Sidewalk Cafe: Analysis of Safe Solutions for Customers

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Abstract. Faced with the global epidemiological situation during the last two years, which has inevitably limited and affected the daily routines, this paper focused on how urban spaces can adapt to shifting demands. Specifically, it is important to consider the catering activities that, after a series of closures during the imposed lockdowns, are unable to fulfil the demands of the shifting requirements during the reopening phases, owing to a lack of open available spaces. This criticality is amplified in an urban environment, where converting public properties into "commercial" uses is difficult, if not impossible, owing to the lack of available spaces. However, in many Italian scenarios, local administrations have created concession spaces on carriageways, turning in some instances parking stalls into refreshment areas, in order to address the demand of restaurateurs penalised by these circumstances. Despite this solution has solved the problem of those activities, it raises two concerns: the first is about safety, because the solutions adopted are exposed to vehicular traffic, and the second is regarding pedestrian passages' flow. This is the circumstance that motivated the authors to conduct an assessment of the contingent reality in the Sardinian capital city, Cagliari, evaluating alternative and definitive solutions for urban space regeneration.

Keywords: Urban spaces · Sidewalk café · Curbside café · Parklet cafe · Safety · Pedestrian passages

1 Introduction

The paradigm of the "*Smart city*" foresees a city that mobilises and uses its resources to improve the quality of life of its inhabitants [1, 2], promoting an anthropocentric, social and economic development but at the same time sustainable [3]. In this context, public space assumes a fundamental role: it is a place of aggregation, of which everyone has the right to enjoy without any kind of restriction that can be both physical and temporal [4]. As Indovina says "*The public space is a space of connection, of social interaction, of collective expression, it is the whole place of the urban and the civitas. It is the space of all, therefore it deserves opportune attention in the planning, it cannot be of "turns out"; moreover, it must be managed, taken care of, guaranteed and defended. It is not a*

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space of anyone, but the space of all" [5]. Also, Jacobs reports "*The streets and sidewalks constitute the most important public places of a city and its most vital organs. When you think of a city, the first thing that comes to mind is its streets: according to whether they seem interesting or insignificant, the city also appears as such*" [6].

According to Lefebvre [7], "*the right to the city*" is identified with the social links, functions, and services that develop in the urban public space but also with its practicability and vocation to meet the individual needs of all users of the city. Public space is a privileged place for exposure to diversity, for the production of new experiences and for the expression of individual identity [8].

Garau et al. [9] develop a methodology to evaluate the practicability of urban spaces starting from the analyses of the existing literature on creating audit tools for evaluating the quality of the urban space related to both its accessibility and walkability.

According to Moura et al. [10], walkability can be identified as the extent to which the urban environment is usable by pedestrians, while Jun and Hur point out that the recognition of walking is a key factor in promoting a sustainable, active and inclusive [11] community. Garau et al. [12] deepen the topics of walkability and develop an analytical tool to evaluate the walkability of public spaces and apply it to a case study. Analytical tools have great importance in the planning process and in supporting the decision-making process, since they help to orient the project of public space in such a way that it really becomes a place of social participation, inclusion, and sustainable ways of life.

The current times, with the increasingly frequent manifestation of critical environmental events and, especially with the pandemic from Covid 19, have seen the need for a profound review of urban public spaces [13, 14]. In this context, the usability of public space has become the priority condition for ensuring health, control over the environment and relations between people but at the same time relaunching the mobility of people and utilitarian, recreational and social activities [15].

