

### Transit Corridor Livability as a means to a City of Proximity. Proof of concept and place-based conditions for a participatory project in Cascais

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#### Introduction

Cities are currently facing the challenge of generating more sustainable mobility solutions as an alternative to the car. Coping with this challenge through a constructive response implies moving from a unimodal approach to a multimodal optimization of the transport system, taking advantage of the new mobility modes that have emerged in the last decade (Schiller and Kenworthy 2018). At this level, public transport and mobility policies have sought to create innovative solutions in terms of supply and demand that influence the choices of populations (Banister 2008; Tyrinopoulos and Antoniou 2013; Sucha *et al.* 2019). On the supply side, solutions include investments in infrastructure, increased availability, and accessibility to multimodal transport, as well as financial measures to reduce and/or limit the use of the most polluting modes in city centers. Demand-side solutions involve approaches that raise people's awareness about the negative impacts of their choices and interventions for behavioural changes. Such solutions are aimed at guiding the urban population towards more sustainable modes of transport and living. Nevertheless, it is difficult to analyze the relationship between such solutions and a change in attitudes and behaviours (Sucha *et al.* 2019).

Government initiatives also tend to ignore the assessment of impacts and costs of long journeys resulting from fragmented polycentrism and its impact on the urban ecology and land uses (Bertaud *et al.* 2009). One way to mitigate these impacts and costs is by integrating transport and land use policies (Schiller and Kenworthy 2018). This framework of new models and approaches has been explored through the umbrella term of Urban Compactness. Concepts referring to

this are, for instance, "compact city" and "city of short distances" (Jenks *et al.* 1997; Rogers 1998; Rogers and Power 2000; Jenks and Burgess 2000), "polycentric city" (Frey 1999), "sustainable urban neighbourhood" (Rudlin and Falk 1999), "urban village" (Aldous 1992; 1995), and most lately, "city of proximity" or "15 minutes City" (Moreno *et al.* 2021). By applying these proposals, fragmented polycentrism is urged to be changed and substituted by a coherent multifunctional polycentrism that allows access to essential urban functions for everyone: habitation, work, supply, leisure, education, health, and a good environment. Such transition to compact or proximity cities requires that TOD - Transit-Oriented Development, and DOT - Development-Oriented Transit can be articulated to find sustainable solutions for each ecosystem (Li and Lai 2009).

This realm can be well observed through the case of Portugal and particularly in its major metropolitan area: Lisbon. In this paper, we will focus on the municipality of Cascais as an innovative and 'good practices' example. Cascais offers a concrete perspective to transition towns, as being in a guiding model position for other urban spaces in the process of change (e.g., the first town in Portugal with free public transportation). The municipality has an active project until 2050 that aims at a complete transformation of the transport system and mobility in its territory. This project approaches a new articulation of land uses, urban planning, and transport to evolve from an intermodal to a multimodal Public Transport network, following proximity/compact city models. The network yet-to-be-created intends the integration of Light-Rail Transit (LRT) and Bus solutions with a High Level of Service (BHLS) by applying the Transit Corridor Livability (TCL)

method (Appleyard *et al.* 2016; Ferrell *et al.* 2016). This method implies the construction of corridors that provide the ground for establishing conditions of accessibility and livability. This is strongly embedded within the framework of a sustainable system of multimodal travel. Through this, a significant reduction of car dependence is aimed to reinforce an alternative to fragmented polycentrism and its hidden costs in urban and metropolitan mobility.

The systemic character of a transition of such kind evokes several political, institutional, legislative, technical, and social challenges, requiring an exploratory phase: proof of concept. In the case of Cascais, this phase is aimed to focus on the study and creation of a corridor in Carcavelos, a vibrant parish located on the eastern area of the municipality. One of the greatest challenges of such a proof of concept is relating proximity/compact city models and "intimacy with the territory" (Cuillier 2006) through TCL proposals to provoke changes in the patterns of lifestyle. Changes within this range comprise alternative transport modes that help create another, new functional and operational relationship with the territories and places, resulting in a new articulation of scales. Furthermore, the idea of proximity goes beyond functionality, emphasizing the cognitive and emotional relation with the territory. Consequently, this construction of new territorialities implies a social dialogue with various partners/ stakeholders in the population's active and democratic participation. Exploring the TCL method, this text presents our first social diagnosis of the study area through the following dimensions<sup>1</sup>: a) a description of Cascais as a lifestyle; b) the position of the Cascais municipality within the urbanization and metropolitanization cycle; c) the

potential of compactness of the Ecosystem within Carcavelos to identify new multifunctional centralities and neighbourhood units, depending on both DOT and TOD.

This paper is structured into the following sections: first, the methods and main concepts are elaborated. After that, the results are being presented through social maps. Finally, the discussion demonstrates synthesis and an application of the proposed model, followed by a conclusion and future prospects.

