



MY NEIGHBOURHOOD

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UN HABITAT
FOR A BETTER URBAN FUTURE

MY Neighbourhood

The UN-Habitat Urban Lab has developed an extensive 'check list' of urban design principles applicable at the neighbourhood scale which facilitates an integrated approach to neighbourhood design by incorporating principles across five key city objectives, across sectors (transport, housing, public space, utilities etc), and across spatial dimensions (neighbourhood, street, open public space, and building unit).

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In the face of urgent global challenges confronting our cities and regions, effective urban planning has become more important than ever before. We need to establish a foundation for urban design that not only aligns with the targets and indices of sustainable development at a global scale but also empowers local voices and meets local aspirations.

Urban areas confront a multitude of intersecting challenges, including inadequate and substandard basic services, social and public facilities, mobility constraints, urban sprawl, uncoordinated and unplanned development patterns, and the escalating threats posed by climate hazards. Addressing these challenges calls for an integrated approach to planning, one that can be embraced by government bodies, private planning practices, and communities alike.

MY Neighbourhood demonstrates the impact of design interventions across various sectors and spatial dimensions and raises awareness among users. Moreover, it supports the identification and organisation of targets and indicators for city profiling and spatial assessments, thereby enhancing decision-making processes. Above all, MY Neighbourhood is designed to be adaptable, collaborative, and facilitatory, fostering inclusive engagement and collective action.

At UN-Habitat, we recognise the critical importance of a knowledge base that consolidates interconnected principles for urban design. This document reflects our organisation's mandate and perspective and draws on our extensive global experience. It encapsulates our approach to sustainable neighbourhood planning, providing guidance towards sustainable development while considering the unique contexts and characteristics of different locales.

It is my sincere hope that this publication will serve as a catalyst for the implementation of best practices in urban design. I also hope that MY Neighbourhood will empower stakeholders to actively participate in the transition towards sustainable development, ultimately leading to a better urban environment for all. Together, we can forge a path towards a more inclusive, safe, resilient, and sustainable future for our cities and regions.

Rafael Tuts

**Director, Global Solutions Division,
United Nations Human Settlements Programme**

ABOUT MY NEIGHBOURHOOD

INTRODUCTION

A neighborhood is a community, geographically localised within a larger city, town, or rural area, represented by a spatially defined unit, with its own system of functional and social networks.

A good neighborhood provides an enabling environment for an improved quality of life for everyone.

Whilst designing a good neighborhood it is necessary to take a diversity of aspects into account, e.g. social, economic, environmental, mobility, etc. as well as a diversity of urban dimensions, e.g. open public space, building unit, etc. to ensure a holistic and integrated approach to urban design.

Neighbourhood-scale interaction with city-wide systems should be linked to ensure design initiatives can bring a maximum impact for both community and the city.

PURPOSE

Driven by the need to translate global, national and local policies and strategies to local planning and design interventions and projects, UN-Habitat's "My Neighborhood" offers a practical guide to achieve sustainable urban space while contributing to localizing the Sustainable Development Goals (SDGs) and implementation of the New Urban Agenda.

UN-Habitat's 'Five Principles of Sustainable Neighbourhood Planning', created in 2014, was used as a starting point. It summarized five key urban planning theories and provided indicators for sustainable neighbourhood design.

"MY Neighbourhood" expands on this work by providing an extended list of key design principles and tips, built from a body of research and project experience, and shows how they are applied to different dimensions of the neighbourhood (not just to a neighbourhood as a whole). "MY Neighbourhood" then links these principles to ensure that they are multi-dimensional and sectorally integrated.

FUNCTION

Rather than providing firm recommendations, the urban design principles and tips in "MY Neighbourhood" brings a new perspective to urban design, that views the city as a growing continuum from neighborhood to urban and broader city-region scale.

It does this by grouping principles according to five city-wide objectives (compact, connected, vibrant, inclusive and resilient). Each principle and tip is described using specific examples, or, in some cases, measurable indicators.

The principles and tips within each of the five objectives cover a diversity of spatial indicators such as **form, distribution, proximity, diversity, intensity and connectivity**.

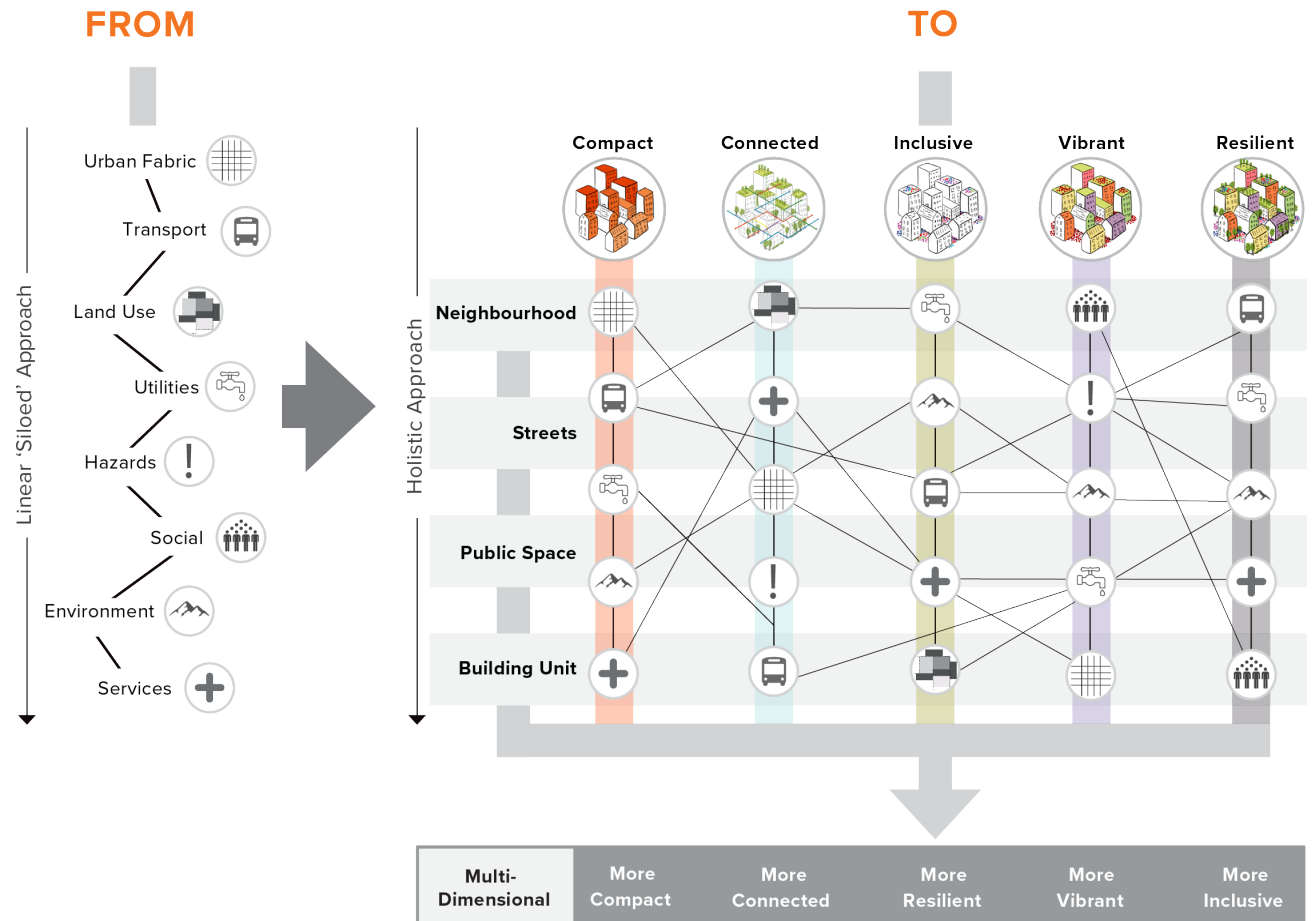
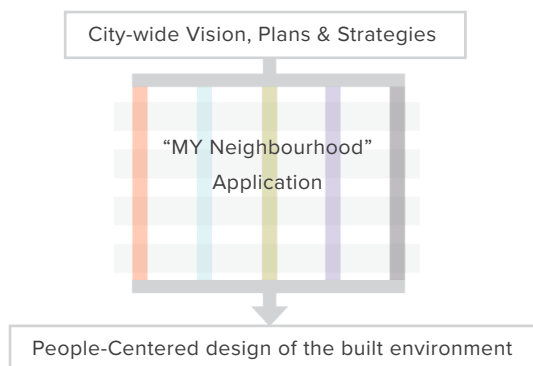
This facilitates a multidimensional and comprehensive set of principles that tackle a diversity of spatial, social and economic and environmental networks.

"MY Neighborhood" deepens the links to local economy, place identity, inclusivity and climate

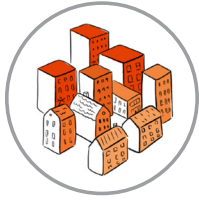
change, ensuring the adaptability of principles and tips across diverse cultures and regions.

Although “MY Neighbourhood” has many functions, it can be used as a guide by organisations or individuals, to form independent and participatory urban assessments, to improve urban strategies and interventions, to clarify vision and to monitor project outcomes.

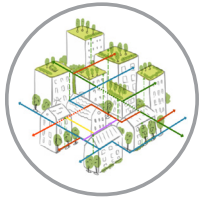
“MY Neighbourhood” classifies design interventions and supports a design process that integrates scale and sectors, and a prioritization of actions and identification of synergies.



