

## MAPPING THE 15-MIN CITY

# introduction

The functionality and practicality of a city has never been so evident as in the last months, which the entire population had to go through a strict lockdown due to spread of Covid-19. Many countries have applied severe rules which has also limited the circulation of individuals within a certain radius of kilometers, having their home as the zero point.

The better structured a block is, in terms of amenities and facilities, the shorter the distance people have to commute, and as a consequence, there is less human contact. However, this idea of multilayered and diverse blocks is not a movement that arose due to the pandemic, this concept started to be developed as a contraposition to modernism principles, which prioritised a strict functional zoning, by centralising

services, residential and commercial activities in specific points, and the connection between them was based on large boulevards, resulting in a typical car-driven urban fabric.

In many big cities, there is an urgency to rethink these traditional modernist blocks and also to plan the upcoming rising of new urban developments, in order to build up more mixed-use neighborhoods where locals find more amenities within a block by commuting shorter distances.

Looking specifically at the European context, the city of Paris has focused on a pre existing urban movement in order to brainstorm solutions for decentralising the city, called “The 15-minute city” or “The city of proximity”.

According to Carlos Moreno, a scientific director and professor specialising in complex systems and innovation at University of Paris 1, the 15-minute concept was developed primarily to reduce urban carbon emissions, reimagining our towns not as divided into discrete zones for living, working, and entertainment, but as mosaics of neighbourhoods in which almost all residents’ needs can be met within 15 minutes of their homes either on foot or by bike.

**The 15-minute city has never been so evident such as nowadays due to the pandemic** ”

# goals + methodology

This manual aims to offer individuals the experience of doing their own analysis of amenities and facilities within the radius zone from their home or zero point. In order to make the tool accessible to everyone, both residents and urban planners, two types of analysis are offered:

**1. Block scale:** a simple and quick tool to analyse a small-scaled area, by adopting a radius of about 100m.

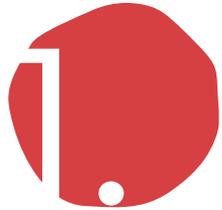
**2. City scale:** based on the “The 15-min city” a deeper study tool, by analysing a radius of about 1.0 - 1.5km, which is approximately a 15 min walking distance. Advised for planners and researchers.

Different categories of facilities and amenities are symbolised by colours, so it becomes easily readable on the map. It is important to highlight that the outcome of the analysis will not give you final answers to the local urban problems, but rather will give you a more accurate perspective of how sectorized and/or diverse the area you live actually is.

**Do you find essential services and basic needs within 1km distance walking/ cycling?**

Since there is not an official definition nor prescription for what the perfect scenario should look like, we can assume that the most desired scenario is the one with a very rich diversity. The analysis, which presents a poor mixed-use scenario, can be further shared with the local community/ municipality in order to propose future urban and placemaking interventions that might be able to supply the demands of the area.

# the categories



**Commercial** Local shops, clothing stores, bakeries, cafes, basic needs such as pharmacies, supermarkets.



**Services** Doctors, lawyers, taxi, cinema, laundry, language course, accounting office, dentist's office, hotels, workplaces in general.



**Residential** Both vertical and horizontal, detached or semi-detached house.



**Industrial**



**Institutional** Community facilities, such as sports halls, church, leisure areas, schools, health centers, among others.