## Methods

The TCL method (Ferrell *et al.* 2016) frames the integration between transport and land use as a strategy that results in multiple benefits, emphasizing “livability”. This reinforces the desire to relocate urban functions to solve, or at least mitigate, the problem of polycentric fragmentation. The following TCL principles are a result of goals and measures related to livability (U.S. DOT-EPA-HUD, cit. in Appleyard *et al.* 2016): 1) to provide more transportation options; 2) to promote fair and affordable housing; 3) to increase economic competitiveness; 4) to support existing communities; 5) to coordinate policies and to attract investments; and 6) to value communities and neighborhoods.

However, these principles’ highly prescriptive and descriptive character makes “livability” a difficult concept to define and measure within the framework of TCL strategies for designing and implementing the TPSP network. One way to overcome these difficulties is to focus on living opportunities to improve the quality of life of populations (Appleyard *et al.* 2016). Following this approach, TCL strategies can be designed to evaluate the degree to which people can access these opportunities. Looking closer to the main challenge of this approach, its ethical dimension needs to be strongly re-considered living opportunities cannot be limited for some (specially the most disadvantaged and vulnerable ones, as is strongly indicated by concepts of ‘Right to the City’) while livability is being promoted for others. Hence, change need to continue being observed while it is taking place. One of the possible risks of compactness models is the potential micro-gentrifications within the urban space.

“Livability” can be characterized through three types of corridors (Appleyard *et al.* 2016): 1) Emerging (infrequent traffic, limited connectivity, low intensity, and little mixed use); 2) In Transition (moderate traffic frequency, moderate street connectivity, moderate to high intensities and some combinations of uses); and 3) Integrated (high traffic frequency, high connectivity,

moderate to high intensity, and a combination of complementary uses).

To reach these types of corridors through the TCL method, the following concepts should be considered: a) lifestyle; b) the urbanization cycle; c) urban compactness; d) neighborhood units; e) new multifunctional centralities; and f) DOT/TOD.

### a) Lifestyle

Urbanization resulted in ‘urbanism as a way of life’ or a lifestyle (Wirth 1938). Other ways of life became visible with the urban sprawl: ‘suburbanism’ and ‘degrees of urbanism’ (Fava 1956; Gans 1973). The increase of mobility (Remy and Voyé 1994) and speed (Virilio 1993) lead to the proposition of lifestyles less place dependent. Urban life is, therefore, explained by chrono-urbanism (Moreno 2021). If expansion/diastole is a trend, retraction/systole is the counterpart. Therefore, relocation comes to be a new kind of urban lifestyle to be considered. Consequently, it is necessary to understand the lifestyle patterns of the study area to promote an active change that articulates transport infrastructure, centralities, and neighborhood in coherence with the relocation of living and new lifestyles.

### b) The Urbanization Cycle

The “urbanization cycle” implies urban expansion (suburbanization and de-urbanization) and an expectation of re-urbanization – a complex domain within metropolitan regions. Since the 80s of the last century, the re-urbanization of cities has been a problem. Looking back to the case of Portugal, good practices and processes of patrimonialization/regeneration/touristification have been followed. Such processes did not prevent (and, sometimes, even increased) the fragmentation of the polycentric model, specifically the sprawl of the main urban functions. Hence, there is a need to actively respond to these problems of re-urbanization for the population through urban solutions, promoting urban social spaces for life, work, supply, leisure, education, health, and access to a good environment.

### c) Urban Compactness

Considering the quest of urban solutions, several concepts have emerged since the 80s of the last century, referring to various forms of and keys to solutions for ‘urban compactness’. These include compact cities; cities of short distances; cities in transition; 15-minute cities; and others, opposing to concepts of diffuse city and disordered polycentrism, which are based on high density and diversified land uses in a local scale as a way to mitigate urban dispersion and the ecological footprint of cities. The case-study presented is in itself



Fig. 1-4, from the top:  
Avenida da Marginal, Cascais (The ‘Cascais Line’)  
Cascais Village Center  
Cascais Bay  
Carcavelos Beach, Cascais

an attempt to approach compactness.

#### d) Neighbourhood Units

"Neighbourhood unity" as an applied concept dates to 1929, appearing in the New York Regional Plan, having been presented academically in 1923 at the meeting of the American Sociological Association. Organically, this concept referred to an urban area that accommodates enough population to run a primary school, meaning that no child would have to walk more than half a mile (800 meters), preferably without having to cross any major traffic lane. In addition to a school, it should have a park and leisure area; small local commerce stores; and a residential environment (Mumford 2000; Hall 1988; Rego 2017). Identifying the self-perception of neighbourhood units (neighbourhood identity) is a way to understand how to restructure space within the study area.

#### e) Multifunctional Centralities

The creation of new "multifunctional centralities" implies two related economic-territorial dynamics: a) the emergence of new activities and commerce outside the main urban center; and b) the relocation to new centers of activities and establishments that were only attached to the main center (Sposito 2001). In addition to that, functional changes are needed at street/ground floor level to activate (and provide) supply and leisure.

