THE RETAIL RENAISSANCE REPORT: USA EDITION

Four Keys To Predicting Online & In-Store Demand Across Global Markets

neustar

A TransUnion® Company

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Introduction

The worldwide Covid-19 pandemic hasn't spared any sector of the economy over the past couple of years, and the retail industry is certainly no exception. In a world where regional lockdowns and restrictions can dramatically curtail the in-store experience, and where online competitors can quickly step in to fill the void, many retailers are transitioning to hybrid online-offline models.

We're clearly in the early stages of a worldwide retail renaissance, and consumer behavior is changing.

Over the past few years, we've had the chance to work with many prominent international retailers to help them absorb recent shocks to the economy and wild fluctuations in consumer demand in their local and global markets. It's when things are in flux that data-driven market forecasting earns its stripes. With our help, our clients were able to quickly recalibrate their predictive models when in-store foot traffic dropped to zero due to the pandemic, and when it came back unevenly around the world. They managed uncertainty much better than the competition, and were able to bounce back faster too.

We developed best-practices along the way and are thrilled to be sharing them with you in this whitepaper. The recommendations in this paper are based on hands-on experience over the past three years with dozens of retailers around the world.

In volatile times, you don't need to be perfect with your models of consumer demand. But you need to be better than the competition. Read this whitepaper to get ahead of the game.

FOUR KEY LESSONS TO GET AHEAD

In this whitepaper, you'll learn four key lessons to better predict consumer demand across e-commerce and in-store channels, and take your retail marketing to the next level:

#1: **Add new variables to reflect current events**

#2: **Refresh your predictive models often using the most recent data**

#3: **Test new operating scenarios to be prepared when change happens**

#4: **Prioritize local data over global parameters**

> **When marketing budgets are under tremendous pressure, it's imperative to accurately predict consumer demand — and the marketing investments contributing to that demand — across all points of sale.**
>
> ***Brett House, VP Marketing Solutions, Neustar, a TransUnion company***

ANSWERING BIG QUESTIONS

An accurate retail sales predictive model can help you answer a host of crucial questions, such as:

- Should I suspend my marketing activities when governments impose strict restrictions?
- How can I better anticipate stocking limitations and supply-chain challenges?
- Should I postpone new product launches in times of crisis?
- Can I rebalance my media mix without damaging my brand's health?
- How do I work with uneven market recoveries around the world?

Next-Level Forecasting

When Alan Greenspan, a top US economist and longtime chair of the Federal Reserve, was asked to reflect back on the 2008 financial crisis, he famously said, "We really can't forecast all that well, and yet we pretend that we can. Markets do very weird things because they react to the way people behave, and sometimes people are a little screwy." That interview was with Jon Stewart on The Daily Show, but Greenspan wasn't being facetious. Forecasting—whether it's the economy, the weather, a political race, or demand for a company's products—is complicated because it's based on the premise that past behavior is a harbinger of future behavior. That can be a big assumption.

Herein lies an interesting contradiction for forecasters: when conditions are relatively stable, forecasts tend to be on point. And yet it's when conditions are unstable, and thus forecasts less accurate, that they're most valuable. A good forecast in uncertain times will really stand out and help a business outsmart its competitors. It's no surprise that the modern forecasting industry started out at the turn of the 20th Century, a period marked by substantial social, economic, and demographic change.

We're in such a period at the moment. Besides its enormous human toll around the world, the Covid-19 pandemic has thrown a wrench in the global economy. Retail, in particular, was hit hard by widespread lockdowns in the early stages of the pandemic, and by numerous and uneven restrictions since then. It's hard to tell if, when, and where another wave of the pandemic is going to hit. Worldwide supply chains are still struggling. As we enter 2022, inflation is on the rise, a new war is putting safety and stability at risk for millions, and consumer confidence is dropping again. And consumer behavior that was a mere novelty before—like online grocery shopping—is becoming more mainstream.

In the early days of the pandemic, McKinsey came out with a report that showed that e-commerce adoption in the US had jumped 10 years forward in just 90 days. One year into the pandemic, Mastercard reported that three-quarters of all apparel sales in North America were made online. Consumers have now returned to physical stores, of course, but the experience has changed: contactless payments are on the rise, for instance, and hybrid forms of online-offline shopping behavior have emerged—like buying online and returning to the store.

The world is changing, and it's time to take your forecasting capabilities to the next level.