As a result of the epidemiological situation of the last two years, the authors have focused their attention in this research on the response that urban spaces may provide to changing requirements. In particular, the authors focused on the criticalities experienced by operators in the catering sector, forced to respect prolonged cycles of business closures. In addition, during the opening phases, since these were governed by the preference for open spaces that not everyone had, a disparity was created between the operators. Added to this is the widespread "psychosis" among customers who, feeling safer in outdoor convivial spaces, choose precisely those activities that have this option to offer. It is evident that the situation has created disparities between the various activities, a problem that has not taken a back seat even with respect to local administrations which, in order to deal with this problem, have had to review plans and regulatory tools to allocate, where possible, spaces public roads, sidewalks, parts of carriageways, etc., to operators in difficulty. This aspect does not concern the concessions regularly ceded in the pre-pandemic periods, but the study addresses precisely those emergency situations implemented in the coexistence of the epidemiological emergency.

For this reason, in the face of municipal regulations and the changes that have been implemented, the authors wanted to analyse the situation in order to propose solutions that did not have a temporal character, but that looked at the long term, in order to make

definitive, which can be standardised and adapted to the context, taking into account the plurality of factors. Specifically, in the analysis of the solutions, two important aspects were taken into account:

- The safety of the customers of public services and pedestrian and vehicular currents;
- Any protection and separation schemes between the two user segments: commercial establishments and mobility.

The backdrop for the analysis is Cagliari, a municipal reality in Southern Sardinia which, also favoured by a mild climate, allows you to use and enjoy the outdoors throughout the year.

The remaining paper is organised as follows. Section 2 presents an overview of its regulations adopted both internationally and nationally, with particular reference to the municipality of Cagliari. Section 3 illustrates a comparison between the solution put in place by the municipality of Cagliari and that proposed by the authors. Finally, Sect. 4 draws conclusions.

2 Analysis of the International and National Context

The Règlement de l'installation des étalages et ter- rasses sur la voie publique ainsi que des contre-étalages et contreterrasses, des commerces accessoires aux terrasses et des dépôts de matériel ou objets divers devant les commerces et des terrasses estivales [16] was published in the Bulletin Officiel De La Ville De Paris on June 18, 2021. For the whole of the public road sector situated in the territory of the City of Paris, the Regulation lays down the rules applicable specifically to installations (whether they are enclosed terraces, open terraces, exhibitions, etc.) on car parks. Article P.4.3.3 lays down the conditions for the authorisation and operation of the Dehors on parking: limits the length of the installations to the linear of the facade and, in the case where a road sign does not border the parking, the maximum length of the space is 5 m. The structure must leave in sight the markings on the ground representing the length and width of the parking lot. The regulation also allows the use of parking stalls on parking lots located on the other side of the roadway, even in the streets open at any time to traffic, but whose maximum authorized speed is less than 50 km.

The occupation must allow the passage of the cleaning trucks and must not prevent the outflow of water. The perimeter of the terraces on the parking lot shall be equipped with uniform barriers or protection screens fixed in such a way as to guarantee their solidity and stability in order to ensure the safety of customers against traffic and to prevent any fall towards the roadway. The height of these protections is limited to 1.30 m, including the height of the floor. In no case should protective barriers be covered and their appearance masked. The regulation lays down special rules for specific sectors such as the Avenue des Champs-Élysées, the Place de la République, the Avenue de l'Opéra, etc.

The authors also analysed Chapter 742 "*Sidewalk cafés, parklets and marketing displays*" [17] of the Toronto Municipal Code which is particularly detailed with the prescriptions of the Dehor. First of all, it calls the dehor, generically called sidewalk café,

depending on the area they occupy, and, specifically: a Curbside café is a sidewalk café that is located curbside; a Frontage Café is a sidewalk café that is located immediately adjacent to the frontage wall of the associated establishment and, a Parklet café is a type of sidewalk café that is a temporary lateral projection into the curb lane or parking lane of a street.