#### f) DOT & TOD

Approaches supported by transport-driven development (DOT) should be considered together with development-driven approaches (TOD). Changes in the daily life model imply a concerted intervention between mobility infrastructures and land uses. As a result, daily tasks would take place in a compact and multifunctional territory through smooth mobility: mainly walking or cycling. Larger journeys would not be daily anymore and would have to be supported by an integrated multimodal network of good quality public transport. Hence, referring to the DOT/TOD principle, this implies constructing an integrated and efficient transport system and constructing a network of multifunctional centralities supported by neighbourhood units (Li and Lai 2009).

These concepts, which we propose to support the TCL method, are used for our preliminary diagnosis, presented in the following steps.

## Results

This section elaborates on the results of an exploratory social diagnosis, focused on the following dimensions: a) a characterization of Cascais as a lifestyle; b) the place of the Cascais municipality in the urbanization and metropolization cycle; c) the potential of

compactness, associating new multifunctional centralities and neighbourhood units, considering DOT&TOD.

#### a) Representation of Cascais as a lifestyle

The Cascais coastline (Figure 1), labelled as "the marginal" or "the line", is the zone of the Lisbon Metropolitan Area in which a Mediterranean lifestyle is most evident (sun and beach, food, entertainment, and street life). This Mediterranean lifestyle is one of the most attractive social imaginations, creating realities and *simulacra* in a global scope (from Bali to Dubai) (Seixas 2009). The "Cascais line" is also a kind of metaphor of the Portuguese coast as a whole or of the 'Lisbon Region' as defined by Florida *et al.* (2008). Suppose the image of Portugal is, above all, its coastline. In that case, the "Cascais line" can be understood as a kind of 'main street of the nation' (Gottman 1961), i.e., a territorial corridor in which Portugal has the best to offer.

Considering Portugal's position among marketers, we can find slogans ranging from 'Take a Break from the Rest of the World' to 'Warm by Nature' and 'Europe's West Coast'. Hence, we may consider that Portugal was built as a 'brand' that functions as a calm place to rest: between the hot South and the West Coast (California) of Europe (Seixas 2014: 90). It is clear that the 'Line of Cascais' incorporates these various images in its landscape: a line that mixes solar and blue scapes by the South and West, reinforced by Cabo da Roca, as the westernmost point of Europe. The connection to the sea is of great relevance, and entertainment through water sports provides another vector in the definition of the 'Line' lifestyle. The 'Cascais Line' is also a strong historical reference to surfing in Portugal, which is one of the oldest mentioned places associated with surf. Carcavelos has become the first body-surfing center in the 1940s, what made it become – for a long period – the country's hotspot for this sport (Figure 4). Another indicator within the entertainment sector is the Estoril Casino, which is the oldest in Portugal and, apparently, the oldest in Europe still in operation.

Another complementary element in the Mediterranean lifestyle is a set of 'micro-urbanisms' that are, at the same time, 'micro-transnationalisms'. The 'Cascais Line' is an authentic hub of these types of elements. In the transition from the 19th to the 20th century, exiled European royal families built their houses around Estoril when Cascais was still a fishing village. In 1921, Carlos Montez Champalimaud bought the land of Quinta da Marinha, where King D. Carlos had a hunting lodge. The objective was to build something like the French Riviera. The

French Riviera was the ultimate model of the modern tourist resort. As a winter destination for the English upper class at the end of the 18th century, the French Riviera became – with the railway – a destination for artists and writers; and finally, after World War II, popular as a tourist destination.

Like the French Riviera, Cascais turned into a small 'metropolis', a kind of global hotspot throughout the 20th century, a meeting place for exiles from the old European aristocracy, tourists from the new bourgeoisie refugees on the transatlantic escape, spies, and national Jet set. After the Portuguese revolution in the 70s, António Champalimaud built the current Quinta da Marinha, following his father's plans. This enterprise is one of the major examples of micro-urbanism as micro-transnationalism. Quinta da Marinha became an urban icon for finance and political families and perhaps the utmost symbol of the closed/reserved condominium that spread in the late 1980s and throughout the 1990s. Established in 1984 by Robert Trend Jones, its golf course is the first in Europe and the second in the world with the Gold Signature (Sanctuary status), the highest-ranking in terms of natural preservation.

#### b) The Municipality of Cascais in the Urbanization and Metropolization Cycle

The Municipality of Cascais highlights the result of *in situ* urbanization and suburbanization processes. These processes, characteristic of urban development in Portugal (and, specifically, in the two metropolitan areas), highlights the role of centripetal and centrifugal forces of the large central city (Lisbon), as well as its historical relationship with small towns and villages (such is the case with Cascais). The suburbanization processes, either from the central city of Lisbon and from Cascais itself, made the 'Concelho Sombra' (Shadow County) grow in relation to the coastal centrality of the 'Concelho Sol' (Sun County). This relationship between the 'Concelho Sol' and the 'Concelho Sombra' seems to be presented in *fractal* form, with several dividing lines along the coast: the seafront, the train line, the dividing lines between coastal and inland parishes and, eventually, others.