LESSON #1

Add New Variables

Working with retail clients over the past couple of years, we've found that it was important to acknowledge the pandemic early on and err on the side of pessimism. We were aggressive in modelling lockdowns, and prepared our clients for a grim outlook. This helped them take drastic actions early on in the pandemic to prioritize expenses and develop realistic recovery scenarios. As lockdowns started to get lifted, and more data came in on what shifts in consumer behavior were temporary versus permanent, our clients were able to quickly adjust their models without missing a beat.

We searched for the best variables to account for the impact of the pandemic in our models, and found the indices in Google's [Covid-19 Community Mobility Reports] to be particularly well suited to the task. They measure people's movements near points of interest based on their mobile phone location, and compare those movements to a pre-pandemic baseline. A big drop in visitors near a workplace or shopping center might indicate that the place is closed. A wider drop could mean a local lockdown.

Figure 1 shows some key insights from a recent mobility report for California. Analysts can export those figures at the country and regional level, and use them in their predictive models.

That data isn't perfect—it only works for people with a Google account who have opted in to share their location history—and there's no guarantee that it will continue to be available post-pandemic. But it's been extremely helpful to pinpoint local shifts in behavior. In particular, it's helped our clients detect situations where foot traffic has remained sluggish despite store re-openings. That type of information is crucial for businesses looking to find the right balance between in-store and online purchase experiences.

PHYSICAL VISITATION TRENDS IN CALIFORNIA

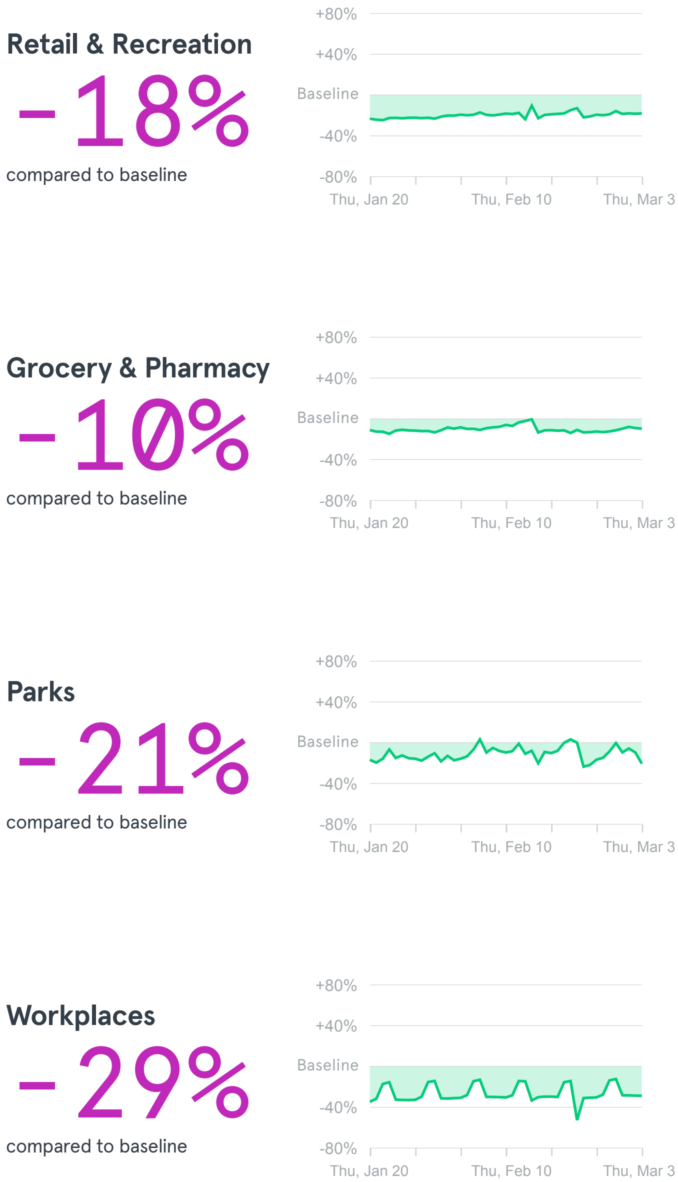


FIGURE 1: Google Community Mobility Report, California, Mar 2022

LESSON #2

Refresh Predictive Models Often

We always build our retail sales predictive models with enough flexibility to scale with our clients' store count. During the pandemic, we gathered data on what stores were open and closed, and what their respective pre-pandemic sales volume was. As time went on, we adjusted those counts and sales figures to reflect the conditions on the ground. This allowed us to develop an accurate forecast baseline before factoring in marketing mix data points.

