

# From the Fields to the Concrete: Urban Development of Campo Mourão

Caio Fialho

**Abstract**—The automobile incentive policy in Brazil since the 1950s creates several problems in its cities, more visible in large centers such as São Paulo or Rio de Janeiro, but also strongly present in smaller cities, resulting in an increase in social and spatial inequality, together with a drop in the quality of life. The analyzed city, Campo Mourão, reflects these policies, a city that is initially planned to be compact and walkable, took other directions and currently suffers from urban mobility and social inequality in this urban environment, despite being a medium-sized city in Brazil. The research aims to understand and diagnose how these policies shaped the city and what are the results in Brazilian's inland cities. Based on historical, bibliographical and field research in the city, the result is a diagnosis of the problem faced and how it can be reversed, in search of social equality and better quality of life.

**Keywords**—Urban mobility, quality of life, social equality, substantiable.

## I. INTRODUCTION

FROM the second half of the twentieth century, developing countries around the world showed a great urban and population growth, with Brazil being one of those, mainly in large and medium-sized cities. This rapid urban growth coupled with a policy of encouraging the use of cars and the lack of planning for urban integration in Brazilian cities in the 1960s and 1970s, was responsible for problems such as urban mobility, degradation of urban areas and economic and spatial segregation [6], [16], [17]. Thus, the population was induced to adopt the automobile as a form of urban locomotion, causing not only damage to the quality of life, but also problems such as air pollution and the decrease in public spaces, with the extinction of collective spaces, designated for use vehicles [3], [16], [17].

Brazil arrives in the 1990s with cities showing a severe case of social inequality and lack of urban planning, aggravated by the adoption of neoliberal policies that quickly developed specific regions within urban centers, matching them to international standards and at the same time impoverishing other regions, especially the peripheries, consequently creating a concentration of income in the hands of a minority, developing an urban division due to social imbalance [7], [16], [17].

In search of social equity, the policy of the 2000s was aimed at bringing the lower-class population closer to public services, making various investments in the entire urban sphere. For the Brazilian cities, the statute of cities was proposed, a legislation made for municipal governments to

have greater support from the law to a project aimed at the collective and urban restructuring.

From this brief historical introduction, we reach the city of analysis: Campo Mourão, which is one of the many Brazilian cities that have these urban deficiencies, which for a few years guided its planning in a rational model, following the project carried out by the Companhia de Melhoramentos do Paraná [1], [4], [2], [18], a model that prioritizes the car in relation to other modes. However, the city had a range of public spaces and a small urban area, but it was designed to be dense, but gradually it was carried away by the power of capital, expanding horizontally and replacing its public spaces with the need for the automobile fleet to grow in the municipality, in a promise of progress that costs to reach the municipality [18].

The progress proposal aimed at expanding the urban area of the municipality connected by high-speed roads, being a great incentive for the use of the car, the main means of transport in this project. Then a vicious cycle was created: neighborhoods increasingly distant from each other, the increase in the use of cars and the incentive to urban territorial expansion. It was a great opportunity for private capital to enter the municipality, releasing it from public urban mobility policies, with a view to the financial economy [5]. For many years, this cycle was repeated, but as was already predicted, it collapsed, resulting in negative effects on the quality of life of the people of Mourão, mainly affecting urban mobility. The difficulty in getting around the city is clear, which intensifies the number of traffic accidents, leaving the municipality in a critical situation. All of this slows down the potential for urban mobility in Campo Mourão, as predicted in the initial planning of the municipality [5].

According to reports, the Ministry of the City recorded that only 6% of Brazilian cities have an urban mobility plan [20]. The urban mobility plan is a federal law 12,587, which instituted the guidelines of the National Urban Mobility Policy, which requires municipalities with more than 20 thousand inhabitants to elaborate their mobility plans, thus seeking a development in Brazilian cities based on Transit-oriented Development or TOD. Campo Mourão is part of the group of Brazilian cities that do not use TOD as a parameter for urban development, showing really that the focus of urban mobility in the municipality is the opposite presented by the law, thus favoring automobiles again and ignoring other modes, even with potential in the urban area of the municipality.

The development of this research is based on the diagnosis made at the city of Campo Mourão, from a historical,

Caio Fialho is with the Unicesumar, Brazil (e-mail: caiof5.cf@gmail.com).

bibliographic, and field research, raising the urban deficiencies, giving rise to the hypothesis of when and what were the errors in the urban policy of from this city, which brought the current problems and what the effects of these decisions have been over the years.

