



# the new urban pattern

An Urban Planning Strategy  
for Kabul

***“From Palace to Place for People.”***

**Mohammad Ashraf Ghani,**  
President

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- 1 Colours of Kabul
- 2 Traces of Kabul

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- 1 Urban vision
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- 1 Land readjustment
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## LEARNING FROM KABUL

**1** Colours of Kabul

**2** Traces of Kabul

**a** The public buildings

» The courtyard

» The axis

» The monument

**b** The residential buildings

» The courtyard

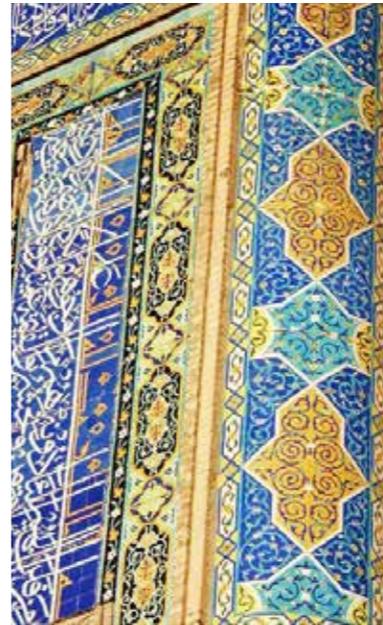
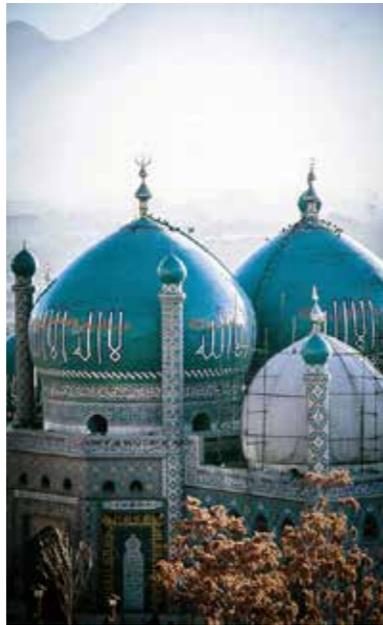
» The path

» The wall

# COLOURS OF KABUL

Kabul may seem to be an earth-coloured city from afar, but has many hidden shades of vibrant colours in details. A colour palette made of these proves the richness of the city's daily life and should be reflected as the city is being re-formed.

Afghanistan has considerable amount of marble in different parts of the country. While the compressed earth blocks are common amongst vernacular residential buildings, resulting in the earthy-look, marble in various colours is a valid alternative building material.

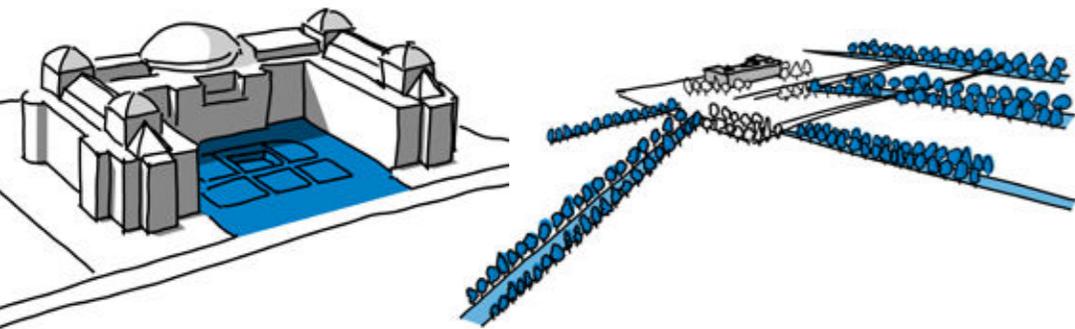


# TRACES OF KABUL

## PUBLIC BUILDINGS: FROM PALACE TO PLACE

The historical public building compositions have three main features that ensure a variety of spaces from **public** to **semi-public**:

1. The courtyard
2. The axis
3. The monument



### THE COURTYARDS

of public buildings are modelled after Darul Aman Palace. The courtyard typology U-shaped buildings creates suggest ideal semi-public spaces that can serve the relevant building's occupants, while creating a common space for a cluster of buildings that needs grouping.

### THE AXIS

can be a vehicular or pedestrian road, or a green belt. The axis, much like the Darul Aman Road, highlights important structures and guide people to and from them.

### THE MONUMENT

as an object or a building, is the image of the government's power and strength. The monumentality is linked to building with respect to traces from history.

## RESIDENTIAL BUILDINGS: PLACE FOR PEOPLE

The existing residential urban structure provides a hierarchy of **private** and **semi private** spaces for socializing.

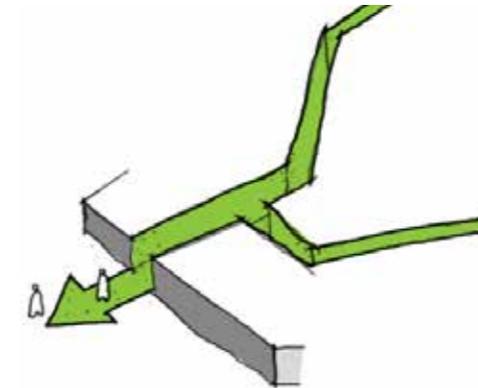
There are three main components of the existing urban structure that facilitate this:

1. The courtyard
2. The path
3. The wall



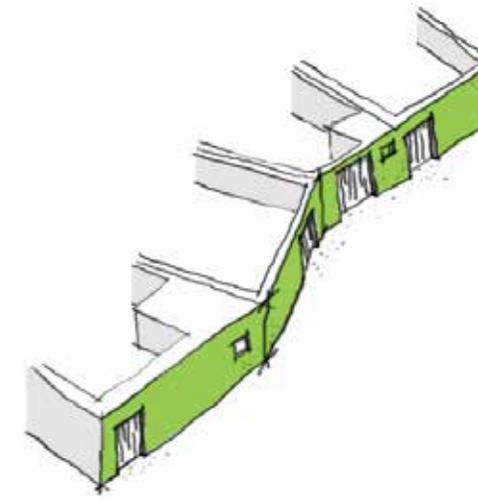
### THE COURTYARDS

create private spaces for the socializing within the family, as well as close friends and neighbours. Courtyards have significant impact as there is a long-established culture, and are amongst the most predominant urban features that shape the residential buildings.



### THE PATHS

grant access within the neighbourhood and provide semi-private spaces for socializing. Although these semi-private spaces are valued by children as protected playgrounds, in means of urban structure the unconnected and narrow paths pose safety and comfort problems as most of the times they are so narrow it is impossible to reach the adjacent houses by ambulance or fire trucks.



### THE WALLS

sustain privacy of the family and helps create semi-private and semi-public spaces. At times, the walls become the fronts of the ground floor stores and transform into a passage from public to semi-public, and to semi-private.



## PROPOSALS: GOVERNMENT AND RESIDENTIAL BUILDINGS

**1** Urban vision

**2** Design thinking

**a** The public buildings

» Connect

» Share

» Diversify

**b** The residential buildings

» Connect

» Share

» Diversify

**3** New urban pattern

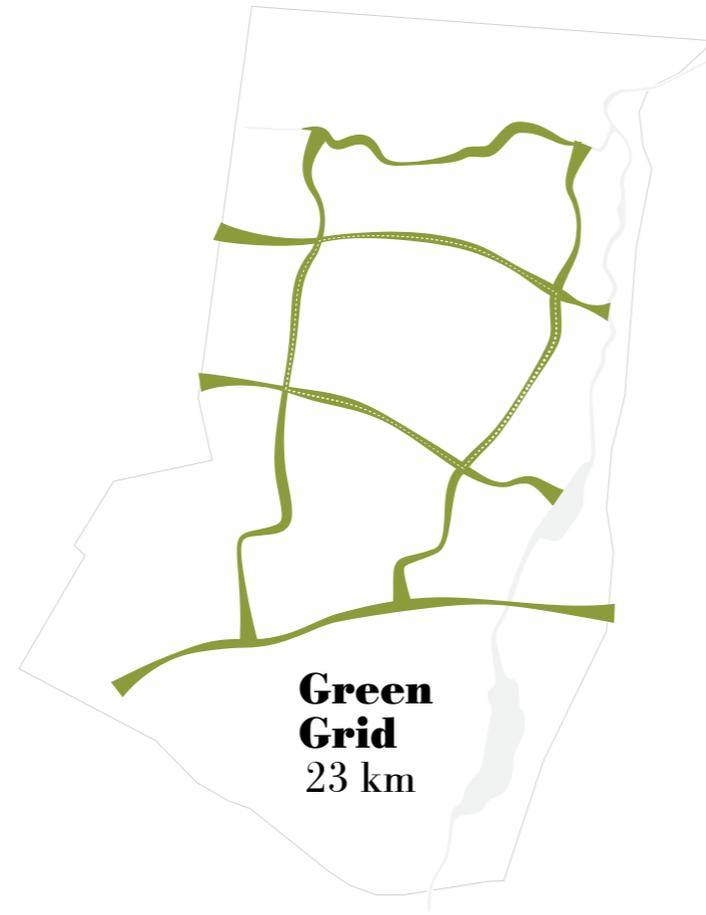
# URBAN VISION

The studied area consists mainly of unplanned informal settlements and has scarce access to public facilities.

