

Optimized allocation of parking spaces – a basis for discussion

This paper elaborates on the current static conditions for car parking space supply and the flexible and individual needs of households. It is based on the province of Vorarlberg in general but relates to the national situation as well.

It starts with the example of a family and their changing needs: Some food for thought to start with:



Family Gruber is very happy about their new 3 bedroom flat. From his new home, Robert can take the bus to work. Katrin, who is eager to go back to work, is looking for a half-day job. At the moment the family gets by well with a single car. A single parking space in the underground car park is part of the flat.

But what will the situation be like in 10 years?

Like this...

The children no longer have to be taken to music school and the Scouts. The two young ladies have their own means of transport by now. Robert has started to become conscious about his health and now takes the bike to work regularly. Katrin works the morning hours in a library nearby. It's a five minutes walk. Since they can borrow the company car on weekends or in the evening, they have sold their own. They save a lot of money on petrol, which is three times as expensive nowadays, and have decided to go on a second and sometimes even third holiday per year instead. Possessing no car is not uncommon in Austria by the way: 24% of all the households do not own a car. (19% in the Austrian province of Vorarlberg)

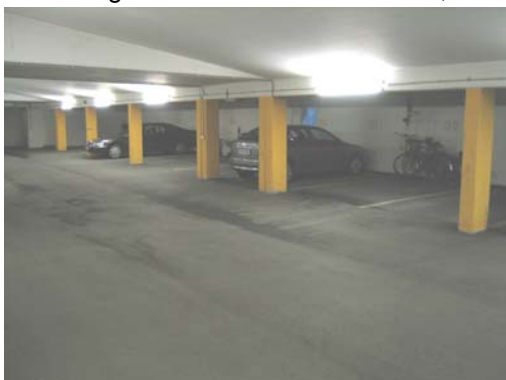
Or like this...

Magdalena, the older daughter, is learning to drive. She can hardly wait to have her own car. With her parents` support she will be able to afford a small car on her 18th birthday. The family will own three cars then.

Having three cars is quite realistic: 26% of all the households in Austria own more than one car. (21% in Vorarlberg)

In both scenarios the family will be facing problems. Either they have one parking space too much or they lack two.

According to census data there are 4,156 million cars and 3,475 million private households in Austria.



Statistically every household possesses an average of 1, 2 cars. In this respect the quota of 1,3 parking spaces per flat decreed by the Provincial Government of Vorarlberg is appropriate. If we in practice allocate parking spaces in a ratio of one car to one flat, then 24% of all the flats will have one parking space they do not require whereas 26% of the flats lack at least one. The requirements are only met for half of the Austrian households (60% in the province of Vorarlberg). Moreover, requirements usually change in the course of time. In the long run parking space allocation in a ratio of 1:1 is likely to be suitable only for a app. 20% of all the flats.

As a result many of the expensive parking spaces in the underground car park are unused, whereas the outside visitor parking area is full or occupants parking in the street.

Preliminary conclusions

- The number of parking spaces decreed by law corresponds with the average demand.
- The fixed allocation of one parking space to one flat and a flat-rate charging of parking spaces do not meet demands. A more flexible system is needed.

The challenge now lies in making parking spaces available to occupants according to demand and calculating the actual costs in order to be able to accurately bill the users and credit the owners.

Experience has shown that a system of selling and renting of parking spaces is complicated, not flexible enough and too costly.

When buying a flat nowadays, the prospective owners find themselves in a situation of having to decide how many parking spaces will be needed in the years to come. Even if they do not own a car at the moment they buy the flat equipped with a parking space to safeguard the resale value. They have to buy spaces although an option on spaces would suffice, which unnecessarily makes a flat more expensive.

Recommendations:

- All parking spaces of a block of flats should be considered as a single unit (as is usually the case with heating systems) and remain in the possession of the association of owners (or possibly contractors)
- A certain percentage of the costs of parking will be set against the actual use of parking spaces on the one hand, and the basic right to park is connected to long term parking permissions (resident parking permits) on the other hand. Every co-owner has the right to purchase a resident parking permit. The proceeds are used by the association of owners (or investors) to finance and maintain parking spaces.

Households without a car do not have to buy a resident parking permit (RPP) whereas households with more than one car can/have to buy RPPs according to the number of cars. Owners of RPPs can be billed on either a monthly or yearly basis. Remember again the example of managing heating systems: If every flat was restricted to consume the same amount of heat, some would pay more than what they had actually used, others would freeze. Problems usually only arise if the heating systems capacity does not meet the overall demand. A mixture of flat (according to square metres) and, to a greater extent, variable costs (according to actual consumption) is usually used for billing. Parking spaces could just be billed like that. The actual use of parking spaces could be metered by way of RPPs or other innovative methods (something like heat meters in heating systems).

