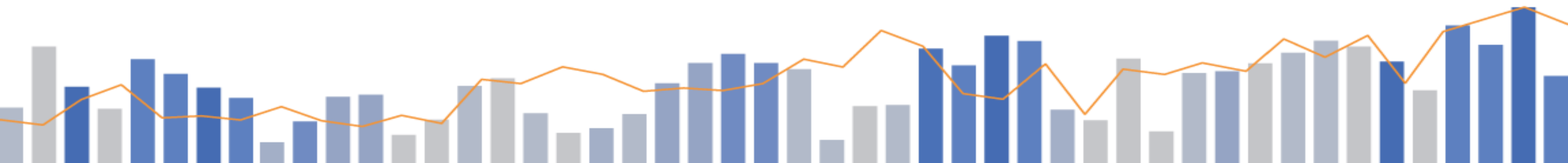
Why Didn't Other Calculators Work?

Capabilities Required for Enterprise Measurement	Other Sample Size Calculators	The Sexy Calculator
Helps us to understand the number of days needed to run a test		
Measures purchases	online only	in-store
Connects to business specific data		
Allows for additional levels of customization		
Shows results in terms of incremental conversions		
Incorporates business specific metrics that serve as a proxy for in-store conversions		

So What Makes it Sexy?



Online Site Visits are Tied to In-Store Conversions



Connects to Business Specific Data

Google BigQuery

Allows us to capture media impressions, data touches, site activity and conversions within one place

Summarize massive amounts of data in seconds

Dynamically pass through parameter values through Tableau reporting to pull test results

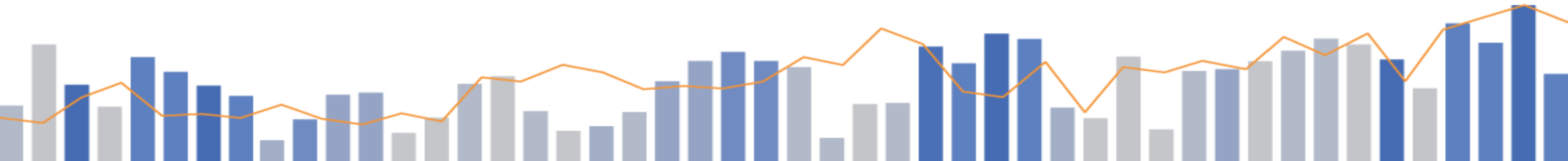
R

Used to calculate significance of test results and confidence intervals



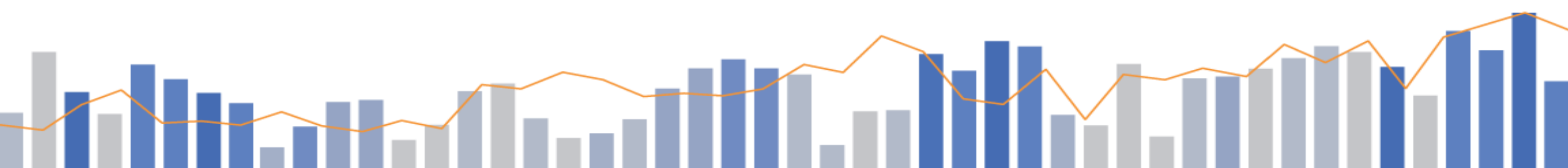
Customization, Incrementality & Proxy Metrics

	Customization	Incrementality	Proxy Metrics
What Is It?	Business specific factors	Additional conversions because of an action	Online activities correlated to in-store conversions
Why Do We Care?	Business specific factors can have a significant impact on conversion rates and site activity	Did our change drive additional conversions?	Generating actual in-store results can take time Using proxy metrics helps us run more tests in less time