According to World Bank's Policy Note #3 regarding the growth of Kabul, the most feasible means to answer the urgent needs of growth will be through the infill of vacant land and densification of existing residential areas. While most informal settlements can be upgraded through better infrastructure, it is not feasible to build new satellite towns from scratch due to insufficient means and time to build infrastructure to make this possible.

Therefore we suggest a strategy based on reforming/redesigning existing residential areas as informal settlements.

To support the regeneration process take place autonomously as much as possible, on the urban scale green grids and rings were proposed in the previous study. These green corridors are expected to act as triggers to revive economic and social activity in the neighbourhood, so that most of the re-form project can be undertaken by the habitants themselves.



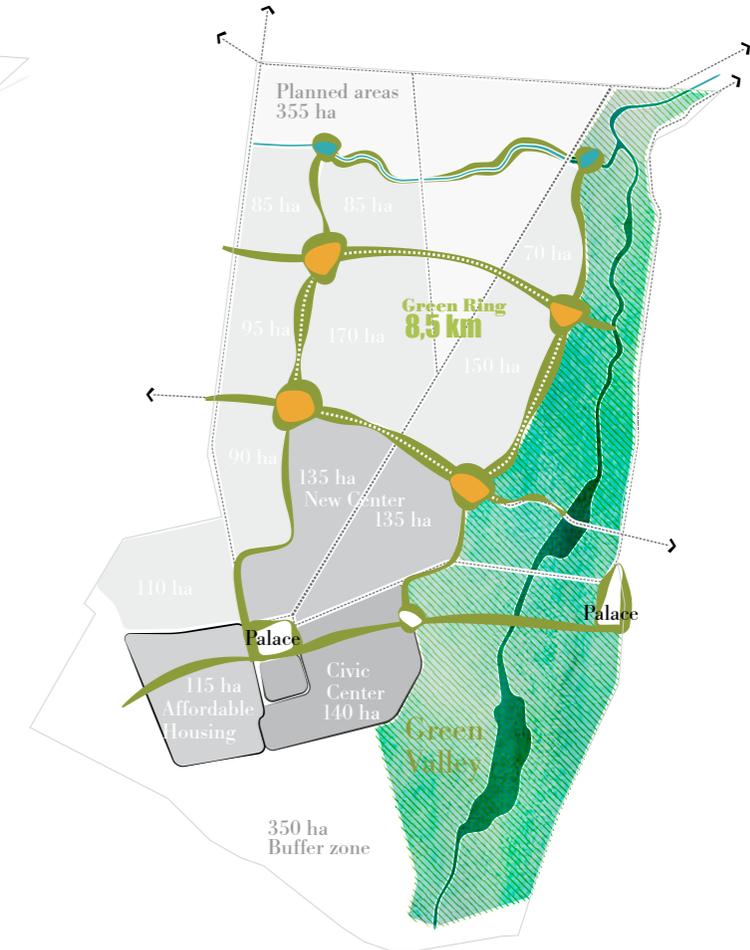
**GREEN GRID**

The 23 km long proposed green grid provides wider roads, accompanied by green corridors and solid infrastructure.



**GREEN RING**

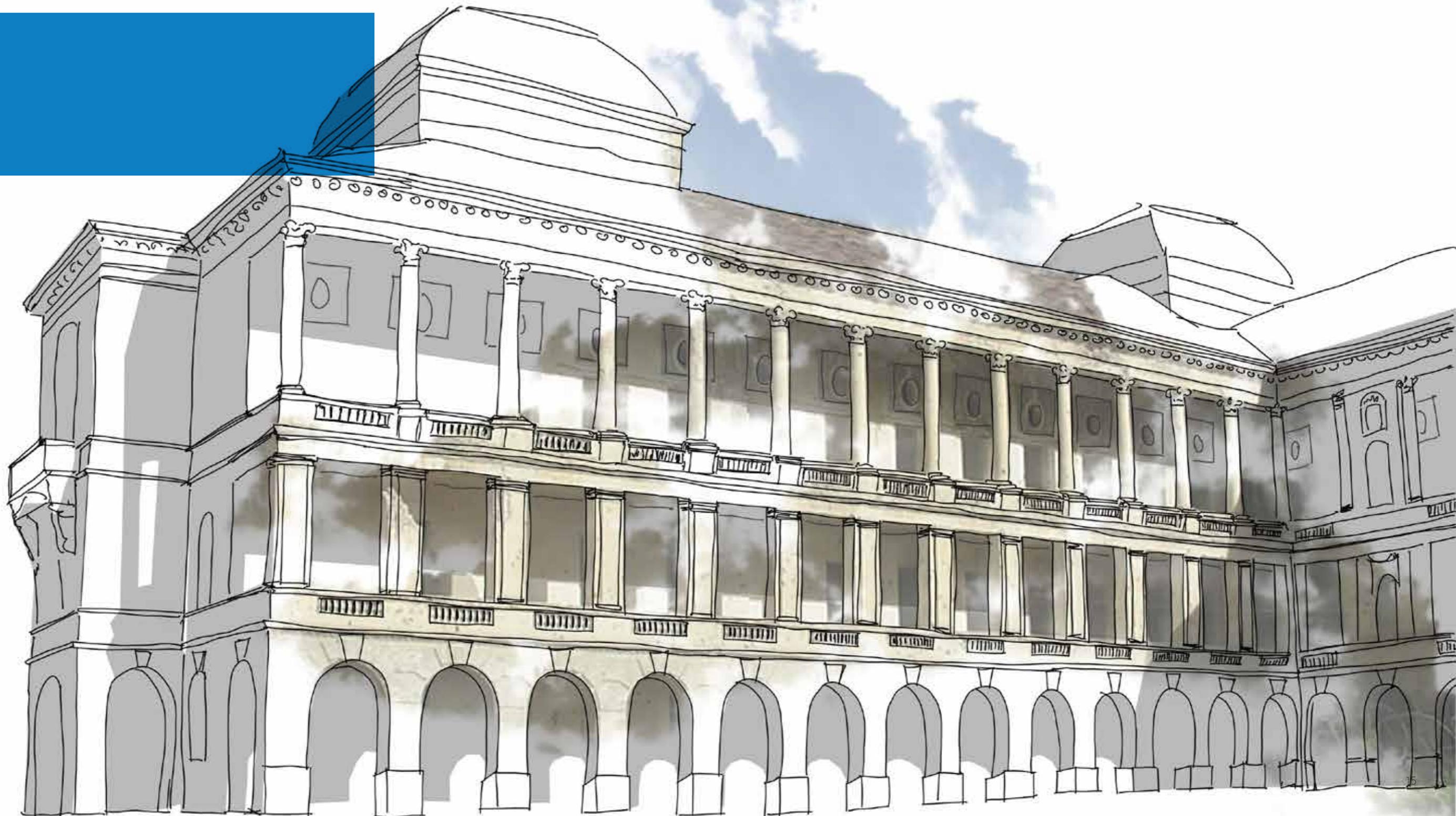
The 8.5 km long green ring connects main focal nodes located on the grid. These nodes are where the urban amenities are grouped, people gather and activity is at highest.



**STRATEGY**

New city centers and axes are expected to rejuvenate the areas in between.

*from* PALACE  
*to* PLACE  
*for* PEOPLE



# DESIGN THINKING

## THE PUBLIC BUILDINGS

The public buildings' generic design process is based on the three pillars of what we learned from the historical make-up of Kabul: The courtyards, the axis and the monument.