1. COMPACT CITY



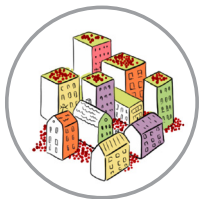
2. CONNECTED CITY



3. INCLUSIVE CITY



4. VIBRANT CITY



5. RESILIENT CITY



FIVE CITY OBJECTIVES

WHAT THIS DOCUMENT DOES

- Provide principles of urban planning and design at the local scale to inform urban transformation
- Show the link between local transformation with city-wide, regional and national vision
- Provides indicators for urban monitoring against SDG and NUA targets, and a starting point to identify new urban indicators
- Ensure that urban assessment, urban interventions and outcomes are multi-scalar and integrated (rather than sectorally siloed or spatially fragmented)
- Enhance strategic urban planning capacity of municipal governments;
- Facilitate an inclusive and participatory approach to urban transformation
- Localizes the SDGs in local urban planning process and urban transformation at the neighborhood, street level, open public space scale

and urban building unit scale

- Provide an entry point to identify strategic projects within a sustainable urban development framework;
- Quicken response to rapid growth challenges
- Enhance local capacity on best practice urban planning;
- Harness and share knowledge of urban development and planning
- Link policy to evidence-based and un-siloed approach to urban transformation

WHAT THIS DOCUMENT DOESN'T DO

- Provide specific data indicators for every principle – MY Neighbourhood aims to be as generally applicable as possible, so in practice, these principles are adaptable to local cultural contexts and facilitate the identification of more indicators
- Provide a prioritisation of design interventions in emergency or extreme resource deprived areas



HOW TO USE THIS GUIDE

1. As a key step in a planning process, in the following ways:

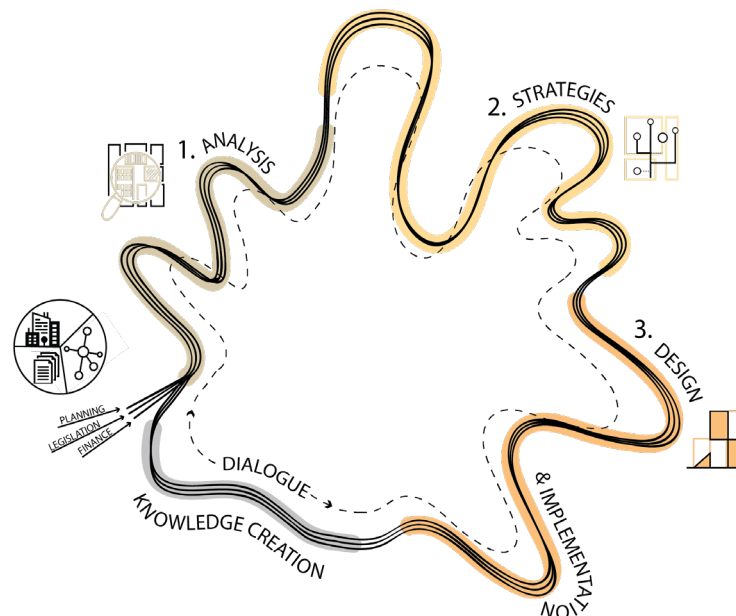
“MY Neighbourhood” principles may be applied in a targeted manner, guiding city-wide spatial analysis, to identify city visions, priority principles, areas in need, urban challenges, and good practices.

The principles then support the development of transformative, area-based strategies and urban design projects that spatialise priority city-wide visions. The principles facilitate participation to ensure multi-sectoral and multi-stakeholder collaboration.

The principles can indicate the performance of an urban area according to the five city objectives and help to monitor the outcome of urban design interventions and align the city's performance against global indicators (SDGs, NUA etc).

New principles and indicators created in this process feeds back into a bank of principles.

The graphic below is an example of the UN-Habitat planning process which regularly adopts “MY Neighbourhood” in many ways and stages of the process.



2. As an independent product for **planning professionals, urban designers, sector experts** (e.g. biodiversity, transport etc.), **civil society groups and individuals, academic groups, government representatives and NGOs** as a guiding and self-assessment tool in the following ways:

The design principles and tips can be used for reference, checklist, explanatory, and capacity building material for professionals, practically involved in the process of urban transformations.

A matrix format can be created (using the city objectives as the x-axis, and dimensions as the y-axis) and can be formatted as a large mural that serves as a reminder of sustainable design principles and as an idea board to collect other local practices and recommendations at different scales and across different visions.

“MY Neighbourhood” has been developed in an interactive and ‘learning by doing’ approach. There are a number of different ways that these principles have already been applied in practice.

1. To engage with community groups (such as youth, women, children etc). The five city objectives, principles and tips were used to facilitate participation, to help understand the city’s current successes, deficits and dynamics.

2. As a check list and guide during design workshops. It has provided benchmarks for ensuring local scale urban design proposals are reflecting city-wide strategies, SDGs and NUA principles.

3. During capacity building training sessions, where local partners have assessed their own city functions, plans, strategies and projects, with the guidance of the Urban Lab, and new indicators have been identified specific to that context.



SHARED BANK OF PRINCIPLES

Scan here to find the digital matrix of MY Neighborhood!



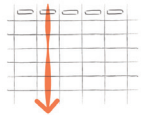
In addition to using this guide, a digital version of these principles can be found using the QR code.

The digital 'MY Neighborhood' is in the form of a matrix, to emphasise the importance of linkages between the Five City Objectives and across scales.

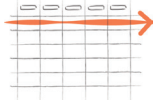
The matrix can be used for brainstorming exercise, placemaking activities and collection of best practices.

Apart from practical guidance, the matrix provides a framework to structure design interventions and to develop them in a way that tackles a variety of themes and issues, contributing to the bigger picture.

As 'MY Neighborhood' is a starting point to identify additional principles, this digital version means that the bank of principles can grow and help share experiences and outcomes.



In the digital format, columns are grouped by the 5 City Objectives.



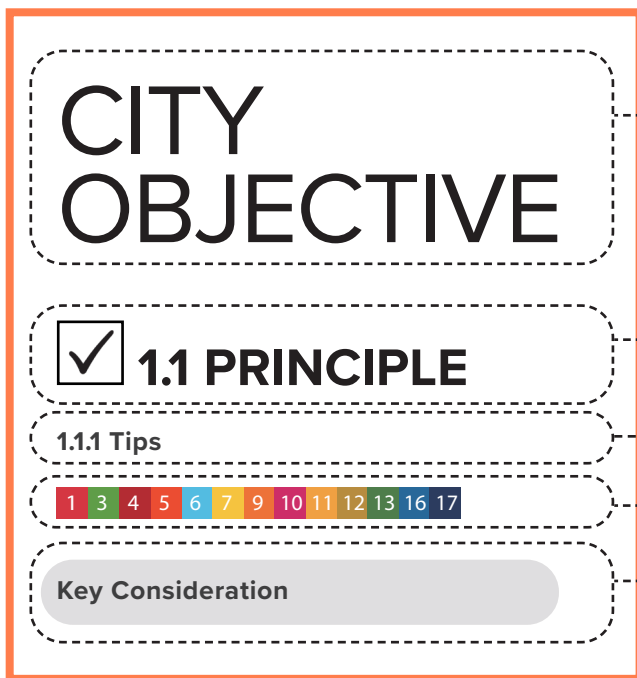
Rows are grouped by the physical scale that the principle and tip relates to.



And each cell gives detail to each principle and tip.



INSTRUCTIONS



Principles are disaggregated by city objectives, to show which recommendations should be applied for each dimension to achieve a certain city vision.

This document can be used to find details for each principle, tip and key consideration.

City Objectives

These objectives are: Compact City, Connected City, Inclusive City, Vibrant City, Resilient City.

Principle

A core design recommendation that accelerates the achievement of the specific vision.

Tips

Design recommendation that supplements a specific principle.

SDG alignment

*Design recommendations contribute to achieving specific SDGs targets and indicators. The alignment of design principles and tips with SDGs was made using the UN-Habitat's **SDG Project Assessment Tool**.*

Key Consideration

Next to some recommendations there is a consideration aimed to give advice/ share an experience about what could be considered during the design process.

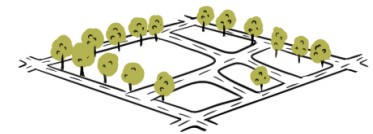
This document disaggregates the principles and tips by physical dimensions of urban design - this answers the question of *where* the suggested interventions are within the neighbourhood, to support a multi-scalar approach and to inform a cohesive vision.

The four dimensions are the following:

Neighbourhood



Street



Open Public Space



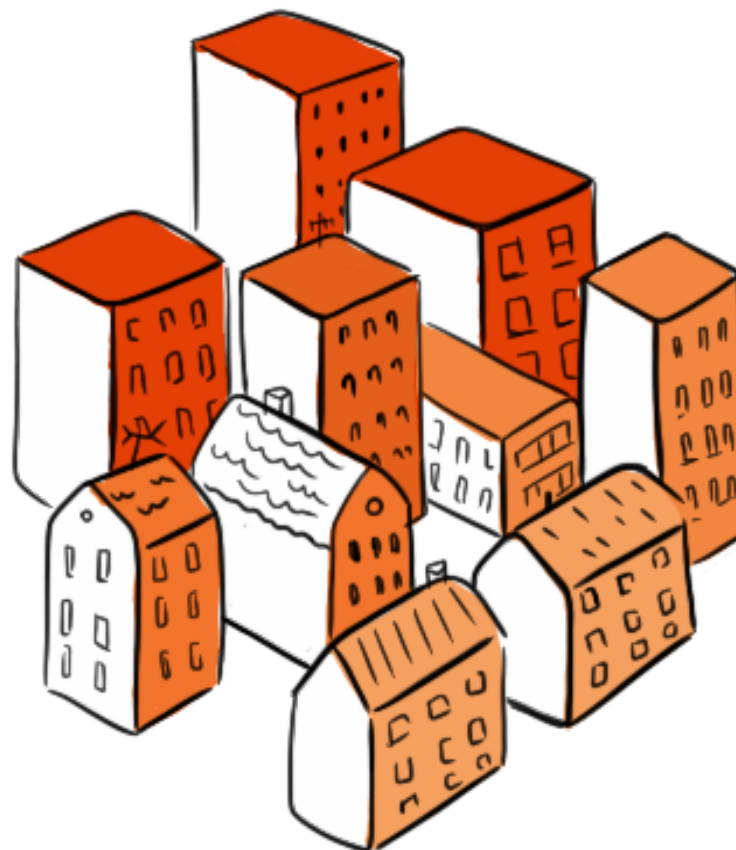
Building Unit



COMPACT CITY

Residents of the compact city enjoy a highly efficient urban form characterized by close proximity to services, reduced travel times, and variety of uses and functions. A highly walkable environment that is supported by the urban layout encourages walking and cycling, providing opportunities for people to interact and businesses to emerge. An efficient public transport system provides affordable and better accessibility for all, bringing multiple economic and environmental benefits. Achieving a compact city implies creating an efficient urban space that is safe, comfortable and attractive for all its residents.

The Compact City relates to the New Urban Agenda transformative commitments: 34, 36, 37, 39, 43, 62, 67, 68, 69, 70



COMPACT CITY

✓ 1.1 PROXIMITY & WALKABILITY



Ensure close proximity of urban services within the neighborhood that makes distances walkable, naturally creating a walking and cycling-friendly environment. Residents of the compact neighborhood should have 5 min walking distance (from 400 to 450 m) to key services. In some cases walking distance may be increased to 10/15 minutes depending on the city scale and a grid.

1 3 4 5 6 7 9 10 11 12 13 16 17

While planning urban services, it is important to analyse the surrounding context beyond the project area to ensure accessibility to maximum residents. Some urban services may maximize the impact of each other once located in close proximity (for example, a library will benefit from the proximity to a university or school).

1.1.1 Infrastructure for safety



To ensure better walkability, the urban environment should provide infrastructure for safe and convenient walking and cycling such

as pedestrian sidewalks and cycling paths of appropriate size (physically separated where applicable, or with slow zones), street lighting, universally accessible pedestrian infrastructure, elements for passive surveillance such as street retail, etc.