L'art. 7.1 establishes minimum width between permitted encroachments and adjacent pedestrian clearway depending on the type of road: 1.8m on a local road; 2.1 m on a collector or arterial road; or 2.5 m, or a different minimum approved by the General Manager, on streets where the sidewalk is at least 5 m. Further detailed requirements are established for each type of coffee sidewalk and, expressly, for parklet caffe, it is stated that the concession can be granted if the parklet café is located on roads where the limit of 40 km/h is imposed or even where it is possible to exceed 40 km/h once elements such as the number and width of lanes, traffic flows, speeds and other safety consideration have been assessed. Further precise provisions are established related to distances with intersections or pedestrian crossings. About the protections, the same article states that there must be a barrier 0.9 m high from the road surface and from 1.2 m from the coffee limit an anti-slip curb to protect the installation from traffic.

The installation will have a height equal to that of the sidewalk, must be designed so that it can withstand the expected loads, must not prevent the outflow of water, there must be no barriers in New Jersey.

In the national context, the Regulations of the city of Cagliari, Sassari, Milan, the Guidelines of the city of Paullo and the Technical Standards of the city of Turin were examined.

The Regulation of the city of Cagliari has been analyzed in more depth since it is the place where the case study was addressed.

Cagliari

The "*Regolamento per la concessione del suolo pubblico per l'esercizio dell'attività di ristoro all'aperto, a servizio di attività commerciali e artigianali e per attività occasionali*" [18] was issued by the Municipality of Cagliari, approved by the City Council with deed n°72 of 22/05/2018 and subsequently amended with deed n°152 of 2/10/2018 [19], n°12 of 9/05/2019 [20] and finally with n°79 of 14/05/2021 [21].

In its first version (2018) the Regulation did not allow any type of occupation of the roadway and/or parking spaces. This prohibition was lifted with Resolution n° 79/2021 with which the original title was modified with the addition: "*Revisione del divieto di occupazione degli stalli di sosta*". The update of the Regulations was done precisely to respond to the contingent epidemiological circumstance.

The regulation as a whole has 25 articles and "*governs the procedure for issuing temporary concessions of public land and the methods of use of the related spaces*" [18]. It is aimed at public operators for the administration of food and beverages, for artisanal and commercial businesses for the purposes indicated in Article 1 c.ii b) and c) [18].

The general principle of granting concessions is part of the general criteria "*for the requalification of the urban environment, for economic development and for tourism promotion*" (Article 2 – [18]). Concessions, the maximum allowable areas of which are regulated by art. 12 [18], may however be subject to limitations on release for the most

varied reasons of public interest including: "*safety reasons, with particular reference to road or pedestrian traffic*" [18].

For the purposes of the study, Article 13 [18] deserves a more in-depth reading, which contains information on the regulation of concession spaces. In its updated version it has been integrated with 4 paragraphs (4 clauses (8 ÷ 11) [21] which refer precisely to the management of the spaces on the roadway.

The conditions that land occupations must comply with are listed in paragraph 1, without prejudice to the provisions of art. 20 of the C.d.S. [22] which governs occupations of the roadway, underlining, in the event of physical occupation of the sidewalks, the respect and guarantee of mobility for pedestrians and users with reduced mobility. According to the aforementioned article of the Regulation, the areas of public land that can be granted are:

a. Those in front of the production activity and adjacent to it;
b. Those in front but separated by the carriageway only in conditions in which 1) the carriageway hosts only one lane and is one-way, 2) the travel speed is limited to 30 km/h and 3) the pedestrian crossing is within a radius of 20 m.

At clause 2, in the concession space, when it "*falls within the historic center or in all cases in which the proposed positioning insists on the carriageway or parking stalls*" [21], the installation of fixed structures such as *"[..] gazebos, dehors or other fixed structures such as to configure closed spaces functional to the exercise able to close, even partially, the required space [..]*" [21]. Probably this prohibition could be due to the temporary nature of the concession.

By submitting the integration [21] in clauses 8 ÷ 10, the specific indications for the occupation of the parts of the carriageway are transcribed.