The design process is as follows:

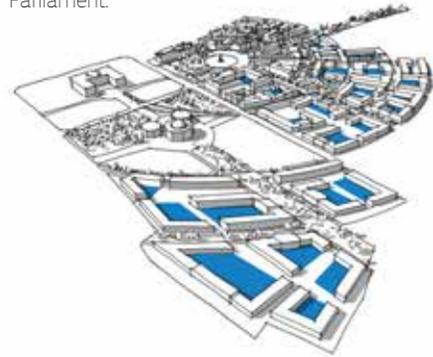
### 1. SHARE

A typical ministry building is modelled after the Darul Aman Palace. The courtyards, similar to the ones in residential areas, have three typologies ranging from building to urban scale.

The building scale courtyards are formed after the proposed U-shaped building, and they are positioned in a way to provide semi-public areas that groups the relevant buildings, such as the buildings that belong to the same ministry.

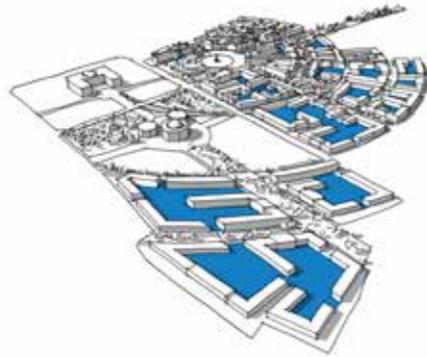
In the larger scale, the ministries that work closely together are grouped in the same vicinity, and their courtyards are connected to each other, creating cluster courtyards.

The final form of courtyards act as urban squares, positioned to highlight important buildings, for example the Parliament.



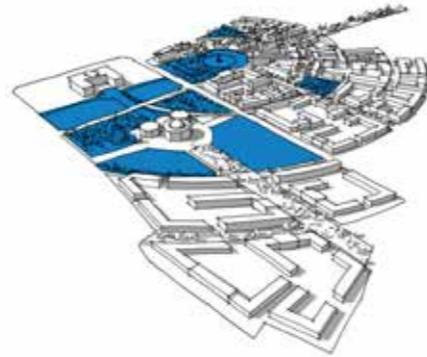
### BUILDING COURTYARDS

The building courtyards serve each building separately.



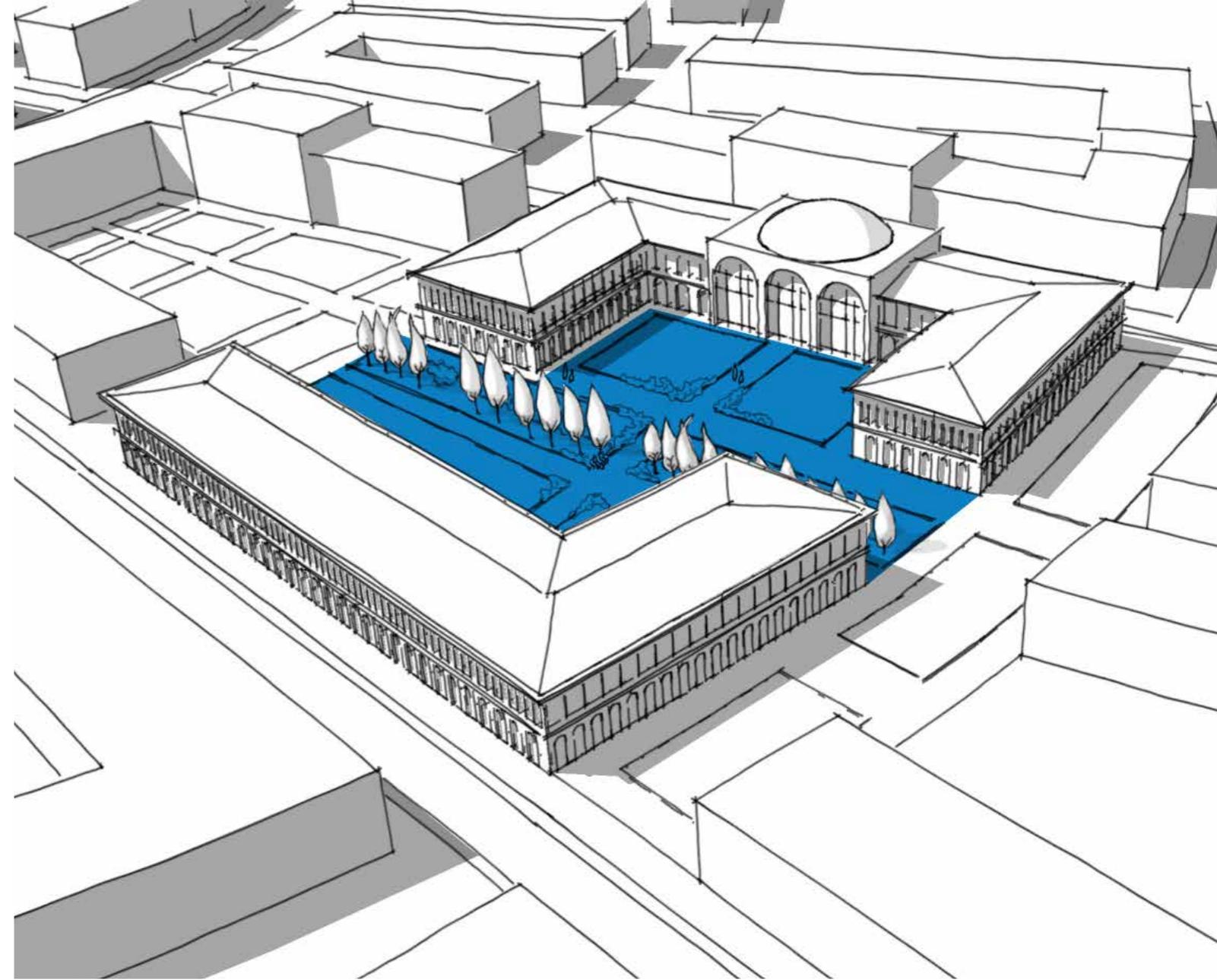
### CLUSTER COURTYARDS

Cluster courtyards consist of several buildings' courtyards, the buildings that work closely together.



### URBAN COURTYARDS

Urban courtyards highlight the historical buildings and/or axes.



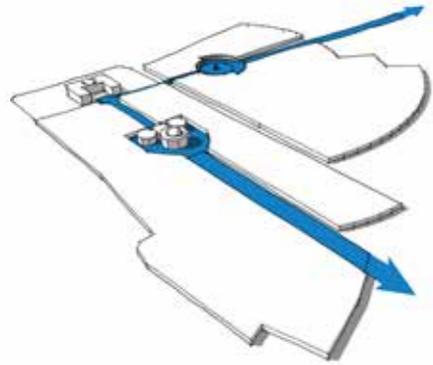
A courtyard defined by one building illustrated above.

These courtyards, when faced to each other create cluster courtyards. The landscaped spaces can be regularly used by the buildings' occupants, as well as the citizens.

## 2. CONNECT

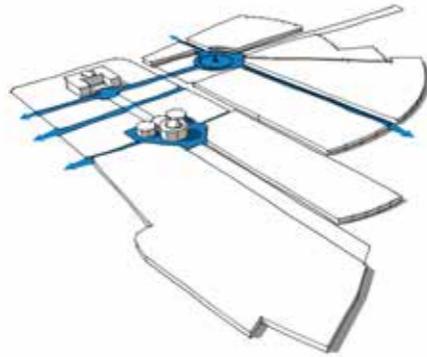
The public buildings' composition differs from the residential part, since public buildings are planned to be built in an empty plot while the residential areas are going to be mostly upgraded.

But this does not change the process' character: The design starts with establishing the axis. In the case of Darul Aman area, the main axis connects the Darul Aman Palace, the Parliament Building and Chehel Sotun Palace. This axis is not only a vehicular connection but also a historical and iconic one.



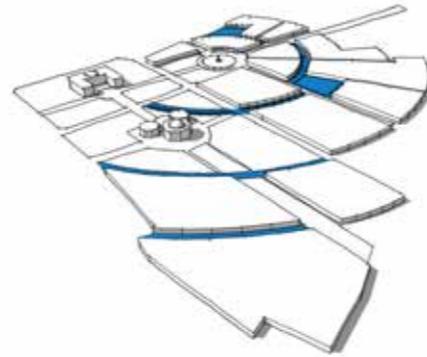
### MAIN AXES

The main axes connect the historical landmarks and the Parliament building.



