

Answering the Unanswerable:

How Top E-commerce Teams Succeed
With a Complete Data Foundation

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Leading Companies Are Focused on Winning the Experience Battle

These companies are investing in tools and strategies that enable them to create the most resonant experiences across customer touchpoints.

Customers make decisions based on the salience and value of experiences — and firms simply have no choice but to win at CX.

The Future Of CX

FORRESTER 2019

Your digital experience is an essential part of your customers' interactions with your brand. Today, most consumers will interact with your company digitally during the buying process—whether they are researching, browsing, or buying—and you cannot afford to overlook this experience. According to research from Gartner, 56% of CEOs said digital improvements have led to revenue growth. [1]

Making effective, revenue-impacting improvements to your digital experience requires a holistic understanding of your users' needs, frustrations, and motivations—you need a way to understand that experience qualitatively. But that's not enough. To determine where to focus and prioritize efforts based on potential impact, you need a way to quantify experiences across your entire user base.

What *Don't* You Know About Your Users' Digital Experience?

Regardless of where you sit in your organization—be it product, engineering, customer support, marketing, design—you have questions about how users are interacting with your digital experience(s). Questions like:

“What, exactly, happened on September 15th that resulted in the severe drop-off to our free trial confirmation page?”

“We have two versions of a product recommendation carousel on our ecommerce site—one curated by humans, one populated by a computer algorithm—which performs better?”

“We’re getting tons of support tickets about our baggage selector being broken, but we can’t recreate the issue. What the heck is going on?”

“We thought that introducing a new search functionality would help users find what they are looking for quicker, but conversions have actually dropped ... where did we go wrong?”

These questions can be bewildering, frustrating, and difficult to answer, but answer them you must. Because if left unaddressed, these unknowns can be extremely costly to your business.

What are you to do? Two methods stand out:

1. **Qualitative research:** You might conduct research to understand the experience your users are having, then translate your findings into experiments, hunting for clues about what to do next.
2. **Quantitative analysis:** Or you might try to cobble together your data—i.e. user and product metrics—in just the right way to shed some light on what to do next, experiment, and analyze further.

Each of these methods has pros and cons, and both are essential in developing a holistic understanding of your user. Historically, however, these two methods have required different skills and technologies.

A Quick Refresher on Quantitative Versus Qualitative Methods

Qualitative methods are generally more suited to helping you answer **why** or **how do** questions. These methods attempt to capture dense, thematic information about the individual experience; they can unlock key insights about user frustrations and motivations.

Qualitative methods generate research data by observing individuals' behaviors and attitudes directly; this data is often more subjective and highly human. While this data can reveal nuanced information about your users, it is generally more time consuming and expensive to collect. This means that sample sizes are often small, making it difficult to gauge how widespread a behavior or attitude might be.

Examples of qualitative methods include:

- In-depth interviews
- Focus groups
- Case studies

Alternatively, quantitative methods are well suited for answering questions related to **how many** or **how much**. These methods illustrate large-scale patterns and trends, and can help you establish the importance of a specific customer behavior or validate an overall concept.

Quantitative data is analyzed in aggregate and is arguably objective because sample sizes are much larger. This data is captured in large amounts at a lower cost, but because it is reductive and abstract, it communicates very little (if anything) about the subjective experience behind the data.

Examples of quantitative methods include:

- Traditional analytics
- A/B testing
- Large scale surveys

An Alternative to Qualitative *Versus* Quantitative

To fully understand your customers' experiences with your digital brand, your organization will need to employ both qualitative and quantitative methods. Unfortunately, few teams have all of the skills and tools needed to generate the full 360° view.

With a traditional analytics tool (quantitative), you will eventually run into a question that you cannot answer. Your tool can show you irregular drop-off in one part of your conversion funnel, for example, but it can't show you why the drop-off is occurring.

Alternatively, a usability study conducted in a lab (qualitative) can reveal nuanced, dense information about how individual users are interacting with your product or digital experience. But you won't have a clear idea of the scale and importance of any issues.

What if you could combine the two methods quickly and easily? You could analyze the impact on conversions of a bad digital experience and then dive right in and see how individual users are interacting with that experience. You could see where they are struggling. You might even be able to understand why.