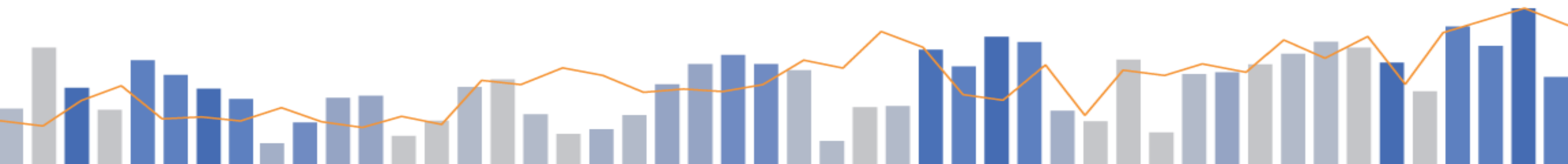
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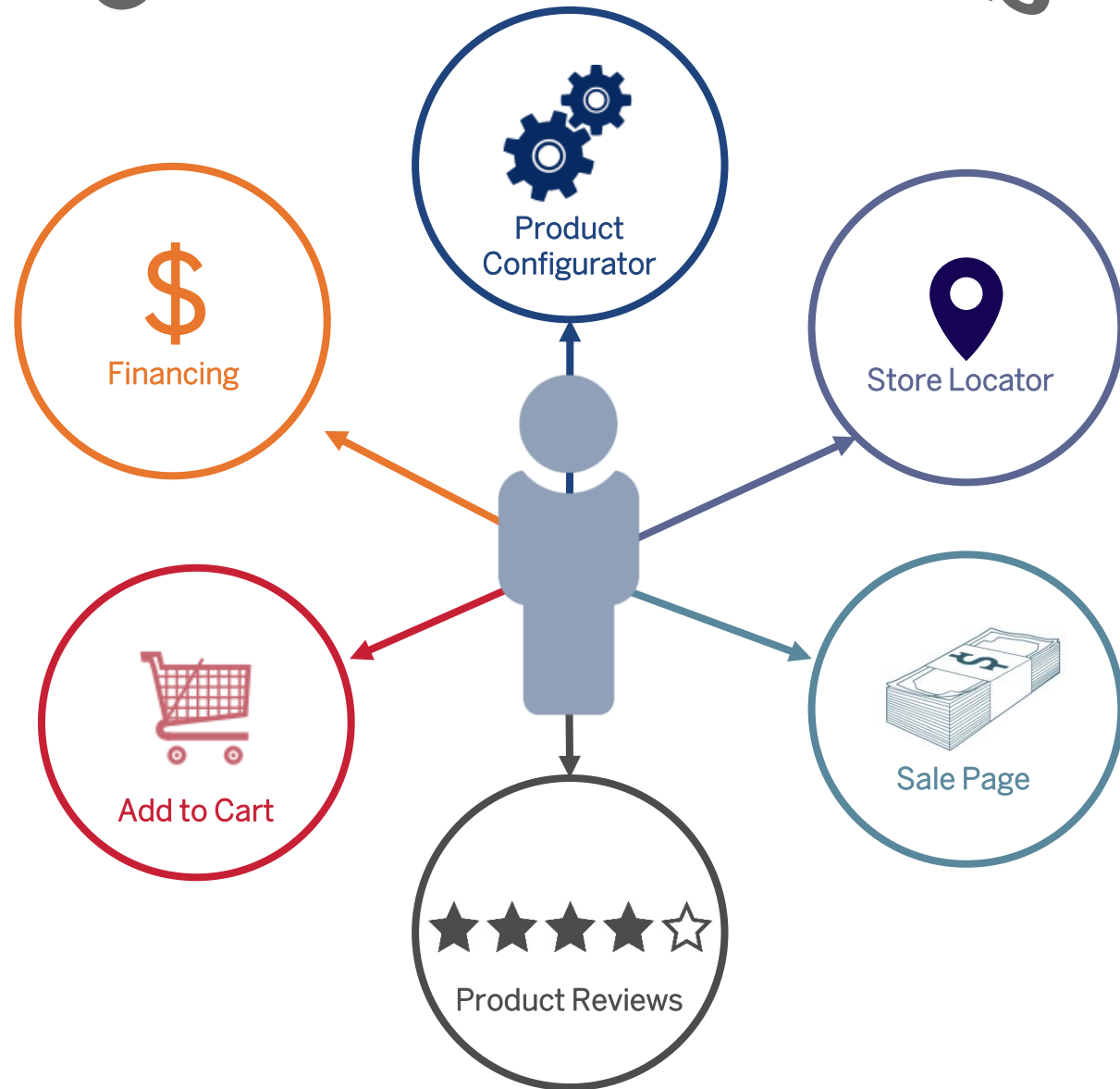
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Proxy Metrics to In-Store Sales

