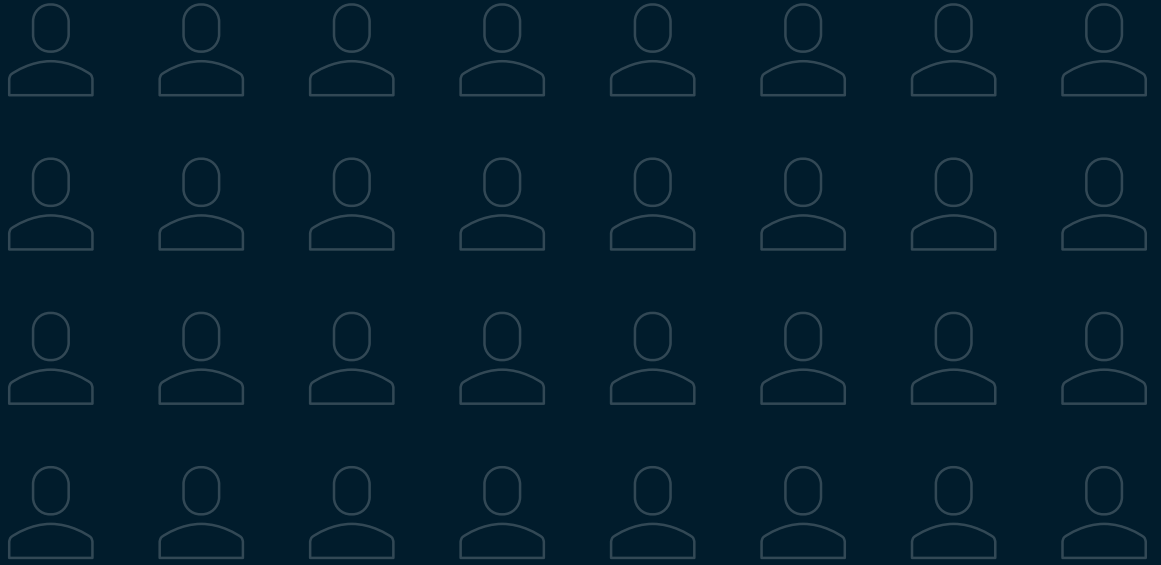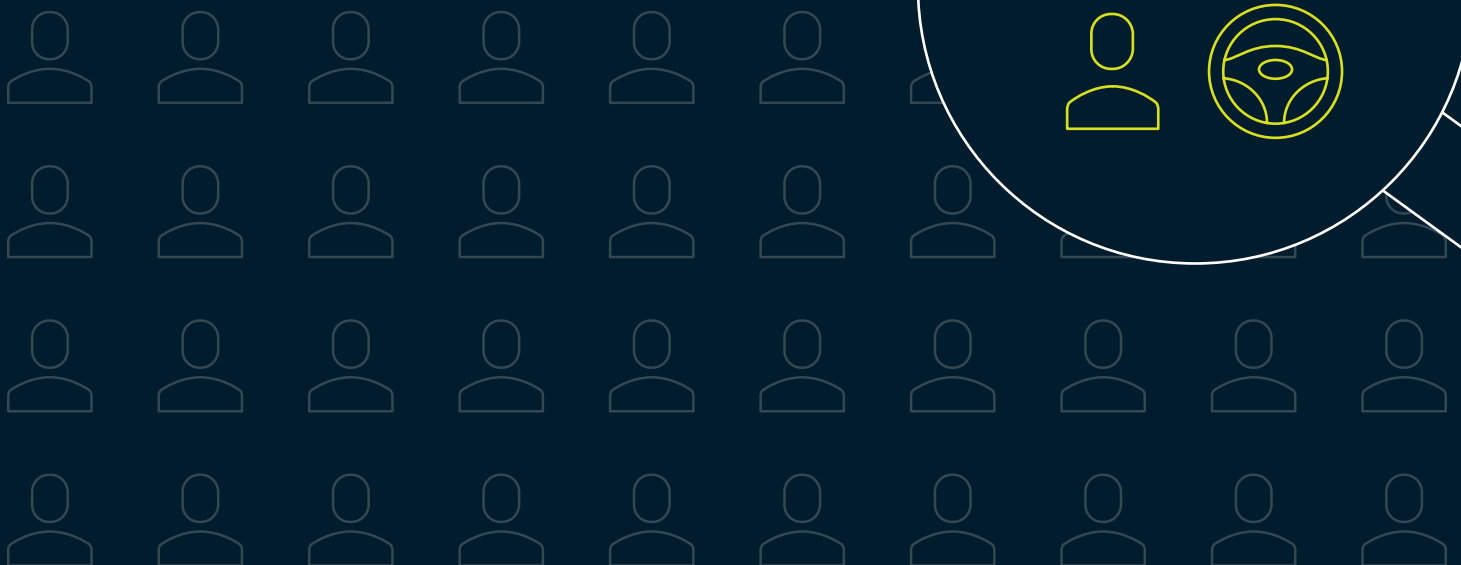# arity®

