

A yellow Kia SUV is shown from a rear three-quarter view, positioned on a mechanical parking set. The car's license plate is visible and reads '42-623-33'. The background is a dark, industrial-looking environment. Overlaid on the image are several graphic elements: a large blue diamond shape on the left, a yellow diamond shape on the right, and a green diamond shape partially overlapping the yellow one. The text 'Parking Set' is centered in a large, white, sans-serif font.

# Parking Set

INNOVATIVE PARKING AND STORAGE SYSTEM OF THE 21st CENTURY

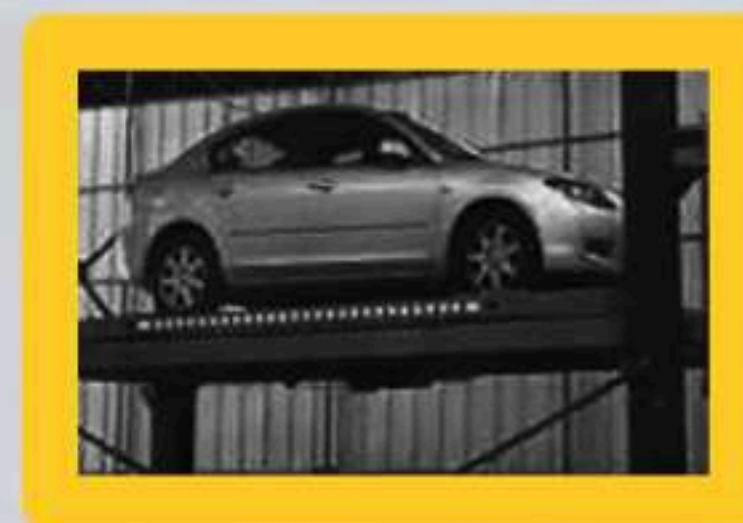
Possibilities of using the Parking Set



**Parking Set**  
Automatic Parking Solutions Group

# Principles and Features of the System

The technology is designed in Israel. Modular, fully robotic system. Consisting of 4 standard, commercially available products.



# **Parking Set**

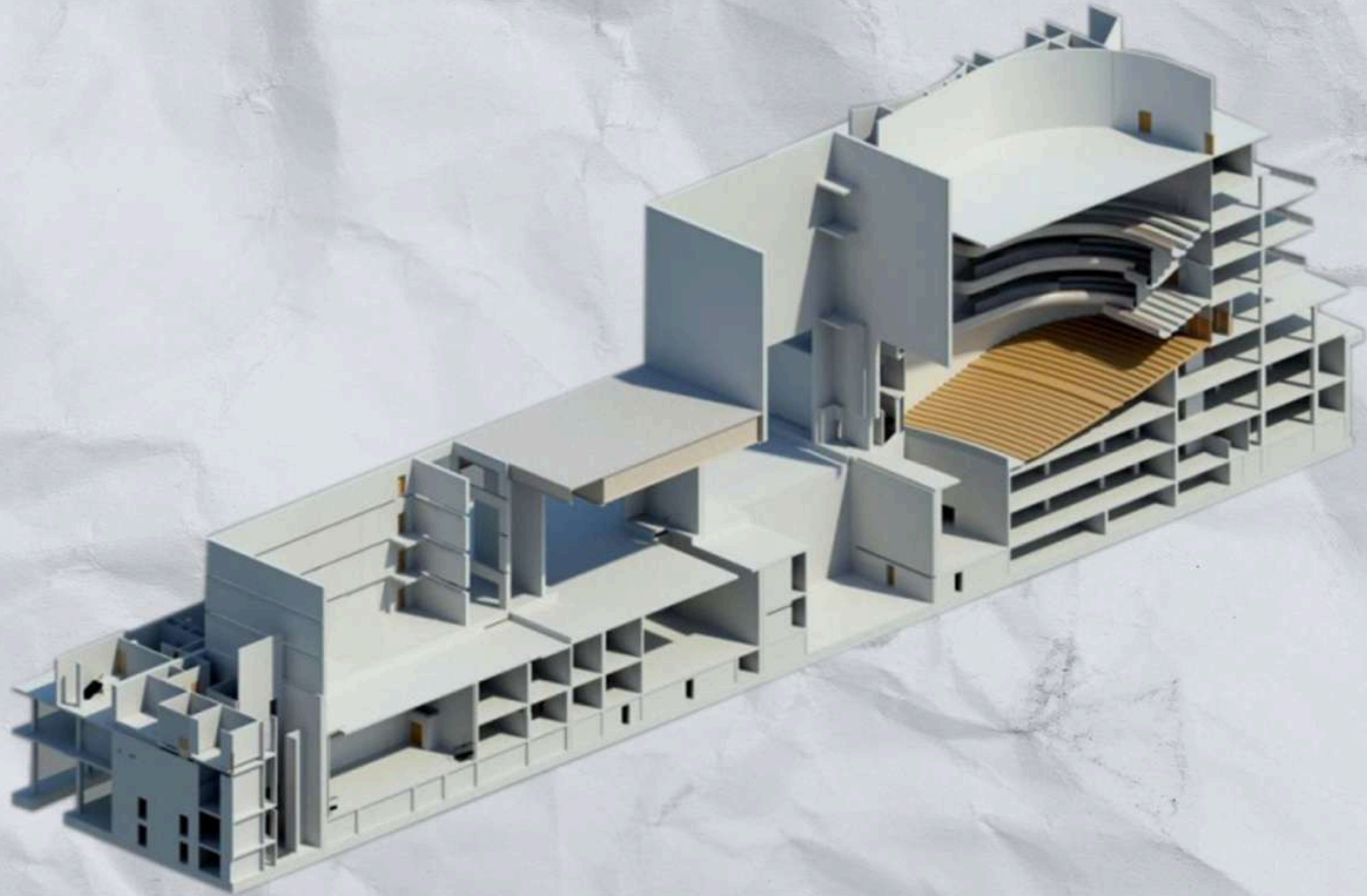
is a technology that allows any space to be optimized, including premises previously equipped with parking systems of past generations.