For a major international luxury goods retailer, we updated our models every quarter with more realistic levels of important factors like promotions and media investments, new product launches, or the latest trends in the consumer confidence index. Not surprisingly, we found that incorporating recent data into our models helped boost their performance.

Figure 2 illustrates how our client was able to predict worldwide sales in Q3 2021 based on models carrying three years' worth of weekly sales data ending in Q4 2020, Q1 2021, and Q2 2021, respectively. The most accurate forecast (only 4.3% off) came from the most recent model (Q2 2021), the least accurate forecast (13.4% off) from the oldest model (Q4 2020), and the Q1 2021 model came in somewhere in the middle (7.4% off). For every new quarter's worth of sales data built into the model, the error in our forecast was nearly cut in half (from 13.4% to 7.4%, and from 7.4% to 4.3%).

PREDICTING GLOBAL SALES FROM WEEKLY DATA

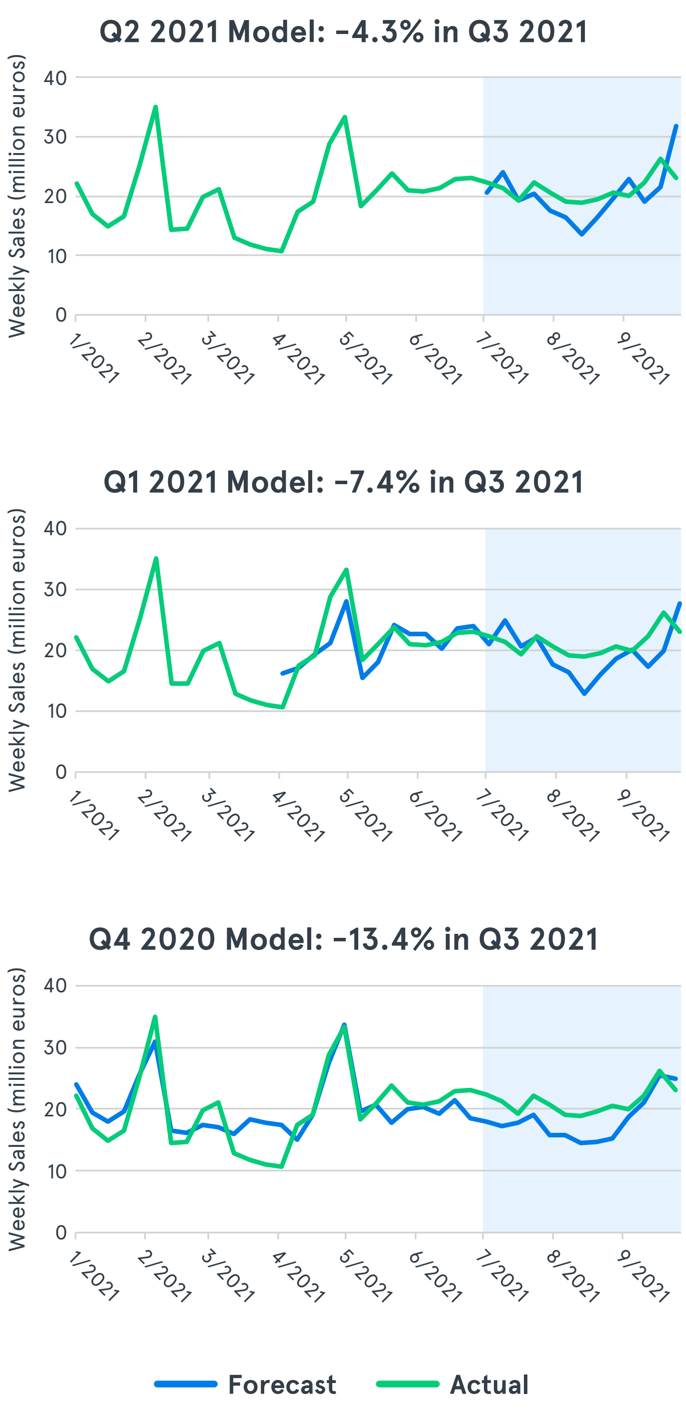


FIGURE 2: More recent models are more accurate

Source: Marketing Mix Modeling Data and Results from Neustar Global Retail Client

LESSON #3

Test New Operating Scenarios

Even with recent data in the system, a model can be substantially off if something unexpected happens. And as we noted earlier, in real life, something unexpected always ends up happening. That's why a modern forecasting solution needs to offer non-technical users the ability to tweak demand drivers and quickly test alternate operating scenarios. What if key macroeconomic indicators like inflation, unemployment, or consumer confidence changed dramatically in the coming quarter? What if we had an early spring? What if our main competitor doubled its media spend? What if our marquee online campaign doesn't perform as expected?