- Clause 8 [21]: "*The occupation of parking stalls is permitted exclusively in favor of public establishments for the non-occasional carrying out of the activity of outdoor administration of food and drinks and in the presence of the following conditions which mst all be simultaneously exist:*

  – *Local roads interests, as defined in the functional hierarchy of city traffic […];*
  – *It is possible to subtract the space without prejudice to road and pedestrian traffic, which must always be guaranteed in safe conditions;*
  – *The business does not have or may have other public or private outdoor space, unless it has assumed a formal obligation to renounce its use by means of a declaration of responsibility;*
  – *The roads on which the parking stalls are located are included in zone 30;*
  – *The installations necessary for the safety of the spaces are not such as to require the construction of masonry, closing or grounding works of any kind".*

- Clause 10 [21]: "*Removal from road traffic occurs through the positioning, at the expense of the applicant, of suitable systems to ensure the protection of the installation [..]*".

In the light of the analysis of the contents of the Resolution [18] and its updates [21], in favour of public establishments that carry out the non-occasional activity of outdoor administration of food and drinks, which do not have o may have other public or private outdoor space, the spaces that fall within the parking stalls are allowed under concession, provided that these concern local roads included in the 30 zones provided that the space taken away does not create any prejudice for road and pedestrian traffic. If the occupation concerns parking areas assigned to the concessionary companies of the paid parking service, the interested party must pay the concessionary company an amount equal to the loss of earnings suffered by the latter due to the occupation of the parking spaces (clause 11. [21]).

The relevant aspect also concerns the protection of spaces that must be made safe through systems "*designed to guarantee the protection of the installation [..] in terms of the impact resistance of the systems themselves, their visibility at night and compliance with the regulations. on road traffic safety*" [21]. However, still, with regard to protection, these must not be carried out through masonry, closing or grounding works of any kind.

This last criterion, namely the protection of the roadway granted under concession, is the most controversial and main topic, the subject of this study, and will be discussed in the following sections.

Comparative Regulations

In the "*Regolamento per l'occupazione del suolo pubblico con dehors e altre attrezzature temporanee e amovibili*" of the municipality of Sassari [23] it is reported that the concessions can be temporary or permanent but valid for three years and then renewable. The structure must be removable and without foundations. Regarding the size, the dehors must have an extension not exceeding the width of the facade of the public establishment, and in any case a total area not exceeding 20 m^2 extending up to 35 m^2 exclusively in the squares and villages and fractions. The occupation on the road is allowed on areas where the parking of vehicles is allowed but only in *limited traffic areas* (ZTL) and pedestrian areas. Roadway installations shall ensure protection with elements on three sides. The concessionaire is directly and personally responsible, civilly and criminally, for any damage to persons or things of third parties also resulting from the lack of vigilance and bad conservation of the artefact with which the public soil is occupied.

The city of Milan [24] also provides temporary concessions and removable structures. Employment may not be granted on carriageways (except in pedonability areas) and in rest areas. The occupation must take place in front of the exercise and, if on board sidewalk, must start at a minimum distance of 1.20 m from the curb. In this case, the sidewalk must have a minimum section of 5.00 m.

Any damage caused to citizens, to public land or to private property by the elements exposed, shall be borne by the concessionaire.

The "*Linee guida comunali per dehor e arredo urbano per attività' stagionali e continuative"* [25] established by the municipality of Paullo, provide detailed information, also through images, on the requirements of the dehors. The structures are temporary and easily removable. The concession may be granted on areas designated for public parking provided that they respect the modularity of the parking stall and do not flood the transit and manoeuvring lanes. In this case, the concession area may extend to the internal delimitation line of the parking area, maintaining a vehicle safety franc of at

least 30 cm. The encumbrance of the dehor must allow the transit of emergency vehicles, and public waste collection services, providing a free lane of not less than 3.50 m.