On-Site Key Actions



Just getting customers to go to the website isn't enough to drive in-store conversions

We did additional analysis on on-site activity (i.e. looking at product reviews) and compared this activity to converting and non-converting customers in-store





In the end, we found certain "Key Actions" that buyers are more likely to take than non-buyers

These Key Actions become the main levers we can adjust to drive in store sales

Use Proxy-Metrics to Measure Earlier

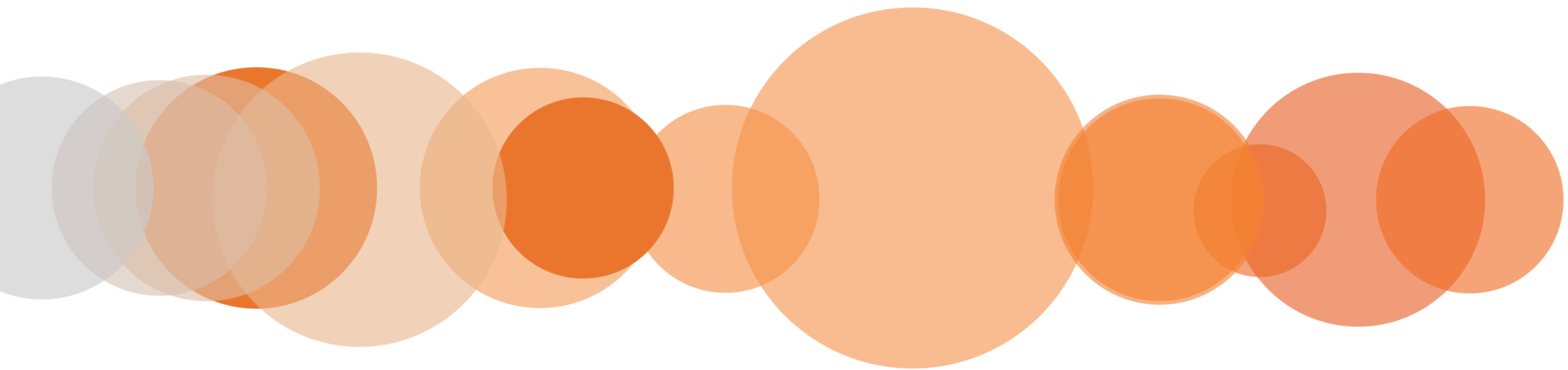
not all site sections drive conversions at the same rate they drive visits; it's important to understand both metrics

site sections as a % of total site visits and purchases

		% of visits	conversion rate
finance	\$	2%	15%
cart view		15%	10%
reviews page visit	★★★★☆	7%	14%
product configurator usage		40%	4%
store locator - navigation		18%	12%
sale page visit		54%	6%



The Sexy Calculator



the A/B testing calculator provides an estimate of the following metrics:

1. days needed to reach statistical significance to read a change in EITHER key action sessions or conversion-rate of in-store units
2. weekly impact of that change if rolled out to all users in terms of in-store conversions

historical data from January 2017 through June 2017
incremental conversions assumes only one key action is modified at a time

confidence

95% Confidence

key action

Store Locator - Navigation

device type

All Device Types

promotional period

All

percent of sessions included in test

update to reflect amount of traffic directed to the test

100%

historical sessions per day

73,790

test sessions per day

73,790

estimated change in key action sessions

update to reflect if the test group will receive additional traffic to the key action.

