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# Episode 19: The Road Ahead for ADAS, EVs and the Automotive Aftermarket

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As vehicles become more connected, complex and technology-driven, the automotive industry is adapting to significant change. Host Ryan Mandell is joined by Rick Schwartz, CEO of Schwartz Advisors, for an in-depth discussion on trends in vehicles-in-operation (VIO), EV adoption, ADAS, automobile repair, and supply chain dynamics. Together they examine how these changes could influence the future of auto claims and collision repair.

**Ryan Mandell:** Welcome back to the Mitchell Collision Podcast. I'm your host, Ryan Mandell. I'm super excited to have with me today a good friend of mine, Rick Schwartz, who's the CEO of Schwartz Advisors, a leading automotive aftermarket mergers and acquisitions advisory company, both on the buy-side and sell-side of acquisitions, as well as consulting work in the automotive aftermarket. Rick, thanks so much for being here today.

**Rick Schwartz:** Thanks for having me here, Ryan.

**Ryan Mandell:** Rick, just tell us a little bit about who you are, your background, and what it is that you all do at Schwartz Advisors.

**Rick Schwartz:** Well, thanks, Ryan. At Schwartz Advisors, as you said, we cover the automotive aftermarket, and really, we cover the vehicle aftermarket because our mandate includes passenger cars and light-duty vehicles. We also cover the commercial vehicle or heavy-duty market, which is vehicles up through Class A trucks. And we also look at a lot of off-road vehicles, industrial vehicles, so, the easy thing for us to say is the automotive aftermarket because a lot of people understand that. The reality is we cover just about every kind of vehicle. If it has wheels and an engine, we cover it.

**Ryan Mandell:** Now, one of the things that you guys have been doing a lot more of over the past decade is putting some more information out into the industry about what people can expect to see from mobility, from the automotive aftermarket, from the vehicle aftermarket in general. And just recently, you all released your most recent VIO report, your Vehicles in Operations report. Tell us a little bit about the genesis of that report. How long have you been doing it and what does that mean? How can we think about the VIO and what it means for the industry at large?

**Rick Schwartz:** Yeah, so as you said, Ryan, we get involved in mergers and acquisitions work and also consulting. And what we realized in all three parts of our business, the first part is where we're actually selling companies. The second part is we're advising buyers, usually private equity firms. And the third part is when we're doing strategy work with companies in the aftermarket. We realized there was a lack of a very good and deep understanding about the vehicles in operation or VIO.

So back in about 2018, we started to put together a forecast of where we saw the overall VIO and we started to look at the VIO and our goal was we wanted to present a forward-looking forecast of what the VIO would be over the next 10 to 20 years. What we then found out after we launched our first editions of the VIO report was that we needed to go even further, so we started to look at the VIO by powertrain.

**Ryan Mandell:** And that's really fascinating to me, because as you're aware, we do a lot of research around electrification, and definitely have seen clearly significant growth in electrified powertrains. So, what are some of the things in this most recent report that stood out to you in terms of the findings from your research?

**Rick Schwartz:** So what we found out is first, we were just looking at a few different powertrains and today we're actually looking at nine different powertrains. So, we're looking at internal combustion engines, we're looking at different kinds of hybrids and some of the hybrids arguably are EVs because they're plug-in hybrids. And now we have full-on battery electric vehicles, but we also have extended-range EVs. So, we break those apart.

What we found in our early editions of the model back in the 2018/2019 timeframe was that we did not see the adoption rates of electric vehicles at the same rate that most other people who had similar VIO models did. And we early on said this is not about whether we like EVs or whether we think EVs are good or bad or indifferent. We just said the data did not support the EV or the kind of EV adoption rates that some other forecasters were talking about in, let's say the pre-pandemic and then the early years after the pandemic. And I think some of our forecasts over the last seven or eight years have been accurate in terms of consumers in the United States were not gravitating towards electric vehicles the way a lot of people thought they would.

**Ryan Mandell:** And right now, we've seen this shift in appetite for EV adoption over the course of the last year and a half, really. A lot of those tax incentives have kind of gone away, which I think was a big driver for some of those early EV adopters. What do you see changing over the course of the next year, especially as we're now in this position where fuel prices are high, there's a little bit of a short-term resurgence in interest in electrification because of that. How does that impact maybe the near-term forecast?