The City of Turin attaches the technical standards "*Guida alla progettazione di spazi e strutture all'aperto, su suolo pubblico o privato ad uso pubblico, attrezzati per il consumo di alimenti e bevande annessi a locali di pubblico esercizio di somministrazione*" to the Regulation No 388 [26]. The municipality of Turin provides temporary concessions and removable structures, the closing hours are established after which the furniture must be collected. The dehor can be placed in public parking spaces but cannot extend beyond the front of the building. In pedestrian spaces or in pedestrian areas it is allowed to occupy additional spaces, within the limit of 30%, compared to those placed on the front projection but the maximum linear extension cannot exceed 15.00 m. Any damage caused to citizens, public or private property by the elements constituting the dehors shall be borne by the concessionaire.

From a comparison between the different regulations, in a nutshell, it emerges that:

a. Concessions are generally temporary;
b. The structures adopted are removable;
c. Some Administrations establish the opening/closing time in the concession;
d. Not all administrations (see Milan) allow the occupation of parking spaces, others (Sassari) grant employment on the roadway where parking is normally allowed only in limited traffic areas and pedestrian areas;
e. The municipality of Paullo specifies that the occupation of public land can be released on the areas intended for public parking provided that the area subject to the concession extends up to the internal delimitation line of the parking area and that one franc is maintained vehicle safety of at least 30 cm;
f. As far as safety is concerned, only the Regulations of the Municipality of Sassari establish that occupations on the carriageway must guarantee protection with elements placed on three sides. However, these elements, as they are described, seem more of a delimitation of the space allowed than of safety for the customers of the commercial establishment or road users;
g. With the exception of the Municipality of Paullo, the other Regulations establish that any liability for damage to property and people is borne by the operator.

3 The Case Study in Cagliari, Italy

The current analysis took into account the Cagliari scenario, in which the municipal rule governing concessions on public property was analysed in the preceding section. To summarise the major steps, the municipality of the Sardinian capital, in response to the epidemiological emergency from Covid 19, integrated its own regulation [21] by granting concessions on carriageway spaces intended for stalls to managers of public establishments engaged in the sale of food stop. However, following its approval which dates back to May 2021, in the following July (12/07/2021), the concessions of public land were temporarily suspended due to an accident involving two vehicles passing through the intersection between *via Istria* and *via Molise*, in an area temporarily granted to a public establishment in order to use it as a refreshment area. Although the accident

was of a modest entity, the barriers erected to defend the occupation failed to withstand the impact, to the point that one of the vehicles invaded the area and the equipment present, fortunately without causing any harm to humans, as there are currently no neither customers nor passers-by (Figs. 1 and 2).



Fig. 1. Cagliari - intersection Via Istria - Via Molise



Fig. 2. Cagliari - accident

This incident highlighted critical concerns regarding the safety of concessions located in carriageway spaces. This is why the municipal administration was forced to suspend the concessions in order to assess their applicability in terms of safety.

Before moving on to the proposed solution, the following paragraph will describe and examine the solution adopted by the Municipality of Cagliari.

3.1 Solution Adopted by the Municipality of Cagliari

With regards to the solution adopted already by the Municipality of Cagliari, it is necessary to preliminarily highlight that it represents the most used solution in many Italian and

international cities, as determinated by an analysis of the previous rules. In the past, the municipal administration has chosen to adopt this type of accommodation, furthermore identifying, in the "*Linee guida per l'arredo e le attrezzature per le attività di ristoro all'aperto nelle occupazioni di suolo pubblico negli stalli dei parcheggi e nelle altre aree pubbliche, non disciplinate da specifico regolamento di pianificazione, richieste provvisoriamente per far fronte all'emergenza COVID-19*" [27], including the type of furniture that can be used. This situation was called into question following the accident described above and which highlighted some critical issues in terms of traffic safety, especially towards customers of commercial activities.