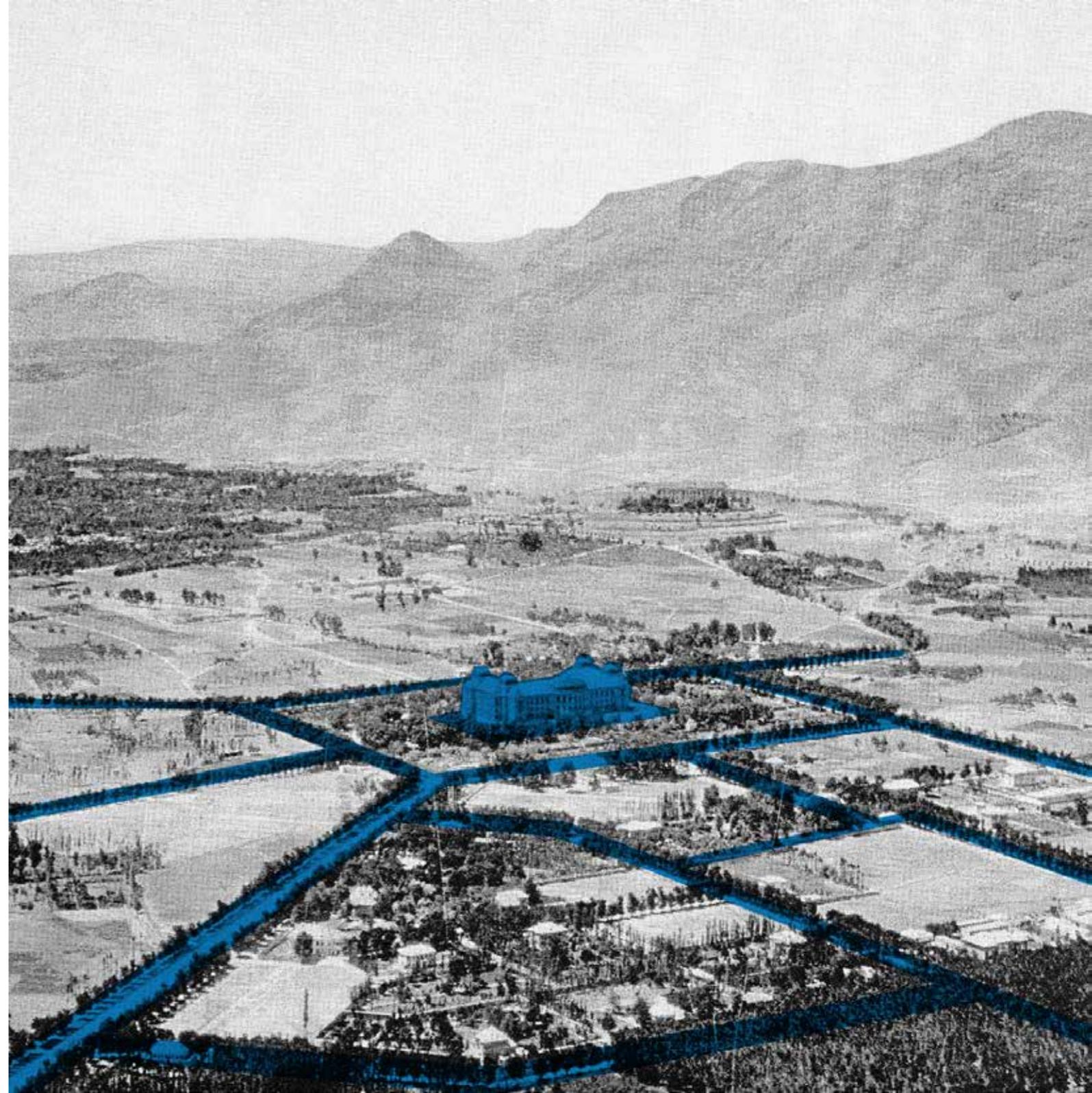
### SECONDARY AXES

The secondary axes establish connections for daily use.



### NETWORK

The rings provide the network between the established axes.



### 3. DIVERSIFY

Diversity in the case of public buildings come from in comparison with the residential buildings. While the residential buildings take their morphological cues from the building techniques and materiality, the public buildings should differentiate from them. This strategy will result in a diversity throughout the city, rather than within a single neighbourhood.

The differentiation is based on three main building elements: Scale, material and form of the buildings.

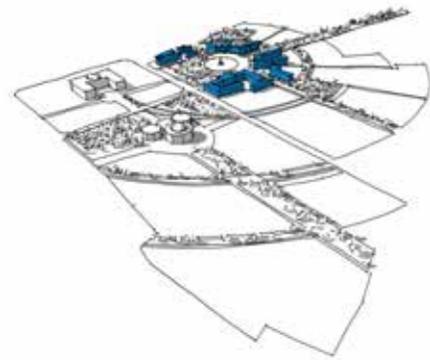
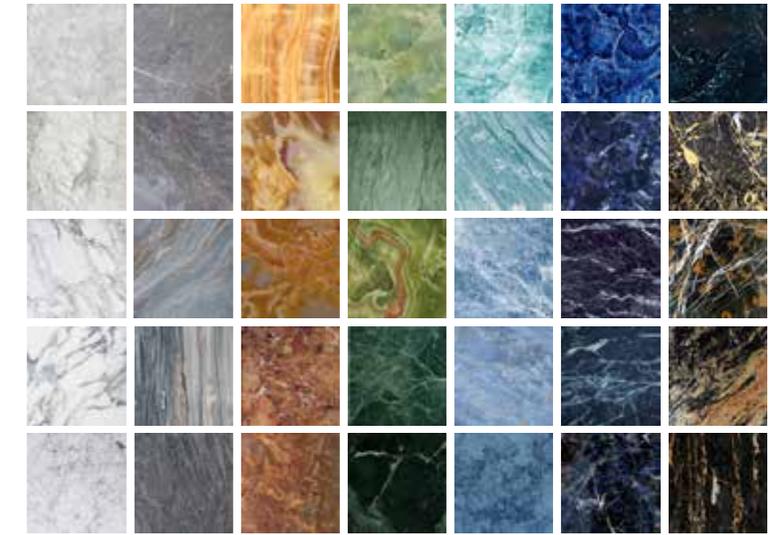
Scale of the public buildings impose the hierarchy in the city; the residential buildings are smaller both in footprint and height, the public buildings are larger but while respecting to the proportions and dimensions of the historical structures. It is important to have an impactful mass but not overshadow the historical palaces ever, rather highlight and compliment them.

The materiality particularly differs from the housing since Afghanistan-based marble is proposed to be used for the public buildings. The Afghan-marbles have a variety of colours of which some was sampled in the previous chapter.

The monumentality of the buildings is achieved through the form; again, respecting the historical palaces, the public buildings should be monumental in order to create the government's powerful image while complimenting the palaces.

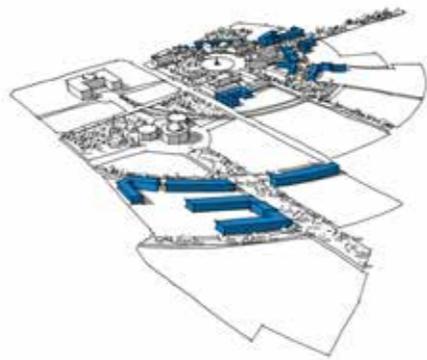
As mentioned in earlier chapters, Afghanistan is a place of many colours and this can easily be reflected on the architecture through the variety of Aghan marbles and stones.

While it may be difficult to use marble as building materials in residential buildings, where compressed earth blocks are widely used, public buildings should definitely embrace colour in order to establish the monumental image and impact. This is also important to create the diversity in city-scale; while the residential buildings create an urban texture of mostly earth-colours, the government buildings should be easily distinguished from afar.



#### TALLEST BUILDINGS

The buildings closest to the main square are the highest, which are 24 m high.



#### MIDDLE HEIGHT

Secondary wing has the middle height, which is 18 metres.



