

# MOVING AHEAD WITH THE TIMES

PARKING PROBLEMS ARE NOT UNCOMMON, ESPECIALLY FOR BIG CITIES. HOWEVER, NEWER INNOVATIONS ARE GOING TO CHANGE THE WAY WE PARK OUR CARS – WITH A LITTLE HELP FROM TECHNOLOGY!

BY AJAY RAINA

**T**raffic in cities is getting denser by the day. It is estimated that, in the next decade, the population in urban areas is expected to grow roughly to about 70 per cent. Population growth is not only a pressing issue for the government but a tangible daily reality for most citizens. The biggest problem of urban commute is the non-availability of parking areas since our cars move only about 5.0 per cent in a given day and parked for the rest.

## Smart Parking System – A growing Need

The automotive industry is racing ahead at a considerable speed. As society begins to embrace the benefits of electrical energy in driving, driverless cars, artificial intelligence, other elements of the automotive industry take similar turns towards efficiency and brilliance. As this evolution continues, the logistics of parking too comes into question.

Here are some of the parking innovations that will transform Car Parking space in the immediate future:

### Automated Parking

In the last few years, we have seen the development of semi and fully automated parking lots. However, Automated and Mechanised parking has been around for many years, though it has developed by leaps and bounds in the past few years.

From simple stackers, we have seen Indian Metros using car parking Towers, Carts, Rotary and Puzzle Systems that facilitate parking of many cars within a limited footprint/ space at one location.

The one element that has been holding back this sector is the waiting time. Sure, you don't have to spend time scouting for a suitable space. But,

on the other hand, you do have to wait several minutes for the machine to load your car. This problem, however, is soon to be relegated to a bygone era.

Parking innovations are in progress that can have the capacity of storing large numbers of cars at one go. At its peak, the system will take only two minutes between ticket and loading. This is less than half the time for a mechanised system and four times faster than the average waiting time for a traditional parking.

What makes it even more interesting is that automated parking spaces can fit 40 to 60 per cent more cars in the same volume of space. The systems have the ability to measure the height of the car and place it in a suitable level of the car park without the need for human access.

### Dynamic Wireless Charging

This technology will function with electro-magnetic charging pads. Initially,



they will appear in home garages, but soon, we could see wireless charging facilities integrated into roads.

That's right! Charging on-the-go!

Rather than a two-hour park and charge, cars would rarely need to stop for the sake of charging. The vision is that wireless charging for electric vehicles will be as accessible and widespread as Wi-Fi is today. It is already being piloted by some community bus systems.

This technology could potentially overcome the current issues of plug-in charging infrastructure that is holding us back from mass adoption. Electric vehicle drivers will be able to charge their batteries as they go about their daily business; parking on charging pads in parking spots, and what not.

### Self-Parking cars

The parking innovation of self-parking cars will allow a much more efficient use of available space. It will allow vehicle owners to pull over at curb and with the press of a button, let the vehicle go and find a parking spot to park, and call it back when it is time to go. It is like your ride ends when you get off.

Thus, a new generation of parking infrastructure can take place. Whilst we don't know exactly what it will look like, we know that it will take up a fraction of the space which it takes up today.

To get into specifics, the average space required for a car in a tradition-

important step in the right direction.

Many cities, such as Beijing, Los Angeles, Dubai, San Francisco, and New York are piloting new and trending parking solutions. These smart car park systems work on low-power sensors and smart meters to track the occupancy or availability of parking spots.

It is an IoT-based device that gives you a signal about the availability of parking spaces by indicating the spaces that are free and the ones occupied. The IoT devices are fixed on each parking slot from where it sends a signal to a nearby receiver which, in turn, gives you a continuous live update about the availability of all the slots. The collected data will be used to broadcast parking information to a parking guidance system and smartphone app for drivers.

Besides the location of the parking space, drivers will get information like the size of the parking space and even nearby public transportation information if the suggestion is needed. So, gone are the days of roaming around the block.

Parking problems are not uncommon, especially for big cities. By 2025, market spending for smart parking products and services is expected to grow substantially. That is good news because it will force people to try to find a solution to these traffic problems instead of taking no action.

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Ajay Raina, CEO, Tedra Automotive Solutions.



al parking garage is about 30 square meters. This includes, for instance, the ramps that connect the different levels. So, the space needed for 100 cars would be equal to 3,000 square meters of concrete.

With self-parking cars, up to 30 per cent of that space could be saved. When you consider how much of our city scape is taken up by parking, it hints at just how much it could change the face of our cities. The architecture will transform by becoming smaller and more cost-effective.

### Smart Car Parking

After our phones and homes getting 'smarter', many companies are now innovating with smart car parking solutions. Innovative and perfect parking solutions are the first and