In the solution proposed by the Regulation [21] and adopted by the Municipality, a series of critical issues were observed, which can be summarized as follows:

a. The accident showed the lack of protection of the concession space, especially towards customers and staff. In fact, the use of the roadway to position the set-ups of commercial activities and obviously host the customers, not providing for any invasive protection that acts as a real divider between the two spaces, poses safety problems, especially for the former. However, there have been individual and uncoordinated initiatives, such as the affixing of removable New Jersey barriers, flower boxes, pylons etc. which had, in the intention, the sole purpose of delimiting the space under concession without any claim in terms of cushioning and dissipation of the impact energy and therefore of protection in the event of a vehicle diversion;
b. The proximity to the spaces travelled by vehicles, in addition to the aforementioned safety problems, exposes customers and staff to exhaust gases, with all that this entails in terms of public health and in the workplace;
c. The current layout of the platforms, in fact, interrupts the continuity of the pedestrian paths. In this configuration, the sidewalk becomes an internal transit area for the staff and customers who make the move - activities - refreshment area - activities, as well as a waiting area for customers waiting to sit at the table or pay the bill. These elements could create an interruption in the pedestrian flow, a circumstance that would become a real nuisance if not a real criticality, for users with reduced mobility both for disabilities (visually impaired and blind, people in wheelchairs, etc.) and for contingent and / or temporary situations (pregnant women, people with strollers, the elderly, etc.);
d. According to the regulation [21], the concessions are required to be issued in the streets in zone 30, one-way and with a low volume of traffic.

Regarding this last point it is necessary to make an observation to clarify what is commonly defined as zone 30. According to the CdS [22] a 30 Zone is an area of the urban road network where the speed limit is set equal to 30 km/h. In logic, the containment of speed would have the purpose of promoting coexistence between the various components of traffic: cars, bicycles and pedestrians. It follows that according to this definition it is sufficient to limit the travel speed to 30 km/h and to affix the vertical signpost (Fig. 3) to delimit a 30 area.

Actually, the question is a bit more complex. In order for a 30 zone to be such it must be in shape and must possess a series of regulation characteristics. In detail, in the 30 zones, the design of the road and all related spaces has been corrected and integrated



Fig. 3. Vertical signs delimiting 30 Zone

through the environmental requalification of the mobility spaces. In particular, through the adoption of traffic moderation and fluidization measures, we want to ensure that the permitted vehicle components transit at a speed of 30 km/h as this is what the average user perceives as the maximum feasible. In other words, it is the geometry of the platform that induces the travel speed and not the simple regulation through the imposition of the limit.

Other regulatory aspects that characterize the 30 zones are:

- At the intersections, the right of way is valid;
- Signs and relative "stop" or "give way" manoeuvres are not contemplated;
- Pedestrian crossings are not demarcated, except in exceptional cases.

It follows that in order for the elements described above to coexist, it is necessary to systematically adopt traffic moderation measures, in order to:

a. Prevent these areas from being affected by crossing traffic;
b. Create a continuous system of safe and comfortable pedestrian and cycle paths;
c. Induce in driver that virtuous driving behaviour, which guarantees maximum safety and favours the development of forms of use of road space other than motorized mobility and connected to the social life of urban space.

From this it follows that, in reality, many of the existing 30 Zones are not able to ensure minimum acceptable safety conditions, due to the type and extent of vehicular traffic, the real speeds of travel, the size of the carriageway, the spaces for pedestrian and bicycle mobility, visibility of intersections, etc.

3.2 Proposed Solution

Based on these premises, the authors examined and proposed a solution capable of overcoming the problems encountered. This project can be counted among the interventions of traffic moderation and protection of weak users. Its peculiarity is that it reverses the

scale of priorities by placing the needs of pedestrians in the foreground and following those of the exhibitors. The reversal of priorities is accompanied by the inversion of the destination of the spaces. In this way, the space acquired on the roadway is not intended for customers but is converted into an extension of the sidewalk [28] The same [22] contemplates a solution of this type, as in art. 20, the occupation of pavements by kiosks, newsstands or other installations may be allowed up to a maximum of half of their width, provided that adjacent to the buildings and provided that an area for the movement of pedestrians remains free, no less than 2 m.