**Rick Schwartz:** There are two ways to answer that question, Ryan. The first is, we're still in the early stages of a little bit of a comeback in EVs. And that's interesting and we're tracking it. However, if you look at the overall

sales of vehicles on an annual basis, it's really not making a significant impact on the overall VIO.

With about 290 million light-duty vehicles on the road, and light-duty would be defined as passenger cars up through maybe some of the small pickup trucks and SUVs, it's not going to really change the overall composition of the VIO anytime soon. We're probably not going to see a significant change in adoption until the late 2030s up through 2050.

Again, this is not about debating whether or not EVs are good or bad. You know, there's a view of EVs that's more in terms of "it's better for the environment." We don't really look at that because we acknowledge that's a factor. We're just looking at the facts of vehicle purchases, how old vehicles are, and the age of vehicles is rising. We're looking at variables like the price of gas. And as long as the price of gas is in a reasonable price range, a lot of consumers are still gravitating towards internal combustion engines and hybrids.

We're also looking at the cost of vehicles. And with the cost of vehicles spiking in the last 12 to 18 months, it has made a lot of EVs out of reach for many consumers. So, when you look at just the menu of variables out there, we don't see any kind of significant adoption of EVs in, let's call it the next 10 to 15 years, putting us out to 2040. And that's something that we cover in the model that we put out in our report.

**Ryan Mandell:** And I think when we look at our data at Mitchell, we only see roughly about 3.5% of repairable claims being identified as a full battery electric vehicle, so it's still very, very small. The number has continued to grow significantly over the past few years, but still, we have to keep in check where that stands as a part of the overall ecosystem.

When insurers are thinking about the shift in different powertrains, the growth of hybridization, the growth of electrification, what are some of the things that you believe insurers need to be considering as these powertrains gradually become a larger portion of the book of business that insurance companies are underwriting?

**Rick Schwartz:** The way we think about it, Ryan, is it isn't so much driven by the powertrain, although that's something to think about, the way we would think about it is in the context of how insurers should be thinking about things is diagnostic capability. What diagnostics are on board? What is the age of vehicles?

And again, if I could just talk about the age of vehicles for a second, because that is related to your question. With the age of vehicles approaching 13 years, and all indications are that it's going to stay at that level for the foreseeable future, you have to think about what vehicles came online in 2013, 2015, 2017, even earlier than that. Cars that came online 20 years ago, some of those vehicles have no diagnostic capability. Some of them have a limited capability.

So, we almost need to look at a matrix of the VIO by powertrain and make sure that on the other axis, we're looking at what kind of diagnostic capabilities they have. And when do, we see the time frame where more and more of the vehicles have the diagnostic capabilities on board. For the insurers, it's all about diagnostic capabilities and also working with the collision MSOs to make sure that day-turn efficiency is optimized as much as possible.

**Ryan Mandell:** And when you refer to diagnostic capabilities, are we talking about the connected car type of aspect, the ADAS functionality of those vehicles? Maybe describe a little bit more, kind of defining what those diagnostic capabilities are that create those differences between the different model years.

**Rick Schwartz:** That's a great question and you're exactly right, Ryan. It's all about ADAS, it's about the connected vehicle. It's about having as many collision avoidance technological capabilities on the vehicle as possible.

We will see improvements every year in terms of the reduction in collisions from these technologies. But, as long as we have individuals driving vehicles, the distracted driving is going to be a big problem. At our company, Schwartz Advisors, we always look at the data. We don't like to make statements based on just throwing out a comment. However, there's a lot of conflicting data about distracted driving. All we can say is distracted driving is an offset to a lot of the very good and effective collision avoidance technology.

**Ryan Mandell:** I would agree with you on that. I think distracted driving is at an all-time high with smartphone ubiquity and the fact that when you look at these vehicles, these newer vehicles, especially, they're equipped with TV screens in the middle.

**Rick Schwartz:** You know, it's a problem, and you're right. It's okay if you have a van and you put the TV screen in the back for the kids, but when there's a TV screen up front, I mean, that is a problem. And the fact that we have some vehicles that can connect to Zoom or Teams, that's a problem.

So, how do we solve for the fact that consumers want to bring a lot of their cell phone access into the vehicle and still create a safe driving environment? I'm sure you and most of the listeners can predict who's looking at their phone when they're on the road, just by how someone's driving. And hopefully I'm not one of those people.