The Municipality of Cascais had a population increase of 3.7% as demonstrated through the 2021 Census, in relation to the 2011 Census. Such variation may be due to an attraction of the Metropolitan Lisbon Area, which had a positive variation of 1.7% in relation to 2011 (which eventually results from a centrifuging effect of the population of Lisbon, which lost 1.4% of the population).

This data can highlight specific processes in the urbanization cycle. The urbanization cycle implies a process that goes from suburbanization to de-urbanization or counter-urbanization, and then leads to re-urbanization. By now, it is possible to see all those processes, simultaneously, in the last ten years. There is a very low population growth visible, or even a negative variation in the municipalities of the first ring around Lisbon: Oeiras has -0.2% of population, Amadora -2% and Loures rises only 1.1%, with only Odivelas having an increase of 2.1%. Therefore, the suburbanization of the first metropolitan ring seems to have reached saturation. Contrary to that, the more peripheral metropolitan municipalities were the ones that grew the most (Mafra with 12.8% and Palmela with 9.6%), demonstrating a counter-urbanization. In terms of re-urbanisation, it is visible that Lisbon continues to lose population (-1.4%), whereof it is certain that the number of tourists in Lisbon has strongly increased in the last decade. Hence, we state that there has been a tourist re-urbanization and a metropolization of Lisbon's working-inhabitants. In other words, the urbanization cycle turned into a spiral with consequences by reinforcing the fragmented polycentrism model.

For now, the questions regarding the positive variation of 3.7% of the population of Cascais remain: what percentage derives from this metropolization of Lisbon's working-inhabitants and what percentage derives from recentralization and, therefore, from the attractiveness of employment of the Council?

#### c) Potentialities of Compactness

In the following maps we present an analysis that enables the establishment of a relationship between neighbourhood units (postulated as school surroundings) and multifunctional centralities. To reach 'compactness', the network of bike lanes was added as an element to these analyses. 12 neighbourhood units have been reached. All public schools are 10 minutes away from a possible route of the TCL or from a network bike lane point that provides access to the route. There are already two multifunctional centralities (through evoking commerce, services, and restaurants), with three more centralities in which there is a combination of two such functionalities. Furthermore, a micro-gentrification risk map is presented, based on 2011 Census.

The TCL route under study (for proof of concept), which is still not public information, will be located mainly in the parish of Carcavelos and is also partly located within the parishes of Parede and São Domingos

de Rana. It was on this selected territory that the following analyzes were carried out (Figure 5).

The first analysis focuses on public schools and the smooth mobility network, calculating the pedestrian journey time at 5 and 15 minutes (Figure 6). All kindergartens are located less than 5 minutes walking from the future TCL route or from the bike lane network that allows access to this route. Some elementary schools are located outside the 5-minute access zone, such as "Lombos Basic School" or "Padre Agostinho da Silva Basic School", but for a very short distance. Summing up, all public schools both elementary and high schools are less than 10 minutes' walk from an access point to the route or to a bike lane network that connects to the proposed TCL route.

To identify the multifunctional zones, the locations of commerce, restaurants and services were considered, and their density was calculated on each of them by using Kernel maps. Combining these three maps makes it possible to identify the multifunctionality of the region and characterize it as 'reduced', 'potential' and 'high'. Reduced multifunctionality is characterized by only including one of the variables: typically, the food industry (restaurants, coffee shops, and bakeries) that is spread throughout the area. High multifunctionality includes the three variables while the potential type of multifunctionality gathers only two of the analyzed variables. The study area can clearly identify two areas of consolidated multifunctionality, next to the railway station and at the northern end of the western route (Figure 7). Three other zones appear as yet-to-be consolidated, two being located along the route and a third one even further away to the east. This third farthest zone encompasses two primary schools and is connected to the TCL route through bike lanes, which could enable a more horizontal expansion, enlarging the area of influence of TCL.

When combining the information on school access areas with multifunctional areas and municipal parks, the importance of the bike lane network becomes clear to establish a

connection between the neighbourhood units and the potential TCL route (Figure 8). Regarding the risks of gentrification, this link becomes even more important (Figure 9). To be calculated, three variables were considered of relevance: a) Unemployed population; b) Population over 65 years of age; and c) The age of the buildings.

Based on these variables (obtained by the 2011 Census and, therefore, with a reasonable degree of outdatedness) this information needs to urgently be reviewed through the lens of the 2021 Census, which could eventually generate new areas of risk.