The issues addressed in the two references above have been reworked in order to respond to the two fundamental needs:

- Maintaining the continuity of pedestrian paths by removing external interference that can make transit difficult, especially for users with reduced mobility;
- The space intended for public concession must be adjacent to the buildings and not on the opposite side of the pavement.

From this perspective, the intention was to reverse the intended use of the spaces, using the extension in the carriageway as a continuity of the sidewalk and placing the merchants' supplies adjacent to the building, as depicted in the following Fig. 4.

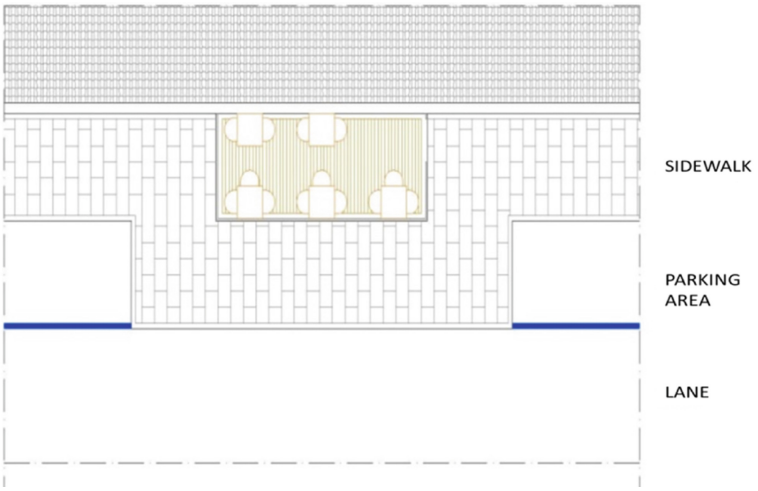

Fig. 4. Solution's Schema Widening of the pavement/Platform

This solution satisfies at the same time the safety needs for the circulation and usability of pedestrian spaces for weak users without neglecting the right requests of the operators.

The positive elements of this intervention are:

a. The continuity of the pedestrian flow is ensured without any interference. In fact, the mere fact that the concession space is adjacent to the building means that both

customers and staff gravitate around the granted area, effectively eliminating the flow crossing the sidewalk, a circumstance that occurs with the displacement of the space. "Commercial" on the roadway;

b. The safety of traffic and patrons is guaranteed. In fact, according to this configuration, the vehicular current is separated from the concession area by a space that is in fact a sidewalk and, as such, does not require protection. It should be remembered, in fact, that the sidewalk is an area of the road intended for pedestrians that must be raised or in the absence of a rise, delimited and protected. This protection, in the case of roads with a design speed of less than 70 km/h, can be obtained simply by creating a shaped edge. This edge must be characterized by the so-called "non-surmountable profile" as represented in the image below (Fig. 5);