3 5 9 10 11 13 16

1.1.2 Permeability of Urban Fabric



The permeability of the urban fabric can significantly contribute to the efficiency of movement and perception of compactness by creating a connected and continuous network of open spaces that prevents from overcrowding. It is important to consider fine-grained urban pattern and appropriate scale of blocks and buildings that increase options for pedestrian routes, promoting better use of functions and creating a walkable public space network within the urban layout.

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1.1.3 Accessible Open Public Space



Public space plays a critical role in perceiving density and should be well distributed within the neighborhood to form a network. Pedestrians should be able to reach from their houses a public space or facility within a five-minute walking distance (the equivalent of 400-meter distance), as it is considered the most practical and realistic threshold. UN-Habitat's Global Public Space Programme recommends evaluating the quality of a public space, as well as its walkable radius, as the catchment area identifies daily users and their movement flow. In some contexts, public spaces should be adjacent to residential units and/or social facilities.

5 10 11 16

1.1.4 Green Space Distribution



Urban green spaces play a vital role for the health and well-being of the residents of the compact neighborhood. Urban green spaces facilitate the reduction of the heat island, are necessary for storm water management, enhance biodiversity, and reduce noise and air pollution. It is important that green spaces are distributed in a way to serve more people, and part of a larger system of continuity. Although there are sometimes tradeoffs between density and green coverage, balances can be achieved.

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✓ 1.2 MIXED LAND USE



Mixed land use, associated with contextually appropriate high residential density, and based on efficient public transport, is one of the core elements of compactness. The suggested floor area distribution for a mixed-use sustainable neighborhood is 40 to 60 per cent for economic use, 30 to 50 per cent for residential use and 10 per cent for public services. The recommended standards offers a range to allow for flexibility so that different contexts can adapt them to their own situations.

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In some contexts, mixed-use environment is an integrative element of urban development (characterized by the first floor with small shops, activities). While planning a new development, it is important to analyse the character of local mixed-use development (the type of shops, street terraces, etc.) and leverage from the local good practices.

1.2.1 Compatibility of Uses



Mixed-use development should ensure mutual compatibility of uses (in a way they benefit each other and the surrounding areas) and their smart distribution to maintain a comfortable environment for residents. Sensitivity issues, noise and pollution levels should be considered as well as a system of designed access points to the neighborhood to maintain privacy and safety needs. Spatial buffers might be used to minimize conflicting uses within the neighborhood (greenery, courtyards, etc.).

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In some contexts, the balance between private and public development should be maintained. Necessary privacy may be achieved with green buffers, vegetation, design elements and public space. The compatibility of building heights and proportions of street enclosure may be taken into account to emphasize certain functions (e.g. wider boulevards with higher development are appropriate for commercial functions, bystreet and human-scale environment may create a pleasant environment for child-friendly spaces, local stores, etc.).

1.2.2 Vertical zoning



To ensure mixed-use environment and prevent monofunctional pockets of urban development, vertical zoning should be applied to block and building design. Lower levels of the building should be reserved for commercial uses or public services (libraries, shops etc.), and appropriate separation of incompatible uses should be considered. Vertical zoning may

consider green roofing for recreational and agricultural purposes (where applicable).

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1.3 EFFICIENT PUBLIC TRANSPORT



An efficient public transport system is an essential element of compactness. Residents should have an easy and universal access within 500m walking distance to low capacity public transport (and 1000m to high capacity public transport) considering catchment areas for different transportation modes. Public transport stops should be designed according to the contextual needs (provide shade, sitting areas, waterpoints, etc.) and comply with universal design standards.

1 3 4 5 6 7 9 10 11 16

1.3.1 Active Streets



To ensure a safe and attractive environment that promotes walkability as a key element for a compact neighborhood, spaces adjacent to the streets should have diverse uses. Active street edges and building frontages create a pedestrian and cycling-friendly environment by providing better safety, places to stop. This implies that “complete street” design and compliance with universal accessibility standards are necessary.

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While designing active street frontages, pedestrian passages should be reserved to maintain the physical and visual permeability of the urban fabric, which, in some contexts, may help to maintain local character.

1.3.2 Sustainable Parking Policies and Reforms



While ensuring appropriate space for surface parking, it is important to avoid vast expanse of parking surfaces or parking units with little contribution to the quality of the street. Where applicable and possible, consider permeable or semi-permeable paving and incorporate porous surface design. Parking design in this way will improve water quality, increase groundwater supply, and reduce urban heat island effects. Introduce more efficient management, adequate pricing, and reduction of on-and off-street parking to help de-incentivize driving, mitigate emissions, and reclaim valuable public space. Cities should re-assess outmoded parking policies and implement parking reforms to protect the environment and improve quality-of-life for all residents. In addition, cities can explore opportunities to adapt the streetscape to facilitate diverse functions, activities and uses. Flexible streets and parking lots can be closed for vehicles at times and used for rush hour drop off, vending during off peak hours, or to host such community uses as markets, exhibitions or sport events. The design of loading and unloading zones through signage and patterned or painted surfaces, as well as through regulatory measures must be taken into account.

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If the provision of surface parking lots in public spaces is mandatory due to urban regulations, surface parking may be used as transitional solution, that can be easily converted to other uses (e.g., public space, etc.). De-paved surfaces or permeable surfaces may be promoted to maintain and protect the existing eco-system that can be integrated in future uses.

✓ 1.4 EFFICIENT DENSITY

The effective use of urban land should be achieved by increasing the density of development and activity. It is important to ensure that the high-density benchmark is locally relevant by assessing the overall efficiency and character of the urban form. To promote a high population density, an indicator around 150 p/ha for a sustainable neighborhood, which refers to an existing urban fabric and new green-field development, may be considered as a reference; however, density indicators may vary and should be carefully assessed depending on the context.



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Achieving a balanced density is recommended, and involves the assessment and consideration of undeveloped/unused urban land, low-density pockets within the urban footprint for redevelopment or/and regeneration. Redevelopment can happen through modification of building units, increase of building height where applicable, etc. In some contexts, unused former industrial sites may provide potential for redevelopment/infill development.

1.4.1 Human Scale Environment



In compact development, human-scale factors should be given greater emphasis from the viewpoint of achieving a better quality of life. A human-scale environment facilitates

communication among residents and interactions with the space. In addition, a people-centred approach, that is based on how a place is perceived and experienced, should be considered in the design in addition to particular recommendations on building heights.

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Often, examples of human-scale development that support compact urban form and efficient density can be found in central/historic areas of the city. In some contexts, vernacular urban pattern performs better in terms of urban efficiency, vibrancy and density and may become a good inspiring practice for the new development. The visual, functional and design quality of the human landscape is imperative in compact and dense urban fabrics, especially to create 'approachable spaces' and to mitigate the impact of large scale projects.

✓ 1.5 PRESERVATION & INTEGRATION OF BLUE GREEN INFRASTRUCTURE



Existing natural areas, vegetation and water should be preserved and integrated within the neighborhood, building better resilience through nature-based solutions, and creating pleasant recreational areas that improve quality of life within the compact neighborhood. In some contexts, agricultural uses may be protected and enhanced to improve the ecological situation, limit urban expansion, diversify the local economy and provide food security.

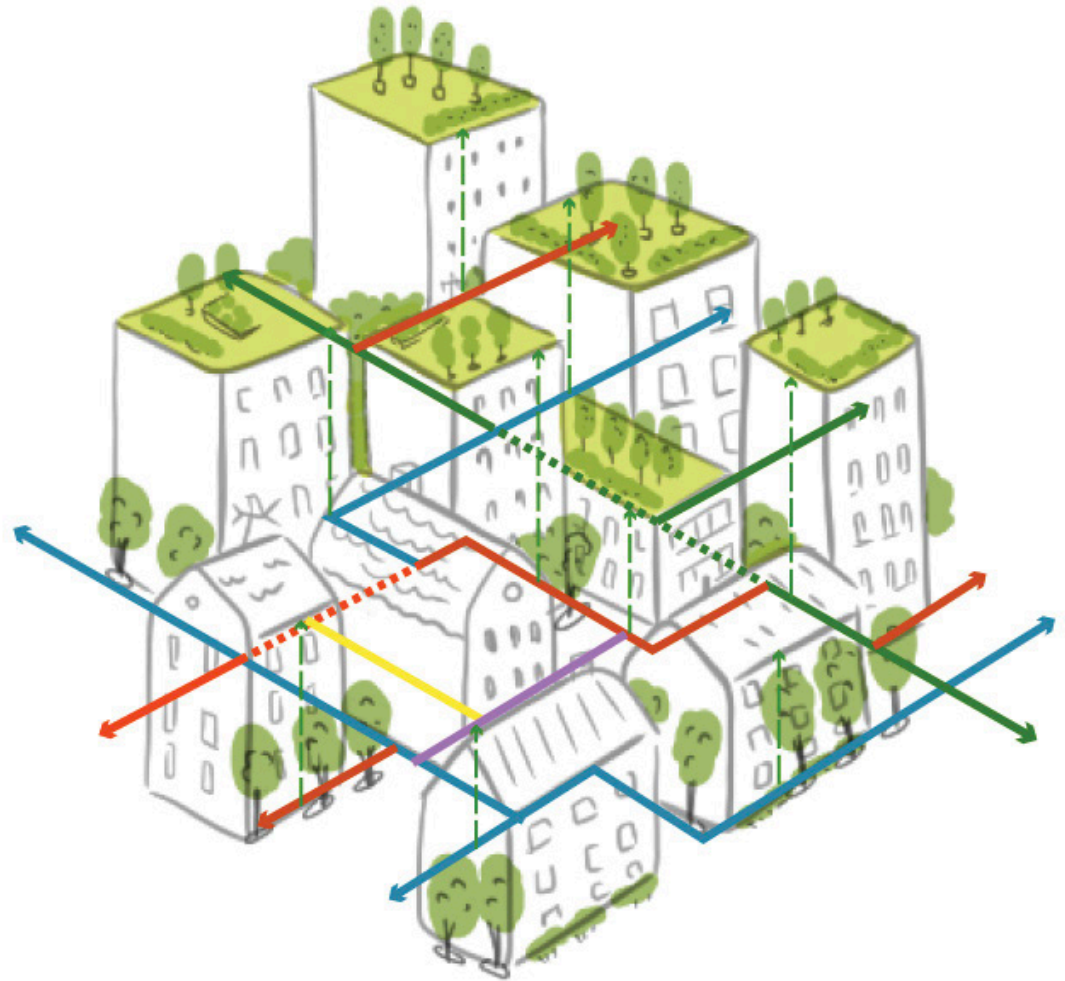
1 2 3 6 9 11 13 14 15

During the site analysis and assessment of planning pre-conditions, it is important to emphasize and map the natural assets to integrate in the plan. Vegetated areas, forests can be transformed into parks and public spaces. E.g. seasonal rivers may be part of the green boulevards or linear parks.