The results identify medium risk areas along a large part of the TCL route, whereas some high-risk areas direct to its west. A high-risk area coincides with the neighbourhood unit identified above with potential multifunctionality linked to a bike lane on the eastern side. These high-risk zones correspond to population densities above 10,000 inhab/km<sup>2</sup>.

## Discussion

The polycentric model, resulting from urban expansion, involves several costs: residential costs; hidden costs that burden Municipal and National Budgets; and the generalized costs (neoclassical economics) of the transport system, directly related to negative externalities. For the discussion of solutions, properly identifying such a problem is fundamental, further pinpointing its costs and, specifically, its social implications. The great dysconnectivity between the territories results in the intense daily movement of the population. It is necessary to overcome the urbanization model, based on the mismatch between urban functions that create a coherence in land use. This enables the reduction of costs in terms of health, individual and family expenses, as well as in municipality costs. Finally, such a transformation is the core aim of Cascais.

Some elements were considered for a configuration (a set of figures) of the Cascais Lifestyle in a distant gaze. Some geographical-cultural elements (sun and beach, entertainment and food) and some central historical aspects (destination of European royalty



Fig. 5. Location plan of the area under study (Source: own elaboration).

exiles; similarity to the French Riviera) were taken into account in order to identify the 'Cascais Line' either a) as a metonym the best of the Lisbon region (following Florida) and, therefore, the best of Portugal as an Atlantic coastline that simulates the Mediterranean; or b) as a European and even global reference. The cases of micro-urbanism are evidencing the transnational reference of Cascais and, simultaneously, a micro-transnationalism, as is the case of Quinta da Marinha and the Estoril Casino.

Regarding Carcavelos, having been the first national body-surfing center and hotspot is probably the town's most relevant indicator for this debate. Hence, even in an exploratory way, it can be said that the Cascais Line embodies a Mediterranean lifestyle, associating sun & beach as well as street-life with good food, sociability, and fun, having a gambling and bohemian elements as a core. This lifestyle, presented here as a hypothesis, evokes the 'best of the South' through 'amazement', in which we can 'rest', and 'welcome by nature', all provided by the most western coast of Europe.

This Mediterranean mode of life, used as a reference to the Cascais Line and, eventually, even to specific areas of the Line (with the Carcavelos Ecosystem being one of them), does not exclude different lifestyles. Beyond the 'Concelho Sol', there is the 'Concelho Sombra'; alongside more compact urbanisms, suburban lifestyles are associated with a rational of a satellite or commuter zone.

This research aimed to identify the potential of a transition from the ecosystem to a multifunctional polycentrism of a city of proximity. We considered 'lifestyle' as a relevant indicator and selected the Mediterranean Lifestyle for the case of Cascais as a trigger to change.

Furthermore, we identified schools as potential centers of neighbourhood units, and potential multifunctional centers as main articulators of the city of proximity.

Such units were analyzed in relation to the soft mobility system (bike lanes) and the TCL route under study. This, we consider as the main elements for a model of social analysis for a change from a polycentric fragmented urban model to a city of proximity.

## Conclusion and Future Prospects

The application of the TCL method implies an analysis of the Ecosystem as a Lifestyle and a Social Diagnosis, but also an exploration of Possible Solutions and an Action Plan. Within the framework of possible solutions, several good practices of other countries may be identified for the design and implementation of TCL Cascais (e.g., Freiburg/Vauban; Grenoble; Bordeaux; Strasbourg, among others). Analyzing these cases as good practices may help to learn from positive and negative experiences by similar projects. Nevertheless, there must be continually adapting and testing of previous solutions, as is the case with the Cascais framework as an active learning process. We propose that the proof of concept in the Carcavelos Ecosystem can be a constructive exercise.

Finally, an Action Plan to promote participation is proposed in an exploratory way, which by no means neglects other possibilities. This is structured into six subprojects: 1) Carcavelos Ecosystem – Futures Laboratory to promote citizen participation in the project's co-creation; 2) clear