The new wave of auto insurance pricing is here.

Are you ready?

Nearly all of today's auto insurers use traditional rating factors to price insurance policies, like credit history, gender, and zip code.

Insurers have relied on these rating characteristics for decades now — and while they can help predict the likelihood and cost of future accidents, they have limited accuracy in forecasting *individual* driving risk.

Without visibility into potential shifts in risk — like the increased amount of time an individual spends driving over 80 mph — insurers will struggle to profitably price risk. When combined with rising inflation, it's no wonder many of today's insurers are having difficulties.

Additionally, despite their predictive power, certain rating factors are now under ethical scrutiny by regulators and industry professionals. California, Hawaii, Maryland, Michigan, and Massachusetts ban or limit the use of credit to price insurance policies, and the Casualty Actuarial Society recently published a series of papers discussing methods to identify potential biases[1] in insurance rating.

As traditional rating factors are reevaluated, insurers can fill the gap with individual driving behavior data, which is inherently more relevant and predictive of insurance risk[2]. Except for California and Hawaii, using telematics insights to price at time of quote allows insurers to offer more competitive rates for safer drivers while avoiding underpricing risky drivers, ultimately helping insurers improve their bottom lines.

Illinois

Illinois lawmakers are considering a new bill that would not allow insurers to use factors like gender, race, or credit score to determine auto insurance cost

42% of auto insurance consumers said how they currently drive should be the most important factor in insurance pricing[3], versus only 17% who thought credit score should be the most important factor.

Current Driving Behavior   **42%**

Credit Score   **17%**

[1] https://www.casact.org/sites/default/files/2022-03/Research-Paper_Approaches-to-Address-Racial-Bias_0.pdf?utm_source=SM&utm_medium=SM&utm_campaign=RIP
[2] https://www.arity.com/wp-content/uploads/2019/12/cracking-mobile-code-white-paper-final.pdf
[3] https://www.arity.com/move/when-price-is-most-important-to-consumers-your-telematics-data-is-crucial-to-compete/

Where "traditional" falls short

With access to driving behavior data at the time of quote, insurers can address pricing challenges head on. Knowing the power of driving behavior data, many insurers already offer discounts for participation in telematics programs to incentivize customers to share their data. But active, continuously connected policies still represent less than 10%[4] of drivers. Many friction points inhibit program growth: A customer might question what their long-term price will be or fail to download the app used to collect their data.

Most importantly, however, this traditional approach to telematics cannot support pricing the policy at new business — an insurer must wait until they've collected sufficient driving data on the insured, typically months after the policy is bound. And even then, many telematics programs are so nascent that they lack enough actual matching claims data to support accurate telematics-based loss models.

Pricing based on proxies

Traditional variables only provide a general idea of how risky a driver is or what their behavior on the road is like. This isn't necessarily a bad thing — it's just how insurers have historically assessed and priced risk.

For example, an insurer pricing a policy for a 24-year-old man who lives in a busy city may take his age and location as a sign that he is more likely to get in a car accident: On average, young men tend to be more aggressive drivers and cities tend to have more traffic and pose a higher risk of crime. As a result, he might be charged more than a 50-year-old female who lives in the suburbs. Yet this particular young man could in fact be a safe driver who spends little time on the road and does not need to be charged a higher premium, while the woman could be a more dangerous driver who logs a significant number of miles.

