

AUTOMATED CAR PARKING

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22



WELCOME



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BACKGROUND

India's Urban Population is around 37%, which is approx(481,980,332).

According to ETAuto India has 22 cars per 1,000 individuals in urban areas

One in the three households in metropolitan India owns two wheeler

Central Bussiness District or CBD is facing the space issue in Metropolitan. In terms of open space, green space



SO WHAT'S THE
SOLUTION

ABSTRACT



An automated car parking is a mechanical system used to park a large number of cars in the minimum space available. The system helps to stack cars on multiple levels vertically resulting in maximizing the space for parking and minimize the use of land. Since it is a mechanical system there is no need for drivers. The system limits the time, money, and resources that would be typically spent when working to create fully functioning parking. It is also beneficial to pedestrian safety, as drivers and passengers do not have to make movements through a rough parking space. Automated parking systems offer many advantages and come in multiple types and forms.

PICTURE OF NYC IN 1930



History Vision

HISTORY

The invention of automatic parking systems helps solve parking issues in areas where space was already minimal, like cities and heavily populated areas. According to New Atlas, The first instance when an APS was used was in Paris, France in 1905. Called the "Garage Rue de Ponthieu," this APS had elevators that transported unaccompanied cars to an upper deck. An attendant would then drive the car to an empty parking space on that deck. Automatic parking further developed in the 1920s when a Ferris-wheel design became a popular mode for automatic parking with limited space. This French design called "paternoster" made it possible for eight cars to fit in each compartment, maximizing the number of vehicles that could be parked while minimizing space.

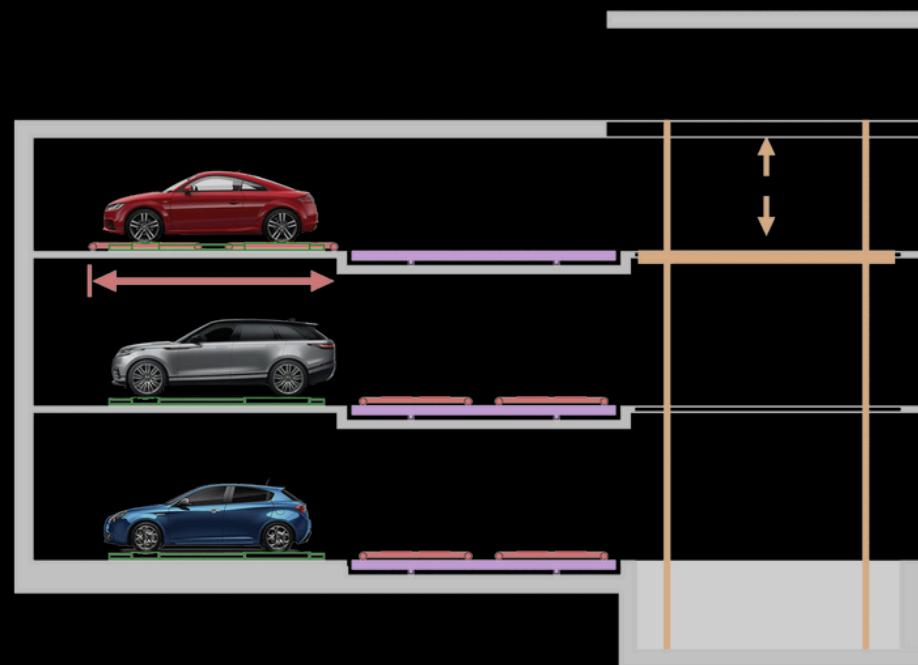
VISION

More cars fit in a compact area: APS's are beneficial because they help save space. This is especially true in the case of fully-automatic parking systems, where attendants do not have to park cars. This means that each vehicle can be parked closer to one another because no one will have to get out of their cars