**Green areas** Parks, linear parks, squares.



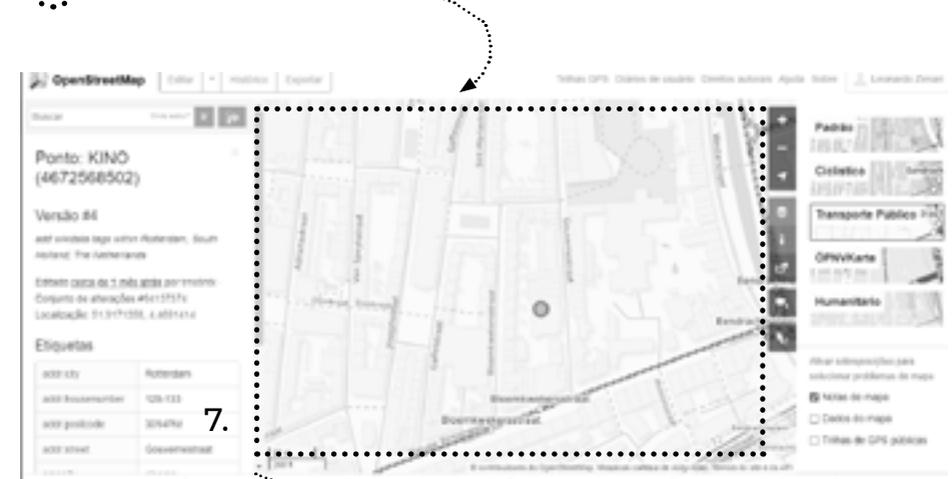
**Mixed use** Residential + other category within the same building. For example: residential building with a commercial ground floor.



**Without use** and/or urban voids.

# 1. step by step **block scale**

1. Go to [Openstreetmap](https://www.openstreetmap.org)
2. Type and search your address
3. With the zoom, you can adjust to either the scale of 30m/100ft or 50m/200ft. It should be enough to cover your block.
4. On your top right, choose the sample “ public transport”, which has a clear background.
5. Export jpg. In case you have trouble to do it, print screen.
6. Open Paint, open the jpg by Ctrl+v. For those who are familiar with Photoshop, Indesign or Illustrator, feel free to use any of them.
7. For Paint: Select only the map, cutting off non essential information + Ctrl+c.
8. File - open new file - Ctrl+v. Now you have the image only with streets and properties.
9. You can print it in any scale you would like to work on.
10. Using the scale of the map as a reference, measure 100m radius from your home.
11. With a compass, draw the circle to be analysed.
12. Within the circle boundary, colour the properties with colourful pencil and/or pen by following the categories.