#### SHORTER BUILDINGS

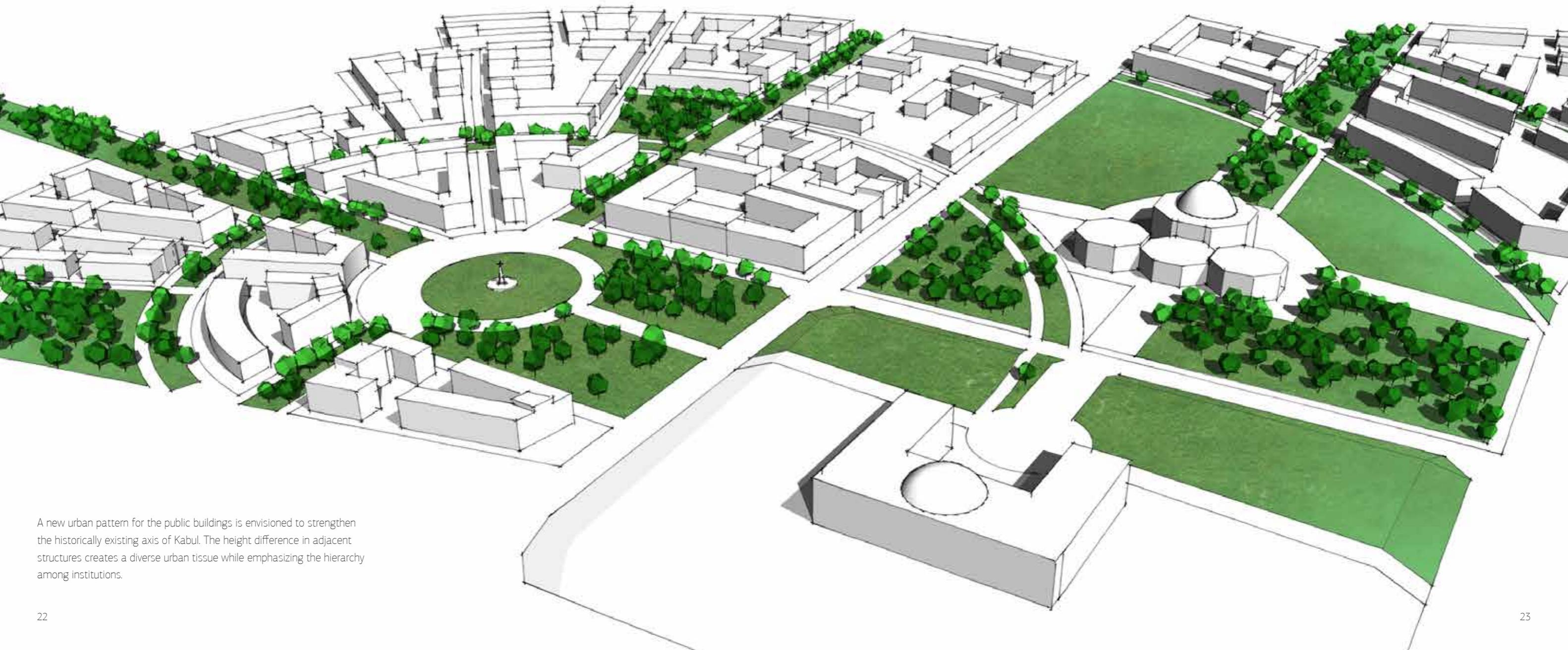
The outer ring has the shortest buildings, which are 12 to 15 metres high.



The new buildings can never be higher than the Palace.

The difference in heights of buildings result from the Palace's natural and man-made topography. As the Palace rises above the hill, the buildings around urban courtyards get higher mimicking the Palace's effect on its surroundings. The Palace itself and the Parliament are never adjoined or neighbored by new buildings, therefore they are always highlighted in the midst of a well-designed, green urban courtyard.

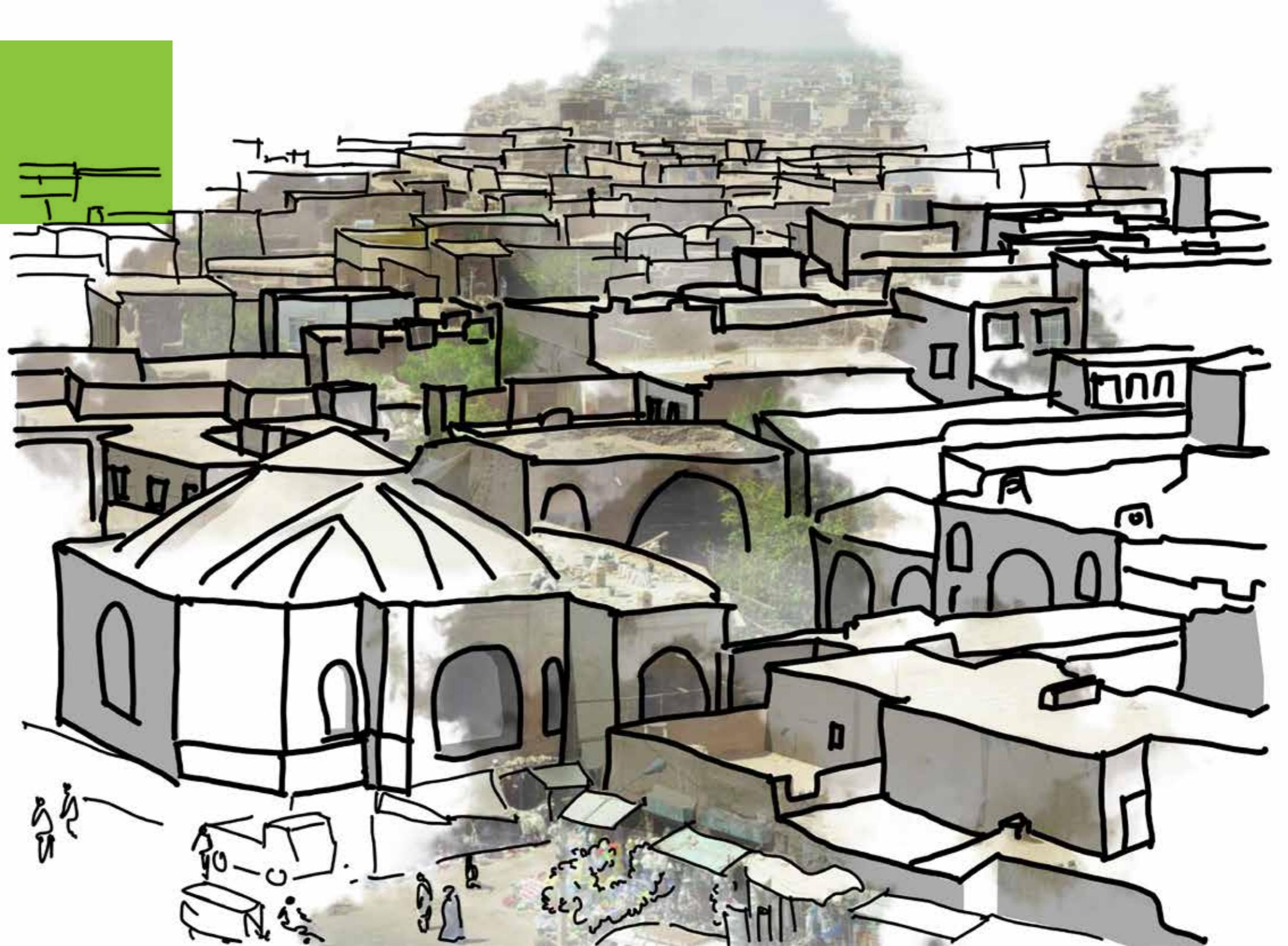




A new urban pattern for the public buildings is envisioned to strengthen the historically existing axis of Kabul. The height difference in adjacent structures creates a diverse urban tissue while emphasizing the hierarchy among institutions.



from PALACE  
to PLACE  
for PEOPLE



## DESIGN THINKING: THE RESIDENTIAL BUILDINGS

The generic design process is based on the three pillars of what we learned from the vernacular urban make-up of Kabul: The courtyards, the paths and the walls. The design process is as follows:

### 1. SHARE

The newly established road network results in a new urban block system. This new blocks are then divided into smaller plots to re-distribute the density according to new requirements. Together with the redistribution of new plots, the courtyard system is redesigned. Currently, the each courtyard is attached to a single house, providing them with semi-private spaces. While this is a significantly important culture and should be kept by any means, at some point it makes it very difficult to densify the area since the lot coverage is highly low due to the courtyards.

Additionally, existing courtyard system only provides semi-private spaces and current semi-public spaces that act as children's protected playground and gathering spots for women are the dead-end alleys; and by turning

them into continuous roads these spaces are taken away by default. Therefore in this step, we assume several courtyard typologies rather than one, with a hierarchy between them again.

The first courtyard typology is the existing one; the family courtyard that serve to a single house. These courtyards are semi-private to the houses that they are attached to.

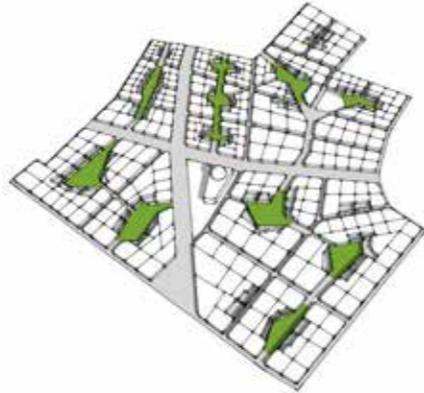
The second typology is cluster courtyards; meaning they are formed by a group of buildings and semi-public areas that can be designed as playgrounds, parks and protected gathering spaces that the families of the surrounding houses will use.