CONNECTED CITY

Residents of the connected city leverage from permeable and efficient street network with walkable and cyclable distances to close destinations while having access to multi-modal transport systems to connect with the opportunities of the wider city. Streets in the connected city function as public spaces and cornerstones for Transit Oriented Development and give priority to people and transit over cars. The urban environment of the connected city considers streets as vibrant, safe and attractive open public spaces accessible for all, integrates blue and green networks, support the functionality of the ecosystem, and connecting people with nature.

The Connected City relates to the New Urban Agenda transformative commitments: 34, 36, 37, 39, 54, 62, 67



CONNECTED CITY

✓ 2.1 EFFICIENT STREET NETWORK



To ensure an adequate level of the street network that also attracts pedestrians and cyclists, the amount of land needed for roads, and open public spaces has to be determined. As a preliminary reference it is recommended that at least 30 per cent of land is allocated for roads and parking and dedicated non-motorised transit paths, and at least 15-20 per cent is allocated for open public space in high density mixed-use urban areas.

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2.1.1 Road Hierarchy



Road networks should support a wide choice of routes based on user hierarchies that prioritises non-motorised transport and pedestrians. It is important that the routes for walking, cycling and public transport are clearly defined. The overall hierarchy must give priority to sustainable modes of transportation (“green hierarchy”) and include arterial routes and local streets based on traffic speed differences. Combining walkability and public transport catchment, the suggested distance between two arterial routes

may be between 800 to 1000 m as a reference. Street features should vary according to specific network requirements of each type and functionality of the street.

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2.1.2 Street Density



To ensure balance between the street and other land uses, the street network should encompass at least 18 km of street length per square kilometer. The indicator is given as a reference and city management and urban planners could “adjust” the design pattern of the street network, using the street density level that is assessed locally.

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2.1.3 Permeable Street Network



An efficient and permeable street network that provides convenient movement should ideally be linked with minimum physical barriers to provide a continuity of pedestrian movement. An efficient and permeable street network might be measured by density of the road intersections. A reference indicator of 80-100 street intersections per km² might be taken as a preliminary benchmark for the network assessment.

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The street permeability (represented by the level of road intersections) may be characterized by different types of street patterns. While designing a neighborhood, an assessment of the vernacular grid might be useful to analyse its climate adaptability and elements that enhance local identity.

2.1.4 Walking Paths and Cycle Connectivity



Pathway and cycling networks should form an unobstructed network and connect to the overall arterial transport system to avoid car-centred streets, and ensuring the possibility to walk and cycle longer distances. A highly interconnected path network provides a choice of walking and cycling routes that lead to other destinations within the city or/and a region. Enforcement processes can be used to support the non-motorised transport network in its early phases.

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Apart from increasing the level of physical activities and promoting better health, cycling and walking infrastructure might significantly support tourist activities, increase the focus on the environment, etc. While promoting a cycling network, it might be useful to assess the broader contexts to discover the possibility of linking to the broader cycling network.

✓ 2.2 MULTI MODAL TRANSPORT



Residents should have a wide choice of transport modes that are available and accessible, such as cycling, taking public transport / e-transport, driving. Therefore, the street network should provide a variety of ways/options that are safe, affordable and accessible, such as cycling paths, sidewalks, trails, public transport, etc., to key urban services that are universally accessible, to provide ‘last mile’ connectivity.

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2.2.1 Convenient Public Transport



Residents should have easy access and a maximum of a 500m walking distance to public transportation considering catchment areas for different transportation forms. Public transport stops should be designed according to contextual needs (provide shade, sitting area, etc) and comply with the standards of universal design.

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While designing a public transport stop, it might be useful to analyse the intensity of public transportation, how local communities use stops and assess gender related issues. The outcome of the analysis might help in proposing the most appropriate design for the local needs (e.g. larger shadings that correspond the length of the bus to ensure everyone is protected from sun while boarding the bus, place for street vendors, lighting for night-time use etc.)

2.2.2 Bike Parking To Promote Cyclability



To promote a more cyclable environment, it is important to ensure secure bike parking as a placemaking factor that influences the choice of transportation mode and destination of a cyclist. Any destination will benefit from biker-friendly amenities, especially key attraction points such as schools, university campuses, commercial centres, health centres and densely populated areas or transport nodes/modal intersections, to promote daily commuting by bicycle.

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2.3 PROXIMITY & WALKABILITY



A well-connected neighborhood should provide residents with a walking distance to key services that should be from 400 to 450 m, which is the equivalent of 5-minute walk. In some contexts, the distance might increase to 10 or 15 minutes. In any case the urban environment should provide convenient infrastructure for safe walking and cycling.

1 3 4 5 6 7 9 10 11 13 16

While planning urban services, it is important to analyse the surrounding context beyond the project area to ensure accessibility to maximum residents. Some urban services may maximize the impact of each other once located in close proximity.

2.3.1 Safety



Convenient public transport and pathways for safe walking and cycling to destinations, especially schools, childhood centres and universities. This implies considering street lighting, greenery (that may serve as green safety buffers), uninterrupted sidewalk network, pedestrian crossings, signage signals, water management, traffic calming measures to lower vehicle speed (30 km/h), etc. Safe routes imply a trajectory through parts of the neighborhood perceived as safe. Addressing underused plots, abandoned structures and other potential pockets of crime is essential to improve safety.

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During the design phase it is useful to consult communities to identify perceived unsafe areas, and create a future scenario movement map to measure increased safety for pedestrian circulation e.g. providing wider pedestrian paths in denser environments or/and car-free environment in urban “hotspots”, etc. Proposals can be enhanced by place-making programming.

2.4 MIXED USE DEVELOPMENT



Mixed use environment is an integral part of the connected city. Integration of different uses within the neighborhood making daily necessities and key services accessible by either walking or cycling from residents' homes. Mixed use development enhances the experience of place by the diversity of movement networks that run through.

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2.5 ECOLOGICAL CONNECTIVITY



Street network should take into account ecological connectivity to prevent fragmentation of vegetation and natural habitat, allowing free movement of animals and other ecological flows (studies found some species of animals avoid crossing roads such as hedgehogs, turtles, snails, etc.). Where applicable, a bridge (or other ecological ‘stepping stones’) can be considered to enhance biodiversity.

2 3 6 9 11 13 14 15

✓ 2.6 COMPLETE STREETS



The street should include sufficient and convenient space for all the street users (pedestrians, cyclists, drivers, street vendors, etc.), promote universal accessibility, healthy and more energy-efficient transportation modes. The complete street should include necessary structural elements and infrastructure as described from 2.6.1 to 2.6.7.

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While implementing a complete street concept, it might be useful to analyse all the street users and their needs. The street section design must be the subject of a participatory approach and place making activity with the local community.

2.6.1 Convenient Sidewalks and Pathways

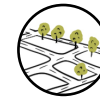


Sidewalks and pathways should be of an appropriate width convenient for all the street users and compatible with the character of the street, providing a safe space for walking, cycling, stopping, socializing, resting, turning around in a wheelchair, etc. The average sidewalk width might vary depending on the context. Rather than following a specific recommendation, it might be useful to consider several indicators of ergonomic design such as: 3 m width is sufficient for multiple users to have a conversation while walking, a wheelchair user needs 1,5 m to turn around and 1,8 to pass other wheel chairs, etc.

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Gender aspects must be addressed by the street design, particularly by street width. The sidewalk should have an appropriate width to allow safe and comfortable movements for women and girls. Providing sheltered spaces are critical for comfortable movements in some contexts. Zoning system is a useful tool to design an appropriate sidewalk (dividing the sidewalk into zones that might include frontage, travel, furniture zones, etc.)

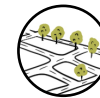
2.6.2 Places Of Attraction



Places of attraction (adjacent to the street) can provide an environment for socializing: seating and resting areas, green spaces, street vending, pocket public spaces, etc. These areas encourage walking, benefit the local economy, and create a vibrant space. Different types of vegetation and urban furniture should be considered to create attractive places. Parklets can be promoted in densely populated areas.

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2.6.3 Bicycle Lanes



Bike lanes should be physically separated by vegetated buffers that provide safety, a better environment and protect cyclists from parked and moving cars, preventing motorized vehicle encroachment and double-parking. Different design techniques may be used to distinguish the bike lane, e.g. colour, texture. Shared streets may be also considered for one-way travel patterns in relatively dense urban contexts and with low vehicle speeds (<30 km/h).

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While designing a public transport and bicycle lane in some contexts it is important to consider climatic conditions and positioning of the sun (e.g. allocating cycling lanes on the most shaded side of the road, etc.)

2.6.4 Structural Elements That Provide Comfort Of Use, Safety And Security



These elements are: pedestrian crosswalks, kerbs, clear and informative signage, public lighting, appropriate traffic calming measures such as pinch-points, medians and refuge islands, speed humps, speed limits, vegetated buffers, etc. Depending on the context, simple solutions might provide a better safety, e.g. varying pavement materials and appearance, shading places next to pedestrian crossing, etc.

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2.6.5 Structural Elements That Support Universal Accessibility Design Standards



These elements include street design interventions such as curb ramps, tactile surface, way-finding signage that is accessible and clear for all street users (vision impaired guidance, etc.)

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2.6.6 Public Transport Lanes



Public transport lanes should be allocated along frequent transit routes and should be supported by necessary infrastructure such as universally accessible public transportation stops with appropriate capacity specific to the street

character. A public transport lane may be defined by a certain colour.

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2.6.7 Safe And Convenient Pedestrian Crossings



Intersections must provide direct, intuitive pedestrian crossings where there is concentrated need. Designated crossings should reflect pedestrian desire lines and crossing distances should be minimized. Pedestrian refuges are required to give pedestrians a safe space to wait before crossing successive streams of traffic, and at-grade table-top crossings may be considered, as are superior to footbridges or tunnels. Intersection design should manage conflict in a way that enhances safety for pedestrians.

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✓ 2.7 ACTIVE STREETS



To ensure a safe and attractive environment that promotes walking and cycling, spaces adjacent to the streets should have diverse uses. Active street edges create a vibrant, pedestrian and cycling-friendly environment by providing better safety through passive surveillance, places to stop, rest, etc.

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2.7.1 Active Street Front



The building unit exteriors should be designed to contribute to the active street frontages and positive, engaging, safe and pedestrian-friendly

environment. A direct relationship between the buildings' facade and the sidewalk contributes to the commercial viability of the street. Uninterrupted building line and minimization of setbacks contribute to street vibrancy. Such design elements as shading, terraces, etc. may be considered. Active street frontages impact the perception of safety and facilitate passive surveillance of streets and public spaces.