The way heating costs are billed is regulated by law. A similar set of rules, which takes into account individual local conditions, would be prerequisite. This remains to be discussed in detail.

What are the advantages of an optimized allocation of parking spaces?

For property developers and occupants:

- Cost saving: an underground car park could be designed to meet the actual demand and would therefore be more cost effective, or could be used more effectively in its given size.
- Owners do not have to consider their future demand in parking space when acquiring a flat. They pay for what they need at the moment and have an option on reducing or extending in parking space later on. In this way they are more flexible.
- Green parks instead of car parks: less outside parking spaces contribute to more attractive and pleasant surroundings, and the overall property value rises.
- A long-term change of demand can be met more effectively by an association of owners: large-scale redevelopment and extension work or renting parking spaces to a nearby shopping centre can be carried out more cost-effectively.

For occupants:

- Instead of parking spaces occupants could be offered public transport travel cards or taxi vouchers.
- If the costs of parking are set against the actual use of parking spaces, occupants can actively save on money.

For property developers:

- New models of contracting, financing and management (mobility management, parking place management) present themselves.
- More flexibility in planning car parks (reducing the risk of building too many/not enough parking places, create synergy with neighbouring projects).

For local governments

- Economic land use with positive effects
- Create equal opportunities for alternative modes of transport
- Find joint solutions to get cars off the streets

What about the problems? Questions and answers:

Where can visitors park? Do they have to pay as well?

The greatest challenge is indeed to come up with a fair and easy set of rules that also takes into account exceptional users and visitors. Several options to tackle the problem are feasible and depend on the local situation (parking space availability, parking space management, free or restricted parking spaces, etc.). Even today the problems that arise from visitors are virulent and solutions have to be found. By way of RPPs, the system described would at least mark resident long stay parkers. Short-term parking zones for visitors are in any case advisable in areas that are not under management.

What happens if car owners do not buy RPPs? How is this controlled?

Even in the present situation it is possible for residents to have more than one car and use visitor parking spaces. Again, it is important to come up with a set of rules taking this special problem into account. A comprehensive control system is possible: Entrance into the underground car park with a key or by way of remote control could be restricted to RPP owners, for example. It is widely expected, though, that clear regulations will have the greatest impact and will lead to a noticeable improvement of the present situation.

Supply and demand do not meet: Low demand – who is covering additional costs? High demand – how will parking spaces be allocated?

Respective models have to be developed. The costs are generally covered by those who use the car park is one suggestion. In case of very low use of capacity, flat costs will have to be covered by all owners since all have acquired options on future parking space. The ratio of flat and variable costs could be changed according to demand: The higher the demand the lower the flat costs could be. In case of high demand, a certain amount of money could go into a fund to support alternative modes of transport such as car-sharing. Overbooking to a certain extent is possible since not all owners will be using the car park at the same time. In case of a shortage of parking spaces, occupants who own more utility values or have acquired an option on future parking space could be privileged. Supply and demand will as well to some extent be regulated by the market. Car-free blocks of flats could allow for future parking spaces (e.g have tennis courts set up that could be transferred to parking spaces if needed).

What can be done about occupants parking their cars on public parking spaces that are for free?

Less demand means higher costs for the members of the owners association. So this situation can not be appreciated and necessary steps have to be taken. It is essential that every occupant who owns or uses a car permanently has to buy a RPP. Moreover, the owners association could find a common solution with the local government in so far as public parking spaces could also be used by the owners of RPPs. This would require public parking space management and billing in the first place. Revenue could be split accordingly.

How can occupants be sure that the costs for parking do not explode?

If the parking spaces are owned by the owners association, every member will benefit from higher costs. The price for an RPP is an efficient market oriented instrument to regulate supply and demand. Nevertheless, fair rules for pricing should be considered (not too cheap because the people without car would pay too much, and not too expensive either to avoid arguments and endless discussion. In any case there should be clear rules for occupants to know beforehand what they are getting into.

In order to streamline the concept described here we would like to involve experts such as property managers, real estate agents, contractors, etc. to get answers to the following questions:

- Are the objectives and merits of the concept clearly outlined and understandable?
- Do you see any substantial benefit for property developers, owners and the general public?
- Where do you expect problems to arise? What are the risks to be considered?
- Will this concept be accepted by prospective owners and occupants?
- Do building contractors think this concept is practicable? If not, why not?
- What are the basic conditions for the implementation of the concept?