Pricing drivers based on proxies alone can lead to pricing gaps, especially for the safest or riskiest drivers. As a result, riskier drivers may not be paying based on their true potential for loss, posing a financial threat to insurers in the event of an accident. Conversely, safer drivers may be priced for more risk than they actually pose. Essentially, the safest drivers often end up paying higher premiums to make up for the losses of risky drivers, which can lead safe drivers to turn to competitors for less expensive insurance at renewal.

The fatal crash rate per mile driven for 16- to 19-year-old drivers is nearly four times[5] higher than the rate for drivers age 20 and older. But factors like this are only proxies of a driver's actual behavior and individuals may behave differently than the statistical norm.

16 to 19 year-old drivers

20+ year old drivers

[5] https://www.iihs.org/topics/teenagers#by-the-numbers

Old models can't keep pace with changing driving behavior

There have been significant shifts in driving behaviors[6] since the start of the COVID-19 pandemic in 2020. At the beginning of the pandemic, the roads were emptier and it may have seemed like less of a risk to speed. But many drivers have continued risky behaviors even as more cars are back on the road, contributing to fatal crashes. In fact, consumers today drive nearly one out of every 20 miles at speeds over 80 mph[7], versus one out of 25 miles in 2019.

Additionally, many individuals' driving frequencies have changed in recent years. Some drive less due to the shift to remote work, while others drive more due to distrust in the safety of public transit. Many people also shifted from ridesharing to driving themselves. These kinds of dramatic changes happen infrequently, but they have a significant impact on driving risk — and traditional pricing models can't keep pace. Without the ability to factor these changes into risk pricing, insurers will struggle to remain profitable.

> **Nearly 32,000 people[8] died in motor vehicle crashes from January to September 2021, up 12% from the same period in 2020.**

2020

2021   **+12%**

[6] https://www.arity.com/driving-behavior-insights-report/

[7] https://arity.com/wp-content/uploads/2021/09/arity_life-in-the-fast-lane.pdf

[8] https://www.transportation.gov/briefing-room/nhtsa-estimates-traffic-fatalities-continued-rise-record-pace-first-nine-months-2021

The power of driving behavior data at the time of quote

The shortcomings of traditional auto insurance pricing models have gained more visibility in recent years. And the pricing gaps stemming from these models emphasize the need for sophisticated and proven driving behavior insights at time of quote. With this information, insurers can price customers more accurately and offer the most competitive prices to the best drivers. This ultimately improves retention of this segment, while offering more accurate prices for riskier drivers and helping insurers avoid costly mistakes.

Improved pricing accuracy

Behavioral data, like how frequently a driver speeds or handles their phone while driving, is invaluable in the insurance pricing process at the point of new business.