# case study

Oude Noorden

Rotterdam

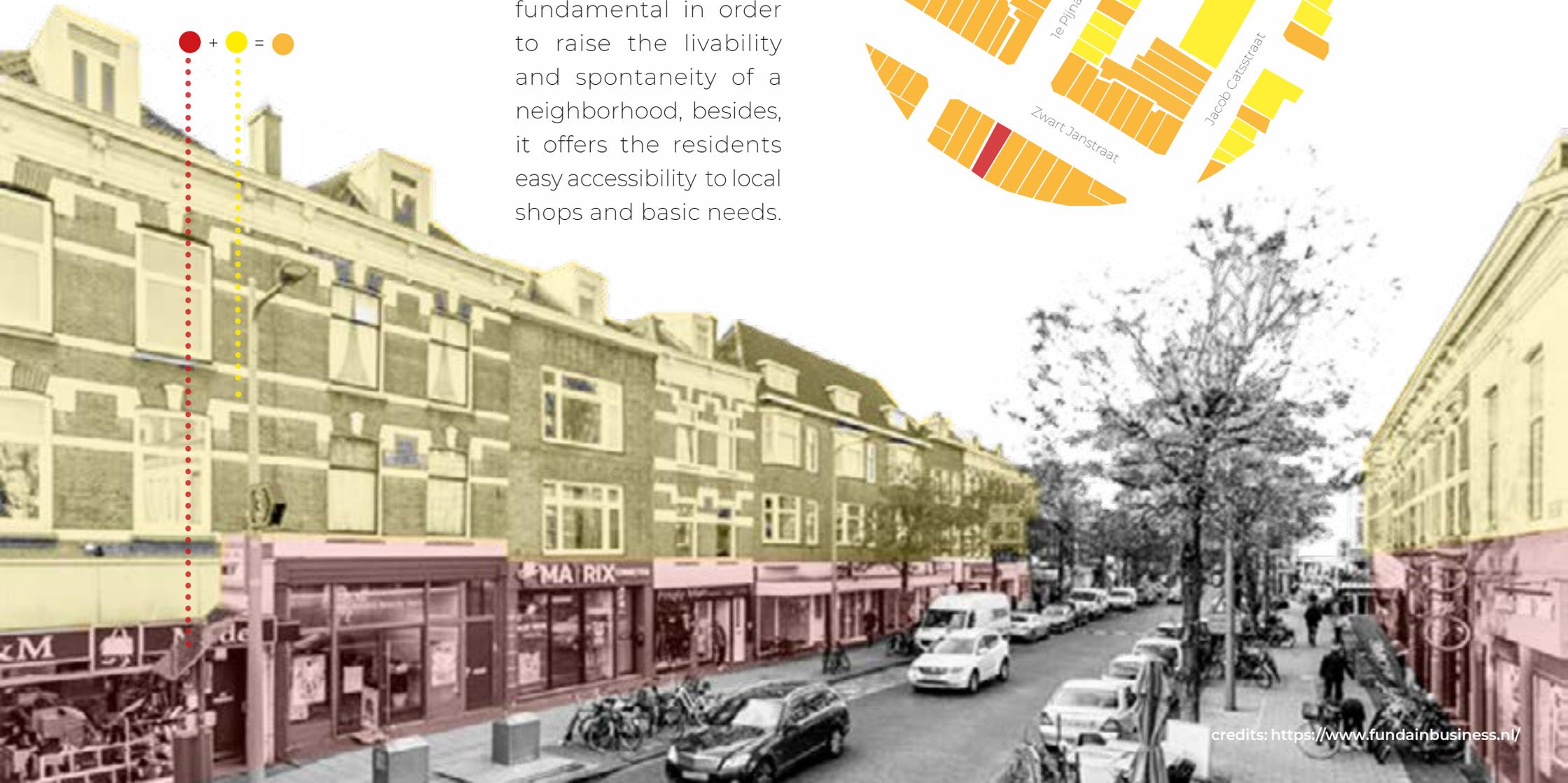


A successful scenario might be the result of a good balance between residential and mixed-use. Plus, the presence of active groundfloors is fundamental in order to raise the livability and spontaneity of a neighborhood, besides, it offers the residents easy accessibility to local shops and basic needs.