## II. CLEARANCE OF THE URBAN PROBLEM

### A. Historical Survey of Urban Development

Campo Mourão is a city in the state of Paraná (Fig. 1), which began to be colonized in 1903, with the encouragement of the state government and built from the Companhia de Melhoramentos do Paraná which arrived in the city in the mid-1930s, investing in construction from the city, some villages and dividing land for coffee plantation in the 1930s and 1940s [1], [2], [8], [18].

The initial plan consisted of four avenues in the southwest-northeast direction, seven streets in the north-east direction and the São José and Getúlio Vargas squares occupying two central blocks of the plan, for a total of 36 blocks. Soon after the construction of the initial plan, in 1953, expansion was

ordered, going from 36 blocks to more than 200 [4], [15], expanding the urban area of Campo Mourão (Fig. 2).



Fig. 1 Location map of the Municipality of Campo Mourão [12]

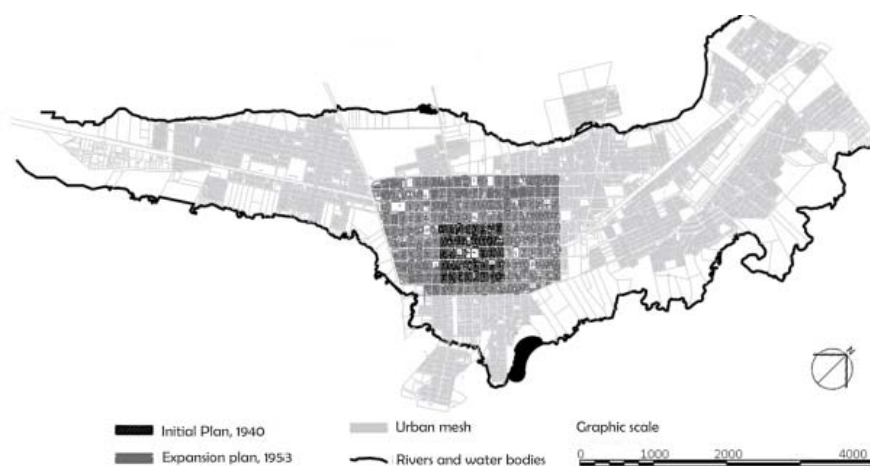


Fig. 2 Map of the foreground of Colônia Mourão [15]

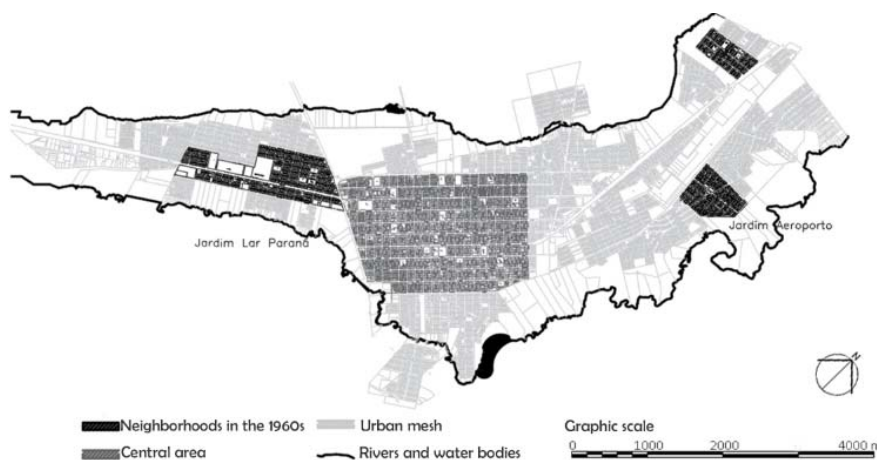


Fig. 3 Location map of neighborhoods built up to the 1960s. Adapted from Bueno, Emanuely

Six years after the expansion of the city in 1953, the construction of a new neighborhood with large dimensions for

a newborn city was started. Called Jardim Lar Paraná, the largest neighborhood ever built in the city, it is in the region called the west wing [4], [5]. Then the first neighborhood was born away from the central area, causing a problem to bring the urban infrastructure to the place.