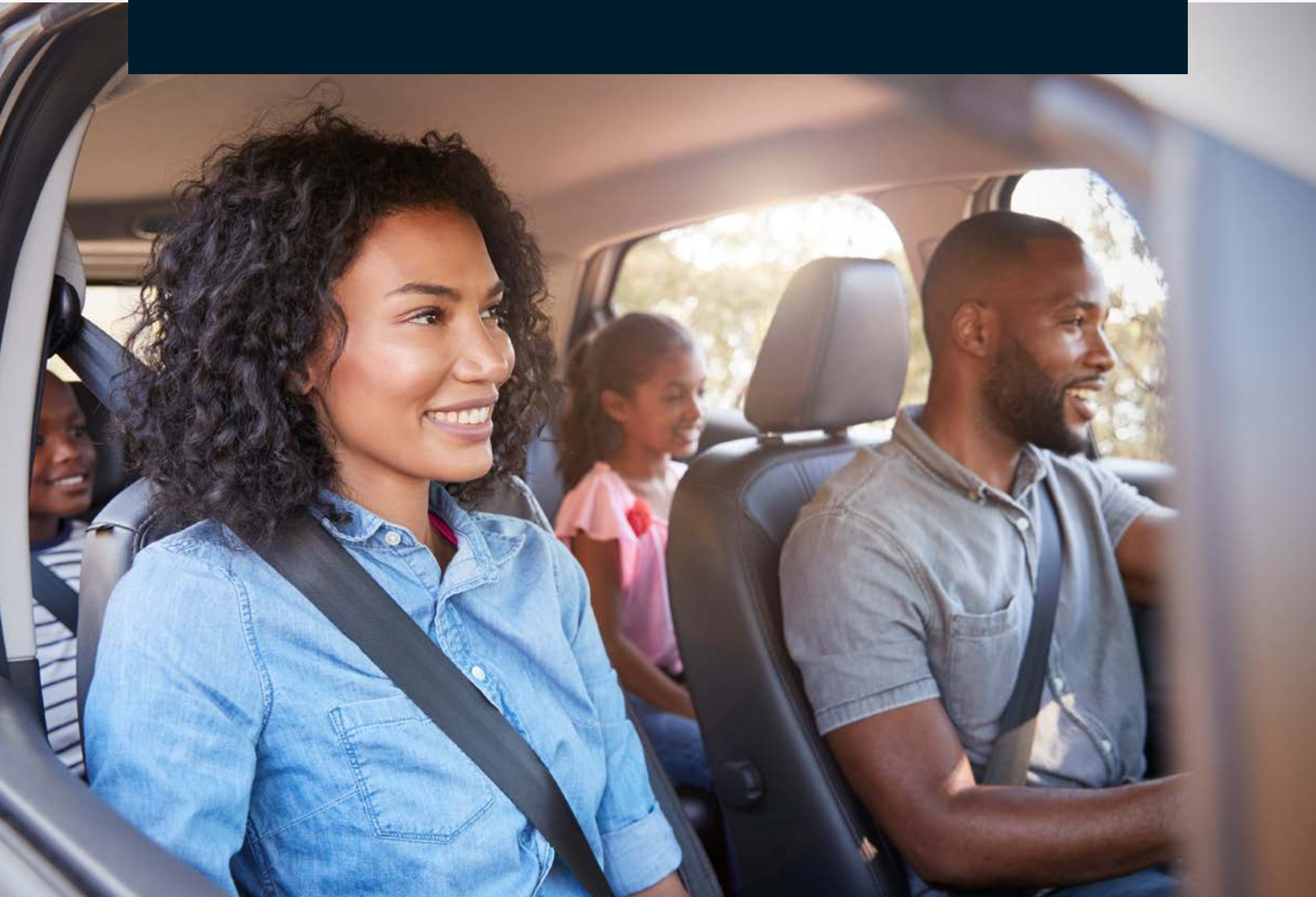**With access to this driving behavior data at the time of quote, insurers can:**

Eliminate the need for a monitoring period

Attract good drivers with competitive quotes up front

Avoid mispricing the riskiest drivers

Reduced losses

Pricing based on actual driving behavior ensures risk is assessed at the individual level, which empowers insurers to rate higher-risk customers accordingly. These risky drivers can then seek out a less expensive premium from competitors, protecting the insurer from adverse selection. This improves the original insurer's book of business, freeing them from a higher volume of claims filed while ensuring drivers are accurately priced on their true risk from the moment they purchase their policy.

▼

Risk is assessed at the individual level, reducing losses

Improved retention

Confidently pricing the best drivers with lower rates empowers insurers to recruit these better-than-average drivers. If you can offer good drivers the prices they deserve from the outset, their retention rate will increase, and so will the quality of your book of business.