Fortunately, innovations in technology are making it possible to turn individual digital experiences into quantitative data—or go the other way. That's where FullStory comes in.

Because FullStory stores and organizes all your digital experience data (every user interaction, every event, etc.), you can quantify and analyze user interactions with your product in aggregate, similar to traditional web analytics. And with **session replay**, you can delve deeper to observe directly what people do as they interact with your product or experience.

Using one platform, you can identify and quantify the magnitude of an issue and illuminate the why at the heart of it.

In the next section, we'll explore how TrueCar uses FullStory's quantitative and qualitative features to build better digital experiences.

TrueCar Creates a Better-Converting Digital Experience Using FullStory

The TrueCar logo, featuring the word "TRUE" in blue and "Car" in a lighter blue, with a small registered trademark symbol.

Several months ago, the TrueCar team was on the verge of launching a new search functionality, dubbed Unified Search. Search is a critical feature for their shoppers and they wanted to make sure that this update, as well as subsequent improvements, would have a positive impact on customers' digital experience.

To do this, the product analytics team was focused on getting the right tools in place. They required tools that would allow the company's product managers to quickly identify what is and isn't working for TrueCar's shoppers (the *what*)—and take action (addressing the *why*).

Wilfred Chang, senior manager, product analytics, explains

Our main role is to be a facilitator. Ultimately, we want to enable our product managers so that they don't have to come to us to get insight around experience performance. They can come up with their own solutions for the customer journey.



Wilfred Chang

SENIOR MANAGER, PRODUCT ANALYTICS
TRUECAR

But this ideal wasn't yet a reality at TrueCar. Product managers were hitting a wall using existing tools and weren't able to unearth actionable insights.

The product analytics team was looking for a tool that would be:

- Intuitive to use, facilitating program management
- A supplement to their existing tech stack, amplifying existing capabilities
- A source of both quantitative and qualitative insights about the digital experience

This led them to FullStory.

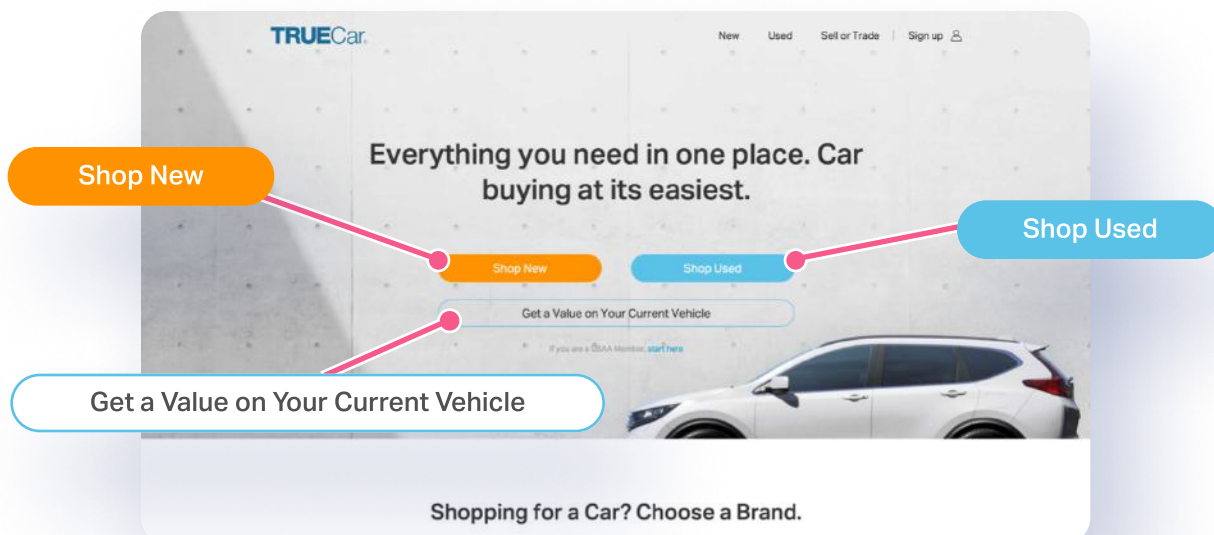
A BIT OF CONTEXT: TRUECAR AND ITS OBJECTIVES

TrueCar is a digital automotive marketplace. The company also powers car-buying programs for over 500 companies, including some of the most trusted brands in the world such as USAA, AARP, and American Express.