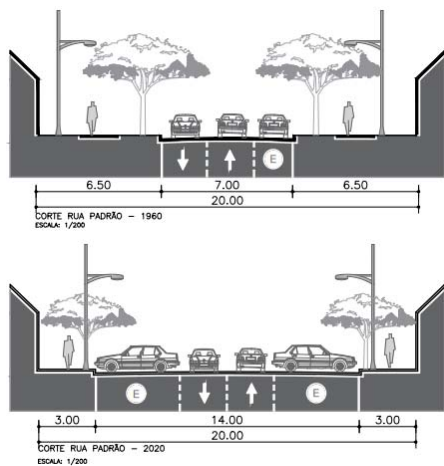


Fig. 4 Standard 1960 and 2020 street section [4]

As mentioned in the introduction, the problems in Brazilian cities worsen in those of the 1960s and 1970s, the growth of the urban area of Campo Mourão had its rise in this decade and the city suffered from a wide expansion of the urban area, jumping from 247 intersections, in the 1950s, to 1009 [5]. Soon, poor planning led to the creation of neighborhoods increasingly distant from each other, creating areas of urban voids. Neighborhoods with four and five kilometers from the city center were implemented, namely Jardim Santa Cruz and Jardim Aeroporto (Fig. 3). This expansion of the territory brings terrible living conditions for citizens, due to the long distances that the population needs to travel, in addition to the difficulty of bringing public facilities to these neighborhoods [11]. The fragmentation of the urban environment, in addition to aggravating the supply of public services and displacement, uses a pretext, the removal of the poorest population to areas of less interest in the municipality [7]. In the 1970s, after the

great territorial expansion, the city suffered a population retraction. Because of this, the city ended up losing financial resources in the way that it had no more capital for investments in public equipment. In the following years, the municipality grew little, passing an average of 200 intersections [5], where the city was occupying its urban voids and at a slow pace structuring itself, with the creation and or modernization of its few existing public facilities.

Between the 1970s and 2000s, the municipality sought to structure and create its major roads connecting the neighborhoods, and to adapt the city to the needs of the automobile, causing the city to dedicate a good part of its capital to this infrastructure work. Some of the roads still have the same characteristics as their initial planning, with a large part dedicated to paving and the smallest part to the road. The standard of the streets in the central area is 20 meters wide, with 13 meters of pavement spreading on both sides of the road, and a 7-meter carriage bed, after the reform of the roads, now has 3 meters of pavement. and 14 of a beddable bed (Fig. 4).

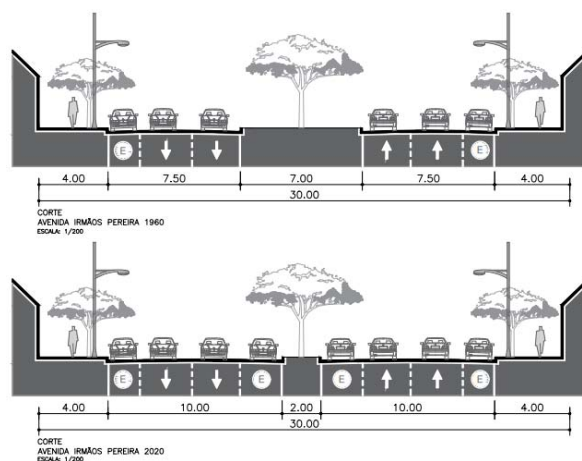


Fig. 5 Standard Street section 1960 and 2020 [4]

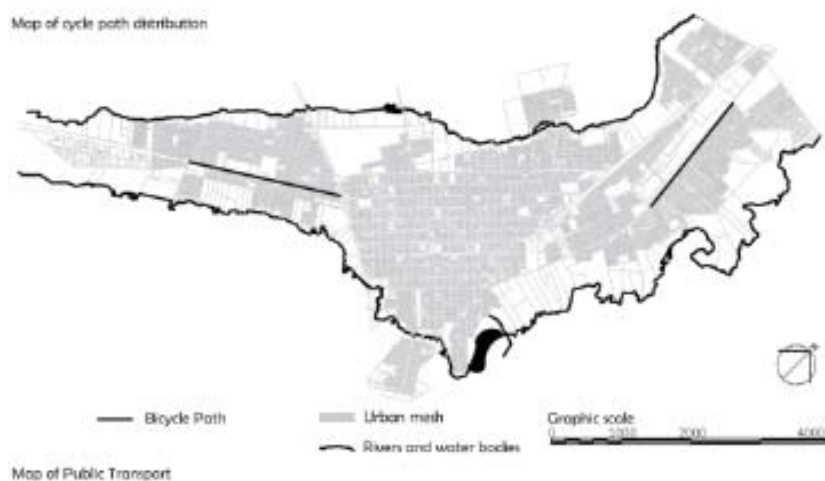


Fig. 6 Cycle map of Campo Mourão [5]