5.0%

5.9%

% of sessions with key action

6.2%

new key action sessions rate

estimated change in-store conversion rate

update to reflect the Δ in conversion rate

5.0%

1.7%

conversion rate

1.8%

new conversion rate

estimated incremental conversions per week

95% Confidence Interval

49

days needed to detect a change

95% Confidence Interval

Δ in in-store conversions

28

Δ in key action sessions

2

Fill out the following:**Test Name****Browse Start Date****Browse End Date****Order Start Date****Order End Date****Panel A Name****Panel B Name****Report Header Preview:**

A/B Test Results: Review Link in Global Navigation

Browse Dates: 4/5/2017 - 5/6/2017

Order Dates: 4/5/2017 - 5/20/2017

select key action

Reviews

confidence

95% Confidence

device type

(All)

panel descriptions

A-Control

B-Review Li..

Overall Incremental Conversions
Device Type: All

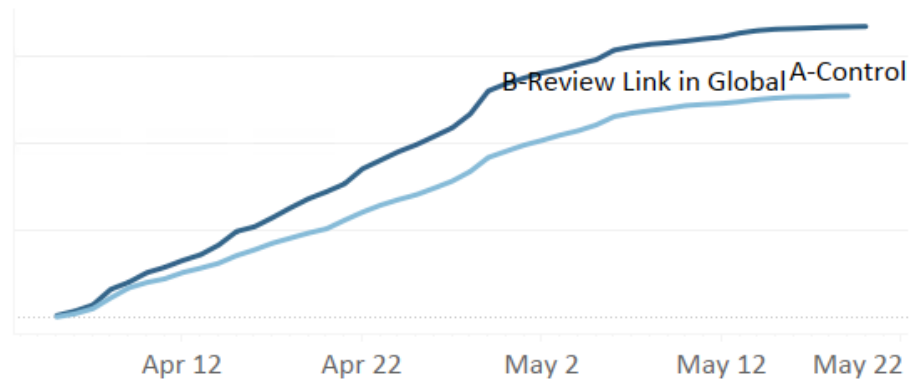
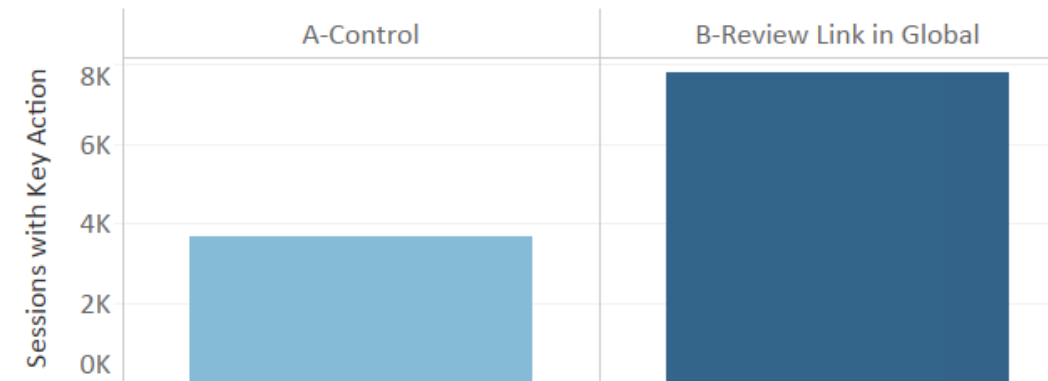
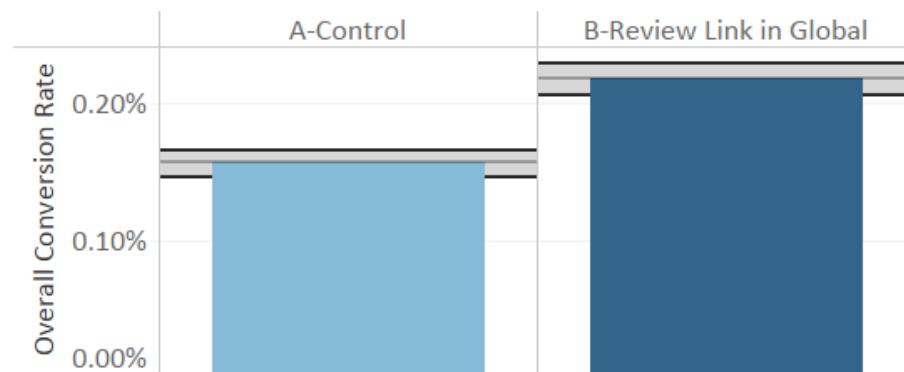
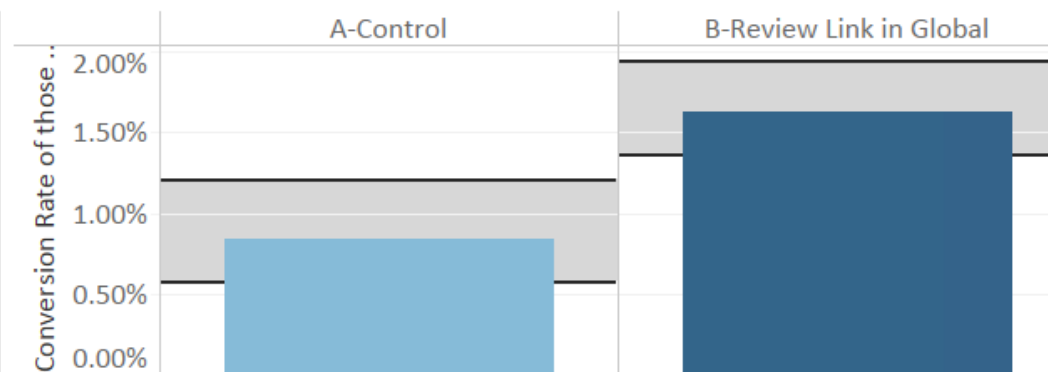
406