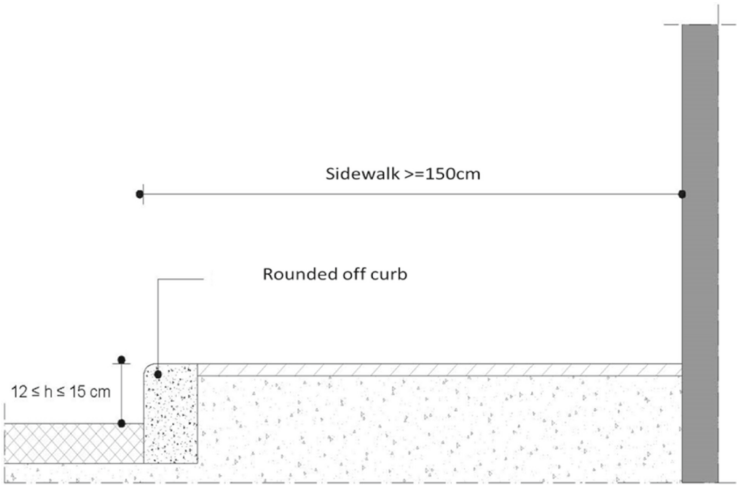

Fig. 5. Detail of the non-surmountable curb

c. The extension of the sidewalk guarantees the overcoming of architectural barriers;
d. The choice of a single typological solution guarantees the improvement of the urban decor, in fact, whatever the material used, the homogeneity makes the public space recognizable and more orderly;
e. The continuity of the rainwater flow lines on the edges that can be easily obtained with simple technical measures that do not prevent the regular flow of the same;
f. The possibility of seizing the opportunity with these interventions to rethink the dimensions of the vehicle lanes, bringing them to values that allow better speed control;
g. The improvement of traffic conditions on internal roads within 30 Zone as the extension of the sidewalks is useful for delimiting the perceptual space for the driver, making him think he is crossing a bottleneck, with the result of a reduction in real travel speeds.

It is clear that, to obtain the advantages described, the concession area must be physically limited, through parapets, flower boxes, etc., even if adjacent to the building.

Firstly, since the concession is expensive, its cost depends on the area requested and obtainable and, as such, it must be delimited to prevent unauthorized use. Secondly, the delimitation of the concession identifies the pedestrian area and therefore the distance from vehicular traffic.

Finally, we want to highlight an aspect that is certainly not secondary. The solution adopted up to now by the Municipality is applicable only to the roads included in the 30 one-way traffic zones. That proposal, due to its characteristics and the resulting advantages, potentially has a greater scope. In fact, it is achievable not only in 30 Zone but also in all the local and residential roads characterized by two-way traffic and with two total lanes as long as they are not affected by important flows. In fact, much of the Cagliari road network can be considered as falling into this category.

4 Conclusions

How does the urban space respond to the changing situations? This is the question that the authors asked themselves in the face of the change of scenery offered by the Covid 19 pandemic. In particular, the authors observed the critical issues encountered by operators in the catering sector who were forced to redesign spaces for customers. Subsequently, they examined the solutions that the various administrations have proposed to support the growing needs of operators in the sector in order to find functional and valid answers especially in a long-term perspective and not only subject to the period pandemic. Finally, they proposed a new solution which meets both the new urban space requirements and the safety requirements for vehicles and pedestrians.

The direct examination concerned the reality of the Sardinian capital, Cagliari, a city of about 154,000 inhabitants and with a high concentration of bars and restaurants in historic and non-historic districts. The study revealed that the commitments made by the municipal administration and the solutions proposed in this regard were not without critical issues, especially in terms of safety and fluidity of pedestrian mobility. It has been observed that allocating the spaces on the roadway to catering activities has brought out two kinds of problems. In the first place, the safety of customers and staff, who are adjacent to the vehicular current, are exposed to the risk of investment in the event of accidental diversion of a vehicle. Secondly, according to this configuration, the sidewalk becomes a crossing and rest area for customers and staff, effectively creating an interruption of ordinary mobility and creating inconvenience, especially for that part of weak users.

Based on the analysis conducted by the authors, the critical issues just exposed can be removed in full, maintaining the acquisition of the spaces on the road but completely reversing the intended use of the spaces. According to this configuration, the concession space would be adjacent to the commercial activity building and the space on the roadway would be intended for the sidewalk. In this way, the safety of traffic and customers is guaranteed, as the vehicular current is separated from the concession area by a space that is in fact a sidewalk and, as such, does not require protection. Furthermore, the continuity of the pedestrian flow is guaranteed. In fact, the mere fact that the concession space is adjacent to the building means that customers and staff gravitate around the granted area, effectively eliminating the flow crossing the sidewalk, a circumstance that occurs with the displacement of the space “commercial” on the roadway.

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