**A facility requiring reconstruction.**

**An integrated and buried parking lot for 93 cars at the cultural facility (theater), in one of the European capitals.**

**The key principle of the parking system operation at the facility is the central transfer mechanism (the carriage)**

**of the corridor type installed between two tiers of reinforced concrete floors located on several levels.**



# The Project Description

**An integrated and buried parking lot for 93 cars at the cultural facility (theater), in one of the European capitals.**

**The key principle of the parking system operation at the facility is the central transfer mechanism (the carriage)**

**of the corridor type installed between two tiers of reinforced concrete floors located on several levels.**



# Example of optimization using the Parking Set

Underground automated parking lot for 93 parking spaces

Using the capabilities of the Parking Set, it is possible to optimize the facilities where similar automatic parking systems of horizontal or vertical type were previously installed.

All available parking spaces on reinforced concrete floors along

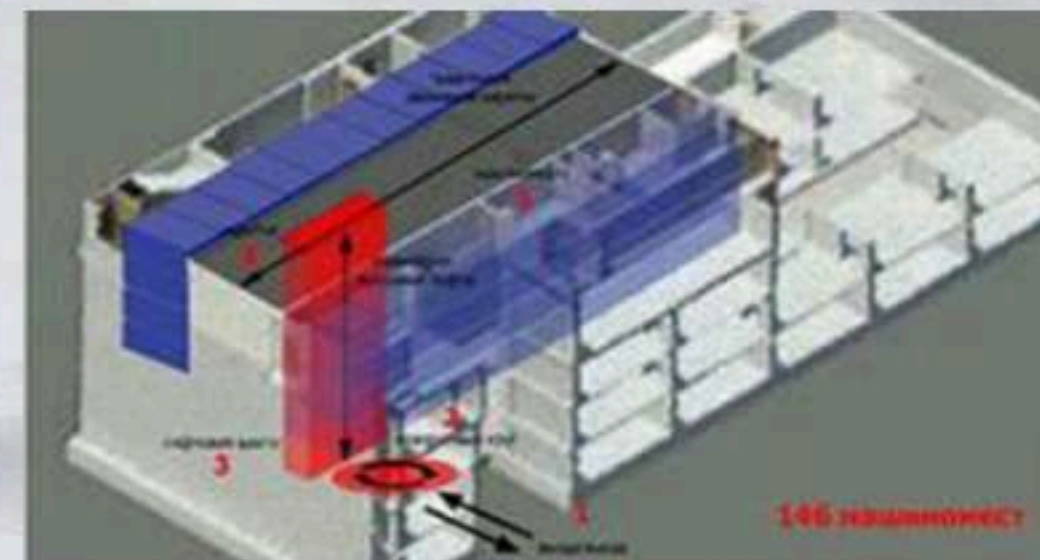
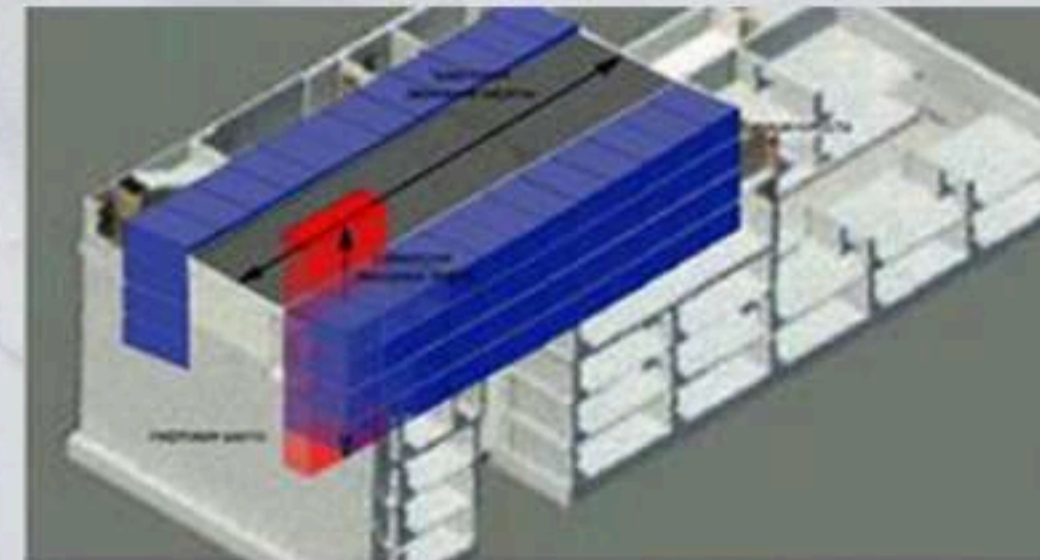
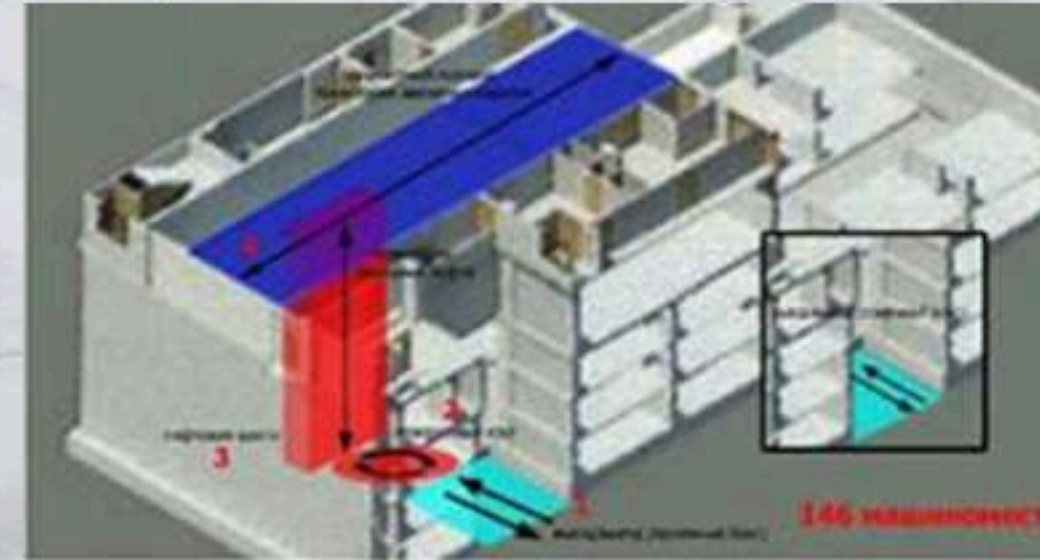
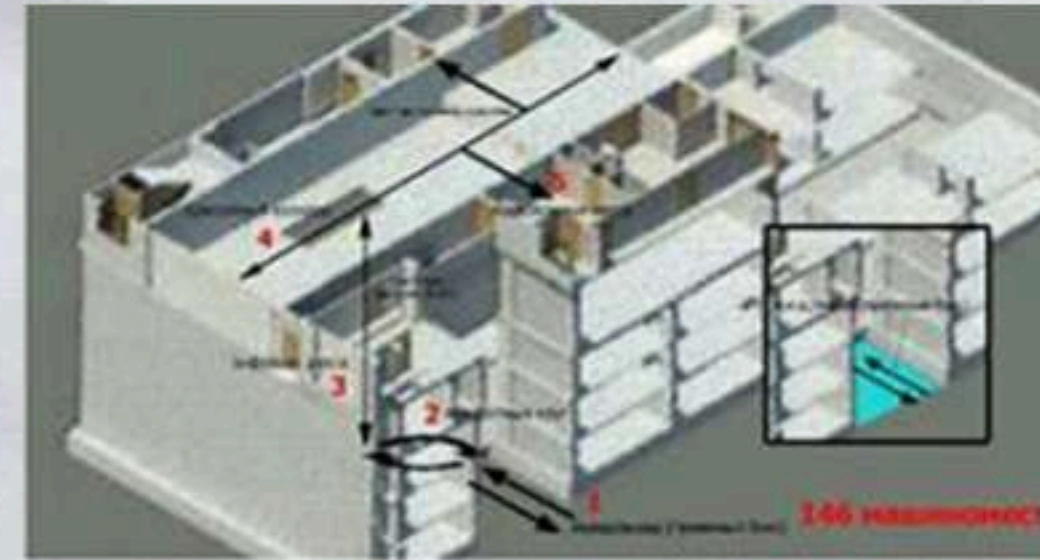
the transport corridor remain, but we install our equipment on them, making the distance between parking spaces as tight as possible.

We remove the transportation carriage on each of the floors from the system that results in clearing the corridor through which it moved previously. This is more than 30% of the internal capacity of the parking lot.