▲

Offer good drivers the prices they deserve

Good drivers tend to shop for insurance less frequently, so the ability to identify and acquire these good drivers at time of quote is paramount.
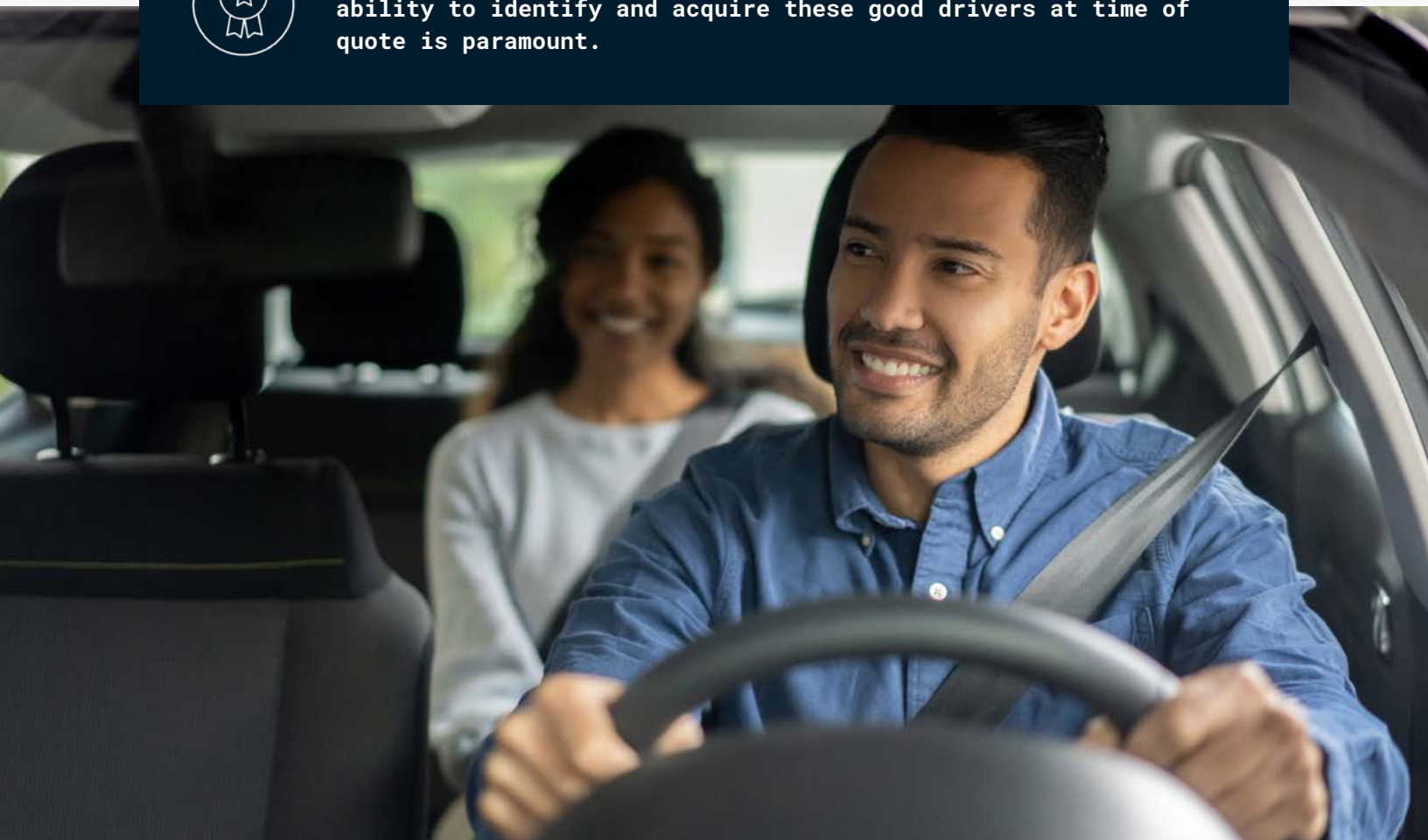
How auto insurers benefit from using Arity IQ℠ network

Arity IQ℠ network allows insurers to eliminate the learning and data-gathering period by calling on existing telematics data for tens of millions of drivers to more accurately price customers at the time of quote. This lets insurers collect insights into a customer's driving behavior at the point of new business — similar to how insurers request a customer's credit information today.