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✓ 2.8 NETWORK OF OPEN PUBLIC SPACE



It is important to ensure that open public spaces are distributed in a way to serve more people, being a system of continuity. To ensure a well-functioning network that connects people, homes and places, public areas within the neighborhood should form an interconnected and continuous space that does not contain any barriers or interruptions. To ensure a continuity of open public space network, public areas should follow the principles of "Complete Streets" and "Shared Spaces" (wherever possible) to ensure safe circulation and wellbeing of all users. Public spaces should support different adjacent uses, ensuring safety and universal accessibility e.g., promotion of child-friendly spaces that include playing and learning activities along the routes to schools, kindergartens, a location of sitting areas next to commercial activities, etc. Programming activities before designing is important in order to balance the presence of active and passive uses of the same space.

2 3 4 5 6 9 10 11 13 14 15 16 17

During the design phase, it might be helpful to overlay high-density hotspots with the street network to define potential "shared spaces" and promote pedestrian priority spaces in areas with higher population density.

2.8.1 Accessible Open Public Space



A public space (park, square, community garden, etc.) should be easily reached by walking within the neighborhood, cycling or using public transport, especially by the elderly and people with special needs (see section on streets). Pedestrians should be able to reach from their houses an open public space or facility within a five-minute walking distance (the equivalent of 400-meter distance). That implies universal accessibility and presence of inclusive facilities for pedestrians, cyclists, private vehicles, public transport users.

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INCLUSIVE CITY

The residents of an inclusive city have equitable right to the city, access to services, employment, open public space, public transportation, and other opportunities the city provides. The urban environment of an inclusive city supports physical, economic, cultural and social needs of all people of all abilities, of all backgrounds and income levels. Open public spaces of an inclusive city are welcoming to all visitors, housing is affordable and attracts a diverse range of residents.

The Inclusive City relates to the New Urban Agenda transformative commitments: 25, 26, 27, 31, 32, 33, 34, 36, 37, 39, 40, 43, 62



INCLUSIVE CITY

✓ 3.1 VARIETY OF HOUSING OPTIONS



Neighbourhoods can ensure social mix, social cohesion and interaction, support demographic and economic integration, while attracting a diverse range of people, meeting the housing needs of increasingly diverse residential household types (e.g. young families, families with children, professionals, retirees, people with disabilities.) by providing a wider range of housing options (apartment block, row housing, row houses, detached housing, etc.) and modes (rental, private, cooperatives).

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While establishing housing typology, it is important to consider gender related issues. Some contexts require private courtyards for women, private circulation spaces, etc. These aspects may be explored during participatory activities.

3.1.1 Mixing Tenures



Mixed tenure schemes have the potential to facilitate the mixing of income groups and

different lifestyles, minimizing location based stigma and reducing concentration of poverty. While promoting tenure mix, it is important to follow tenure blind design principles aimed to ensure no explicit indicators of tenure type in housing design and layout.

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3.1.2 Diversity Of Plots



Diversity of parcels and plots promote diversity of forms, uses and tenures, allowing the creation of various building types. Compact parcels and plot subdivisions contribute to factors of the inclusive city - facilitate the greater levels of land use mix, create a human-scale environment that enables social, communal interaction.

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While designing the urban structure, it might be helpful to analyse the most efficient type of urban morphology within the city (specifically historical, central parts) to identify the most locally appropriate dimensions of plots that facilitate convenient pedestrian movement and interactions with the space.

3.1.3 Mixed Urban Block



Instead of mono-tenured units, the block should provide a variety of typologies, unit sizes and tenure types to meet the housing needs of all. Developers should consider multiple tenures within the same plot. While promoting mixed urban blocks, ensure a “tenure blind” approach to design aimed to avoid any tenure based distinction in design quality.

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✓ 3.2 AFFORDABILITY



Affordable housing should be allocated between 20 and 50 per cent of the residential floor area, and one single tenure type should not exceed 50 per cent of the residential floor area at the neighbourhood scale. The recommendation indicates a wide range to enable urban planners and city management to follow the national or regional owned-to-rented ratio.

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While promoting affordability, apart from socio-economic policies, the physical design should facilitate the more efficient use of resources in maintenance and management of the built environment and open space. Climate responsive design and appropriate choice of materials are important to consider to minimize maintenance costs.

3.2.1 Accessibility To Services



Urban design should ensure equitable accessibility to infrastructure and services (e.g. water supply, wastewater treatment, drainage and flood control, solid waste management, etc.), social facilities (schools, kindergartens, health centers etc.), and economic centers (shops, markets etc.), aiming to improve the living conditions of vulnerable communities (e.g. considering adjacent territories, promoting open public spaces with a broader impact, etc.).

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✓ 3.3 MIXED LAND USE & VARIETY OF FUNCTIONS



It is important to ensure a diversity of uses within a neighborhood, avoiding monofunctional clusters that cause isolation and fragmentation of the built environment. An attractive and functional physical environment shapes the character of spaces and facilitates the diversity of local communities. In a mixed land-use neighborhood job opportunities are generated for residents from different backgrounds and with different income levels.

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3.3.1 Accessibility To A Wide Range Of Jobs



The urban environment should be designed in a way to provide residents with a walkable environment to a diverse range of jobs, which will facilitate the establishment of social networks formed by people living and working in the same neighborhood. The job-resident ratio between 0.5 and 0.7 might be taken as reference for preliminary considerations.

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While designing mixed-use development, it is important to consider the quality and convenience of access routes between residential areas and employment opportunities. Proximity to public transport stops provide better accessibility for all. Attractive public spaces

can help to facilitate a higher level of social interaction. Vegetation and green coverage increases the quality of the environment, however it may be necessary to consider the consequences of improvements through green coverage (for example by exacerbating eco-gentrification or increased maintenance needs).

✓ 3.4 WALKABILITY & ACCESSIBILITY



The urban environment should promote walkability as a critical measure to bring people together in the public space, boosting social interactions and bringing a sense of social inclusion. In addition, walkability and close proximity to and between attraction points promote social encounters and the facilitation of social cohesion, which can only be supported through an urban environment that complies with universal design principles.

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3.4.1 Prioritizing Pedestrian Movement



Streets should be designed to prioritise pedestrian movement (using Complete Street designs) to attract a variety of street users. Walkable and comfortable streets increase social interactions by being pleasant public spaces for all, supported by active urban frontages of the built environment. In some cases, levels of traffic from private cars can be reduced while allowing car access only where it is necessary. “Shared spaces” can also be promoted by demarcating areas with different colours or textured pavings.

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✓ 3.5 EFFECTIVE & AFFORDABLE PUBLIC TRANSPORTATION



Effective and affordable public transportation is critical to make the urban environment more inclusive, reduce urban poverty and inequalities, enhance economic development by maximizing accessibility to jobs and public goods for all groups of society, and in particular for low-income communities and centres of economic opportunity. Public transport that is safe, efficient, reliable and affordable for all, helps foster a sense of community by connecting people and places disregarding of their social or demographical status. Public transport infrastructure should serve everyone and meet the needs of all passengers.

1 3 4 5 6 7 9 10 11 16

3.5.1 Accessible Public Transport Stops



To ensure equitable access to public transport, transit stops and stations should be designed in accordance with principles of universal design, ensuring ramps with correct design and inclination (maximum 10%), tactile features, etc. Shading structures and street furniture should provide a comfortable environment to ensure public transport is accessible to all. Additional design considerations could be conducted to ensure the design considers specific community needs.

✓ 3.6 BARRIER-FREE ENVIRONMENT



Ensuring the urban environment is free of obstacles to individuals with physical and cognitive disabilities and ensuring safe, continuous and comfortable movement of people in the city is necessary. Urban design should aim to reduce social and environmental barriers and ensure residents feel safe from accidents or intimidation. This implies improvements to safety and perceived safety such as street lighting/safety in low light, dropped kerbs, safe crossings, streets maintenance, CCTV, passive surveillance, etc.

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Topography should be taken into account in the design proposal to ensure safe and convenient movement for people of all abilities (e.g. ensuring maximum straight and not curved ramps with an appropriate and convenient slope).

3.6.1 Universally Accessible Streets



To ensure well connected and inclusive communities, streets should consider universal design principles. This implies physical elements such as clear paths of travel, curb ramps, tactile surfaces, convenient wayfinding signage that is accessible and clear for all street users (vision impaired guidance, etc.), green buffers, etc. (as per universal design checklists). In addition, to ensure pleasant and easy navigation along pathways, a sufficient width (for two wheelchairs to pass) should be maintained with minimum obstacles and barriers (such as temporary road signs, advertising boards, bins, and seating) that would otherwise prevent the comfortable use of sidewalks. Supporting regulation or enforcement of universally accessible streets may be required to avoid encroachment of obstacles.

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3.6.2 Universally Accessible Open Public Space



Apart from the ease of reaching a public space by walking, cycling or using public transport, public spaces should be designed to span the full needs of residents of all ages and abilities following the universal design principles. Public space should be optimized for maximum accessibility (e.g., playgrounds adapted for Persons with Disabilities, ramps with correct design and inclination (maximum 10%), lights and tactile strips at crosswalks; accessible restrooms and parking spaces reserved for Persons with Disabilities; colour contrast application to design elements, openness and visibility etc.)

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3.6.3 Welcoming Open Public Space



Open public space should provide equitable access to resources and services and should be opened to all without paying an entrance fee. Open public spaces should facilitate the positive perception of accessibility, ensuring people feel welcome, safe and comfortable going to the public space, not being afraid of intimidation or violence. Welcoming spaces can be supported by design interventions such as wayfinding signage (indications translated into multiple languages), child-friendly areas, public art showcasing different cultures and lifestyles, small street retail opened for a diverse range of vendors, community murals, portable libraries, spaces for communal learning and creativity, designed space for expression and public gatherings (moveable street furniture, amphitheaters, boards, etc.)

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The type of interventions that can demonstrate that people are welcomed in the neighborhood or a place can be defined during the participatory sessions that include a wide range of community representatives, including people in most vulnerable situations. Such design interventions as street signage translated into specific languages (e.g. for those who arrived), street art, community murals with welcoming messages might be helpful for people to feel included.

3.6.4 Designing Places Of Respite



Places of enclosure (small areas, separated from the major activities of the street) provide places of respite from sensory information. Quiet, enclosed spaces to sit can help people with sensory processing challenges or those, who often feel overwhelmed by the amount of sensory information in public places. Additionally, secluded areas off the main circulation path provide people with safe, private and quiet spaces to gather, rest and interact.

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3.6.5 Universally Accessible Building



Ensure that buildings provide accessible entrances for all in accordance with principles of universal design (ensuring ramps with correct design and inclination (10%), tactile features, etc.). To ensure convenient and safe circulation, universal access should be provided to all elements of the block and adjacent spaces, such as internal courtyards, semi-private community gardens, parking spaces, etc.