Key Action Incremental
Conversions - Reviews
Device Type: All

61

Incremental Reviews Sessions
Device Type: All

4,111

Cumulative Conversions
Device Type: All

Sessions with Key Actions
Device Type: All

Overall Conversion Rate
Device Type: All

Key Action Conversion Rate: Reviews
Device Type: All


select key action

Reviews

select confidence level

95% Confidence

Overall Results

	A-Control	B-Review Link in Global
Sessions	655,946	658,911
In-Store Conversion Rate	0.16%	0.22%
Incremental In-Store Conversion Rate		0.06%
In-Store Conversions	1,030	1,441
Incremental Conversions		406
Are the results significant?	✓	

Key Action Results - Reviews

	A-Control	B-Review Link in Global
Sessions w/ Key Action	3,662	7,790
Pct of Sessions with Key Action	0.56%	1.18%
Incremental Key Action Session Rate		0.62%
In-Store Conversions - with Key Acti..	31	127
Key Action Session Buy Rate	0.85%	1.63%
Incremental Buy Rate of those w/ K..		0.78%
Incremental Units		61
Are the results significant?	✓	

Results by Device Type

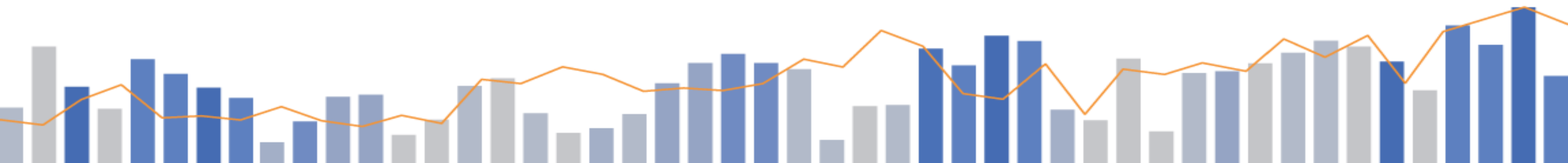
Desktop		Mobile		Multi	
A-Control	B-Review Link in Glo..	A-Control	B-Review Link in Glo..	A-Control	B-Review Link in Glo..
211,452	212,257	441,707	443,159	2,787	3,495
0.22%	0.26%	0.11%	0.18%	2.12%	2.86%
	0.04%		0.06%		0.74%
467	562	504	779	59	100
	93		273		26
✓		✓		✓	