Arity IQ℠ network can be deployed instantly, which:

Enables the most accurate risk assessments at quote

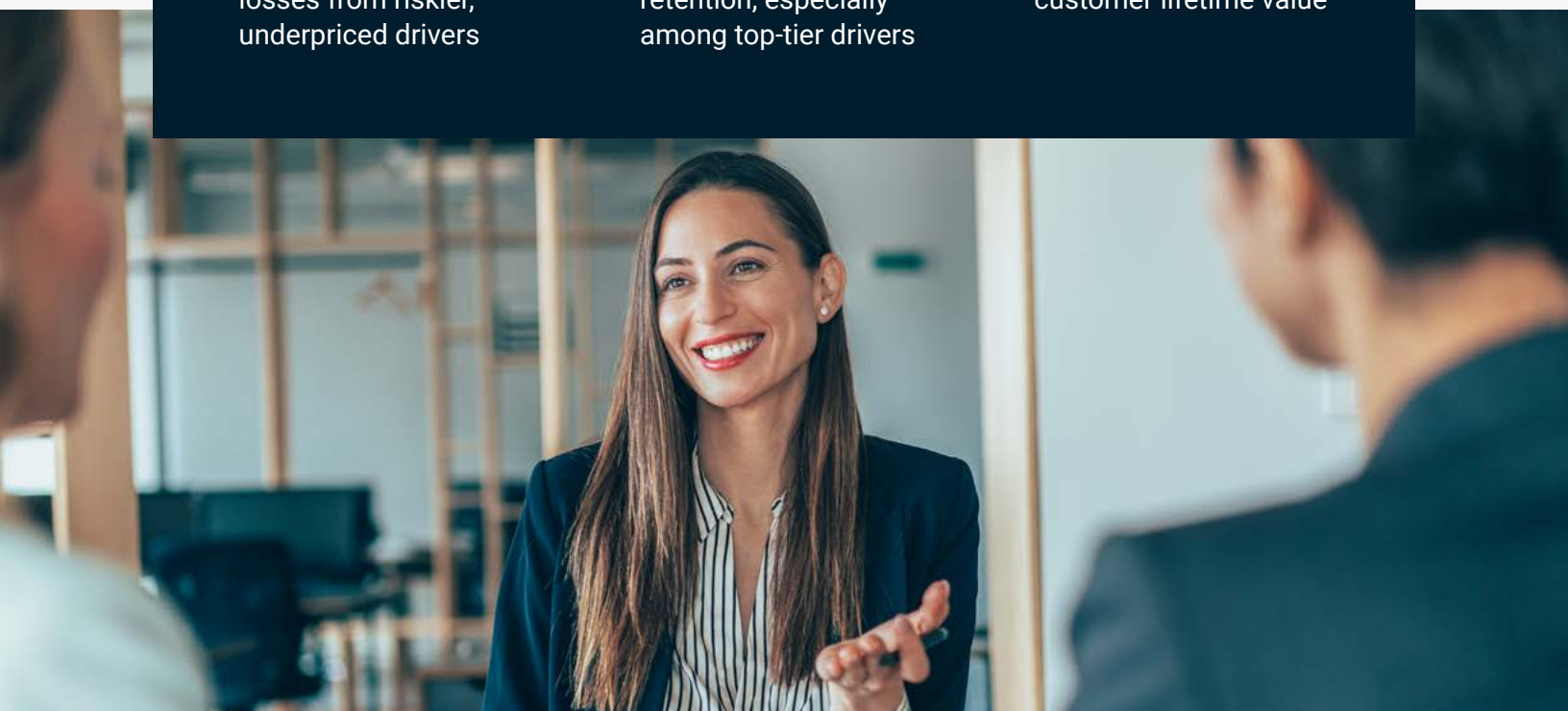Helps insurers price competitively to acquire a higher percentage of safe drivers