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✓ 3.7 WELCOMING ENVIRONMENT

Apart from creating an inclusive space, the neighborhood should promote a welcoming environment that facilitates the integration of people, especially those in vulnerable situations and creates social networks. Neighborhood social facilities and spaces should be open to all, promote sharing activities and public art, revealing local talents. Various programming initiatives should aim to promote the positive use of public space, engaging various local organisations and volunteers. The physical environment should support various initiatives as described in 3.6.3.

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While designing such activities and related design interventions, variety of cultures and traditions should consider. Seasonal open public space design might be helpful to promote diversity of activities.

✓ 3.8 SAFE STREETS

To ensure inclusive streets that are adapted to all the users of all ages, gender and ability, it is critical to promote safety in street design, regulation, and use. Ensure that streets are considered and treated as places, rather than through-ways. Safety should be achieved by reducing exposure to the risk of conflict between street users and movement modalities, shaping streets that are accessible for



vulnerable users, safe and welcome to everyone (universal accessibility, opportunities for expression, enhancing perceived safety, passive surveillance, etc.)

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✓ 3.9 DIVERSITY OF OPEN PUBLIC SPACES



Open public space should be designed to ensure a comfortable and safe use for everyone, where people from all backgrounds can spend considerable time enjoying the space, especially those in vulnerable situations. That implies creating a diversity of open public space categories (public, semi-public, semi-private, etc.) to differentiate the type of activity and access and creating a variety of activities appropriate for each user group of users. According to Project for Public Spaces places thrive when there are at least 10 activities (not limited to consumption), designed in a way to create social linkages (the power of 10 rule). The principle of 10 activities might be scaled up to 10 different attractive places that might be considered in the neighborhood.

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Activities might be established as a result of placemaking exercises that encourage everyone to think about what's special in their communities. Such activities might already build social networks during the participatory process.

3.9.1 Attractive Common Spaces



To promote social networks within the communities, the block should include additional functions and spaces that encourage brief walking experiences, physical activities, play and social interactions while enjoying a pleasant space such as internal courtyards, private/semi-private playgrounds, mail rooms, community gardens adjacent to the block and within the block, community run public artworks etc.

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✓ 3.10 SAFE OPEN PUBLIC SPACE



Public space must be used without any fear, and should not favour specific groups or promote gentrification. All structures/facilities should be universally accessible, safe and convenient to use. Passive surveillance should be created by active street frontage, adjacent activities and retail. Safety measures should ensure zero sense of exclusion and discomfort (e.g. created by fencing, prevailing and visible security control).

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The scale of the built environment influences the way people perceive the space. Human scale environment may nourish a sense of place among residents, enhancing the sense of security by increasing the impact of passive surveillance (by making the environment easier to observe for people in buildings, cafes and shops adjacent to public space).

VIBRANT CITY

Residents of the vibrant city have access to the diversity of activities, urban services, and economic opportunities. A vibrant urban environment forms place identity, facilitates social interaction, communication, physical and learning activities and attracts people to live, work and spend time in the vibrant neighborhood. A vibrant city provides an enabling environment for building social, cultural, and economic capital, where urban character is emphasized.

The Vibrant City relates to the New Urban Agenda transformative commitments: 26, 27, 34, 36, 37, 38, 39, 40, 45, 53, 62, 68



VIBRANT CITY

✓ 4.1 MIXED LAND USE & FUNCTIONS VARIABILITY



To promote a vibrant and dynamic urban environment, it is important to ensure a diversity of different functions and uses within a neighborhood that encourage residents to interact with a wide range of activities and walk to diverse destinations. A flow of different users can create vibrant and safe places. In addition, mixed-use development promotes agglomeration of economic activities, which is a key feature of vibrant neighbourhoods and communities. Temporary architecture, such as temporarily pedestrianised streets, can help local government to test planning solutions, and can be facilitated through designing for flexibility.

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While defining different activities within the neighborhood, the “rule of 10” (as per 3.9) formulated by Project for Public Spaces might be scaled up, which recommends creating 10 public destinations, activities within the neighbourhoods (in addition to mandatory distribution of social facilities).

4.1.1 Balanced Mix Of Activities



To ensure vibrant mixed-use development that also creates a sense of place, a balance between different activities should be taken into account, including a balance between professional, leisure and recreation, commercial, educational activities, etc. In addition, compatible functions, if planned right, can maximise the impact of each other (e.g. park in proximity to public library, university campus in proximity to public spaces with learning, eating activities, etc.).

4.1.2 Vertical Zoning



To promote a vibrant urban environment, vertical zoning should be applied. Vertical mixed-use development facilitates activation of the street edge through ground-floor retail and commercial uses while providing easy access to local employment opportunities, promoting walkability, ensuring better safety and emphasizing local identity through local small businesses and design elements. Active street edge, particularly at the street corners, may activate the public realm. Where applicable vertical zoning might include green roofing to create private/semi-private recreational spaces, community gardens, water harvesting and can expand tree canopy over streets and non-green circulation zones.

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While planning functions at the scale of a city block, it is essential to ensure compatibility of uses and promote buffer spaces where applicable (office floors, etc.). Shared spaces as per 3.9.1 might facilitate interactions between residents.

4.1.3 Active And Interesting Facades



Relation between the ground level, the sidewalk and the street significantly contributes to the attractiveness of the urban environment. Visually more attractive and interesting streets are used more often. In addition, active frontages contribute to streets safety and people’s perception of the urban environment. Facade design can support the local identity by including design elements that promote local culture, traditional architecture and consider local climatic conditions.

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✓ 4.2 PROXIMITY & WALKABILITY



To ensure a viable mixed-use development, the positioning of different activities within the neighborhood should be appropriate and encourage residents to walk to their destinations. It is recommended to promote 5 min walking distance (from 400 to 450 m) to shops and services. Proximity is a crucial factor that makes different uses benefit from each other (e.g. a school or university campus can make an adjacent park viable etc.).

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✓ 4.3 DIVERSE URBAN FABRIC & FINE GRAIN



The diversity of parcels and plots promotes a great diversity of urban fabric and architectural forms necessary to create a vibrant streetscape.

Smaller plots create a fine grain that promotes a greater level of mixed-use, creates a better permeability of urban fabric that enables better walkability and a higher level of pedestrian interactions. In addition, smaller units are more attractive for small businesses, which is an important factor in achieving a vibrant environment. In addition, neighborhood permeability supports small commercial outlets by increasing slow moving and diverse, pedestrian street traffic.

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In some contexts, the analysis of current urban grain is critical to understanding the adaptability of the built environment to climatic conditions. The conduction of urban heat island, synthesis of local knowledge, comparison of fine grain and new development pattern might be helpful in understanding which type of urban structure is performing better in terms of climate adaptability.

4.3.1 Leveraging From The Existing Context

Regeneration and bringing new uses to unused/abandoned or dysfunctional structures that have design potential can significantly revitalise the place, encourage businesses and create an enabling environment for a wide range of activities. Regenerated buildings/urban areas can support the unique urban pattern, bringing social value to the existing urban form, increasing vibrancy of the neighborhood.

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4.3.2 Reinforcing Local Identity

Local identity can be emphasized at the building unit scale through promoting context-specific design elements, using local materials and/or colours, and the form of the built environment.

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4.4 REINFORCING LOCAL IDENTITY

Vibrant neighbourhoods should include “character areas” that emphasize local culture, activities, climate, natural assets, etc. and are well defined by urban morphology (character of urban pattern, size and positioning of the blocks, adjacent public space, etc.). Activity hotspots (markets, identical public spaces, active streets, etc.) coupled with appropriate design significantly contribute to the creation of a sense of place, encourage economic activity, walkability and tourism.

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While designing the urban structure it might be helpful to analyse the local urban morphology within the city (specifically historical, central parts) to identify particular features that contribute to the vibrancy of the urban environment. The defined elements might be replicated in the urban design (traditional design elements, type of street shading, etc.).

4.4.1 Incorporating History

Historic cities have the most attractive urban

space. The vernacular urban pattern may be embedded in the neighborhood structure to retain the traditional character of the city. The traditional urban morphology may be reflected in public space network, urban grain, streetscape, etc. Street dimensions, street enclosure, open public space typology and other characteristics should be analysed and relevant features may be replicated in the new urban structure/ development.

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4.5 APPROPRIATE HIGH DENSITY

To facilitate the vibrancy of the built environment and communities, a certain degree of urban density should be supported. Higher population density equals a higher frequency of interactions which should be supported by good quality design that promotes a comfortable and safe environment that enhances opportunities for self-expression and communication. Capacity building and engagement with communities may provide useful to discuss how some of the qualitative benefits that sprawl is perceived to offer may be incorporated into the design of compact neighbourhoods.

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4.6 MULTI MODAL TRANSPORT

Residents should have a wide choice of transport modes that are available and accessible, such as cycling, taking public transport / e-transport,

and driving to allow a diverse range of users to interact with the built environment (including economically). Therefore, the street network should be universally accessible and adapted for various modes (cycling paths, sidewalks, tracks, public transport infrastructure, etc.) following “complete street” principles.

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4.6.1 Efficient Public Transport



The vibrant city should ensure efficient public transport that promotes equitable access to social and economic opportunities and facilitates clustering of jobs, housing, services (routed along the home-work-services triangle) and amenities around public transport hubs, bringing numerous economic benefits. In addition, public transportation should be affordable and accessible to all users.

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✓ 4.7 CONNECTING WITH THE NATURAL ENVIRONMENT



Connections with the natural environment significantly contribute to a community’s wellbeing. Revealing the site’s natural resources and supporting them with urban design (through creating an open public space, developing a riverfront, etc.) will enhance local character. Natural assets should be revealed and integrated within the neighborhood to create pleasant landscapes and vibrant places that attract residents and tourism.

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4.7.1 Promoting Local Flora



Urban vegetation can contribute to the character and quality of the built environment while promoting walkability, ensuring safety and a healthier ecological environment. Identifying, articulating and promoting ecosystem services delivered by nature and local species, supports the use of local species to form identity and character, an attractive and comfortable environment, biodiversity and more enjoyable public spaces.

2 3 6 9 11 13 14 15

Where applicable, it is important to promote context-specific vegetation. Although climate change may impact the kinds of local vegetation species, these can often prove the most effective both at combatting local climate change related risks (such as flooding), performing valuable ecosystem services such as water purification, may be providing cultural significance, as well as growing local/historically relevant produce. Local knowledge of species and change of vegetation over time can help to identify key places where vegetation may revitalise the space and bring back its identity, positive perception and value (e.g. additional vegetation to enhance a botanical garden, revitalisation of riverfront through vegetation, restoration of local forests, etc.).