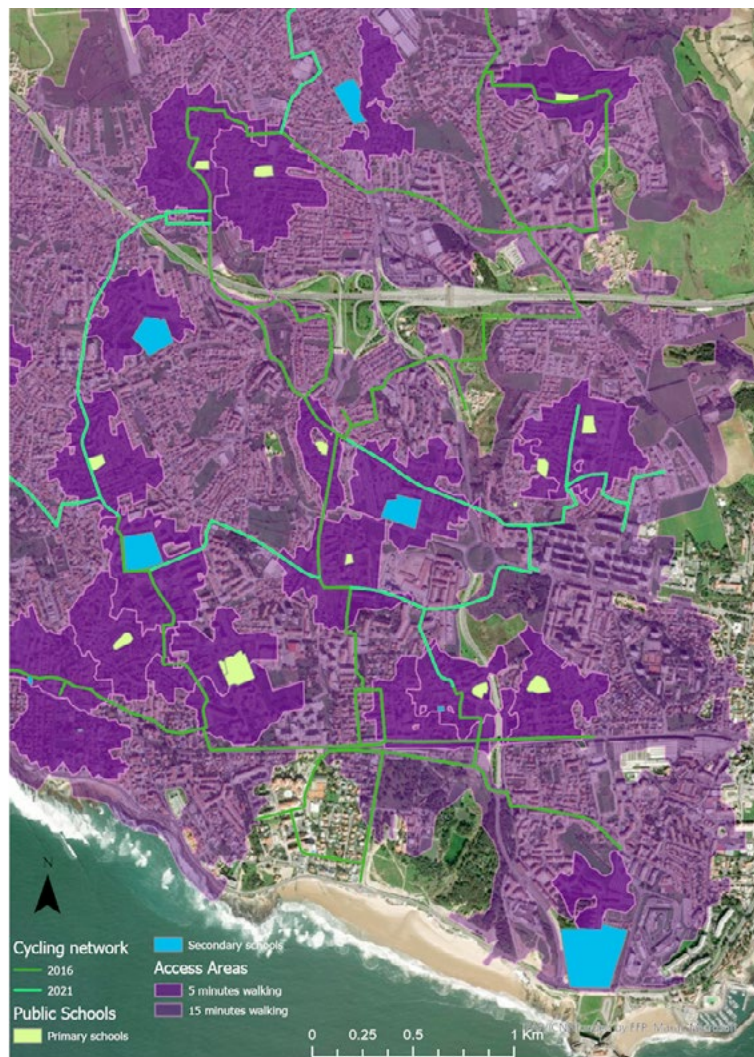


Fig. 6. Access areas to schools and Bike Lane network (Source: own elaboration).

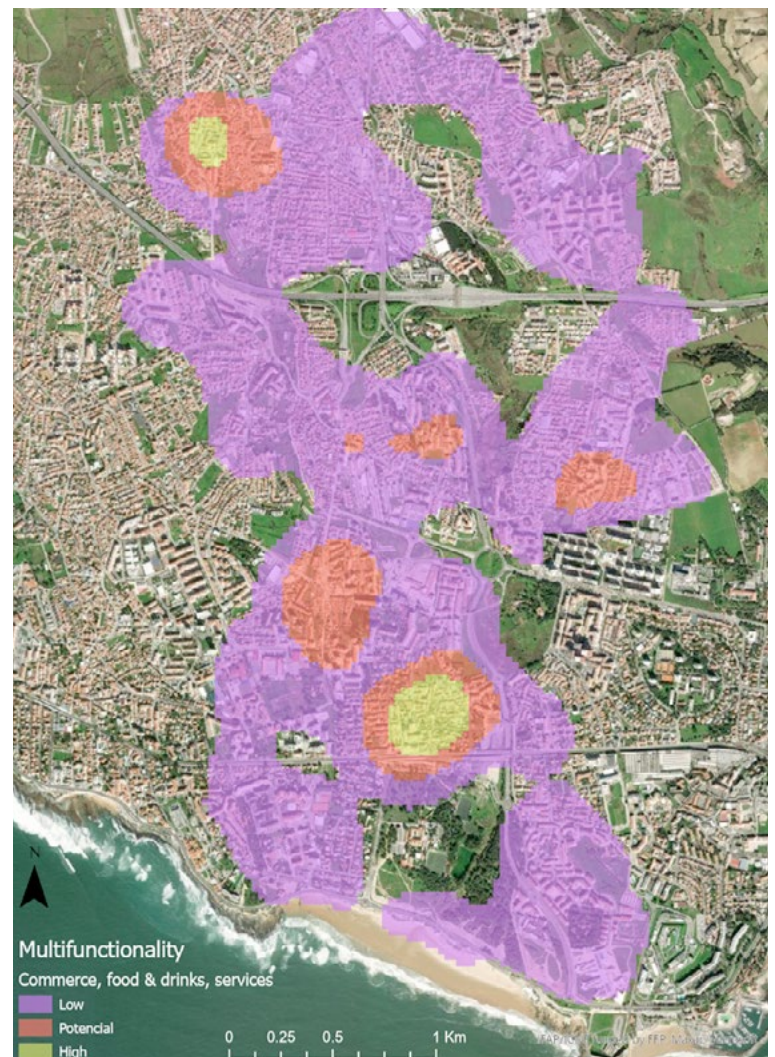


Fig. 7. Multifunctionality centralities (Source: own elaboration).

identification of Neighborhood Units and articulation with (new) multifunctional centers as well as mobility networks and profile users; 3) Characterization of a Model of Multifunctional Centralities, adding employment, culture, health, sports, and so forth; 4) Micro-gentrification Risk Map and mitigation actions; 5) acceleration of soft mobility (from schools) and the role of mobilizing leaders; and 6) Urban acupuncture, tactical urbanism and urban nudging action plan to reduce car dependency. ■

### Footnotes

1 This work is the result of a partnership between the Municipality of Cascais (Office of the Vice-Presidency) and the research team of the Center for Administration and Public Policies (CAPP) of the Institute of Social and Political Sciences (ISCSP), University of Lisbon.

