

"How Tech Savy Do We Need to be to Buy a Car?"

- Aman Gada | July 31, 2023

Will the process of buying a new car be just as exciting as it has been or will it turn mundane?

Being an automotive enthusiast I find the process of researching features of a car very exciting. However, the last time I had to shortlist a few cars was in 2018. It may not seem like a long time but looking at the features promoted in adverts of today, the features and specs that I was considering while selecting a car have changed drastically.

The passenger vehicle category in India may be at an inflection point. We are witnessing a paradigm shift comparable to the launch of the Ford Model T in the US or the entry of Suzuki in the Indian Markets. These statements may seem like exaggerations to prove a point, but as I share my observations about some of the current and future trends you may agree with me.

Some of the trends I have noticed are the Standardization, Electrification (can't not add this in any discussion about trends in the automotive space), Softwareization, and the impact a New-gen car will have on our life.

When I ask my father, what are the things he considers when buying a car he listed; Interior space and boot space, mileage, horsepower, servicing cost, service network, and availability of parts and features compared to others in a similar price point. Usually, there were only a couple of cars that ticked all boxes back in the 2000s. However, if you go with a checklist now, you may find 20 that fit your requirements because cars have gotten incredibly standardized over time. Automakers only want to make cars that the masses want, niche categories are being killed mercilessly (Sedans in India; Honda Civic, Nissan Sunny, Skoda Octavia, Toyota Corolla Altis, and many more), and intense competition has forced all Original Equipment Manufacturers (OEMs; Maruti Suzuki, Hyundai Motor India, Tata Motors etc) to offer similar products.





I remember the uniqueness that the first Honda City (lovingly called the dolphin) and the Hyundai Verna had(both launched in the same year). You were either a Honda or a Hyundai family, the two while



being similarly priced sedans, had completely different design languages, look and feel. I am deeply disappointed with the trend of modern incarnations of the same cars that feel less and less unique, with similar-sized engines, interior space, edgy design language, and pricing.

Even in other categories, the trend is evident. The 2 most prevelant SUVs on Indian roads, the Hyundai Creta and the Kia Seltos are based on the same chassis. Many of Toyota's cars are just rebadged Maruti Suzuki Cars!

Coming back to the biggest trend which obviously is the **Electrification of Vehicles**. Only someone living under a rock must have missed it. While mass adoption of Electric Vehicles (EVs) may be better for the environment compared to their Internal Combustion (IC) counterparts, one could suspect automakers may have ulterior motives behind the passionate EV push we have been seeing.

An advantage of EVs is that automakers do not need to build 'variants' for a given model of a car. In an IC car, there are usually 3-5 different variants of a model with different pricing and features. The trend will continue but unlike the IC version all variants of an EV will have the same physical parts, thus improving the supply chain logistics and costs for the manufacturer immensely. The differentiation will be created through software. An electric vehicle can be highly customized using software means. You could have a range of different speeds or battery capacities using the same motor and battery pack.

The game changer however is **flexibility**. When buying an IC car you are locked in terms of the features (unless modified) for the rest of the life of the vehicle. However, in an EV you can update the features remotely through the internet, which will only be possible as cars adopt **Softwareization**.

The 2nd interesting trend I have noticed is, Softwareization. Which will enable customization to an extent that was unimaginable only a few years ago. Imagine this, you are a first-time EV buyer, and you're eager to embrace the future of electric mobility. However, you have some concerns about range anxiety, a real problem many consider before buying an EV. So, you decide to go for the Long-range variant that provides a bit less power but has the highest range, offering peace of mind on



those long journeys. After using the car for a few months, you realized that you always have a 50% charge when coming back home and luckily have access to good charging infrastructure. Here's where the magic happens — You can call the company and request the Sport Plus pack to unlock 50 more horsepower, just like a little boost of adrenaline for your daily drives. The best part is that the automaker upgrades the car with virtually no additional cost to them. A win-win situation!

Now, you might think the story ends here, but it doesn't! The automaker wants to maintain a long-lasting relationship with you as the car owner, and they come up with even newer features that can be 'downloaded' to your car if and when you decide to buy them. Imagine subscribing to a bundle of features like Advanced Driver Assistance Systems (ADAS) or even luxurious massaging seats, giving your car a whole new personality with just a few clicks. It's like getting exciting surprises for your car whenever you want!

That day is not far-off in the future, BMW has already started rolling out subscription-based feature upgrades as a trial, as follows:

Feature	Model Compatibility	One-Time	3 Years	1 Year	1 Month
Remote Engine Start	2019 and newer vehicles with automatic transmission and 4- or 6-cylinder engine	\$330	\$250	\$105	\$10
Drive Recorder	Vehicles equipped with BMW Live Cockpit Professional and Parking Assistant Plus	\$149	\$99	\$39	N/A
Traffic Camera	2020 and new vehicles equipped with BMW Live Cockpit Professional	N/A	N/A	\$25	N/A
Driving Assistant Plus with Stop & Go	Certain 2022 and Newer iX-SUVs	\$950	\$580	\$210	\$20
Parking Assistant Professional	Certain 2022 and newer iX SUVS, X7 SUVs, and 7 Series sedans equipped with Parking Assistant Plus	\$950	\$580	\$210	\$20

But don't worry, this whole process is not as sinister as it may seem. As a happy customer, you'll be thrilled to maintain a relationship with your car's maker, especially because the maintenance of an EV is significantly lower in terms of frequency and cost compared to traditional internal combustion vehicles. Fewer moving parts mean fewer things that can go wrong, and most repairs can be



efficiently handled via the cloud, eliminating unnecessary hassles with middlemen and service providers.

Now let's talk about the future! Thanks to advancements in ADAS and fully autonomous self-driving technologies, the stress of my morning commute is a thing of the past. As someone who spends a significant amount of time on the road, I'm eager to get back those precious minutes — or even hours — that I would otherwise waste in traffic. If you spend 2 hours per day commuting for 5 days a week, you spend more than 21 days a year in your car, now imagine you get back that time to catch up on your emails, study, read or meditate.

However, I do realize that creating these cutting-edge vehicles is no easy task. It's not like developing other software products like a phone app or video editing software. I've learned that manufacturing a car requires zero-fault manufacturing processes, and it takes incredible precision and planning to bring these marvels of engineering to life. Yet, thanks to technology companies and **Engineering Research and Development (ER&D)** firms, like KPIT Technologies Ltd, Tata Elxsi Ltd, and L&T Technology Services Ltd, the automotive industry has been able to accelerate the development process.

Such companies enable **Virtualization**. This technology, in particular, has been a game-changer when it comes to the manufacturing process. It's like having a digital twin of the car and all its components, allowing automakers to make changes, perform stress tests, and fine-tune everything in a virtual environment before even producing a single physical piece. It's like being able to perfect a car in a parallel digital universe, drastically reducing development times from years to mere months. As a tech enthusiast, I find this mind-bogglingly awesome!

Coming back to the original question, I do believe that if you are the type of person who loves the roar of a powerful engine, or like to have more power than the other guys on the road to make quick overtakes, the process of buying cars in the future may become less exciting. However, if you love to have the best operating system or depend on the maps to find your way anywhere, you may find the process more thrilling.

If I wanted to, I could go on for 100 pages, as something new is happening in the automotive space almost every week. The OEMs and Tier - I companies (primary component makers for OEMs) are all working harder to out-innovate each other in order to gain an edge. The companies that fail to innovate and adapt to these changes will most likely not survive.



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