We often hear that companies that stop marketing during a downturn come out on the losing end when the dust finally settles. They lose brand usage in the short term and brand equity in the long term. But to keep spending up without a clear idea of its effect on sales is a recipe for disaster. When we model future sales, we make sure that our clients can tell the difference between baseline sales—variations in demand that would happen even if marketing was turned off—and marketing's contribution to sales. There's a multiplying effect at play, as shown in figure 3a for a client's quarterly sales in the US, and companies that understand it can maximize the return on their media investments.

CONTRIBUTION TO QUARTERLY SALES

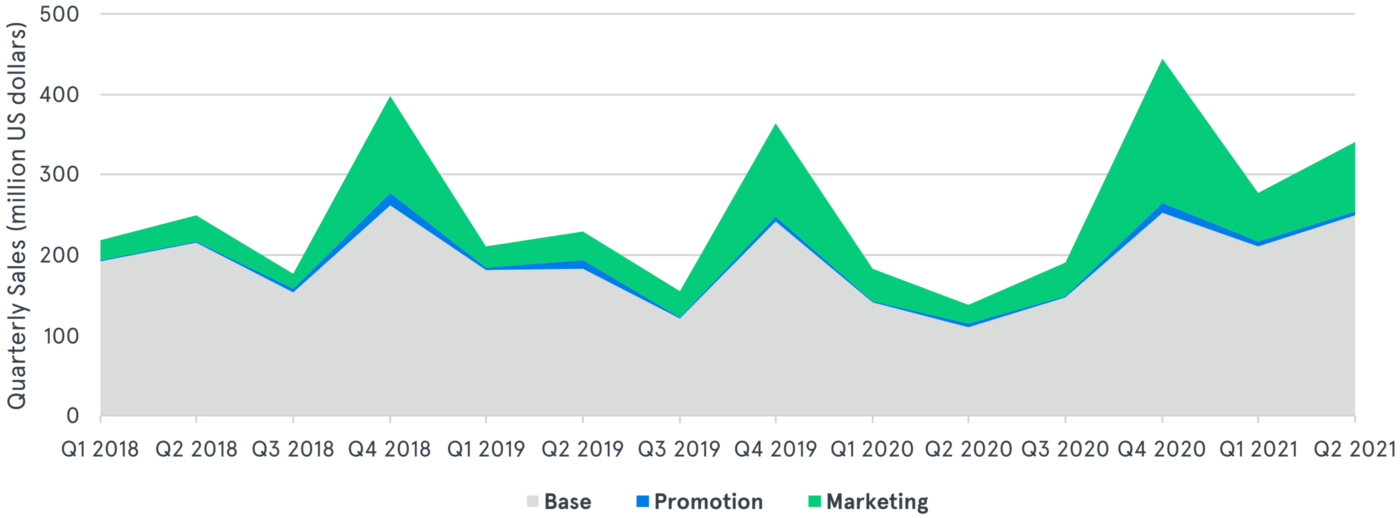


FIGURE 3A: Marketing spend amplifies baseline sales fluctuations throughout the year

Source: Marketing Mix Modeling Data and Results from Neustar Global Retail Client
(Promotion includes tactics like price discounts and other sales incentives)

LESSON #3 CONTINUED

Armed with our predictive models and scenario-planning platform, many of our retail clients have been able to justify ongoing media spending at pre-pandemic levels. Figure 3b shows how a retailer's total sales in the US declined from 2018 to 2019, but stabilized in 2020 despite an ongoing drop in baseline sales. Incremental sales attributed to the company's marketing efforts made up the difference, climbing from 22% of total sales in 2019 to 30% of total sales in 2020, when the lockdowns imposed by the pandemic were at their most severe in the US.