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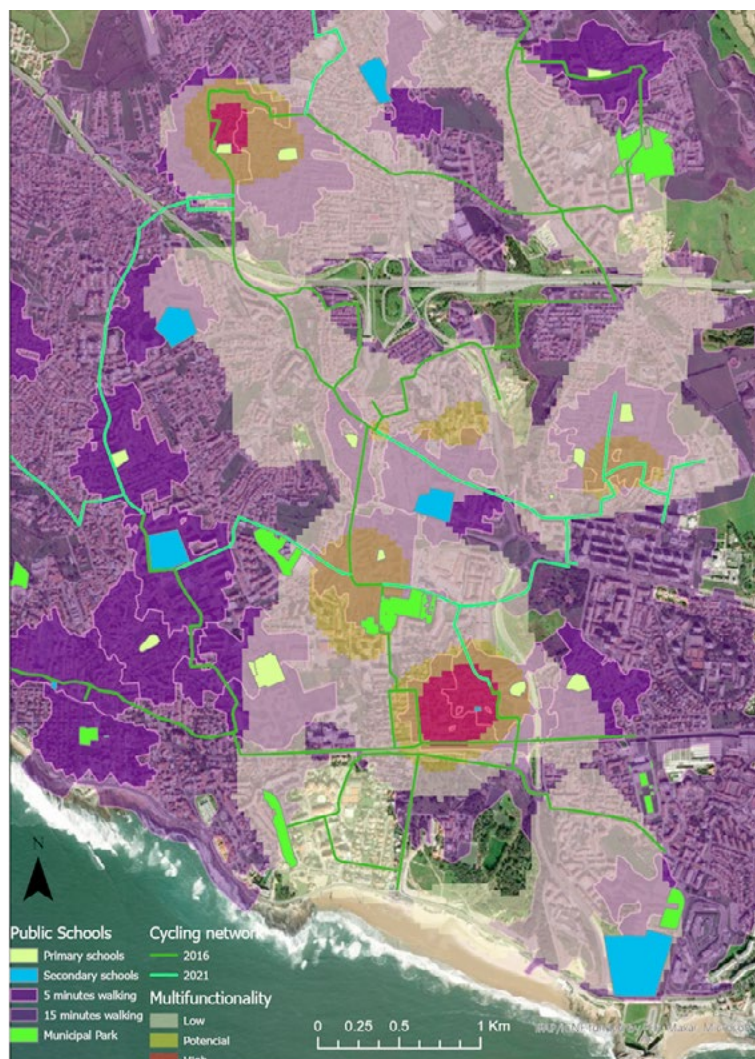


Fig. 8. Multifunctionality and school travel (Source: own elaboration).

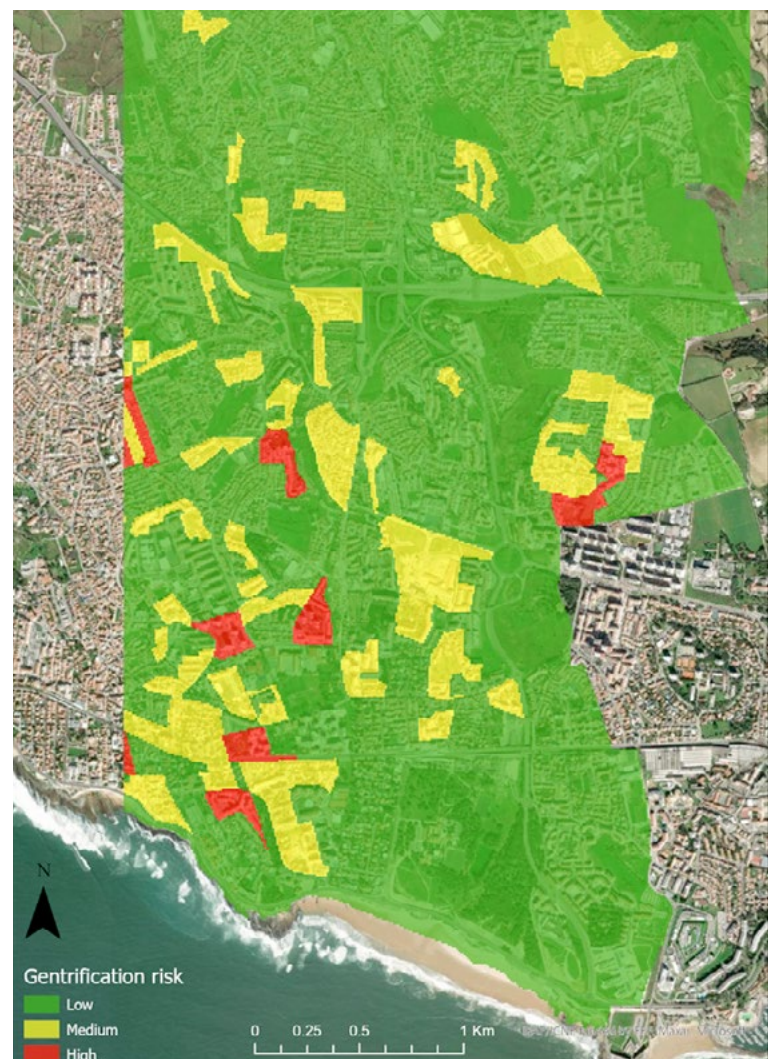


Fig. 9. Areas at risk of gentrification (Source: own elaboration).