Already the avenues are between 25 and 30 meters, where the 30-meter-wide lanes held between 5 and 7 meters of central construction site [15], which were intended for parking, one of the avenues that underwent a major change was Avenida Irmãos Pereira, important avenue of the city, which reduced its median and deployed parking on site the side (Fig. 5).

### B. Structural Survey of Urban Mobility

Despite all changes in the structure of urban roads, the city has done little for other modes, such as public transport, cycling and walking. In such a way that today we do not find bike lanes or bike lanes in the central area, only in some disconnected areas of the city (Fig. 6). The urban cycle network is just over 4 km long, despite a road structure with the potential for implantation of the modal over a large urban area, due to the slope of the municipality ranging from 1% to 8% in some points, and maintaining an average of 3.5%, according to research surveys.

Public transport, on the other hand, has had the same characteristics since its implantation in 1969, with an average of only 11 thousand people using transport daily, about 11% of its inhabitants, as reported in 2019 [21]. The system has 13 lines distributed throughout the municipality, with a major problem; the passage interval between buses, with most lines having a 40-minute hiatus at one hour and twenty minutes of waiting, reaching in the worst cases, 6 to 8 hours of interval between vehicles, during the day [19]. Looking at Fig. 8

below, a satisfactory distribution of the public transport network is notable, but, as mentioned above, the waiting time between vehicles causes a lack of interest in the population, away from the use of the modal.

The time that these lines take to complete the journey, from the starting point to the terminal located in the central area or the opposite, is just over an hour [18], which makes the car even more interesting to local inhabitants, as they make the same distances between 15 and 25 minutes, according to information obtained from the Google Maps platform.

It is notable the poor distribution of bus stops, with the distance of up to 600 meters between stops, in some regions (Fig. 7). This distance creates difficulties for the user who needs access to the modal. The indicated bus stops are every 150 or 250 meters linear, so that the passenger could access it by walking and/or using other urban modes such as cycling [11]. These bus stops are mostly abandoned or simply a signpost with no structure at all to users and often not noticeable to the population.

The modal is not competitive with the car, given that it is slow, expensive, poorly distributed and with severe deficiencies for access, resulting in a loss to the municipality, accentuating its mobility problems, even though it is a small to medium-sized city.

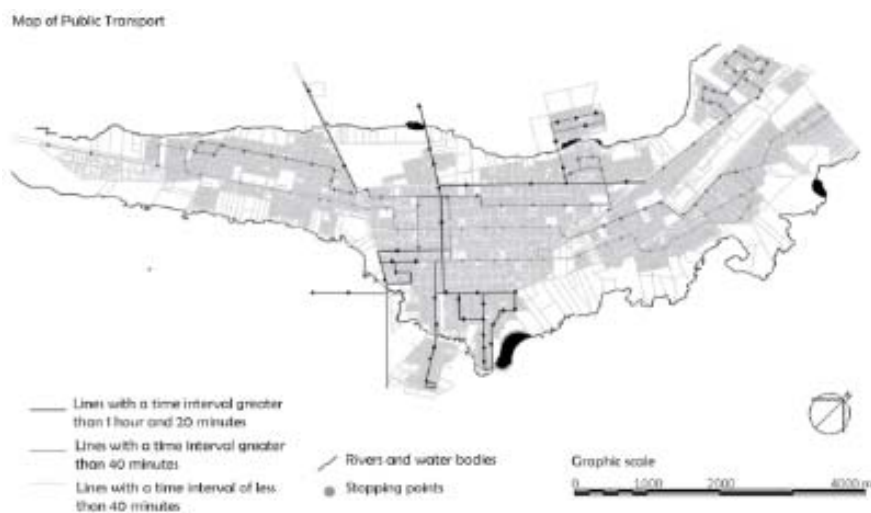


Fig. 7 Campo Mourão public transport map [19]

Over the years, the pedestrian has been losing space for automobiles, the sidewalks have been getting smaller and smaller, halving their sizes, while the rolling lanes and parking lots have doubled, and the act of walking is not treated with its due importance, having difficulties and severe obstacles, due to the state of conservation of the sidewalks, lack of afforestation, dangerousness, forcing the pedestrian many times to walk on the roads, mainly in the neighborhoods.