TrueCar has a network of over 16,000 certified dealers. Currently, over one third of all new car buyers engage with the TrueCar network during their purchasing process due to the company's emphasis on price transparency.

Understanding TrueCar's Most Important Digital User Journeys

When someone lands on the TrueCar site, there are a few different journeys they might enter. The three primary calls-to-action are featured above the fold on the company's homepage: Shop new cars, shop used cars, get a value on your current vehicle.



“Shop New” and “Shop Used” prompt users to search for their preferred vehicle based on different filtering criteria. These journeys end in a lead generation form. Leads generated are sent to dealerships in TrueCar’s network, making up the majority of the company’s revenue.

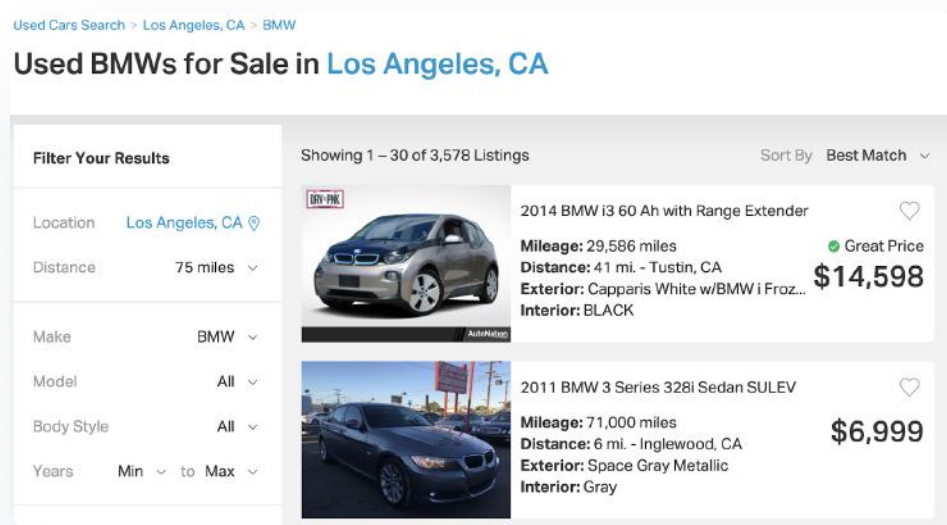
Before the launch of Unified Search, these journeys were split. TrueCar had one experience for people shopping for new cars and a separate experience for people who wanted to explore used cars in the marketplace.

Unified Search was born out of a desire to put more control into the hands of the customer.