The marketing team used its extra budget to develop new creative copy in line with the times, and to run carefully targeted campaigns on TV and across top digital properties. Clearly, those marketing efforts helped steady the ship at the height of the pandemic in 2020, and positioned the company for success in 2021. By mid-2021, year-over-year sales were up 49% already.

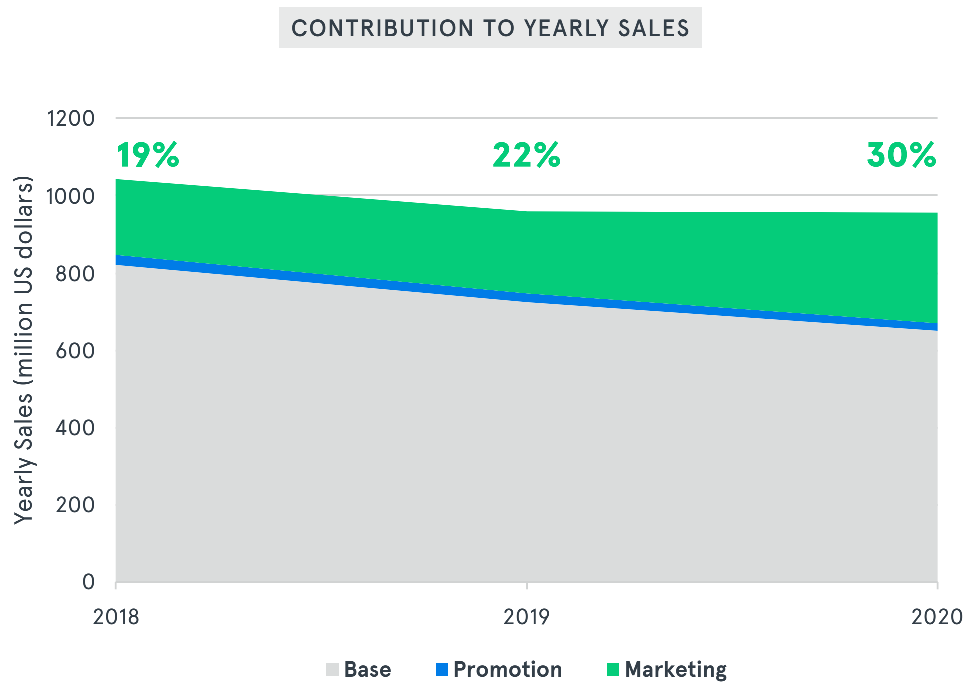


FIGURE 3B: Marketing can help buffer sales declines during downturns

Source: Marketing Mix Modeling Data and Results from Neustar Global Retail Client
(Promotion includes tactics like price discounts and other sales incentives)

LESSON #4

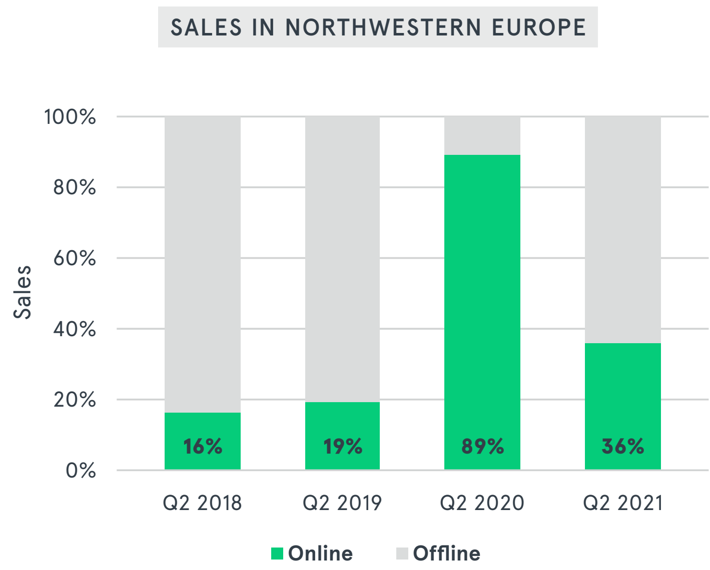
Prioritize Local Over Global

Location, location, location. The way consumers interact with your brand is influenced by local variables. The impact of the Covid-19 pandemic hasn't been the same around the world, and it's affected different parts of the world at different times too. A good predictive model accounts for market specifics, like local economic indicators, government policies, competitive activity, distribution networks, media partners, or cultural preferences.