The third and last typology is the community courtyard, referring to larger urban squares that host public amenities such as educational, health-care, religious buildings. These are completely public areas and placed strategically in each neighbourhood.



### FAMILY COURTYARDS

The current urban form is full of narrow roads and dead-end alleys.



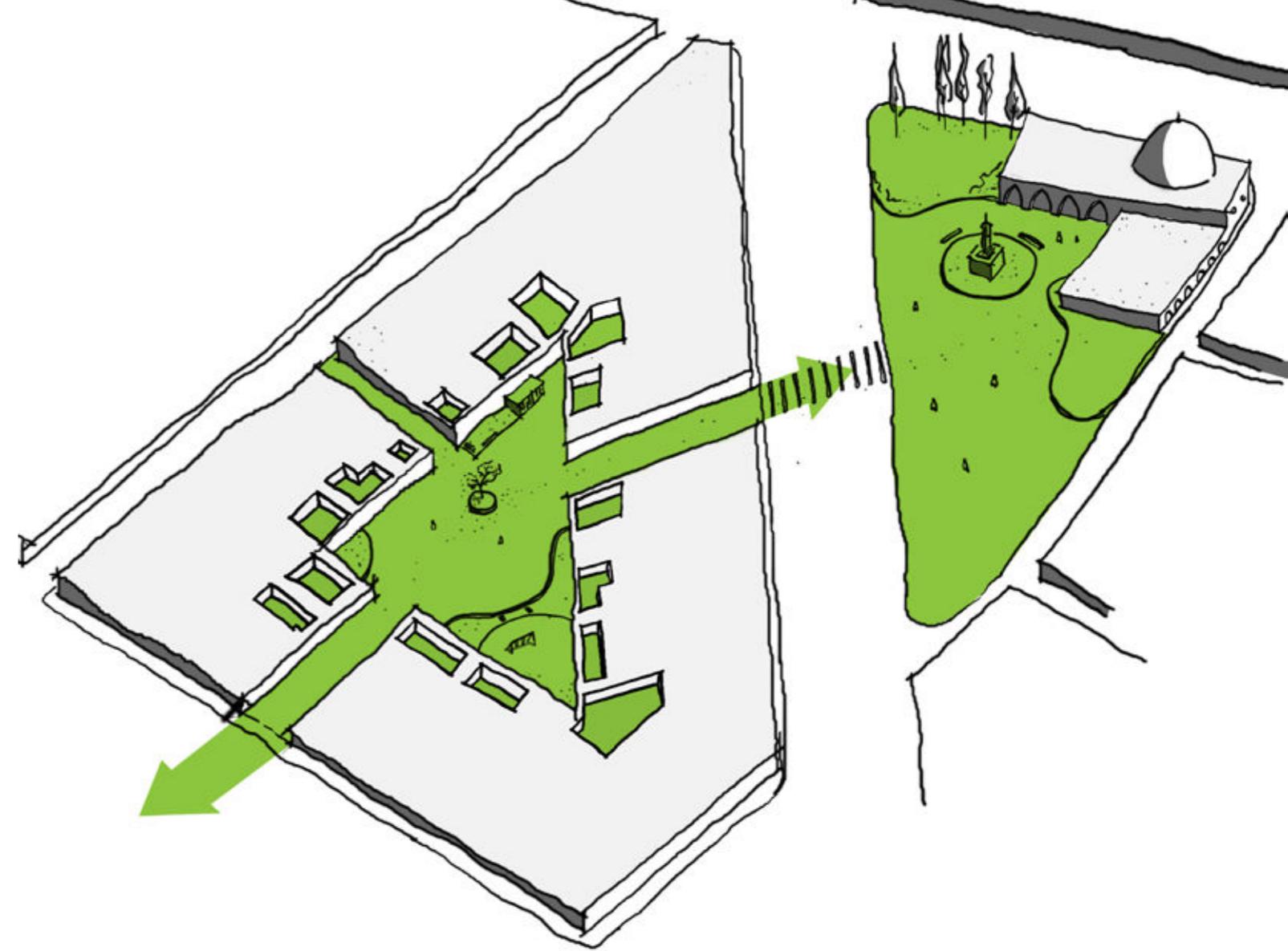
### CLUSTER COURTYARDS

The main axes are wider, and have a higher vehicular traffic.



### COMMUNITY COURTYARDS

Narrower roads are designed for pedestrians, bikes and tuk-tuks as well as motor vehicles.



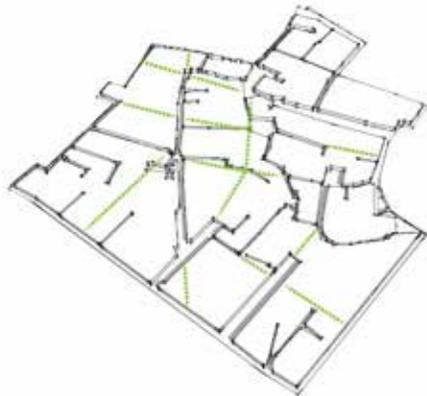
Family, cluster and community courtyards illustrated above.

Family courtyards face the cluster courtyards rather than the roads, ensuring a more secure, quiet vicinity. Cluster courtyards serve multiple houses and 3-4 blocks; and are used as children's playground, park, small commercial areas. Community courtyards are the largest, and coupled with amenities such as mosques, hospitals, schools, etc.

## 2. CONNECT

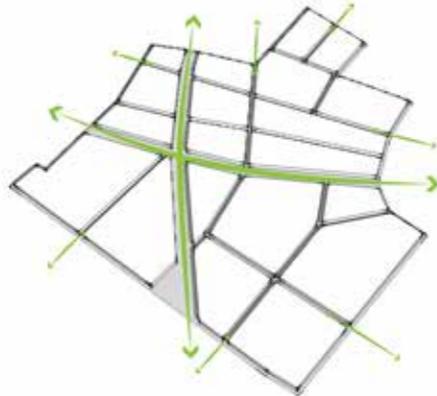
The process starts with connecting the existing pathways to each other to create a well-connected vehicular and pedestrian road network. While doing so, a road hierarchy is also planned; main axes are widened while secondary roads and paths are mostly kept as they are as much as possible and only connected where needed.

Keeping the intervention to a minimum is important in order to respect the urban memory and to maintain a feasible economic investment. Additionally, having a hierarchy amongst the pathways is essential to maintain the existing private to semi-private, to semi-public, to public space hierarchy. While the wider roads act as public spaces where main commercial activities are focused, the narrower paths can remain as rather semi-public areas.



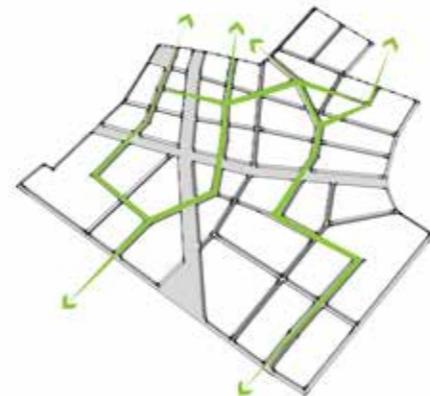
**EXISTING PATHS**

The current urban form is full or narrow roads and dead-end alleys.



**MAIN AXES**

The main axes are wider, and have a higher vehicular traffic.



**SECONDARY ROADS**

Narrower roads are designed for pedestrians, bikes and tuk-tuks as well as motor vehicles.



The existing cul-de-sacs illustrated above.

The alleys are connected with an intervention as minimal as possible. This way the urban memory is preserved while the economic liabilities are optimised.

### 3. DIVERSIFY

The final step of the design process strategies towards densification and emphasising the established space hierarchy /diversity with the buildings themselves.

The current residential make-up mostly consists of single-storey houses with occasional shops facing the alleyway in front. While the diversification mainly starts with the new road network and courtyard system proposal, putting into account the necessity for densification as well calls for action in the third dimension as well, meaning the height of the buildings should vary too.



#### EXISTING MORPHOLOGY

The current residential make-up mostly consists of single-storey houses.