The space cleared is filled with modules of our system:

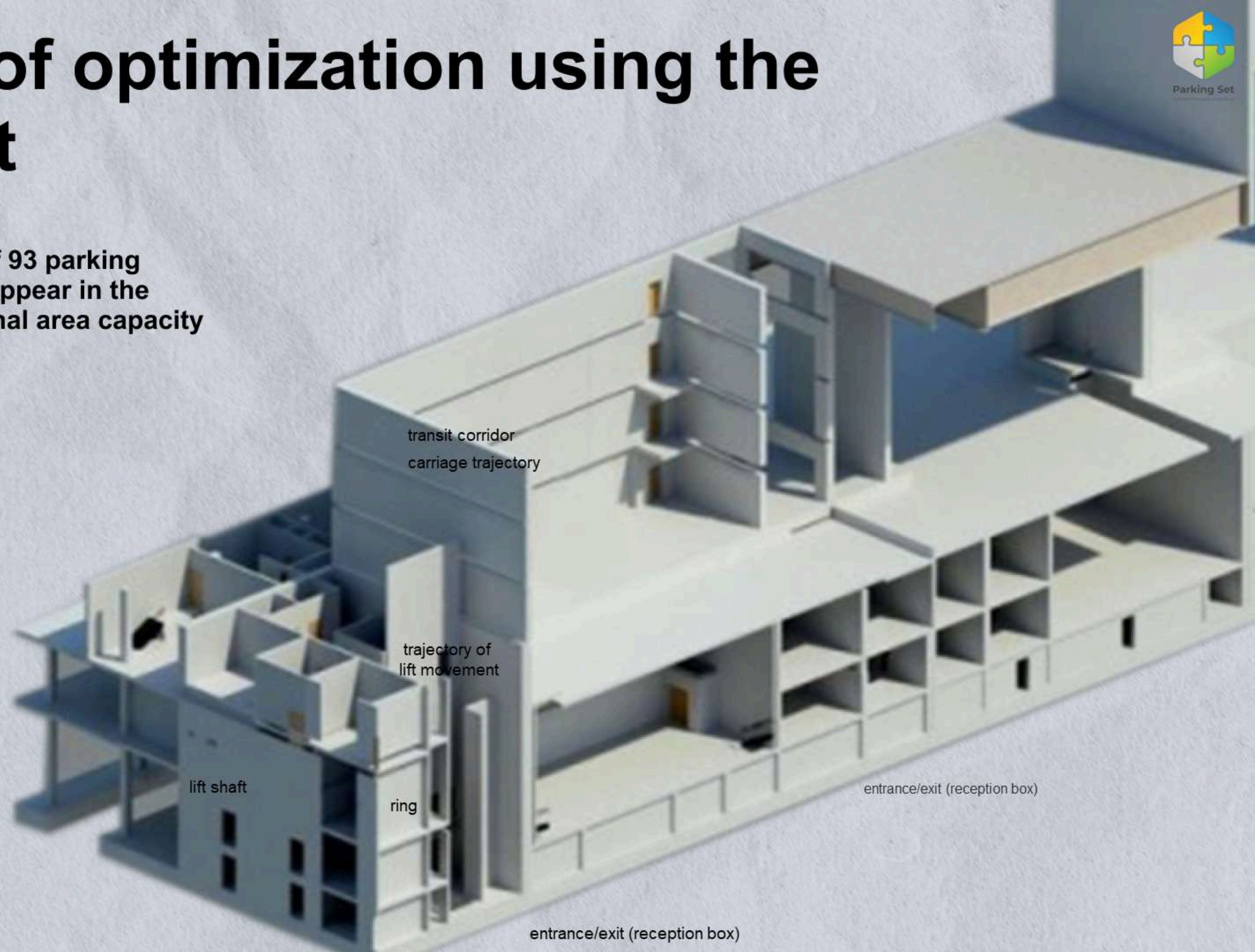
- inside the empty inter-floor space, we mount on the grid of metal support columns;
- or fill the corridor space with concrete tiers, connecting the left and right parts of the floors with each other, thus creating single surfaces on each floor, and we fill the area created with the Parking Set modules.

The number of parking spaces increases, service speed for customers improves, the risks of failure of the parking complex are minimized, since each unit of the Parking Set system is autonomous, and, unlike systems using a carriage, when one unit breaks down, the rest of them work.



# The result of optimization using the Parking Set

As a consequence, instead of 93 parking spaces, 146 parking spaces appear in the project, since the entire internal area capacity is used.



# The result of optimization using the Parking Set



**Underground parking lot for 146 parking spaces in the facility where there were previously 93 parking spaces  
The number of parking spaces increases: 93 parking spaces turn into 146 parking and storage units.**

**The risk of inability to get cars from the parking lot in case of breakdown of the transfer mechanism (the carriage) is eliminated. Each Parking Set storage module is autonomous, we monitor the risk of breakdown remotely and, when detected, eliminate it before customers actually face it. Besides, our mobile app allows customers to watch online the entire process of servicing their cars as well as performing any service operation, for example, ordering the car to be retrieved at the time requested by the customer, or paying.**