For retailers, knowing where a region stands on the online-offline continuum is particularly important. Despite the recent spike in e-commerce around the world, there are markets where in-person shopping is still very much preferred for a variety of reasons. Perhaps consumers in those markets still consider shopping to be a social occasion, or shipping is unreliable, or cashless transactions aren't the norm yet. These factors hinder the development of e-commerce options in Southern Europe, for instance. A recent report from EuroCommerce shows that e-commerce adoption in the UK stands at 92%, but only 54% in Italy. Across Western Europe, e-shoppers represent 86% of the population, compared to 60% in Southern Europe and 41% in Eastern Europe.

A robust forecasting model needs to account for these types of local differences. But nothing is set in stone: e-shoppers represented 33% of the Greek population at the beginning of 2020, but 59% at the end—a 77% increase, by far the strongest in Europe.

Figure 4 shows how the split between online and offline sales evolved for a retail client over the past four years in two key markets. We can clearly see the effect of strict lockdowns in the region in Q2 2020. But it's also very interesting to see how the pandemic turned on a switch for online shopping across the region: the share of the retailer's business coming from e-commerce has doubled in Northwestern Europe from pre-pandemic levels (from 19% to 36%), and it's more than tripled in Southern Europe (from 3% to 11%).



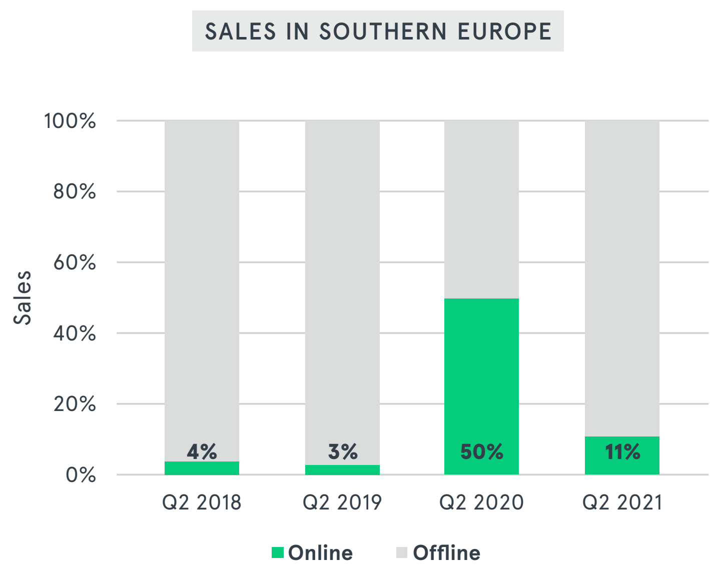


FIGURE 4: Online sales over time and by region

Source: Marketing Mix Modeling Data and Results from Neustar Global Retail Client

Conclusion

The key takeaway from our experience over the past couple of years is that it's crucial to not just forecast, but also use models to test alternate scenarios. In uncertain times, you can't predict everything perfectly, but you can be better prepared in case the unexpected happens.

In this day and age, forecasting is not something that happens in a vacuum, once or twice a year, solely for financial planning purposes. Make sure your research variables are connected to realities on the ground, update your predictive models more frequently, test alternate operating scenarios ahead of time, and give priority to local data over global data.

If you take the lessons in this whitepaper to heart, you'll come out on top—even if things get "a little screwy" along the way.

LEARN MORE

Learn how you can improve your ability to forecast and improve marketing performance with **Optimizer**, the closed-loop marketing optimization and consumer insights platform by Neustar, a TransUnion company.

home.neustar/optimizer

ABOUT TRANSUNION (NYSE: TRU)

TransUnion is a global information and insights company that makes trust possible in the modern economy. We do this by providing an actionable picture of each person so they can be reliably represented in the marketplace. As a result, businesses and consumers can transact with confidence and achieve great things. We call this Information for Good.®

A leading presence in more than 30 countries across five continents, TransUnion provides solutions that help create economic opportunity, great experiences, and personal empowerment for hundreds of millions of people.

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ABOUT NEUSTAR

Neustar, a TransUnion company, is a leader in identity resolution providing the data and technology that enable trusted connections between companies and people at the moments that matter most. Neustar offers industry-leading solutions in marketing, risk, and communications that responsibly connect data on people, devices and locations, continuously corroborated through billions of transactions. Learn how your company can benefit from the power of trusted connections.

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