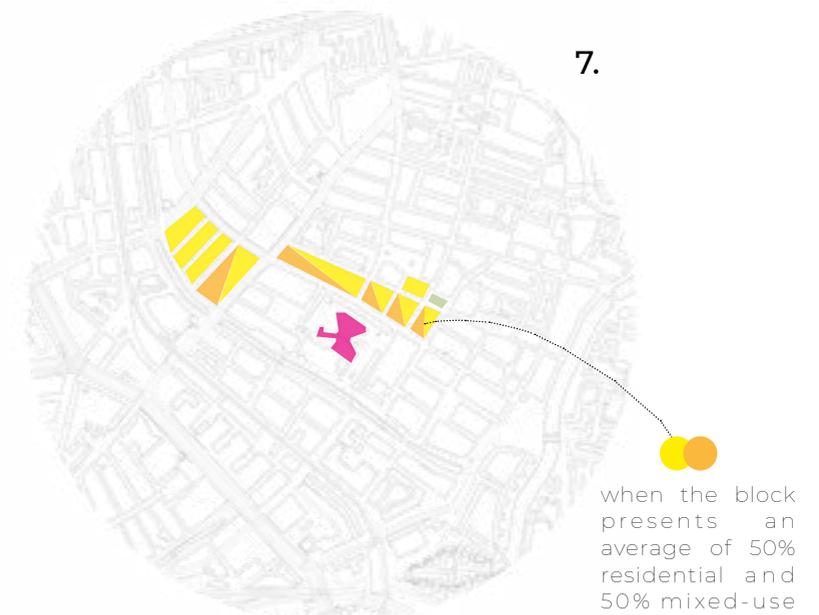
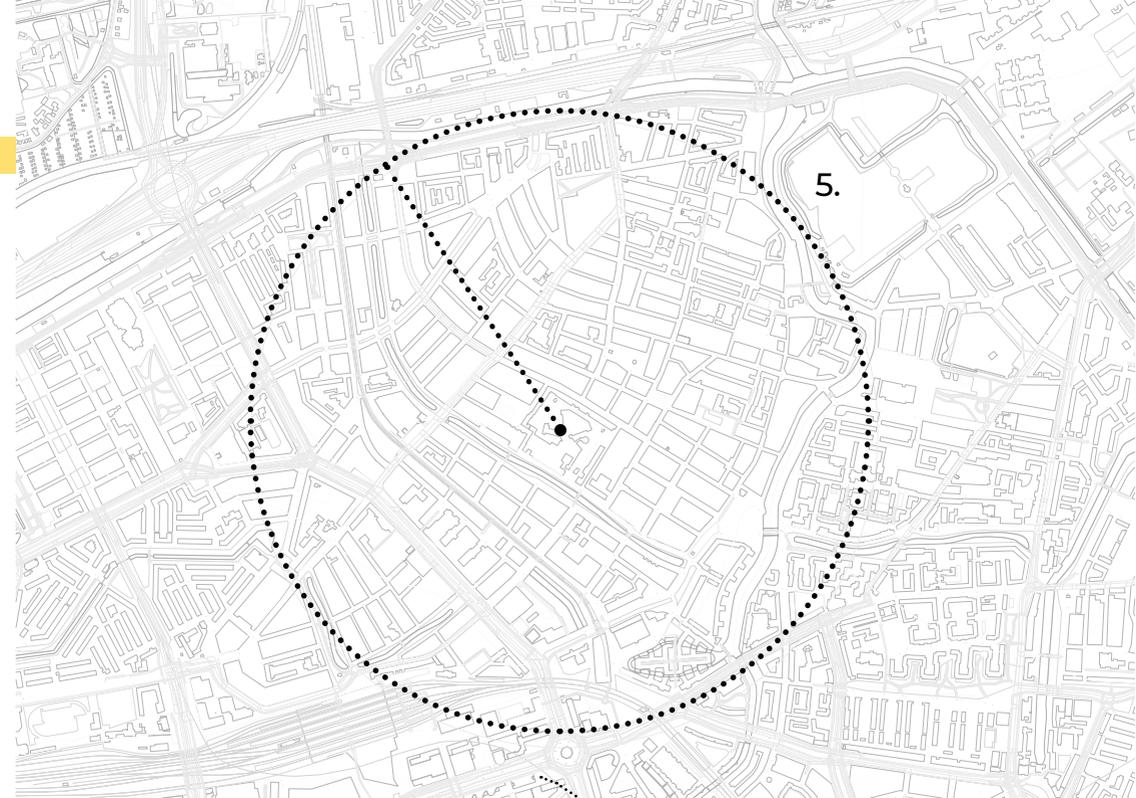
52%

46%



## 2. step by step city scale

1. Many cities offer a dwg file (Autocad) with the map of the municipality. Check if your city is available on the browser.
2. For The Netherlands, TU Delft offers the national map of 2017. Go to <https://sites.google.com/a/g-tudelft.nl/top10nl-2017/> and search the code for your region.
3. Download it and open with Autocad.
4. You can delete some of the layers that are not relevant.
5. Measure 1km radius from your home and draw the circle, so you have an idea of the area you have to work on.
6. Ctrl+p to set up the printing. Plot style table: grayscale, paper size: ISO A1, scale: 1:4.000 should be enough to cover the area. At last: window - select the area and print it. For those working on Photoshop, save as pdf.
7. Start colouring the map! In case the scale doesn't allow you to see each property or if the dwg file does not provide it, you can color the block as an unit, by analyzing which category prevails.