✓ 4.8 ACTIVE STREETS



Safe and walkable streets with a diverse range of uses are the key elements of a vibrant city. Active and interesting street edges coupled with a “complete streets” design approach create a pedestrian and cycling-friendly environment that provides better safety

and enjoyable open public spaces for residents while meeting diverse mobility needs. The ‘living street’ concept may be used to prioritise certain streets for pedestrians and cyclist movements and create a vibrant social space where people can meet and children can play safely.

3 4 5 9 10 11 13 16

In some contexts, active streets should be carefully designed, taking into account the surrounding context. The analysis of potential intensity and convenience of future pedestrian flow might be helpful to identify the key active streets with appropriate activities. Some elements such as urban advertising, pathway signage, etc. should be designed in harmony with the adjacent areas (which is particularly relevant for areas in proximity to heritage sites). Special attention can be paid to lighting so that needs of safety are balanced with light-adverse biodiversity (e.g. moths and nocturnal foragers).

4.8.1 Reinforcing Local Identity



The relationship between the streets, buildings, and vegetation contributes to creating a positive sense of place that an appropriate movement pattern should support. The street design can enhance the local character of the street and in some cases, cultural identity, through the choice of activities and design elements such as urban furniture, public art, etc. Design solutions that address different climatic conditions and environmental features reinforce the local identity and a sense of belonging (e.g. shadings, terraces, etc.).

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✓ 4.9 DIVERSITY OF ACTIVITIES & OF OPEN PUBLIC SPACES



Vibrant open public spaces should be designed to ensure comfortable and safe use for everyone and engage people to participate in a wide range of civic, physical, social and other activities. Public space design should ensure accessibility and an attractive environment for all people, ensuring intergenerational and intercultural social mix and recognising children as active users of space. That implies creating a variety of activities appropriate for each user group. According to Project for Public Spaces, places are particularly vibrant when they include at least 10 activities (not limited to consumption) designed to create social linkages (The Power of 10). The principle might be scaled up and be applied to a wider area (e.g. neighborhood) to have at least 10 places that attract residents.

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The different activities might be defined during the participatory placemaking sessions with the residents, where they are encouraged to think about particular features and identity of their environment and community. Their thoughts and ideas might be used for community mural, that can become a local landmark and an interactive element for open public space.

4.9.1 Reinforcing Local Identity



To enhance local identity, it is necessary to consider social dynamics and cultural specificities of the local communities and local

heritage to generate a strong relationship between people and place. Open public spaces may provide amenities for cultural activities and design elements specific to the local contexts and climate (terraces, pergolas, urban furniture, public art, etc.).

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In some contexts, especially in newly planned neighbourhoods residents may be encouraged to develop their own particular narrative and character, putting their ideas in a street mural which can serve as an example of collaborative public art.

4.9.2 Vibrancy For Stimulating The Local Economy



Vibrant neighbourhoods include open public spaces that have potential to contribute to the local economy. Small businesses and ventures that fit the human-scale environment support the local economy and add to the identity of the place. Points of small commerce should be promoted and supported by a safe and attractive urban environment that fosters walking and cycling.

3 4 5 9 10 11 13 16

Public space is essential for activating the local economy. In some contexts, public spaces (incl. streets) may include a place allocated for informal businesses. For example, setting up kiosks that could be rented out or delineating for street vendors using different textures of the pavement and colour.

RESILIENT CITY

All the residents of the resilient city are guarded against immediate and chronic stresses within urban systems and are prepared for future potential challenges. Resilient neighbourhoods are less vulnerable to sudden changes and sustain the operation of services and urban systems that can help in withstanding any potential crisis and facilitate the recovery process. Resilient neighbourhoods are self-reliant in their ability to function in the instance of reduced availability to resources (for example using local building materials can reduce the need for cooling or heating systems). In addition to building adaptation to the changing world, resilient urban form may support and enhance existing social and economic structures, improving the community well-being.

The Resilient City relates to the New Urban Agenda transformative commitments: 25, 31, 32, 34, 36, 37, 38, 39, 43, 44, 62, 65, 67, 68, 69, 70, 73, 77



RESILIENT CITY

✓ 5.1 MIXED LAND USE



Mixed land use coupled with high residential density and public transportation system directly contributes to urban resilience, promoting efficient use of land and infrastructure, walking and cycling, reduction of car dependency, and protection of environmentally sensitive resources. Refer to 1.2. for the suggested floor area distribution.

1 3 5 8 9 10 11 12 13

5.1.1 Mixed Urban Block



In addition to multiple benefits as per 1.2.2 and 3.1.3 and 4.1.2, multi-functional buildings help to minimize building footprint and promote an efficient use of land, resources and more compact development patterns.

1 3 8 9 10 11 12 13

✓ 5.2 EFFICIENT DENSITY



If implemented appropriately, densification is a powerful tool in achieving a resilient city by facilitating the efficient use of urban land, urban form and systems, limiting urban sprawl and, thereby, motivating the preservation of environmental assets, rural areas, and farmlands, heritage sites, etc. Densification should be applied within the current built-up area to connect to the existing infrastructure networks, along main public transport corridors and/or within identified primary and secondary nodes considering the wider scale.

1 2 3 4 6 7 8 9 10 11 12 13 14 16

✓ 5.3 PROXIMITY & WALKABILITY



Resilient neighbourhoods should provide residents with a walking distance to key services, infrastructure for safe walking and cycling.

5.3.1 Permeable Street Network



The overall street connectivity (that can be measured by the level of permeability of the street network) is critical in achieving urban resilience by providing better accessibility to urban services and promoting walkability through the variety of routes. The efficient and permeable street network that provides convenient movement should be linked with minimum dead ends and physical barriers. As an indication, the permeable street network should have 80-100 street intersections per km².

1 3 4 5 6 7 9 10 11 16

5.3.2 Gridded Network And Fine Grain



Gridded networks with smaller blocks (of no more than 1000m as suggested by the Institute for Transportation and Development Policy) ensure better service accessibility, facilitate rapid evacuation in case of disaster and support supply delivery during the recovery phase, all of which are critical in disaster-prone areas.

1 3 4 5 6 7 9 10 11 13 16

✓ 5.4 EFFICIENT STREET NETWORK



The resilient city relies upon an efficient street network that is adapted to a variety of mobility patterns. As per 2.1 in high density mixed-use urban areas, it is recommended that at least 30 per cent of land is allocated for roads and parking, and at least 15-20 per cent is allocated for open public space.

5.4.1 Universally Accessible Streets For Convenient And Efficient Movement



To ensure the convenient and safe movement of people of all abilities, it is crucial to ensure universal accessibility. As per 3.6.1, clear paths of travel, curb ramps, tactile surfaces, convenient wayfinding signage that is accessible and clear for all street users (vision impaired guidance, etc.), green and clear buffers and minimum barriers should be considered. The well planned linked street network that accommodates for topographic features is critical for efficient and convenient movement for all.

4 6 10 11

✓ 5.5 MULTI MODAL TRANSPORTATION



Multi-modal transport systems overlayed with densely populated urban areas facilitate a more efficient circulation pattern and can improve social cohesion. Residents should have a wide choice of transport modes that are available and accessible, such as cycling, taking public transport / e-transport, driving. In addition, a multi-modal transport system should encourage the use of transport options that benefit the most sustainability and community well-being. That implies a variety of convenient, well-designed routes (cycling paths, sidewalks, tracks, public transport infrastructure, etc.) and affordability (public transport cost, bike sharing, etc.) as per 2.2.

1 3 4 5 6 7 9 10 11 16

5.5.1 Efficient Public Transport



Public transport significantly contributes to the resilience of a city, encourages people to have healthier lifestyles and leads to a more self-sufficient and energy-efficient urban form by reducing the dependence on fossil fuels. As per 1.3 residents should have easy access and a 5 to 15 minutes walking distance to public transportation stops, that are designed according to contextual needs (provide shade, sitting area, etc.) and comply with universal design standards.

1 3 4 5 6 7 9 10 11 16

✓ 5.6 SAFE, STABLE & AFFORDABLE HOUSING



The need for climate-resilient, affordable housing is critical to frontline communities in cities as they recover from and prepare for shocks (especially as a result of climate risk). Apart from providing affordable housing, it is important to ensure housing stability as well as provide opportunities for employment within the neighborhood. In addition, it is crucial to strengthen the resilience of stable housing to climate change.

1 5 10 11 13 16

Though the provision of stable housing should be addressed in both legal and institutional dimensions, it is critical to spatially define areas for stable housing, particularly in the context prone to life-threatening hazards where the population affected should be relocated from their homes. The stability of new housing in this case is crucial for community well-being.

5.6.1 Stable And Affordable Urban Utilities



It is critical to consider cost-effective and sustainable energy solutions that support the efficiency of city-wide or localized energy grids in the most cost-effective way. Renewable power, water capture techniques aids, nature-based solutions and high-performance design of new development can reduce the pressure on grid operation, minimising the cost for utilities and in some contexts improve the quality and stability of those (e.g. water harvesting, water filtering through context-specific vegetation). Were

applicable, new development should consider improved construction techniques, better insulation material, LED lighting, passive heating /cooling techniques etc., that will facilitate the reduction of utility costs.

7 11 12

Solutions on stability and energy efficiency should be coupled with campaigns to increase awareness of human behaviour in energy saving. It is important to note that local culture, traditions, and habits should be considered to ensure such interventions can be implemented. Consultation with actors who know the context is necessary while developing design solutions.

✓ 5.7 CLIMATE RESPONSIVE DESIGN



Climate responsive urban design is most effective when applied at the neighborhood scale, where urban morphology, geometry of spaces and street orientation can be manipulated to leverage from climatic conditions and make the neighborhood resilient to climate change, e.g. enhancing shadows, navigating the wind patterns, reducing energy consumption, etc. Selected materials and vegetation can have a greater impact to reduce urban heat island, reflection of solar radiation amongst others, leading to a more comfortable outdoor conditions. Such aspects as the sun path and solar position, site-specific climatic conditions (humidity, rainfalls, etc.), seasonality, historical weather patterns, and topography should be considered in the design development phase. The interactions between structure (layout, form, land use, materials, greenery), energy, water

and waste should be designed to minimise the flow of resources needed for neighborhood operation. In addition, a resilient neighborhood should minimize waste and transform it into beneficial uses following the three “R’s” (Reduce, Reuse, Recycle).

1 6 11 12 13 14 16

Tools such as lighting models, daylighting studies, estimation of the urban heat island might be useful to understand how the design best integrates the local climate and micro-climate specific to the site. The site-specific climatic conditions should be analysed at the early design phases to ensure multiscale application of climate-responsive design principles across the different dimensions (street, public space, building unit). It might be helpful to analyse the vernacular architecture and how traditional buildings adapted to environmental conditions.