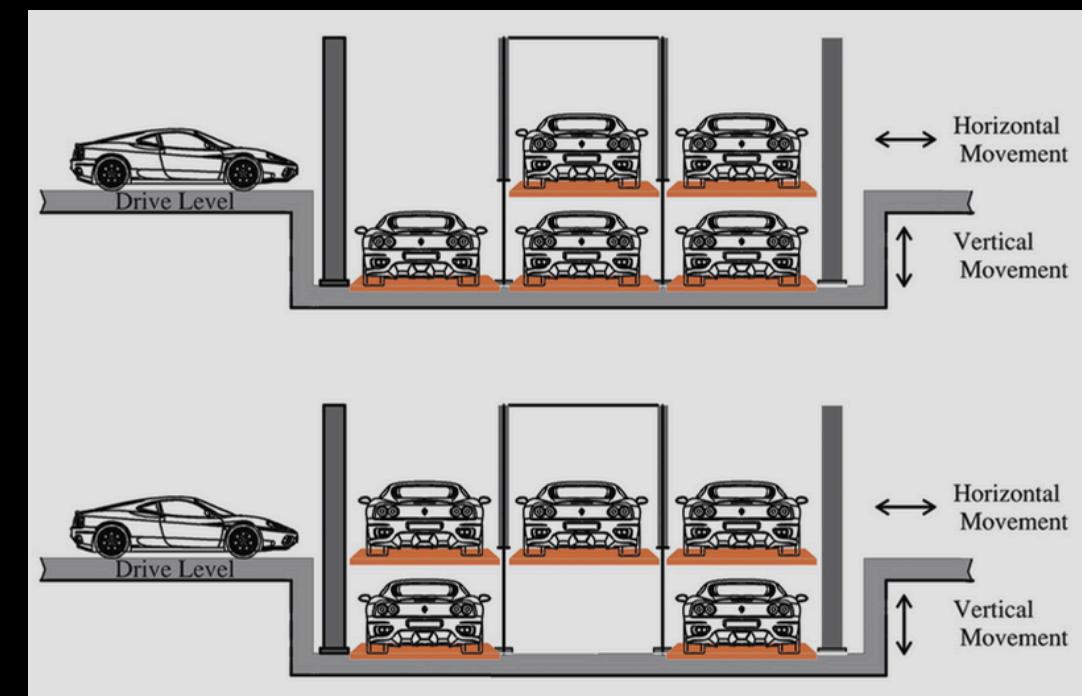
Better security for cars and personal property: Because of its limited space and inaccessibility to car-owners and other pedestrians, APS's prevent vehicles from being damaged or personal items from being stolen out of them