The region with the highest concentration of pedestrians is the central region of the municipality, due to the structures that

improve and encourage the walking of the Moorish people, such as the Avenida Capitão Índio Bandeira boardwalk and the Getúlio Vargas and São José squares, where they have a satisfactory state of conservation, good urban furniture and beautiful afforestation, however, this region is only about 300 meters, being just an "island" in the middle of a city that focuses entirely on the car [17].

The right to the city when it is granted to people, and made from public facilities, becomes the fundamental key to urban vitality, because with the lack of population in the place, the

area is abandoned and deteriorates, losing not only market, but its use as an area of common good.

### III. THE PUBLIC ADMINISTRATION

According to the guide “DOTS nos planos diretores” of 2018 [10], we have two types of urban formation, the 3D city and the 3C city, these models are forms of simplified classification of the city. So that the 3D model is the representation of most Brazilian cities, in which they are dispersed, disconnected and distant cities, that is, cities that did not institute an urban planning focused on the right to the city, but rather promoting the use of the urban environment focused on individualities, such as private space and real estate speculation. In the opposite direction, we have the 3C model, where we see compact, connected, and coordinated cities, in other words, cities with planning focused on the rational use of the soil, ordered by urban mobility, seeking a more compact city with a healthy density, offering greater opportunity for its inhabitants, in addition to a fair and egalitarian development, that is, a more humane city. So, we arrived in a city of about 94 thousand inhabitants [12], where mobility problems are recurrent in the urban environment, in a way that influences the entire urban sphere. The city is perfectly an example of a 3D city, dispersed, disconnected and distant cities, so that it has only a central nucleus and a dispersed and low-density urban area, an insufficient infrastructure in several regions of the municipality, forcing residents to move around.

The urban development policy supported by the territorial expansion and privatization of the urban space, which the city appropriates and employs, primarily results in the majority of investments in public works destined to the needs of the automobile [3], [11], and this is visible in the figure below (Fig. 8), where public expenditures of the Municipal government of Campo Mourão were surveyed, in the period from 2018 to June 2020, which are available on the municipality's transparency portal, and thus separated into four categories; Road System, Education, Health and Public Spaces.

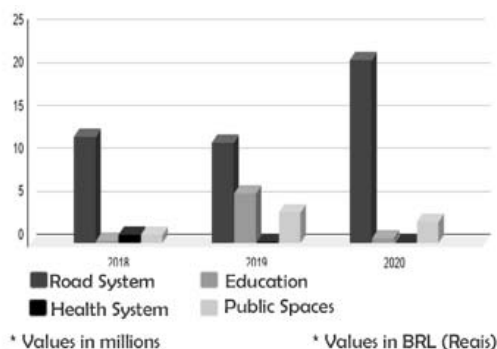


Fig. 8 Spending on public works by the municipality of Campo Mourão 2018, 2019 and 2020 [22]

Then, after the high investments in the road network added with a policy that despises alternative urban modes, we have

therefore, an exponential increase in the number of vehicles (Fig. 9). Currently Campo Mourão has 70,359 registered vehicles [9], showing a 63.41% growth in the fleet in the last 10 years, which is extremely disproportionate compared to the population growth in the same period, from 87,194 inhabitants, for 94,859 inhabitants [12], an increase of 8.7% over a period of ten years.

Today the city has 1 car for every 7 inhabitants, almost double the Brazilian average, 1 car for every 4 inhabitants [9], where the city is unable to accommodate this growing amount of vehicles, and adding to a classification and deficient road signage, as mentioned above, and which does not match the actual municipal situation, results in a high number of accidents, thus in the five-year period, between 2014-2018, 2838 accidents were recorded in the municipality [9], that is, an average of more than 560 accidents per year, which directly affects the quality of life of the Moorish population, causing consequences not only for those who suffered from these accidents, but also for all their residents.