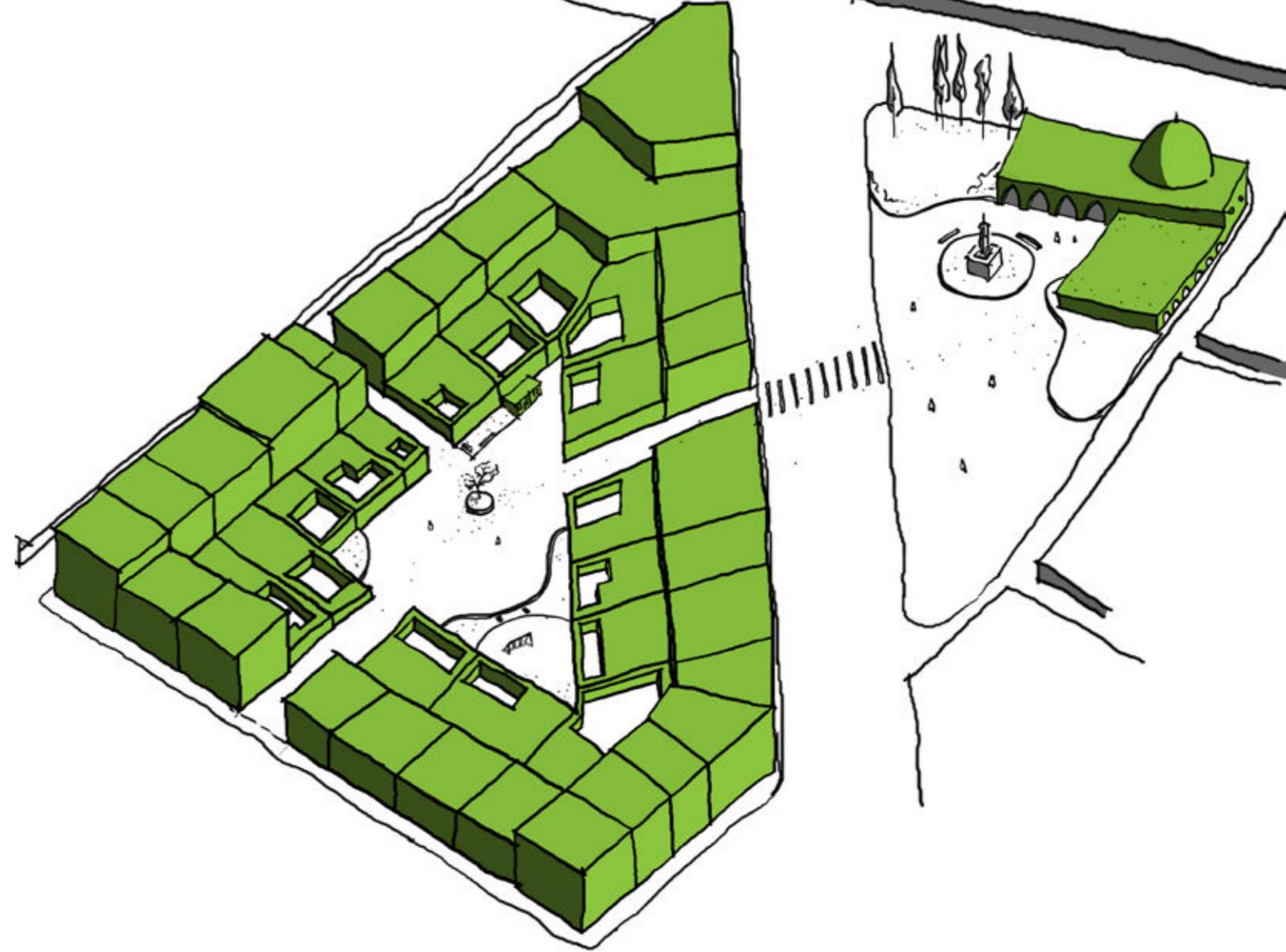
#### DIVERSE HEIGHTS

The buildings get higher if they face the main axes.



#### MIXED-USE

The higher buildings have commercial spaces in the ground levels.



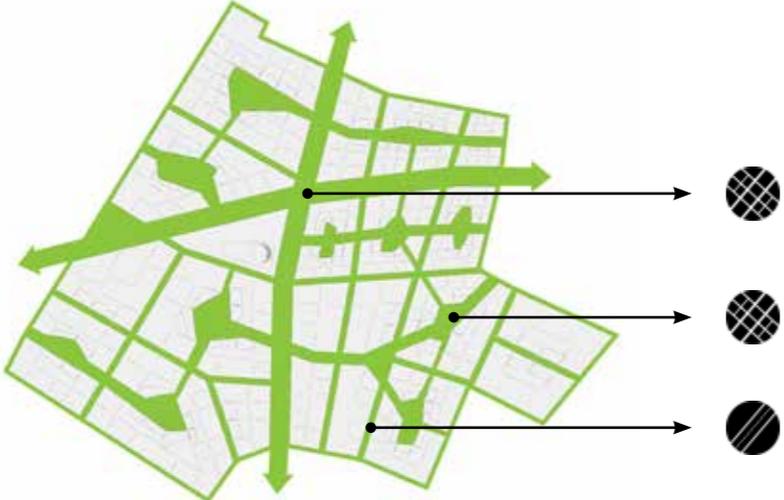
Diverse massing composition illustrated above.

The main idea behind height strategy is to keep the courtyard-facing masses low, and go higher when facing the roads. This strategy aims to keep the vernacular one-storey houses with private family courtyards on one hand, while making it possible to increase density on the edges with 3-4 storey-high buildings. The extra space created is also used for commercial activities, which is thought to give the residents a chance to finance the upgrading by themselves to a certain degree.