TYPES OF APS

Shuttle Parking System



Puzzle Parking System



Stacker Parking System



Let's Talk Briefly About

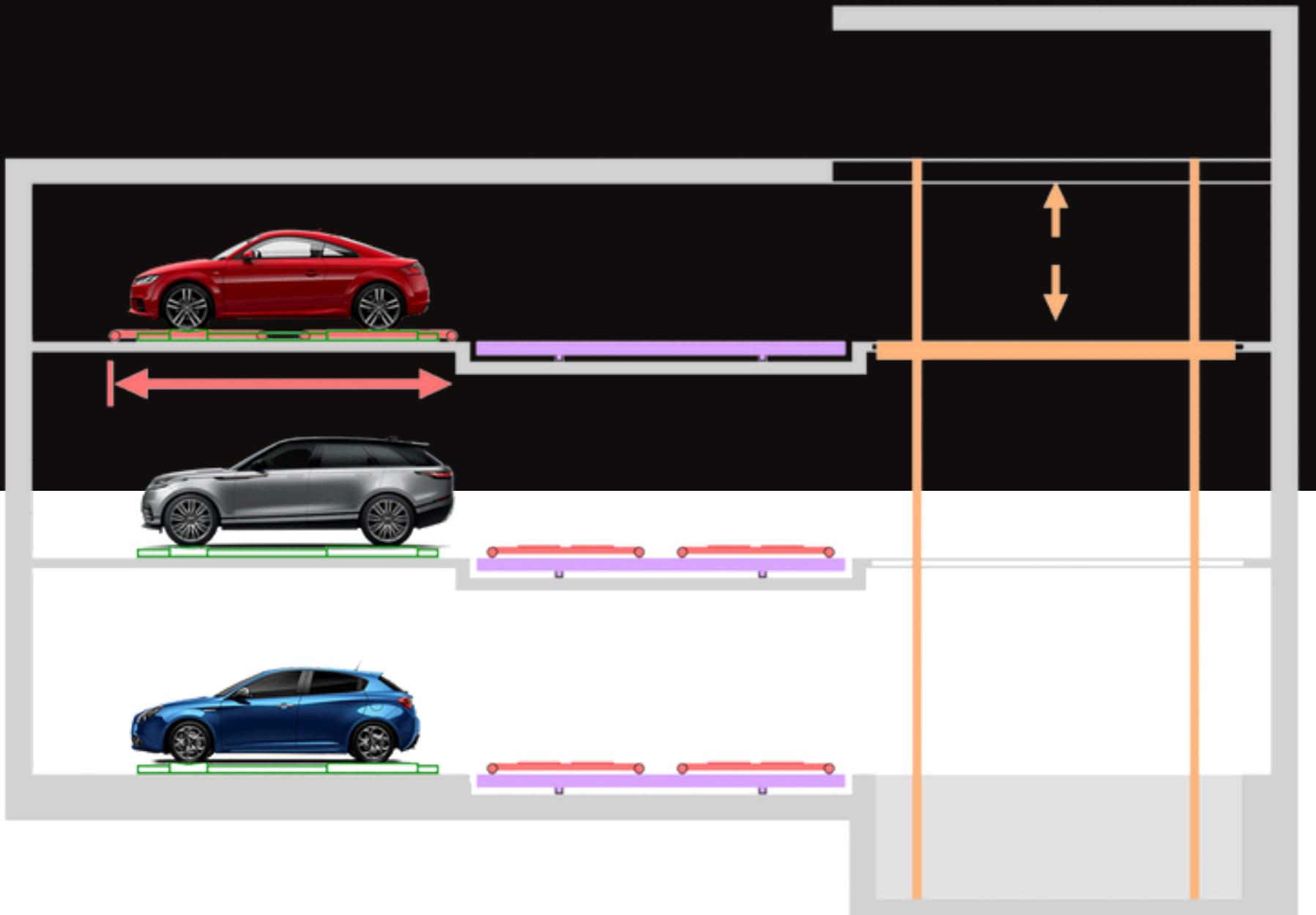
SHUTTLE PARKING SYSTEM

Design.

Shuttle Park T is a parking model wherein cars are moved by an integral-lift carriage. This type is suitable for public and private parking facilities of medium or large size: up to 1000 parking spaces with multiple modules. It can be built below or above ground, with access point above or below the parking levels.

Features

- Underground, above ground, or mixed
- Possibility of different elevators and multiple carriages on each level
- Suitable both for pallets and integral-lift systems
- Modular both in length and in height/depth
- Each elevator is equipped with an entry/exit room



Concept Style

- The Shuttle Park T automated parking system is characterized by one or more dedicated shuttles (in blue in the diagram) on each level; this allows for a reduction in cycle times with respect to other automated parking models
- The cars are parked on fixed stalls (in green in the diagram). A shuttle (in blue) moves horizontally from floor to floor, positions itself in front of the stall containing the car to be retrieved, transfers the car with the integral-lift carriage (in red) from the stall to the shuttle itself, moves in front of the elevator (in orange), and transfers the car from the shuttle to the elevator. The elevator ascends to the exit point, where the user can get in the car and exit the parking facility. Parking takes place in reverse order. The elevator and the shuttles are independent elements that can complete separate tasks, thereby significantly reducing cycle times (while the elevator lifts the car, the shuttles independently retrieve or park cars on the various levels).