**Ryan Mandell:** That's right.

I want to come back to the ADAS topic here in just a minute, but while we're talking about some of the factors that contribute to accidents, one of the other things that I read in your report is that you expect to see the overall size of VIO increase for the next, roughly 20 years, and then it starts to kind of fall off after that.

So, as there are more vehicles on the road, does that also have an offsetting factor that's also an offsetting variable to some of those collision avoidance technologies? And what is it that's eventually going to cause the VIO to start to go into decline?

**Rick Schwartz:** Well, let me answer your second question first about the VIO going into decline. We see in, probably 15 to 20 years when we get into the mid-2040s, more autonomous vehicles on the road. We see more fleet-owned vehicles.

Owning a vehicle is probably one of the most inefficient assets any consumer can own. I've seen some data that says cars are not used anywhere from 95% of the time, which means I'm only using my car as little as 5% of the time in a given week or month. And some people think that those numbers are a little inflated.

The point is, when my car is sitting in the garage, when my car is sitting in a parking lot, I'm not using it. So, when we see more of the VIO go to fleets, when we see more of other vehicles go to AVs, we're going to see fewer vehicles on the road. So, we'll actually see a slight decline in the VIO probably in the mid-2040s due to more consumers going to either autonomous vehicles, more consumers using fleets where they don't have to own a vehicle, they can just have a vehicle on demand. So, the whole ownership dynamic is going to change.

**Ryan Mandell:** But up until that point, we still see that there's going to be gradual growth. I think you mentioned 1% growth of vehicles on the road year over year.

**Rick Schwartz:** Yeah. We see 1% to 2% compound growth. Like I said, we were at about 290 million vehicles on the road today. We think we're going to peak at around 315 million vehicles on the road over the next 20 years. It's simple math and algebra. That's how we look at things. We look at how many vehicles are on the road. We look at the age of vehicles. There's a lot of good data on how many vehicles come out of the car parc every year based on scrappage and how many new vehicles are sold. That's how we do our forecast. We look at the platform build forecast from the car manufacturers. So we look at a lot of different data, and this is not going

to be a linear growth.

Historically, we've seen linear growth of the car parc, but because of the fact that a lot of ownership dynamics will change, the fact a lot consumers will realize I don't need to own a vehicle, I can just get a vehicle on demand or I can have almost a lease situation where instead of leasing a car the way I do now, I'm leasing a car and I just have a car on demand. So, probably in about 15 to 20 years from now, we're going to start to see a slight decline in the number of vehicles on the road.

**Ryan Mandell:** So jumping back to ADAS, when you think about all the growing complexity on these vehicles, I mean, there's so many more sensors and cameras and all this functionality that most of the time I turn off when I'm driving a rental car that has all that. But the vehicles are equipped with all this. So, when they're in an accident, there is a lot more to think about in terms of bringing that vehicle back to pre-loss condition. One of which is the actual parts themselves that get damaged. And with a lot of collision parts, there's a value chain. There are OEM parts, there's aftermarket, there is remanufactured, recycled—many different options. That's not the way it is right now with these ADAS parts.

How do you see that evolving over time? Do you think there's going to be the development of different players in that value chain to help improve the cost-effectiveness of collision repairs as these vehicles get more complex?

**Rick Schwartz:** You know, that's a great question. And we've been involved in a lot of conversations on that topic. So you're right, if we look at the collision, the crash parts, everything but the sensors, there's a really interesting value chain that, as you said, includes OEM, recycled, remanufactured—but we don't have that dynamic at any scale right now with sensors. And there's a lot of discussion on creating a marketplace for remanufacturing sensors. And the opportunity is to have sensors at a lower cost.

Some of the key questions that still need to be answered are, first of all, how do you do the remanufacturing? How does it get done and is there going to be a certification? If you have a sensor, which is a critical part of the safety mechanism in a car, how are you going to ensure that it is something that should go back in the vehicle and where's the liability going to be for a remanufactured sensor? Is the liability going to be with the company that does the remanufacturing? Is it going to be with the MSO that installs it? There's a lot of questions that need to be answered in terms of putting together the right business model.

I think there's going to be a lot of innovative people who are going to look at the opportunity. They're going to look at the number of incidents of vehicles going in for work at a collision MSO and they're going to figure out how do we get remanufactured ADAS and other avoidance tech. We're going to see a marketplace develop in the next, we'll call it five years I think, of having lower cost, high quality, remanufactured and certified sensors going into vehicles. So that's going to be an interesting dynamic that we're tracking.