GIVING TRUECAR SHOPPERS MORE CONTROL OVER THEIR EXPERIENCE WITH UNIFIED SEARCH

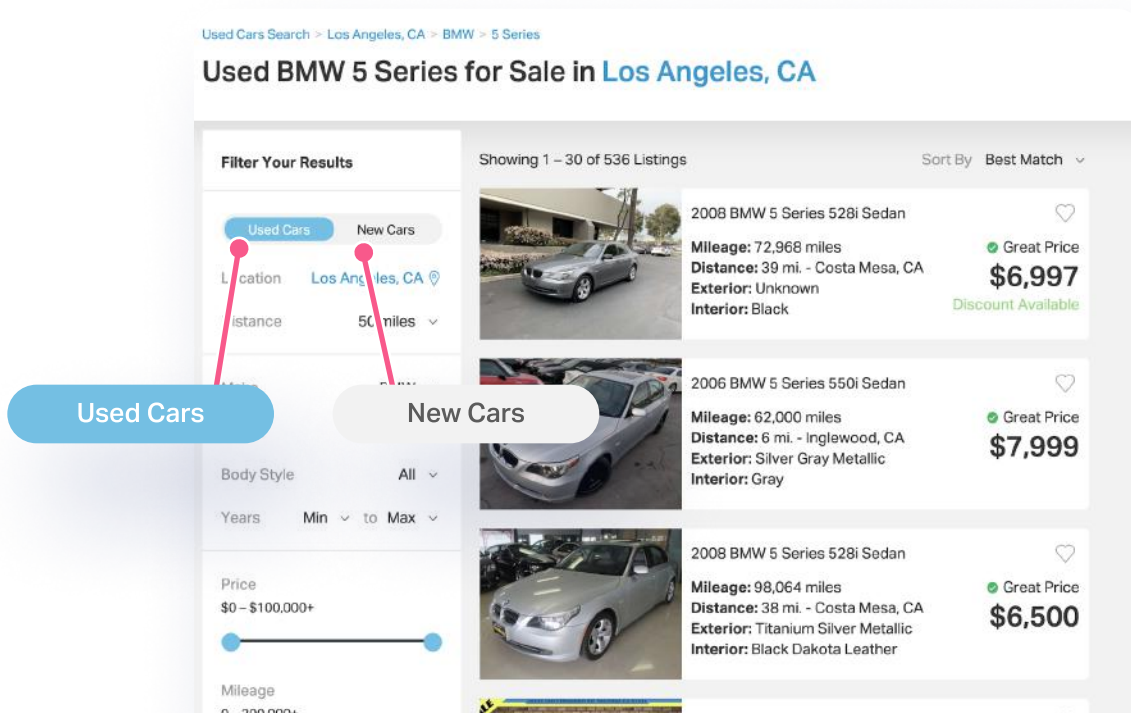
Using TrueCar’s original, separated search functionality, users could search by high-level criteria, such as best match or lowest price. Then they could use a filter panel to drill down on a specific set of vehicles that fit their needs.

These searches were always siloed. Either the filtered search results were all new cars or they were all used cars. What if a customer wanted to evaluate all the options across both categories?



The original search functionality would display either used or new cars—in this case used BMWs.

The new Unified Search experience set out to solve this problem. The team added two pill buttons to the top of the filter panel; these buttons allowed users to quickly toggle between used and new cars. If a shopper was interested in shopping by price band, say under \$50,000, they could easily see which vehicles, used or new, might fall within their budget.



The TrueCar team was optimistic about Unified Search, but before rolling it out to their entire user base, they wanted to know whether it would actually have a positive impact on the digital shopping experience. So they released the feature to a subset of their users and used FullStory to capture experience data.

The team wanted to understand how users were interacting with Unified Search and, of course, they were hoping to see an incremental increase in leads.

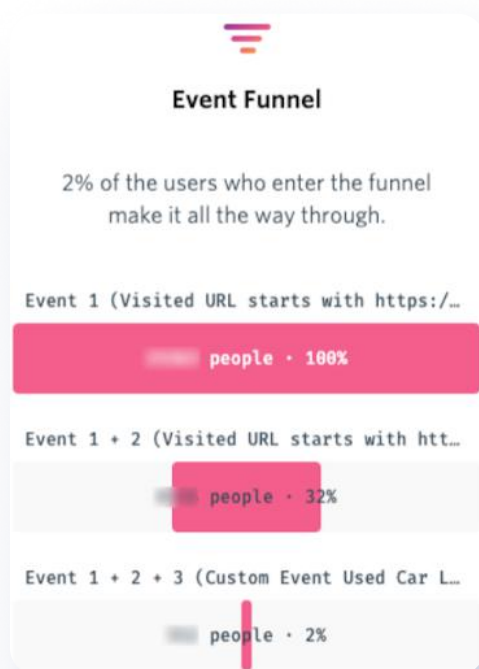
HOW DID UNIFIED SEARCH PERFORM? TRUECAR LEVERAGES FULLSTORY TO GET THE FULL PICTURE

To track the performance of this new search functionality, the TrueCar team built a **conversion funnel** for Unified Search in FullStory.

There were three basic steps in this funnel:

1. A user reaches a vehicle search results page
2. Next, a user clicks on a vehicle hitting what TrueCar calls a Vehicle Detail Page (VDP)
3. Finally, a user submits a lead from the vehicle details page i.e. they convert

Over several weeks, the team monitored funnel performance, looking for any misses or increases.



The TrueCar team built this funnel in FullStory.

In looking at this funnel, we could see that 32% of people were converting to a VDP but only 2% of those were actually submitting a lead form. Which of course led us to a bunch of questions: Are there any differences between what users that submitted a lead vs. those that didn't are experiencing? Are there any differences between those that made it to a new car search page vs. those that made it to a new car details page?