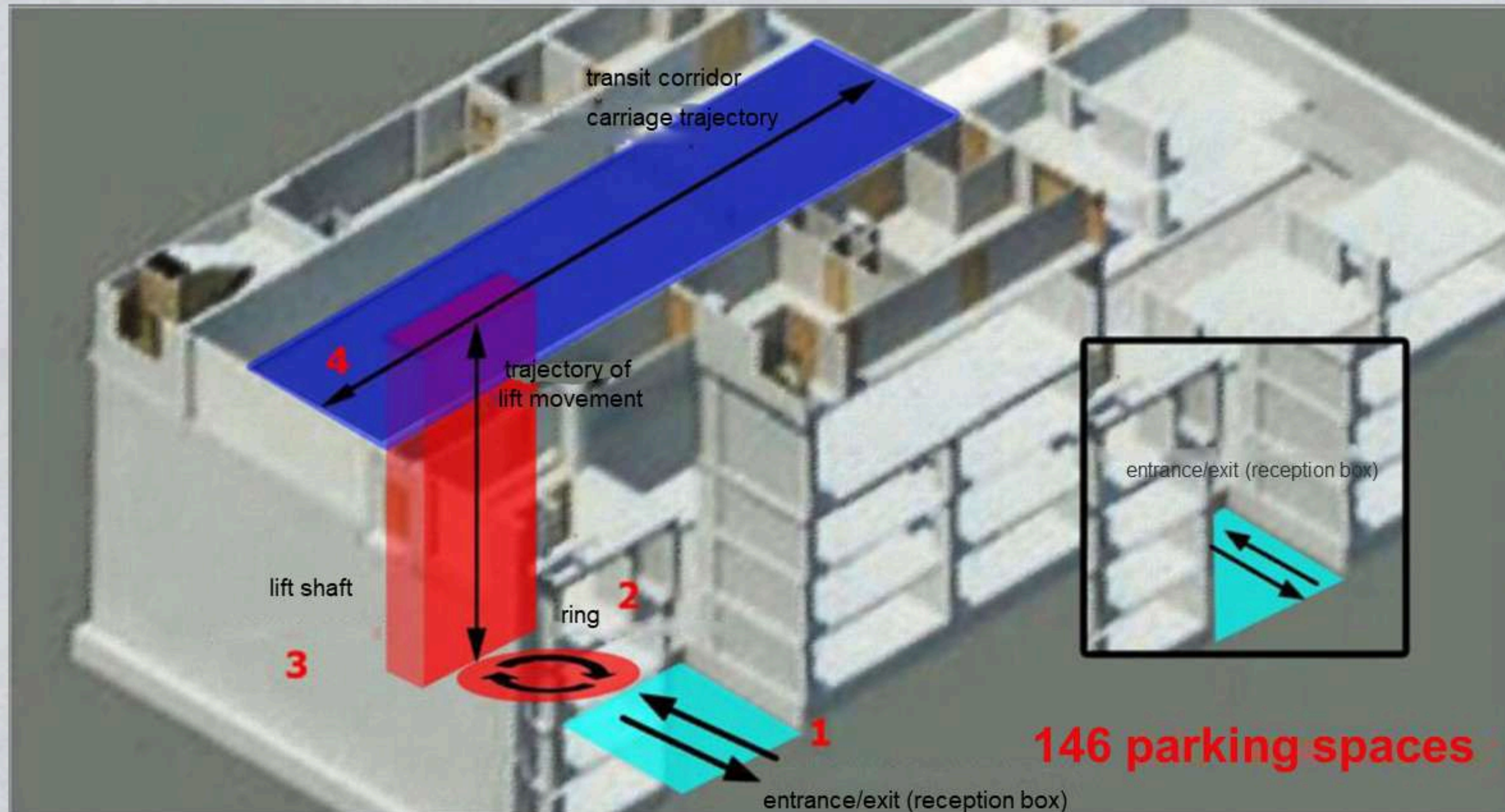
**It becomes possible for the customer to get their car at any time quickly for retrieving something from it, for example, forgotten items, and then continue the parking process, which is not possible in other systems.**

**Service speed for customers increases greatly, since, unlike systems with one central transfer carriage, the Parking Set units work simultaneously.**

**(In competitive systems of previous generations, while the carriage takes the car from the reception box to the storage space or vice versa, delivers the vehicle from the parking space to the customer, the next operation is started only after the previous one is completed. Each Parking Set storage module is totally autonomous, operational processes of receiving and retrieving cars take place in parallel, so an unlimited number of vehicles can be serviced simultaneously.)**

# The result of optimization using the Parking Set

Underground parking lot for 146 parking spaces. Each of the 146 storage cells can be used either as a parking space or a safekeeping unit, since the Parking Set is a closed safe system for cargo storage.



# Possibilities for optimizing facilities using the Parking Set

**This example shows the possibility of optimizing projects where automatic parking systems of past generations were previously used. Using the modular Parking Set technology, parking spaces can be created in almost any project related to both new and existing real estate facilities.**

**During reconstructing conventional parking lots or redeveloping territories, it is possible to maximize the number of parking spaces. Extremely low noise level during operation of the Parking Set units as well as utterly low level of vibration loads transmitted to buildings where the complexes are installed allow the Parking Set to be used in old buildings and objects of historical heritage.**

**During new construction, it is possible to create the maximum number of parking spaces, which is especially effective for planned underground parking. Since the Parking Set mitigates significantly the need for burying and reduces the cost of underground construction.**

**When implementing projects of residential buildings and complex residential development of territories, the use of space is optimized, and it becomes possible to comply with standards for providing apartments with parking spaces, increasing the attractiveness of projects for buyers and minimizing the subsequent problems of lack of parking spaces for residents and guests.**

**The space required for parking is optimized, areas are cleared for additional construction of commercial real estate with possible compliance with parking regulations.**