5.7.1 Hazard Mitigation



Neighborhood design, where applicable, should consider hazard mitigation to ensure safety for all. The structure of open spaces should be designed to facilitate convenient and efficient movement for all. In areas prone to hazards, it is important to ensure evacuation zones, emergency service facilities, and amenities close to population hotspots that should be highly accessible without any barriers on the way. Some facilities (schools, universities, etc.) may function as “safe heavens” due to their location in the zero-risk zone. Water storage facilities to drain or delay stormwater run off should be considered.

1 11 13

5.7.2 Climate Responsive Street Design



The street design can contribute to urban resilience by improving urban microclimate and reducing urban heat island effects, Greenhouse Gas emissions and energy consumption. Street vegetation, green safety buffers (e.g., low-rise vegetation), promoting use of permeable and green surfaces and bio drainage improves both the quality of the environment and community well-being by absorbing CO2. Determinants such as urban layout, topography, street orientation, width, and street enclosure should be considered to ensure climate responsive design. Design parameters will vary depending on the local climatic conditions.

1 6 11 13 14

5.7.3 Open Public Spaces For Hazard Mitigation



Open public spaces can play an important role in ensuring safety. Selected public spaces may include hazard mitigation structures and facilities in addition to enhanced natural features (permeable surface with context specific vegetation to absorb water, durable trees to block rockfall/avalanches, retention ponds, stormwater catchment basins to catch excessive water, etc.).

1 6 11 13 14 15

5.7.4 Climate Responsive Buildings



To foster urban resilience building design should be optimized to particular contexts to minimize energy use and have a reduced impact on the natural environment. Site-specific climatic and environmental conditions (as per 5.7) should be considered in the block design development. Where possible it is important to support the use

of passive heating and cooling to reduce the reliance on artificial energy and therefore the cost of building maintenance.

1 11 12 13

5.8 INTEGRATION OF BLUE & GREEN INFRASTRUCTURE



Existing natural areas, vegetation and water should be preserved and integrated with the neighborhood though the system of open public spaces, watersources, urban forests, etc.. In some contexts, vegetation is critical for hazard mitigation (e.g. securing green permeable surfaces in the areas prone to flood, planting durable trees to protect the settlement from rockfalls). Where possible nature-based solutions should be promoted to provide benefits for both biodiversity and human well-being. The sustainable integration of water systems is crucial to ensure the supply of safe water and sanitation (e.g. biofiltration systems for grey water, sewage recycling, storm water retention and harvesting of water runoff should be considered in urban design projects).

1 2 3 6 9 11 13 14 15

5.8.1 Ecological Connectivity



Ecological connectivity is crucial to support the functionality of ecosystems, preserve natural habitat and adapt to climate across spatial scales. As per 2.5 the urban form should take into account ecological connectivity to prevent

fragmentation and allow linked blue and green systems, facilitating the movement of ecological flows. Although not compensation for loss of natural habitats, where possible, green buffers may be reserved, such as through green boulevards or ecological bridges to ameliorate green coverage.

2 3 6 9 11 13 14 15

5.8.2 Enhancing Agricultural Potential



Preserving agricultural assets and promoting urban agriculture (including agricultural functions within urban areas and fringe areas, community gardens, green roofs) increases resilience to climate risks and improves the quality of the environment by reducing “food miles”, supports local employment and social inclusion and helps to achieve high food security, which is particularly important in import-dependent areas prone to hazards. In addition, urban agriculture plays an important role in hazard mitigation by providing permeable surfaces, mitigating the urban heat island and minimising environmental degradation, and can establish a virtuous cycle with pollinators.

1 2 6 11 13 14 15

5.8.3 Integration With Nature



Integration with the natural system facilitates the reduction of urban heat island, enhances local natural features, and supports local biodiversity protection. Where applicable, open public space should support the neighborhood in benefiting from ecosystem services (e.g. water harvesting, permeable surfaces to absorb excess water, bioswales, water purification, recreation space, nutrient recycling etc.). Apart from a targeted challenge and outcome, public space should

form a continuous system that reveals local environmental assets and promotes ecological connectivity.

1 2 3 4 5 6 7 9 10 11 13 14 15 16

5.8.4 Green Roofing



Green roofs (or vegetated roofs, eco-roofs, living roofs) can support the adaptation to climatic conditions. New development and/or the retrofitting of existing buildings with green roofs help to reduce urban heat island effects, improve air quality, counteract the negative effects of climate change and absorb/retain rainwater through the promotion of context-specific vegetation and water harvesting techniques. In addition, green roofs can support urban food production if used as community gardens.

1 6 11 13 14 15

While promoting green elements (green roof, facades/walls) structural and physical suitability of a green structure retrofit should be defined, analysing building, structural and engineering capacity, maintenance strategy and suitability with heritage buildings.

5.8.5 Using Local Materials



To minimize the building’s environmental impact, it is important to use regional, local materials considering materials lifespan and durability with less embodied energy. Construction materials should be locally supplied (in terms of their origin and supplier company).

11 12

Analysing the lifetime expectancy of the specific project might help in choosing the materials for each function. The requirements for materials might be further integrated into the local building codes along with the lines of certifications schemes such as LEED, BREEAM or DGNB.

5.9 ACCESSIBILITY TO JOBS



The resilient city should provide residents with a walkable distance to a wide range employment opportunities. Intensified human density (people and jobs) with sufficient and balanced job/housing mix and high level of accessibility to public transport will facilitate the reduction of traffic and a more efficient circulation of people. For preliminary considerations the job-resident ratio might be taken as a reference as per 3.3.1.

1 8 9 11

GAME



INTRODUCTION

“MY Neighbourhood” principles and tips have been developed into a game. The game is intended to work as a mind-activating and an idea-generating tool for anyone interested in urban design.

It has been developed to spark interest and discussions around different ways to see urban design interventions and their linkages to a wide range of goals for the city and the community.

The game aims to emphasize the importance of discussion and brainstorming, considering a diversity of goals and ideas ranging from strategic principles to targeted design solutions for sustainable neighborhood design.

HOW TO PLAY?

1. Separate Goal and Idea cards and shuffle
2. Select the Judge - multiple judges playing different roles (community members, activists, city mayor, etc.) are welcome!
3. The Judge distributes 7 Idea cards to each player. The Judge(s) choose(s) 1 Goal card and places that card face up on the table;
4. Players choose one Idea from their cards that best accomplishes the Goal and gives their chosen Idea card to the Judge face down.
5. When all players have given the cards, the Judge reveals them.
6. The players must convince the Judge(s) that their Idea card is the best match. They only have 20 seconds!
7. The Judge chooses the player(s) that are the most convincing, or have the most interesting/strongest idea. They are the winner!

A version of this game is available to download and print. All the materials for the game are organised in a convenient way for easy printing, starting with (front and back sides of) each Goal, Idea and Wild card.

As a printing guide, standard card sizes are 6,8 cm x 9,4 cm with 3mm bleed marks from each side.

To access the materials to download, print and play “MY Neighbourhood”, scan the following QR code:





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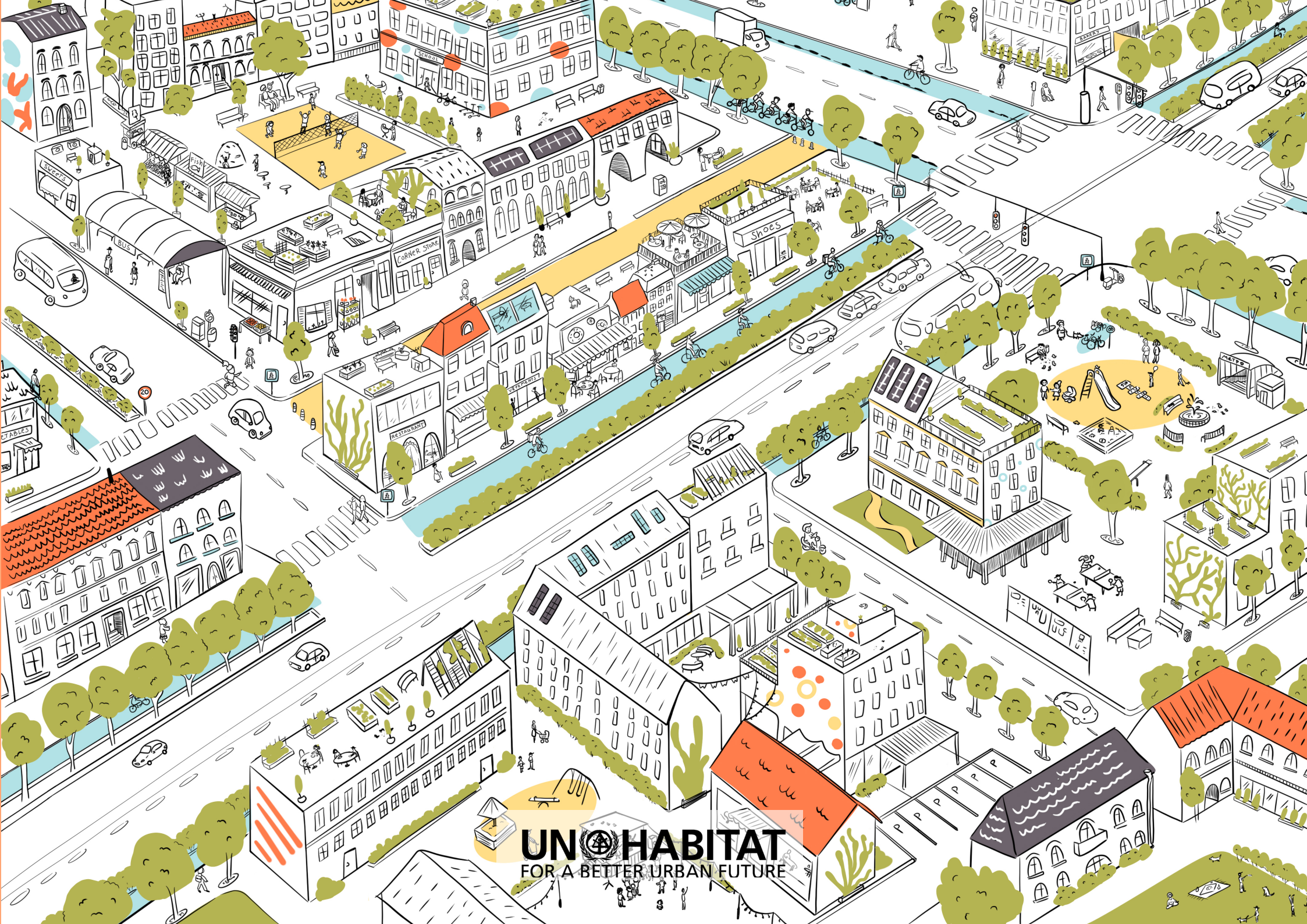
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Additional and specific data, observations, tips, and indicators were gathered through collaborative working sessions with a number of groups from diverse contexts.



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