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## Envisioning the future in public urban green spaces planning and design. Lessons from Porto

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### Introduction

Located in the littoral north of Portugal, the city of Porto is the leading city of the second biggest metropolitan area of the country with an area of 41.42 km<sup>2</sup> and a population density of approximately 5.000 inhabitants per km<sup>2</sup> (Pordata 2020b). The city has a warm-summer Mediterranean climate, with an annual average temperature of 15.3 °C, being the maximum annual average of 19.6 °C and the minimum annual average of 11.1 °C (Pordata 2020a). Due to the intense urbanization process of the peripheral territories in the second half of the twentieth century, the city has lost a significant part of the green structure (Andresen 2001). However, several parks and public gardens are still scattered in the middle of the dense urban fabric, varying by to age, location, use, spatial quality, surroundings, size, green structure and equipment. According to the inventory realized by Farinha-Marques *et al.* (2014), 95 urban green spaces were identified in the city. Along with the green structure diversity, Porto inhabitants socioeconomic profile varies, being considered a mosaic because of their huge heterogeneity (Alves 2012, 2016). The combination of these dimensions makes the city of

Porto a living lab to study Public Urban Green Spaces (PUGS) uses and functions and how this varies according to their location.

Porto has experienced profound social and urban transformations in the last century, resulting in changes in the urban landscape (Fernandes and Seixas 2018). Current trends in landscape urban planning and design should meet new life forms and patterns of urban societies and their reflection in urban space. This concern has been explicit in the need to move beyond a sustainable discourse to a regenerative one, which has been addressed in cities and urban planning (Crowley *et al.* 2021; Girardet 2010, 2014). A regenerative approach aims to restore nature-human connectedness and, most importantly, learn to live with nature (Mang and Reed 2013; Wahl 2016). The necessary transition should be done through the power of imagination to envision the future and prepare it.

Particularly, PUGS landscape urban planning and design should address some important questions: how to combine both ecological and social variables? How can these spaces provide both ecological and social benefits? This means to look to these spaces beyond the greenness. PUGS are vital components

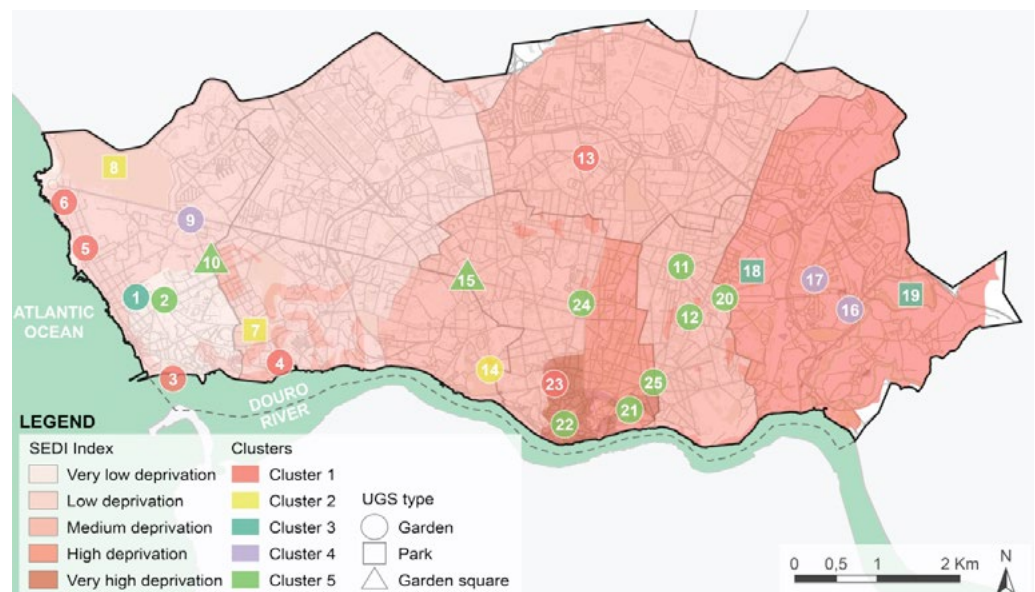


Fig. 1. Cluster distribution by socioeconomic and environmental deprivation areas according to PUGS type.