**When implementing urban programs, parking complexes can be created and combined into a single network and located anywhere: underground, above ground, inside or next to buildings where the residents, tenants, and visitors need parking spaces.**

# What is Parking Set

**Parking Set is an innovative algorithm designed in Israel for optimizing the use of space. This innovative solution is used for automatic parking or property storage. Parking Set offers for residential and commercial real estate, enterprises and municipalities, the tools and creative solutions for the problems of chronic shortage of parking spaces. Parking Set allows the parking lot space to be increased without enlarging the area occupied. Applying our technological tools makes it possible to solve the problem of organizing the maximum possible number of parking spaces in any of the projects. These solutions include a model for creating parking lots in non-standard locations as well as ways to significantly increase vehicles storage volume, optimize their service speed, reduce electricity consumption and environmental impact while keeping competitive prices for our equipment.**

**We know how to make the most effective use of any space in the city, to remove cars from the streets and return the city to the people while creating additional, comfortable, and safe opportunities for them to enjoy private transport. Design, construction, installation, commissioning, maintenance of our equipment – we do all this in practice.**



# Project optimization using the Parking Set

In residential buildings and any other commercial real estate, the use of the Parking Set maximizes the possible number of parking spaces. Optimization affects the layout of the territories, the budget, the terms of implementing construction projects: there is no need for ramps and maneuvering areas. The need for burying is minimized because the creation of parking spaces correspondingly reduces costs, including for waterproofing.



# Project optimization using the Parking Set

The Parking Set reception boxes can be integrated into any building from any side. The trajectory of entering the reception box becomes convenient and familiar for any driver. Streets and yards are emptied of cars, all parking spaces are removed into buildings and underground. At the same time, the need for levels of burying is reduced. The Parking Set storage density allows the designed or even larger number of parking spaces to be placed on fewer floors.

Costs for creating ramp heating systems and for their subsequent operation, service, and repair are also reduced. For managing companies and owners, the operating process gets easier. For drivers, the parking process becomes more convenient.