A lot of companies are trying to figure out a lot of parts to this question. First of all, where do you get the cores? How do you get the sensor? What is the supply chain going to look like? And then what's the process going to be? Where is that going to get done? Is it going to be done domestically? Are you going to have to outsource like you do with a lot of the hard parts? And then, like I said, where's the liability? Until we know where the liability's going to rest in terms of if a vehicle owner is in an accident and they claim that the sensor didn't work, who's going to be responsible? So that's probably the critical question that needs to be answered.

**Ryan Mandell:** And finally, just speaking of the supply chain, and maybe just to close out here, talking a little bit about where do you see vulnerabilities existing in the overall parts supply chain moving forward? We've seen obviously a drastic change in tariff policies by the United States over the course of the last year. Plus, are there going to be shifts in where parts are being produced? Does that create any gaps in the ability for manufacturers to provide those parts? How are you all thinking about what that looks like over the course of the next 18

months?

**Rick Schwartz:** There's a lot in that question to unpack, starting with, yes, tariff policy in the United States has had a dramatic impact on supply chain. It has had a dramatic impact on cost and, ultimately, consumers are bearing the cost because at most steps in the value chain, costs arise, and ultimately it's going to be the consumer who is going to have to pay most of that.

We are seeing a lot of shifting of country of origin. So, for example, there's a lot of remanufacturing work that has been done and continues to be done in the United States, but companies are looking to shift outside the United States because the cost of getting those products remanufactured might be more efficient in other countries. Some companies are still doing assembly work in the U.S., and hopefully we can have a balance of the right amount of manufacturing. Whether it's light-duty manufacturing or reman in the United States.

But the fact is, a lot of other countries, whether it's countries in Asia, Turkey, some other countries, India, there are very good opportunities for companies to look at for manufacturing. So, the whole supply chain is up for grabs right now in terms of where the most efficient place is for companies to go.

Tariff policy is a factor and it's a variable that every company has to be mindful of. And they have to be mindful of how they impact their business. There's no doubt that over the last 18 months, tariffs have really been a factor that most companies have had to quickly pivot to adjust to. Hopefully, we'll see the tariff policy settle down and get back into something that's more in the historical range of predictability, even if the actual rates increase. But once companies get comfortable with the tariff policy, whatever it is, that's something that we found over time is that it doesn't matter what the challenge is. Whether it's tariff policy, manufacturing or technology, most companies in the United States will figure out a solution.

**Ryan Mandell:** Rick, what are some of the leading indicators that you all at Schwartz Advisors look for in terms of trying to understand what's next for the automotive industry?

**Rick Schwartz:** Well, obviously, Ryan, we look at what the OEMs are doing. We look at what the vehicle manufacturers are doing—they announced their platform build. We look at some of the advancements in technology and what's going on in terms of R&D for everything related to the vehicle.

And then something else we follow is the old saying—follow the money. And by that I mean, follow money in terms of where are institutional investors looking to make their bets today on the different technologies, applications of the technology or vehicles? So where is the venture capital community investing today on brand new technology? And then, where's the private equity community looking to scale businesses that already exist?

So at our company, Schwartz Advisors, we do a lot of work with private equity firms and companies that are owned by PEs. So, really keep an eye on where the PEs are making significant investments in companies on everything from improving the congestion on the roads and the efficiency of our transportation network. Where they're making investments in diagnostic capabilities, tools and equipment. Where they are making investments in potentially the remanufacturing of sensors. So, at our company, we track where a lot of the investment dollars are flowing because that oftentimes is a good and accurate leading indicator of how the collision industry and the diagnostics for the collision industry are going to look in the next five to ten years.

**Ryan Mandell:** If people are interested in learning more about Schwartz Advisors or want to reach out to contact you guys, what's the best way for them to do that?

**Rick Schwartz:** You can check out our website. It's simple, it's [schwartzadvisors.com](http://schwartzadvisors.com) and we'd be glad to talk to you. We'd be glad to answer any questions about our report. You can actually go to our website and download our report, it's called the SA Mobility Aftermarket Report and if you have any questions about it, please drop us

a line.

**Ryan Mandell:** Thanks so much, Rick. It's great to see you as always. Appreciate your time today.

**Rick Schwartz:** Thanks, Ryan.

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