Wilfred Chang

When a product team observes a large drop-off like this within a traditional analytics tool, it can be very difficult to understand what is actually going on behind the low conversion rates. FullStory is unique in that it enables teams to perform quantitative analysis on aggregated digital experience data and then explore deeper to get a sense of the why behind the what. Using session replay, teams can dig into the observed drop-off and see what users are experiencing in the wild.

Within FullStory, the TrueCar team could analyze a critical funnel—like the one shown on the previous page—and then dig deeper. They could segment their users by everyone who completed steps one and two, but did not fill in a lead form, for example. They could then watch **several sessions**, shedding light on how users are interacting with the new search experience from a qualitative perspective. These insights inform next steps: An A/B test, a quick bug fix, a UX improvement.

WHAT DID THE TRUECAR TEAM DISCOVER?

Ultimately, the TrueCar team needed to understand two things before rolling this experience out to their entire user base:

1. How is this new funnel performing: Is it generating more leads than the previous experience?
2. How are users engaging with this new search feature: Is it clear that users understand the content being presented to them? Are there unforeseen points of frustration?

After several weeks, FullStory data had revealed a few key insights:

- Many shoppers entering the site via search were interested in viewing both new and used cars, validating the initial idea behind Unified Search
- Users seemed to understand the new search functionality: They were able to search only new or used cars, depending on preference
- A major UX bug was proving very frustrating to users, resulting in over 4,000 dead clicks (the team was able to prioritize this fix)

Most importantly, Unified Search was delivering that incremental increase in leads. The team had only shipped this functionality on their flagship website, TrueCar.com, and they were able to deliver over 3,000 incremental monthly prospects.

It's really heartening to see that we were able to deliver this many incremental prospects. It's proven to our leadership team that this is a viable business model. These results allow us to continue to put the power in the users' hands and allow them to shop how they want.

Wilfred Chang

TRUECAR INCREASES ENGAGEMENT IN A KEY USER JOURNEY USING FULLSTORY HEATMAPS

Of course, Unified Search is not the only focus initiative for TrueCar's product analytics team. Among many other improvements, features, and optimizations, they are also focused on optimizing the company's configurator flow.

The configurator flow is a journey wherein a user can build their ideal virtual vehicle step by step: style, color, add-ons, etc. Once built, they can search to see if this vehicle, or one that is a close match, is available at a dealership nearby.

The team has been running experiments to increase engagement within the flow, with the ultimate goal of helping users find a close match to the vehicle they're searching for.



Steps one through three of TrueCar's configurator flow.



Steps four through six of TrueCar's configurator flow.

Chang explains that users who complete the configurator flow often have greater buying intent: *“When a user enters our site, they have the option to decide if they want to go through the configurator flow. Those that do have a better close rate (i.e. are more likely to buy a car).”*

Configuration and Buyer Intent

This tendency for users who configure a vehicle to have a better close rate is reflected in a well-known persuasion principle: commitment. [2]

Popularized by psychology and marketing professor, Robert Cialdini, the basic premise of this principle is that people have a deep need to be seen as consistent. Once we have committed to something, publicly, we’re much more likely to deliver on that commitment.

By getting a person to commit to something relatively small—in this case, configuring their ideal car—Cialdini theorizes that you can increase the likelihood that that person will see themselves as a customer.