# case study

Ørestad district

Copenhagen



0,75%

92%

2,5%

3%

0,75%



residential:  
multi-family  
typology



services:  
Sweco  
Architects



commercial:  
Shopping Mall

institutional:  
sport complex



residential:  
single-detached  
house



mixed-use:  
very poor  
ground floor

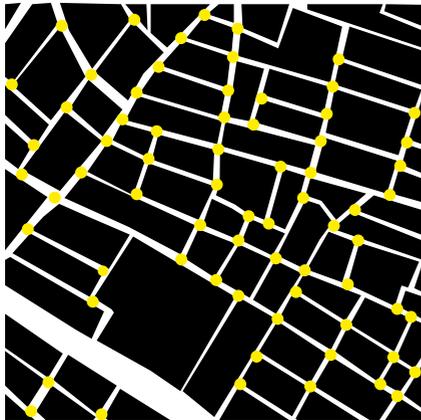


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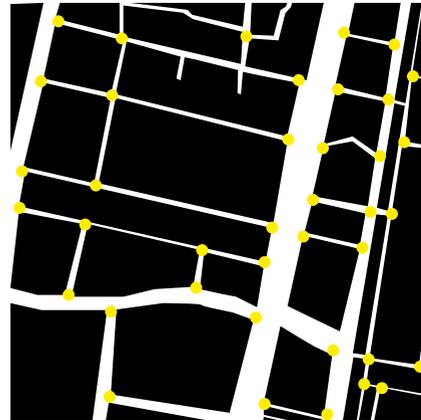
Even though Ørestad District may be rich in services, such as workspaces and companies' headquarters, the remnants of the modernist urban planning are still barriers for the accessibility and reconnection of the district. Factors such as strict functional zoning, implementation of wide boulevards and massive blocks result in a monofunctional area, featured by a fragmented urban fabric and a high concentration of commercial use in one specific point, for instance, the shopping mall.

# deeper analysis

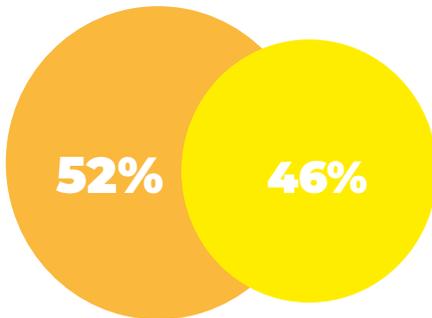
Oude Noorden, Rotterdam



Ørestad, Copenhagen



● block  
● junction



When comparing the two cases, it is evident that Ørestad has a wider variety of colours (categories), which makes us think that it is a more multifunctional and diverse neighbourhood, however, there is a very poor balance between residential and commercial use, also, they are highly concentrated in specific areas, as a result of functional zoning.

Looking at the urban fabric, Oude Noorden in general presents smaller scaled blocks and shorter distances between junctions, which means faster and easier accessibility within the whole neighborhood.

In order to conclude, both cases do present the basic principles of the 15-min city, it is indeed possible to find basic needs and essential

services within 15 min walking or cycling. However, in Oude Noorden, Rotterdam, you find a wider range of commercial use within much shorter distances when comparing to Ørestad, Copenhagen.

The 15-min city can be a very rich tool, not only to map what kind of services you find nearby your address, it can be also implemented as a tool to analyse the local urban planning and its impacts on the city's functionality.

The manual motivates you to use the 15-minute city concept with public space analysis in order to get to know your project, on either the block or city scale, more in depth to critically investigate the existence of mixed-use development in both accessibility and human experience perspective.

# references

## “The 15-min city”

<https://www.bloomberg.com/news/features/2020-11-12/paris-s-15-minute-city-could-be-coming-to-an-urban-area-near-you>

## Cidade de São Paulo: Lei de parcelamento, uso e ocupação do solo

<https://www.prefeitura.sp.gov.br/cidade/secretarias/urbanismo/legislacao/zoneamento/index.php?p=214281>

## Urban Finland

<https://urbanfinland.com/2021/01/08/inspiration-for-a-15-minute-city-action-plan/>

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