Key Action Results - by Device - Reviews

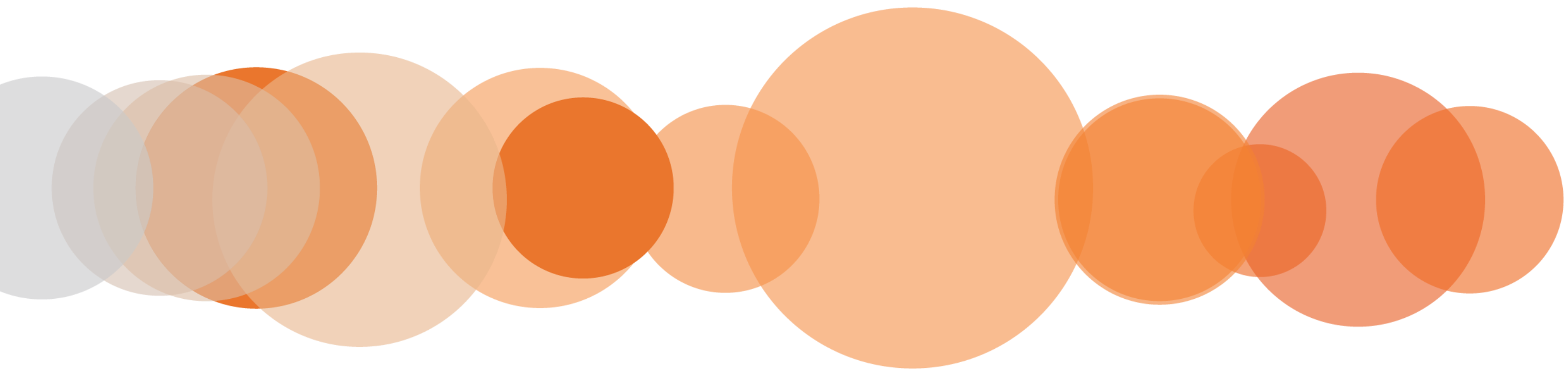
Desktop		Mobile		Multi	
A-Control	B-Review Link in Glo..	A-Control	B-Review Link in Glo..	A-Control	B-Review Link in Glo..
1,629	4,445	2,018	3,274	15	71
0.77%	2.09%	0.46%	0.74%	0.54%	2.03%
	1.32%		0.28%		1.49%
10	70	17	40	4	17
0.61%	1.57%	0.84%	1.22%	26.67%	23.94%
	0.96%		0.38%		-2.72%
	43		12		0
✓		✗		✗	

“That’s pretty f*cking badass”

An Actual Satisfied Client... in a meeting ...



Results



Case Study: I want it measured now

Question: what is the effect of the addition of a “find-a-store” pop up on an item detail page?

Hypothesis: adding the “find-a-store” pop up will increase customer store visits and overall revenue

Problem: reading a test with purely store sales metrics would take 8 weeks or more – this is way too long





MR

IMPATIENT

Site Action Data Predicted Test Winners

Site tests are read using in-store conversion rates, but it can take time to achieve significance. O2S data allows us to predict and read test results more quickly.

Test Read 1

*use key action conversion rates to **more quickly** read test results*

Δ key action conversion rate	+370 bps (store locator) -132 bps (unit configurator)
------------------------------	--

Incremental annualized revenue	\$4m
--------------------------------	-------------

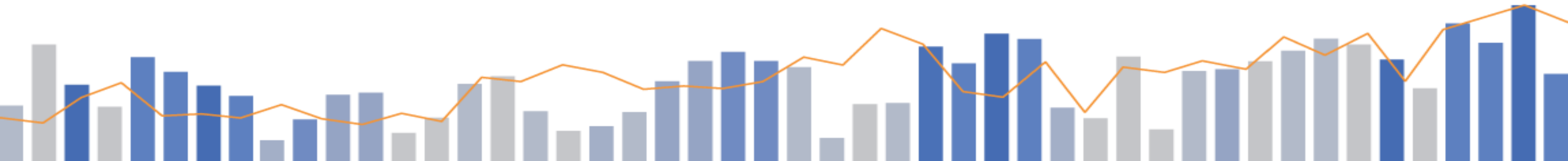
Test Read 2

wait for sufficient data to achieve significance and use in-store conversion rate to read test results

Δ in-store conversion	+34 bps
-----------------------	---------

Incremental annualized revenue	\$4.5m
--------------------------------	---------------

both test read options give directionally the same results!