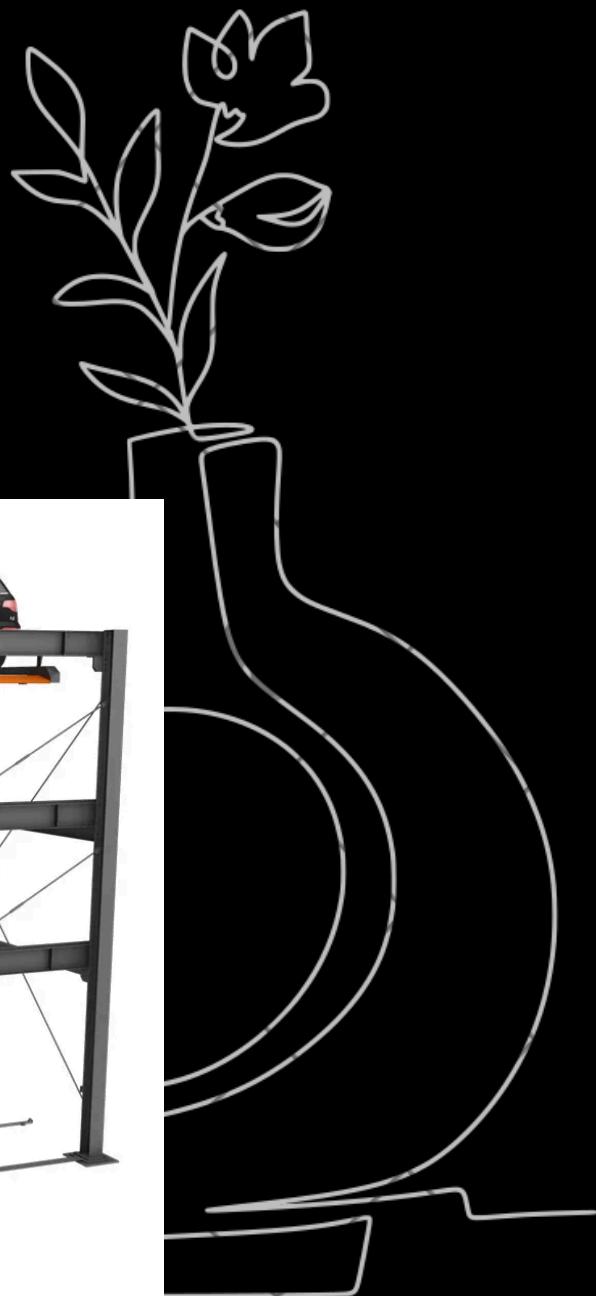
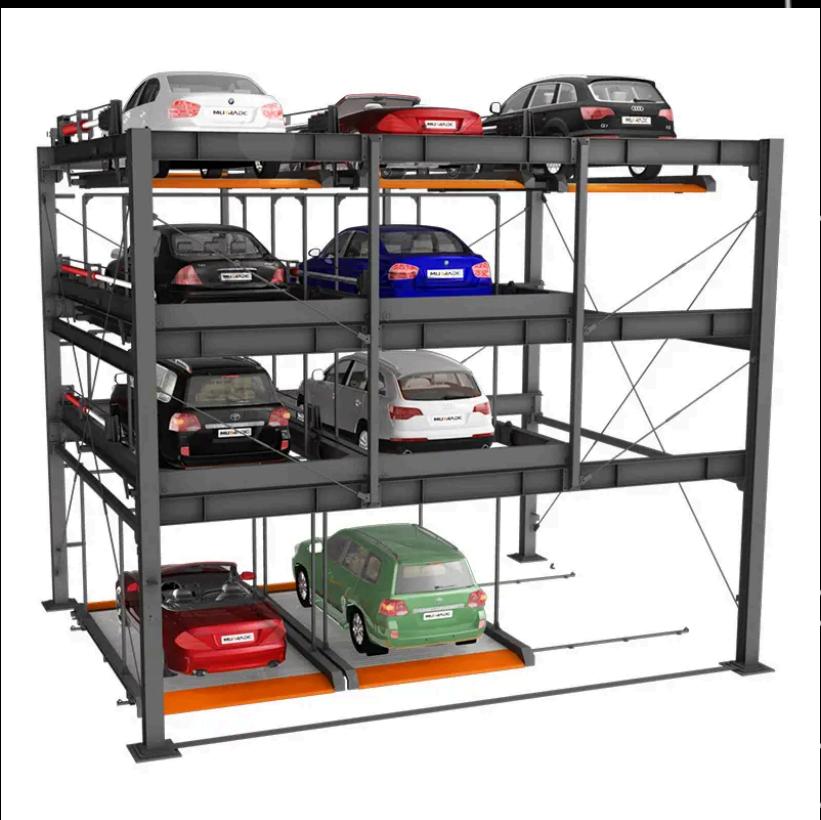
PUZZLE PARKING SYSTEM

WHAT IS A PUZZLE PARKING SYSTEM?