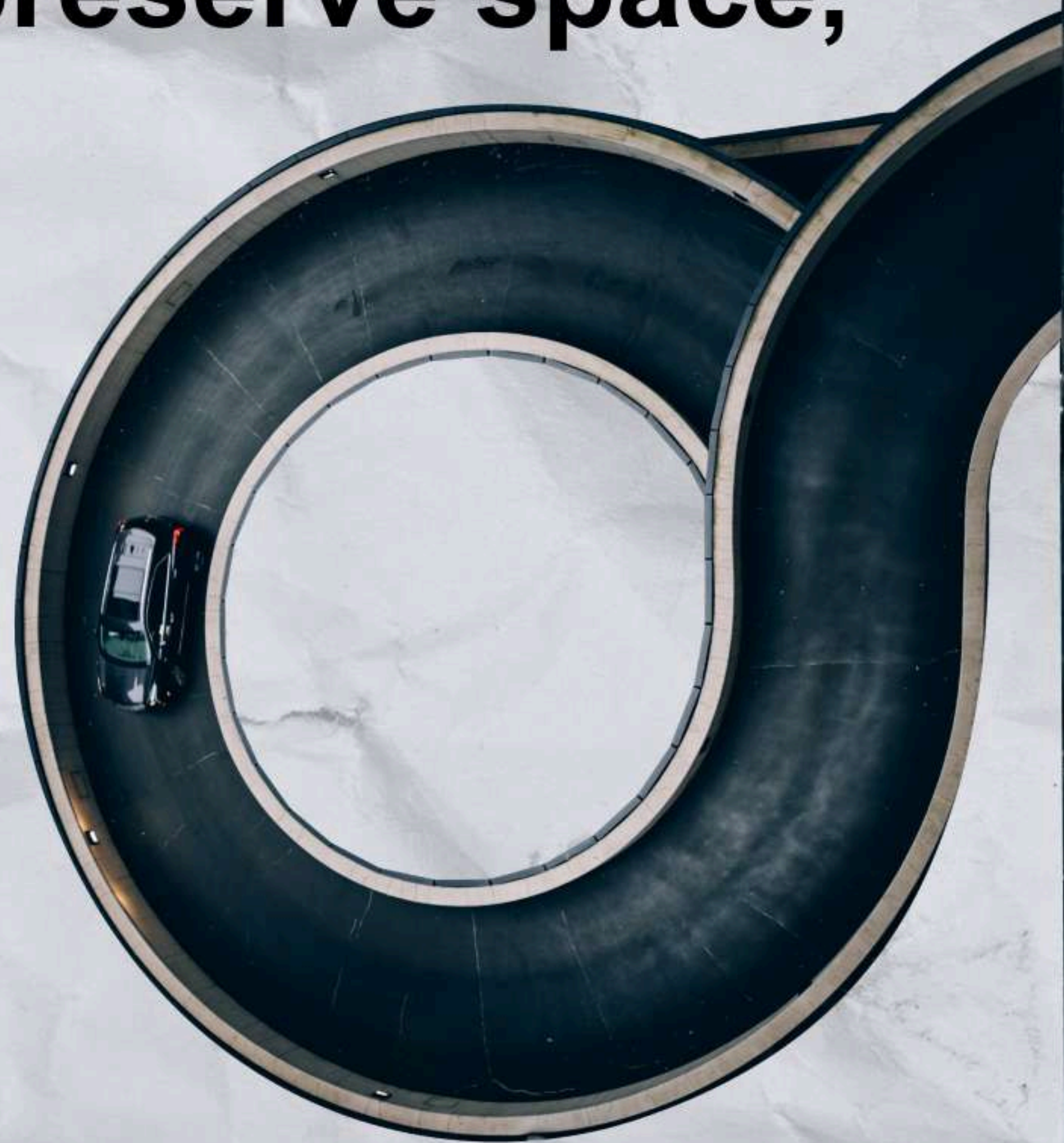


# The Parking Set helps preserve space, materials, and nature

It optimizes the space outside and inside buildings. It saves area, materials, and money. For drivers, the parking process becomes more convenient and faster.

Reinforced concrete parking lots over 3 floors often stand half-empty. One of the reasons for this is the inconvenience for drivers to drive up ramps above the third floor or go down below the third level.

The volume of exhaust emissions is reduced, since in the Parking Set, the driver turns off the engine in the reception box, and the system transports the car using electric motors, unlike lengthy independent maneuvers of vehicles with engines running in conventional reinforced concrete parking lots. No need to warm up the engine in winter: it is always warm in the parking lot.



# The reception box can be integrated into any part of the building from any side

During servicing, the car turns on the ring and is retrieved by the customer always ready to leave the complex with its hood towards the exit gate; this speeds up the parking process and makes it convenient for drivers with any experience level.

The user interface of the reception box is simple and convenient:

A – Hand over the car B – Pick up belongings C – Pick up the car

The reception box is always well lit, equipped with a video surveillance system, decorated aesthetically, which makes our complexes comfortable and safe to operate, especially for women and children.



# The Parking Set makes the parking process quick, convenient, and safe

The Parking Set is a completely robotic transport and cargo storage system. The driver parks the car in the reception box, and after the driver and the passengers have left the reception box, the system transports the vehicle to its storage cell. Storage cells are moved between the floors by the lift. In the storing process, the car is turned on the ring and, when retrieved by the driver, is always ready to leave the reception box.

The driver does not need to maneuver on ramps, the parking lot, and floors by driving to the upper floors or descending to the lower ones. There is no need for drivers to look for their cars in the parking lot: the vehicles will come to them. There is also no need to walk away from the car and return to it. The parking lot customers' time is saved. In large-capacity parking lots, such as those at airports or shopping malls, reception boxes are located along the perimeter or in designed places, the car can be retrieved by the customer in any service box closest to them and not just at the one where they left the car.



# The Parking Set optimizes the space, service, and operation of parking lots

The space as well as costs for furnishing the parking lot with lighting, ventilation, signs, bumpers, mirrors, markings, video cameras, access control, and security systems are optimized. The process and the cost of operation are simplified and made cheaper. No need for constant lighting and ventilation, so there is no cost for this. No conflicts between staff and customers as well as related reputational risks of the managing company. Theft of revenue by personnel is impossible. Financial flows of payments are completely transparent.

Technical solutions make it possible to provide mechanical retrieval of cars if there is no electricity and in case of failure of the automatic control system.

Accidents during parking, damage to cars, stealing from cars, auto theft, vandalism, criminal threats to customers and parking staff are excluded. The Parking Set mobile app allows customers to watch online their cars at all stages of servicing.