Problem: we have a ton of data

The data needed for the Sexy Calculator comes from our tagging solution which gathers all owned-media touches for our clients

for one client, 10 months of data is ...

10 terabytes which is equivalent to ...

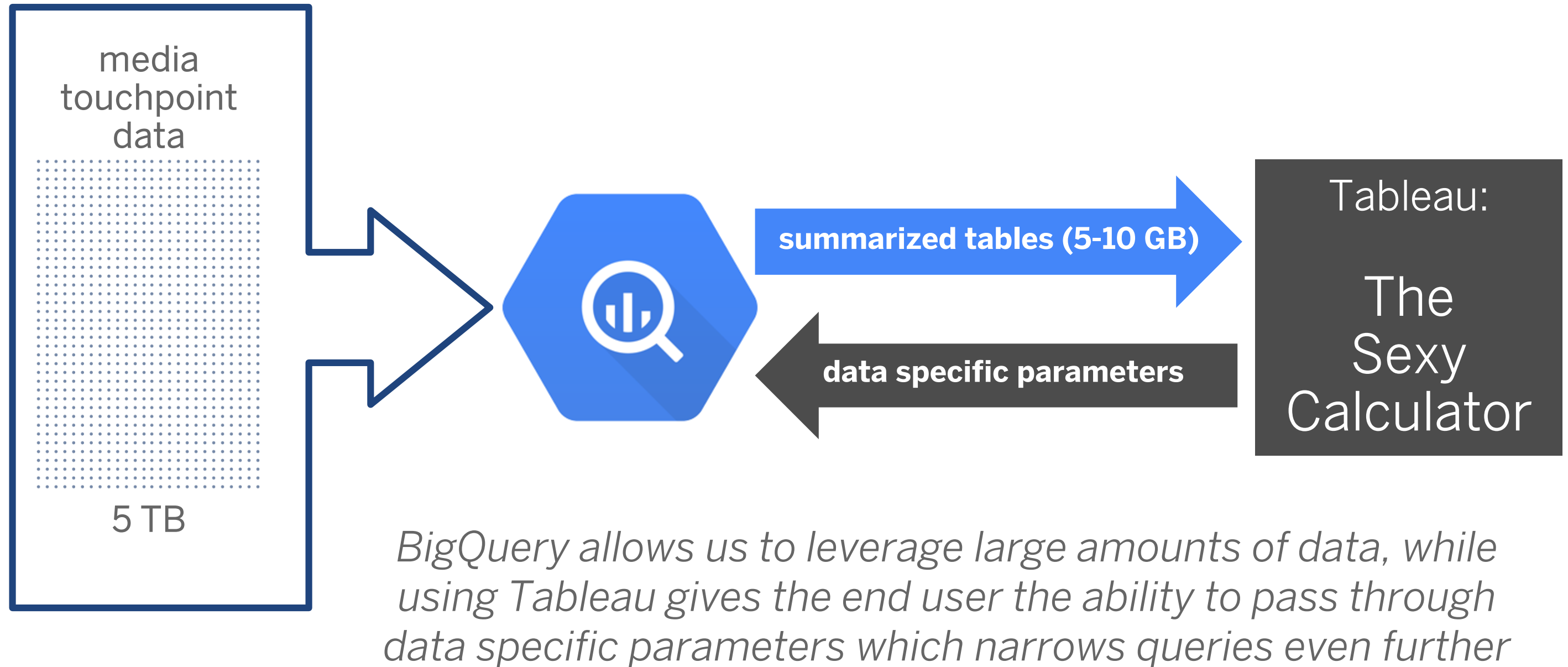
about 2.8 *million* songs, (assuming 3 minute song length and average quality)...

which, if stored on a 64g iPod touch without any cat videos or pictures would require ...