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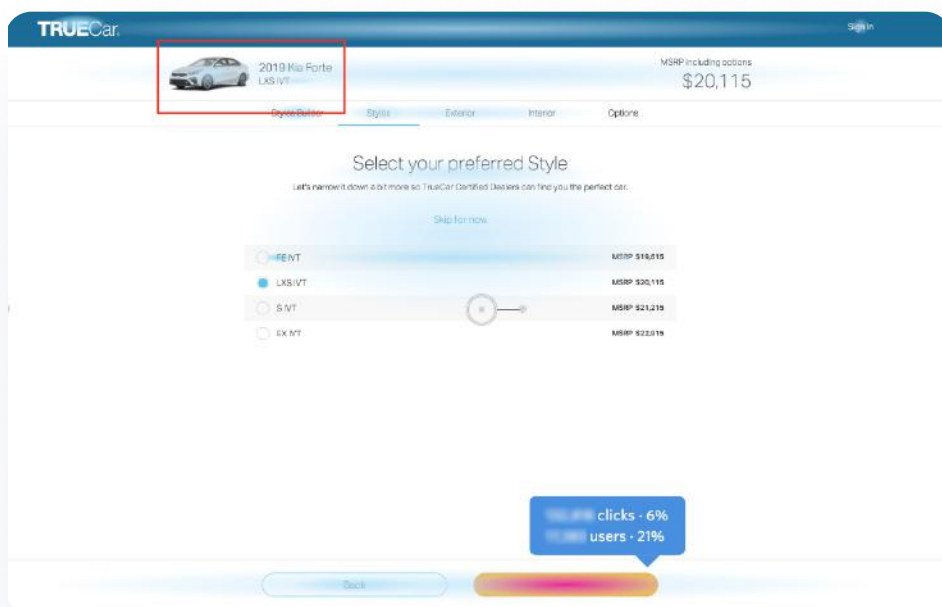
The TrueCar team uses different tools, such as LaunchDarkly and Optimizely, to A/B test changes to the configurator flow to try to increase engagement.

Using **heatmaps** in FullStory, they can explore how users are engaging with each A/B test variant to understand why one might be performing better or worse. This feature provides a visual overlay of aggregate, page-level statistics for any page or screen within a user session.

This is technically quantitative data—you can see absolute clicks and percentages. But in visualizing this aggregate data, you can see and imagine where your users are engaging, how they are interacting; you can get closer to that individual experience.

The TrueCar team uses heatmaps to identify the most engaging features as well as points of frustration, like Dead Clicks or **Rage Clicks**.

For example, on the “Styles” step in the configurator flow, the team saw a high number of users clicking on a static image of their vehicle. Given engagement levels with this element, it was clear that users were expecting something to happen. Understanding this desire means the team can revise this experience to get closer to user expectations.



FullStory's heatmaps revealed a high number of users clicking on a static image of their vehicle.

As a next step, the TrueCar team could translate this insight into an experiment hypothesis:

If we make the vehicle image clickable and trigger a slideout banner that summarizes users' selections to this point, it will alleviate confusion and anxiety and will propel users through the next stages of the configurator flow, resulting in more qualified leads.

They could then track variant performance in FullStory and assess whether their assumption was better aligned to user expectations (or completely off the mark), inspiring further iteration.

The TrueCar team has increased engagement by 50% over three months with FullStory and their A/B testing tools.

Using FullStory in combination with the A/B testing tools, TrueCar has been able to iterate on the configurator flow in a high-impact way, increasing engagement by over 50% in the past three months.

Moving Forward: How You Can Replicate TrueCar's Success Using FullStory

As you work to optimize your organization's digital experiences, consider the methods you're using to uncover and operationalize insights.

- Are you relying solely on quantitative measures to show you where an issue may be occurring?
- Are you heavily investing in qualitative methods to understand why a subset of users may be behaving a certain way?
- Does your quantitative and qualitative data live in different platforms, siloed in different teams?

Take a step back and ask: **What questions could you answer if you were able to easily pivot from quantitative product analytics to qualitative digital experience data?**

To create the most impactful digital experiences, you need answers about *what* users are doing and an understanding of *why* they might be behaving that way.

FullStory gives you the ability to move seamlessly from quantitative to qualitative—and back. So you get the answers you need, fast.

ABOUT FULLSTORY

FullStory's digital experience software provides thousands of companies globally with clear, actionable, revenue-increasing insights about their customer experience. FullStory securely stores and organizes digital experience data, making that information easy to understand and act on so that companies are no longer flying blind when it comes to digital customer experience. Product and software development teams use FullStory to operationalize the digital customer experience, breaking down information silos and turning painful customer struggle into immediate opportunities to improve their most critical metrics and KPIs.

The company was founded in 2014 and names as its investors GV (Google Ventuers), Kleiner Perkins, Salesforce Ventures, Dell Technology Capital, and Stripes Group.



Discover how FullStory can help your organization marry quantitative and qualitative data—resulting in analytics bliss.

[Get a demo today.](#)