# The Parking Set solves two problems: parking and storing

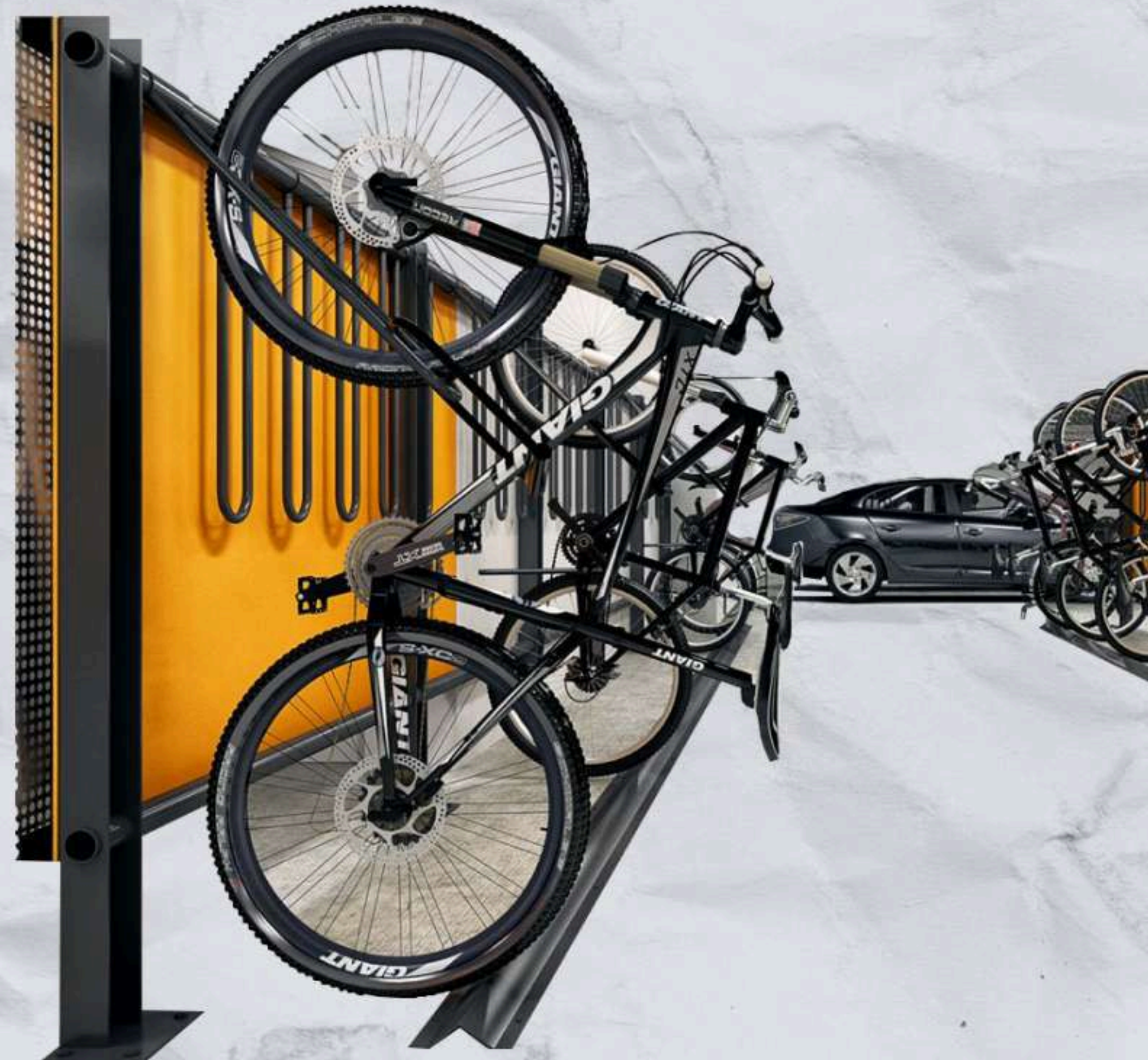
The Parking Set is a completely fully robotic transport and cargo storage system.

Modularity of the system allows the tightest filling of all areas of any space with the system units without the need for maneuvering room. In most real estate facilities, managing companies and customers, in addition to parking, face the problem of storing property. We can solve this problem too. The system units can be equipped with containers of any internal configuration.

Both parking and storage spaces can be created in the same area, which allows creating of multifunctional parking and storage hubs of safe storage type.

The system units are arranged up against each other. The space is used with the maximum efficiency: 85–90% of the area.

When creating parking complexes, the Parking Set uses two standard floor heights: 2 m for sedans and 2.4 m for jeeps. The tight unit arrangement allows the maximum number of storage spaces  $2.4 \times 5.6 \text{ m}^2$  to be created. One unit can store  $32.2 \text{ m}^3$  of cargo weighing up to 3 tons. In the Parking Set, the area for holding one car is  $13.5 \text{ m}^2$ . In classic conventional parking lots it is about  $45 \text{ m}^2$ .



# The Parking Set can be integrated into the Smart City concepts

The Parking Set permits optimization of old reinforced concrete parking lots without building new ones, the upper and lower floors of which are not used, since driving onto them is not convenient for the drivers. Urban space is freed up for other purposes.

Within the Smart City concept, the Parking Set permits integration into the urban transport infrastructure of parking and storage complex networks with different capacities, located within walking distance of their users.

The Parking Set is a solution to the problem of removing cars from streets into buildings and underground while increasing the number of parking spaces in areas of dense development where they are so needed.

The Parking Set integrates with any access control and payment systems (parking meter, SMS, online).



# Why the Parking Set



**Universal opportunity for building parking spaces with the necessary storage density and service speed in any type of real estate objects, and taking into account all individual features of the particular project, during new construction or at existing locations and operated facilities.**

**Universality of possible location of the complexes to be created within walking distance of users: above ground, underground, in buildings, on the roofs of buildings, at the blank walls of buildings, on adjacent territories.**

**Universal opportunity for use in projects of complex geometric configuration and extremely limited spaces of complex configuration.**

**The maximum possible number of parking spaces in any project, which is especially effective in underground construction or restricted building footprint.**

**Variable use: parking lot, warehouse, lift, transport system, car dealership showroom, etc. Combining options within the same project is possible.**

**Energy efficiency. Low noise and vibration levels when the complexes are operating  
Eco-friendliness. Reduction in harmful emissions. No aggressive oils or lubricants in the equipment.  
Innovation and patent protection.**

**Comfort of use, Service speed, Safety, and Reliability.**

**Convenience and transparency of business processes for the operator's managing company and owners.**

**Opportunity for network scaling within the Smart City programs, creating parking lots of the capacity required in this location in buildings, next to them, or underground, removing cars from city streets.**

**Warranty and post-warranty servicing.**



**Parking Set**

Automatic Parking Solutions Group

**We look forward to the start of our collaboration!**

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