200 iPods!



Solution: Google BigQuery & Tableau



More Benefits: **TIME**

The Sexy Calculator has saved 30+ hours per month, leading to the question, “what can you do with an extra 30 hours?”

play 120 games of
ping-pong

Watch all of the
“Star Wars” films
... twice

180 Totino’s Pizza Rolls
using a microwave



Summary

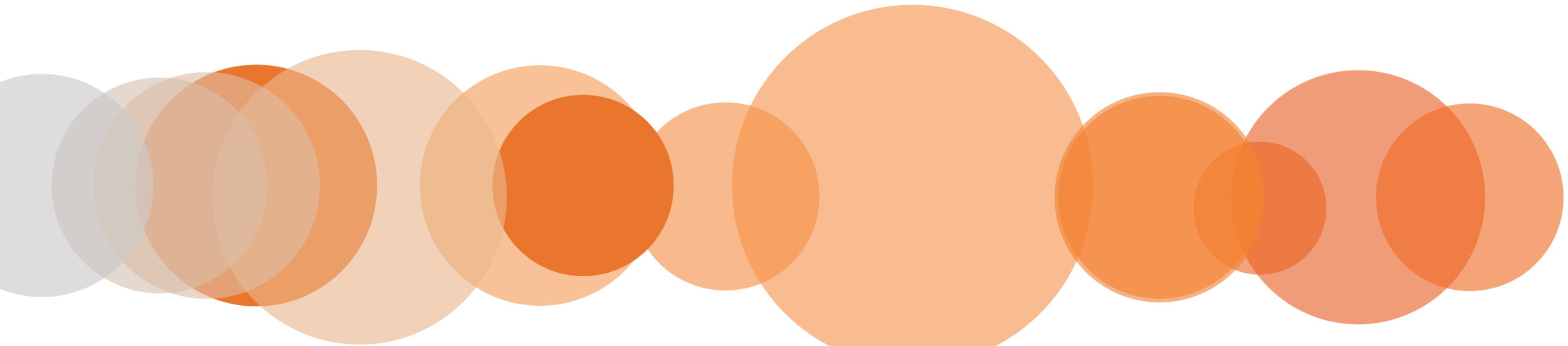
Site optimization to enterprise revenue is a must-have for retail clients

Using Tableau, Google BigQuery and R, the Sexy Calculator brings to life the impact of A/B testing

Our Clients are happy, and we're happy!



Q&A



Claire Wyatt

claire.wyatt@ovative.com

Rachel Rabaey

rachel.rabaey@ovative.com

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WEBINAR SERIES

Strata: See your marketing through augmented reality

Ovative: Measuring marketing impact from online-to-store

Blue Bunny: Building high impact promotional pricing (**June 11**)



A crowd of people at a conference, with a man in the foreground giving a thumbs up. The image is dimly lit with a purple/pinkish hue.

Retail Virtual Users Group

Next meeting: 7/25!

Hosts:

Nathan Kollett (Wayfair)

Kevin King (Coca-Cola)

Karen Hinson (Chick-fil-a)

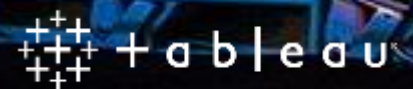
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- Retail Virtual User Group Meetup
- Q&A
- Industry Lunch Meet-up
- Learn more at <https://tc18.tableau.com/>

Pictured: Over 14,000 customers at Tableau's 2017 Customer Conference

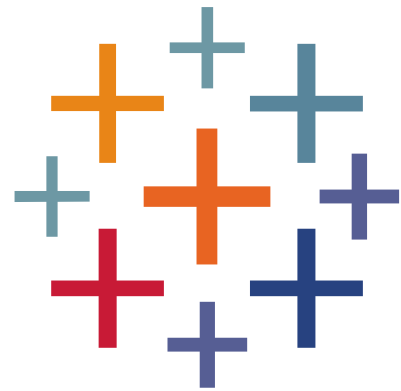




Top 10 retail dashboards
for better performance

Thank you for attending today's webinar





+ able au®