



The recent trends in the “Auto Industry” force us to believe that “nothing is impossible” (as the word itself says I’m possible).

Just pause for a moment – IMAGINE – when somebody buys a car in the years 2025-2030, what is one likely to be offered by the existing (if they exist)/new manufacturers. And what are going to be the considerations for making the purchase decision.

I will just try to give you glimpses of few things which are already part of the design in the next platforms being launched:

#### Vehicle Autonomy

Very few should now be skeptical about “Self-driving / Autonomous Cars”. Google had launched the self-driving car project in 2009 and the project got completed in 2015. Till June 2016, the first fleet of vehicles had already completed “Road Testing” in autonomous mode for a total of 27, 77,585 Kms. Just wait for a thousand days and in 2020, Google plans to make the car available to public.

# Disruptive Trends in the Auto Industry

You must unlearn what you have been programmed to believe since birth

- Pankaj Jain  
Sr. VP (Sales & Marketing),  
Kalyani Steels Ltd.

India may follow, but in many parts of the world, people may be driving their LAST Car which needs to be driven. The driver is likely to become the passenger in the next car. And the car – “Well, it is likely to become a Mobile Living Space”

#### Alternative Energy

My recent meeting with a very senior executive from a Japanese Automobile OE gave me good insight to likely usage of alternative energy in automobiles of tomorrow. Serious efforts are being made by most of the leading manufacturers for

developing alternate forms of energy. This does not just include the much hyped TESLA which has already sold 1,86,000 electric cars by December 2016, but also other forms of energy like Hydrogen, Water, Solar and unconventional hybrids.

And if this was not enough, let me share that already plans are underway for manufacturing *Amphibian* automobiles (Yes, you read it right – amphibian – which can travel both on road and water) for flood prone areas. [This is just one example of



OE's Making products for Niche Market]  
**Smart Cars**

We have seen enough of “Smart Phones” but the **next era is going to be an era of “Smart Cars”**. Car has already become an electronic machine and soon may become almost similar to a mobile to serve us in various ways. Soon, we might see **many apps for Car**, which will **help make intelligent decisions** for the drivers and the passenger. Today’s high end cars already have between 75-100 computer processors; many mechanical parts are already replaced by “Electronics”.

To share an example, as per a report, car companies and software companies are together trying to create applications that will help in reducing driving accidents caused by alcoholic influence and lethargy—as drivers will be supported by autonomous driving technologies which will overtake in such a situation.

Car Internet and array of sensors collecting not just traffic conditions but also crime (especially in smart cities) might be a feature in almost all the cars

**Change of Material**

So far, we were always contemplating over which of the two metals between steel and aluminium is ideal for use in automobiles. **Now, a new material—carbon fibres is creating disruption** and emerging as a strong contender surpassing both steel and aluminium in terms of strength and lightness. Already BMW has replaced large number of parts in 2 of the new models with parts made of carbon composites, replacing aluminium and steel.

Above examples are just a few things mentioned – which has come into the media – but there may be many more things which we might even have not imagined. For individuals, whether some feature comes or not does not matter; but **trust me, if steel manufacturers and auto-component manufacturers do not see the “Writing on the Wall”, it may throw their business partially or completely out of gear.** If you belong to the steel industry or the auto-component industry, just try to answer the following questions which might open your eyes for a rethink of your short term and long term strategy.

(a) Bloomberg New Energy Finance just released a study claiming that electric car sales will be up to 40 million units by the 2040s, up from just half a million last year. **Assume for a second, that the expectation come true – think how it will affect the steel and auto component business.** Initially, we might see hybrids, but when cars become only electric, what impact will it have to manufacturers of engine /

transmission components dedicated to IC engines?

**(b) Are Carbon fibres a BIG threat to the existing product lines of Flat Products (Steel) and the huge past investments made ?** Are we aware that almost all mid-range and high end sports bicycles are today using aluminium or carbon fiber (not steel).

(c) Ford cuts more than 315 Kg/Car from its biggest seller, the F-150 pickup, by changing to an aluminium body. **Today, it may be one off, but the question is HOW LONG? We have already seen many components – both critical and non-critical replaced.**

**The fight in ON and it will be interesting to explore how long steel will retain its position.**

The global auto industry is leaving no molecule untouched as it searches for new and different ways of reducing weight whether to boost fuel economy or to reduce carbon emission to make the vehicles more environment friendly.

And automakers are not just restricting to using aluminium but even exploring other potential substitute materials like magnesium & compressed wood.

The struggle for existence holds as much in the intellectual world as in the physical world. But we should all remember – ***“It is not the strongest species that survive, nor the ones that are most intelligent; but the ones most responsive of the change”.***

In today’s fast changing world, whatever can be done – will be done. ***The ONLY AND BIG QUESTION IS WHETHER IT WILL BE DONE BY YOU OR TO YOU.***