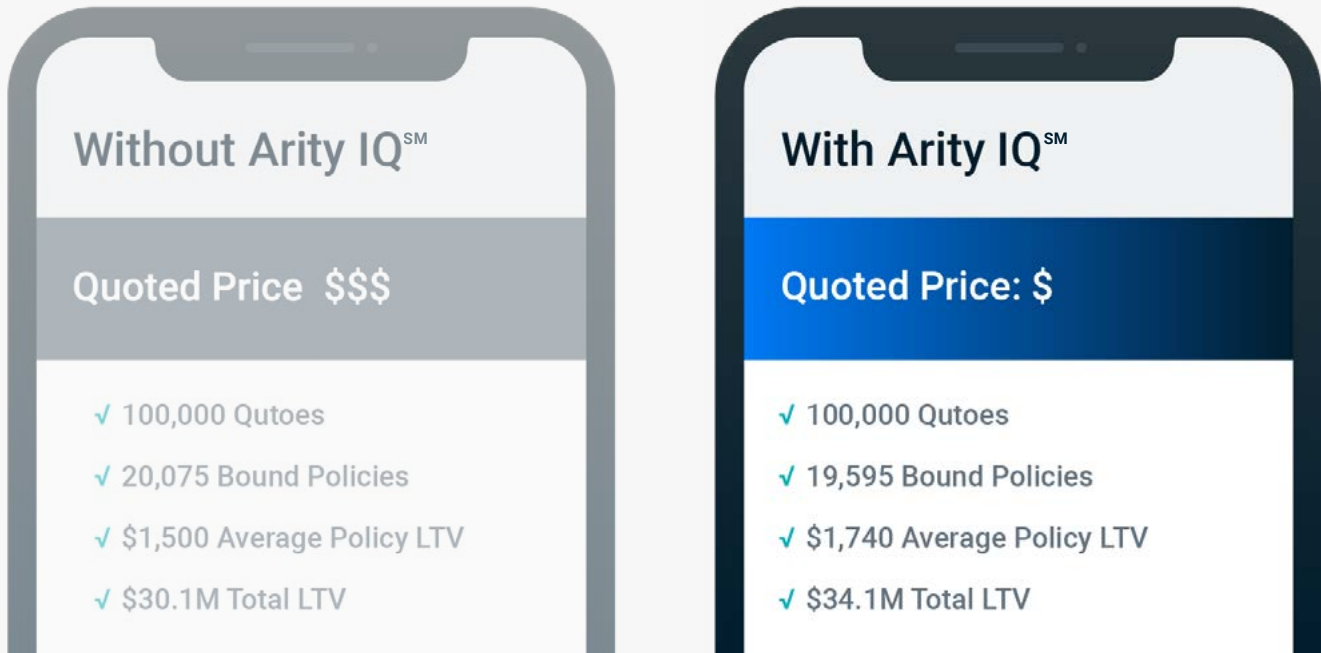Stems potential losses from riskier, underpriced drivers

Increases customer retention, especially among top-tier drivers

Improves overall customer lifetime value

Pricing with and without actual driving data tied to claims at the time of quote

Without Arity IQ℠

Quoted Price $$$

√ 100,000 Qutoes
√ 20,075 Bound Policies
√ $1,500 Average Policy LTV
√ $30.1M Total LTV

With Arity IQ℠

Quoted Price: $

√ 100,000 Qutoes
√ 19,595 Bound Policies
√ $1,740 Average Policy LTV
√ $34.1M Total LTV

Conclusion

Arity has both the largest pool of driver scores readily available for pricing at time of quote and the largest driving behavior dataset tied to actual claims, accounting for billions of miles driven. With this data, Arity generates driving scores that insurers can use to more accurately predict insurance losses and claims. By improving pricing sophistication with driving data at the time of quote, insurers can competitively price the best drivers, more accurately price the worst drivers, and ultimately increase their bottom lines.

Learn more about Arity's innovative insurance telematics solutions.

We set up sample pricing models based on conservative industry averages, actual customer pricing models, and online shopping metrics. Without making any adjustments or pricing optimizations by tier, this example represents pricing to the fullest indication (100%) of insurance risk across an entire book of business.

About Arity

Arity is a mobility data and analytics company that provides data-driven solutions to companies invested in transportation, enabling them to deliver mobility services that are smarter, safer, and more economical. Arity collects and analyzes trillions of miles of driving data to create a greater understanding of how people move. With the world's largest driving dataset tied to insurance claims collected through mobile devices, in-car devices, and vehicles themselves, Arity derives unique insights that help insurers, developers, marketers, and communities understand and predict driving behavior at scale. Arity was founded by The Allstate Corporation and was launched in 2016.

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