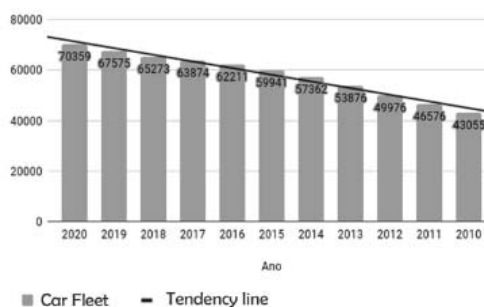


Fig. 9 Growth of the Vehicle Fleet [9]

### IV. THE INVERSION OF VALUES

From the premise that “cities have the capacity to provide something for everyone, just because, and only when, they are created by everyone” [23], we realize that the way of political and social urban organization, not only of the city of study, but as of most of the Brazilian cities, they need to undergo an alteration, proposing to its residents, a real insertion to the right of urban use. And for this use to be effective, an inversion of values is necessary, where human beings are once again the protagonist of the city, and the car returns to its assistant function, reconfiguring the mobility system in force in urban centers. In this way, we arrive at another premise, widely used in Brazil in the groups of protests of 2013, in favor of the free pass, that “a city exists only for those who can move through it”, where it is necessary new means of transportation, which are accessible, comfortable and fast, in addition to urban planning integrated with mobility [10].

Reducing inequalities in the displacement of the population, which is most felt by the class with the lowest income power, in which, it is obliged to reside in places far from the central urban centers, building a new form of urban misery, where the resident has no space for leisure or creativity, due to the loss of time on the way between home and work [13].

Although Brazilian cities present critical frameworks on the

right to urban use, in 2001 Brazil took an important step towards better quality of its cities, the approval of the Statute of Cities, which guarantees the right to urban use of land, housing, infrastructure, urban transport, public services and regulates fiscal inspection and regulation practices. And in 2012, the country took another big step towards the approval of the National Urban Mobility Policy, which establishes a series of guidelines, regulations and guidelines for the development of mobility in Brazilian cities with more than 60 thousand inhabitants [14].

Anyway, the question on this occasion is how we can verify the consequences in a small/medium sized municipality, which is located in the Brazilian countryside, where urban deficiencies and the results of an individualist policy are less visible, due to the fact having a relatively low number of inhabitants and a small territorial extension, compared to large municipalities, consecutively, it has a smaller population in a state of fragility, which makes it less expressive, but no less important. So, we asked, is it possible to reverse the current situation found in Campo Mourão? It is like? Firstly, the inversion of values, where the human being becomes the key part of the city, in which the right to the urban environment ceases to be theoretical and begins to be practiced, using the premise of Jacke Jacobs in 1961 that “cities have the ability to provide something for everyone, just because, and only when, they are created by everyone” [23], with a focus on equality, not only financial, social, but also urban.

The public and shared space must be adopted as a place of comfort, leisure, and fun for the inhabitants, promoting the social relationship of individuals, in addition to a sustainable culture from a greater number of squares, parks and green areas distributed by the local urban network.

As there is no city without transport, fair and sustainable urban mobility is necessary for an urban environment that wants to offer opportunities to everyone. Looking for the incentive of pedestrians to travel short distances, cycling for medium distances and for long public transport, such as buses or urban trains, however implementing a system that covers the municipality, encourages urban and social development.

And today we have great possibilities for that to happen, because we have the support of the law, both City Statute, as well as of the National Urban Mobility Policy, making it not just a distant dream, but a close reality, and that we can experience in a few years.

## V. CONCLUSION

From the concept that the ideal city to live in is a compact, connected and coordinated city [10], [11], we realize that the city of study, Campo Mourão, is far from this model, as shown in research, made from bibliographic studies on municipal, regional, and national history, in addition to a deepening in the topic of study. This leads to a diagnosis of the planning policies used in the municipality since its planning in 1940, and a possible elucidation of a guideline for a more humane urban planning policy, aimed at all classes and types of people living in the city today.

We found that the municipality is just one of the Brazilian

municipalities that have the same urban failures, caused due to decisions that disadvantage living in the urban environment, in addition to the right to use the city. But also, the possibility of a reversal of this situation through a change in the measures taken not only at the national level, but also at the municipal level.

A city made of people for people [11], is what we need for social welfare and the advancement of our society. Thus, the research seeks a result for the urban problems presented today, based on a historical, structural, and social diagnosis portrayed in the city of study, aimed at improving the quality of social life in Campo Mourão.

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