Puzzle mechanical parking systems are mechanical structures that can shuffle around multiple platforms that act as individual parking spots for vehicles. This capability makes it possible to add parking spots in the space above, or below the ground.

THE SYSTEM'S UNIQUE ADVANTAGES

- Puzzle mechanical parking system allow buildings to add parking without expanding their lots or garages. Puzzle parking systems can take on a variety of configurations to fit within existing parking garages. This adaptability means that they can work in all kinds of circumstances, including those where developing more land is not possible.
- Unlike parking lifts, there is no need to have valet staff who can remove vehicles on the ground level and lower the raised platforms. Users can instead directly identify themselves and call their cars. From there, the system will move around its platforms to bring that person's car to grade level, where they can then drive it out of its parking spot. Puzzle parking systems are highly convenient thanks to this streamlined operational setup.



STACK PARKING SYSTEM

1

Stackable car parking systems have unifying features that define them all. Their main purpose, as you may guess, is to stack one or more vehicles above the ground in a parking space.

2

This allows people to utilize vertical space in parking areas that would normally go unused and park two or more cars in a space that would ordinarily house only one vehicle. Stack parking systems accomplish this with moving platforms that they can raise or lower with mechanical frames.



3

Vehicles can park on the platforms and continue to sit on them stably as operators lift them to make room for more vehicles to park below.

Besides baseline car lifts, Harding Steel also provides Tri- and Quad-Lifts, Carlofts, and Wohr Parklift 450 systems. Tri- and Quad-Lifts hold three or four cars within towers that exist in singular horizontal parking spaces. The Carloft uses a platform that hangs down from chains. It is useful for tighter spaces where a Parklift may not fit. The Wohr Parklift 450 distinguishes itself from the others by allowing independent access to all the cars it holds, regardless of their position within it.

ADVANTAGES

- MORE CARS FIT IN A COMPACT AREA: APS'S ARE BENEFICIAL BECAUSE THEY HELP SAVE SPACE. THIS IS ESPECIALLY TRUE IN THE CASE OF FULLY-AUTOMATIC PARKING SYSTEMS, WHERE ATTENDANTS DO NOT HAVE TO PARK CARS. THIS MEANS THAT EACH VEHICLE CAN BE PARKED CLOSER TO ONE ANOTHER BECAUSE NO ONE WILL HAVE TO GET OUT OF THEIR CARS.
- BETTER SECURITY FOR CARS AND PERSONAL PROPERTY: BECAUSE OF ITS LIMITED SPACE AND INACCESSIBILITY TO CAR-OWNERS AND OTHER PEDESTRIANS, APS'S PREVENT VEHICLES FROM BEING DAMAGED OR PERSONAL ITEMS FROM BEING STOLEN OUT OF THEM.
- MORE MANAGEABLE FOR DISABLED INDIVIDUALS: HANDICAPPED INDIVIDUALS (DRIVERS OR PASSENGERS) CAN EXIT THEIR CAR ON LEVEL GROUND AND DO NOT HAVE TO NAVIGATE STEEP INCLINES, DECLINES, OR STAIRWELLS. FOR THIS REASON, APS'S COULD BE EXTREMELY BENEFICIAL TO THEM.





DISADVANTAGES

- Absence of staff and inexperienced customers: This could be applicable at fully-automatic parking systems where there are few or no staff members. An unsuspecting customer might not understand how to use the system, create a backup, or create a negative user experience for that individual.
- Inability to cope with high volumes of customers: Another disadvantage to automatic parking systems is their inability to cope with high volumes of customers at a time. For example, a parking system located near a train station or an airport could work well as the drivers might not be back for an extended period. Shopping at a mall or department store is also an example where drivers might not return to their cars all at once. However, parking systems next to sports stadiums, or concert venues might create problems for customers who have to wait in line for their vehicles due to the sheer number of event-goers leaving at the same time.

MY CONCLUSION

The system is made more efficient as vehicle travel time and search time are significantly reduced due to the information provided by the smart parking system. With the information provided, drivers are able to avoid car parks that is fully occupied and locate vacant parking spaces with ease elsewhere



THANK YOU

FOR YOUR PATIENCE AND ATTENTION