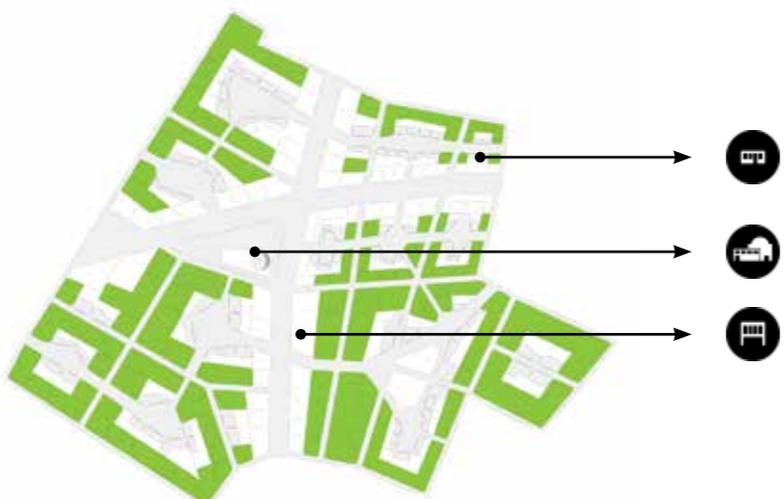
SHARE



CONNECT



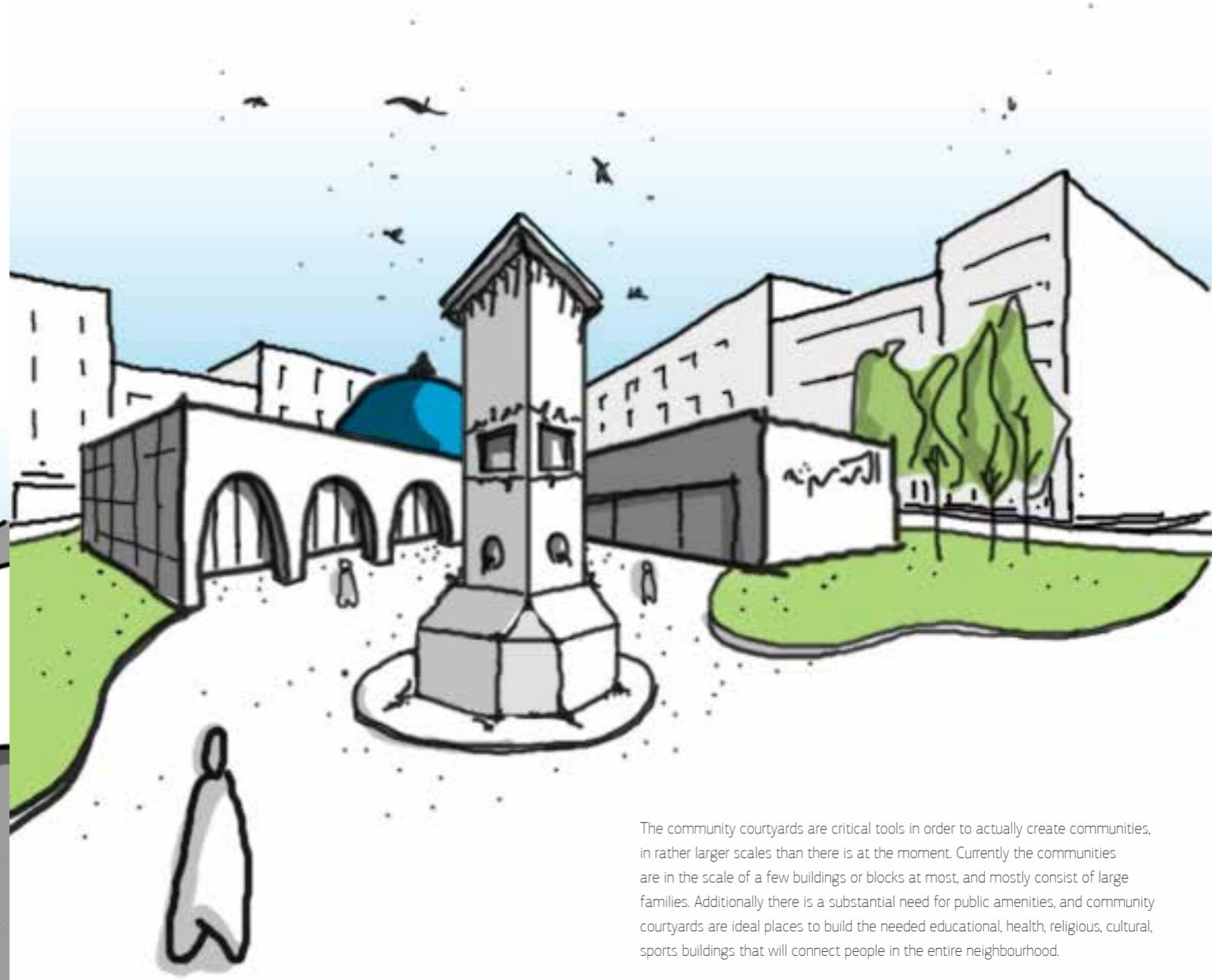
DIVERSIFY



The paths should be wide enough to allow service vehicles to reach, but remain narrow enough to have buildings cast shadow on each other, so that urban passive climatisation practices are preserved. It is important to respect the ways of living of locals, since they are the ones who will maintain these spaces once they are created.

Currently the children of Kabul mostly use the cul-de-sacs as playgrounds, and the women as the social gathering areas when they do not use their courtyards. When connecting the dead-end paths and turning them into continuous streets, these impromptu playgrounds and social spaces are taken away.

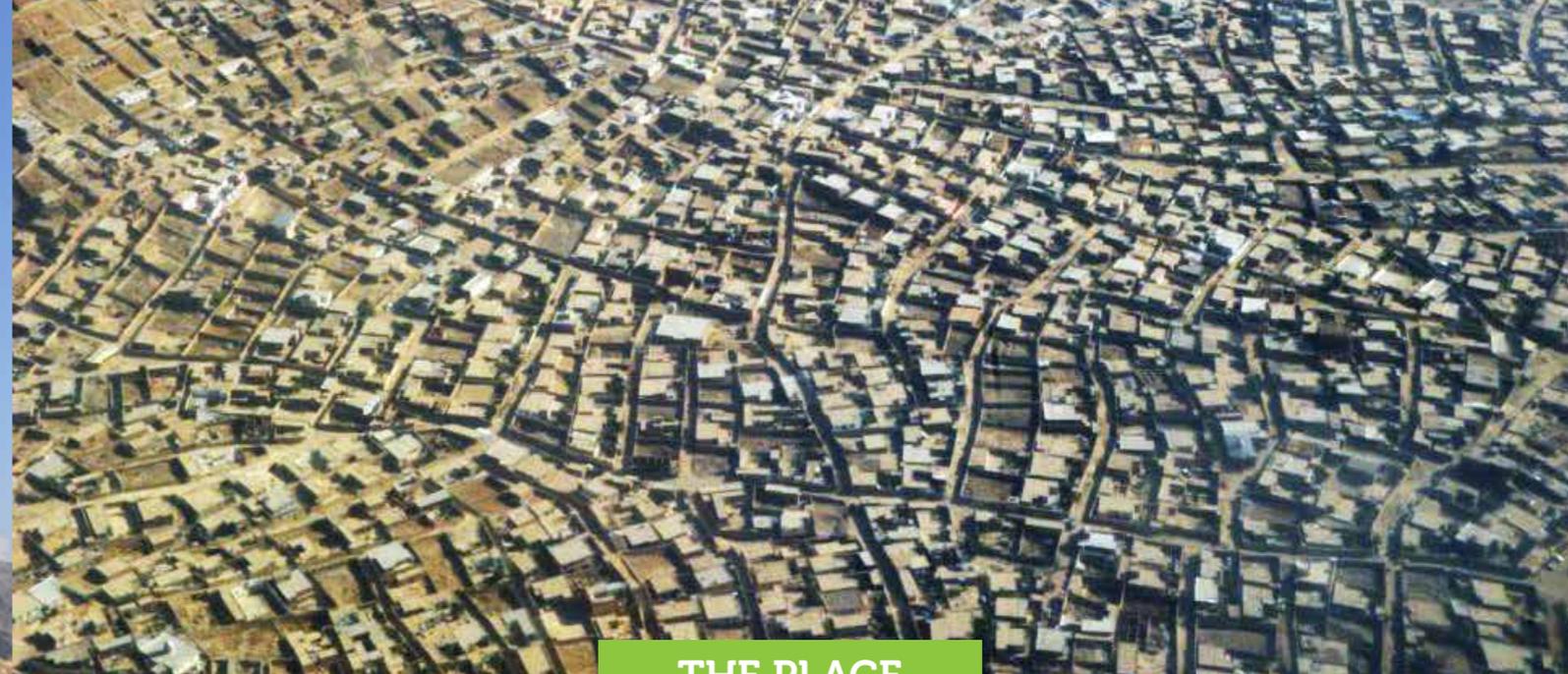
The cluster courtyards serve to 3-4 urban blocks, meaning potentially 3-4 large families that live together. This makes these areas semi-public and semi-controlled spaces, meaning they make great playgrounds for children and gathering areas for women. The cluster courtyards can also be spaces for small commercial activities, allowing street vendors to open up shop on a regular basis.



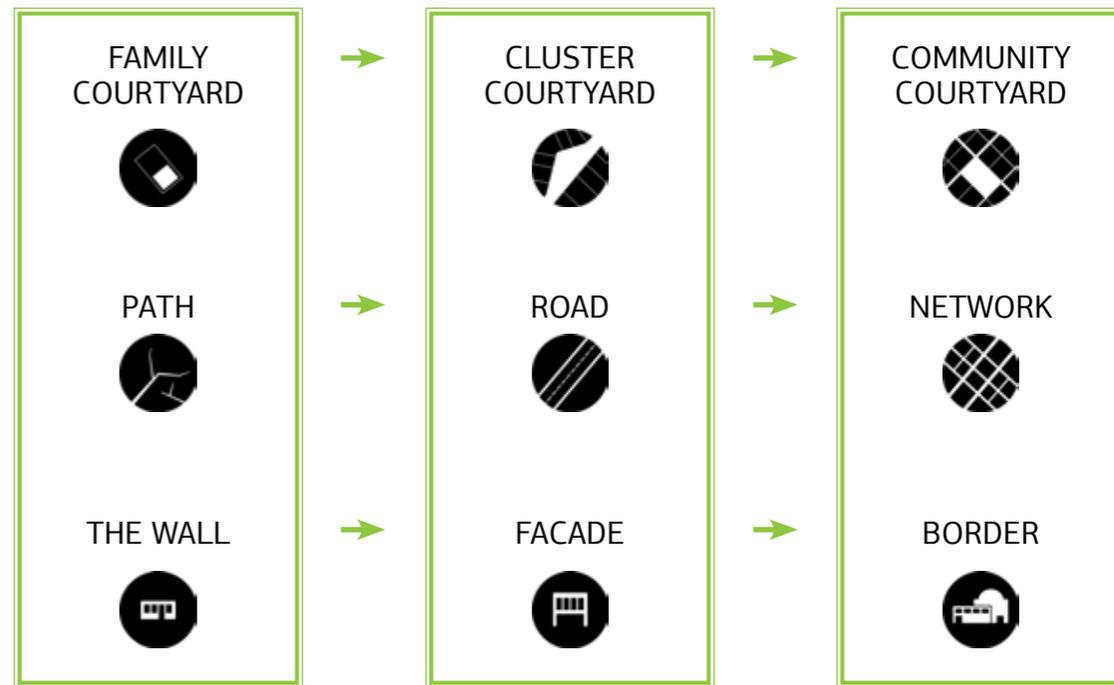
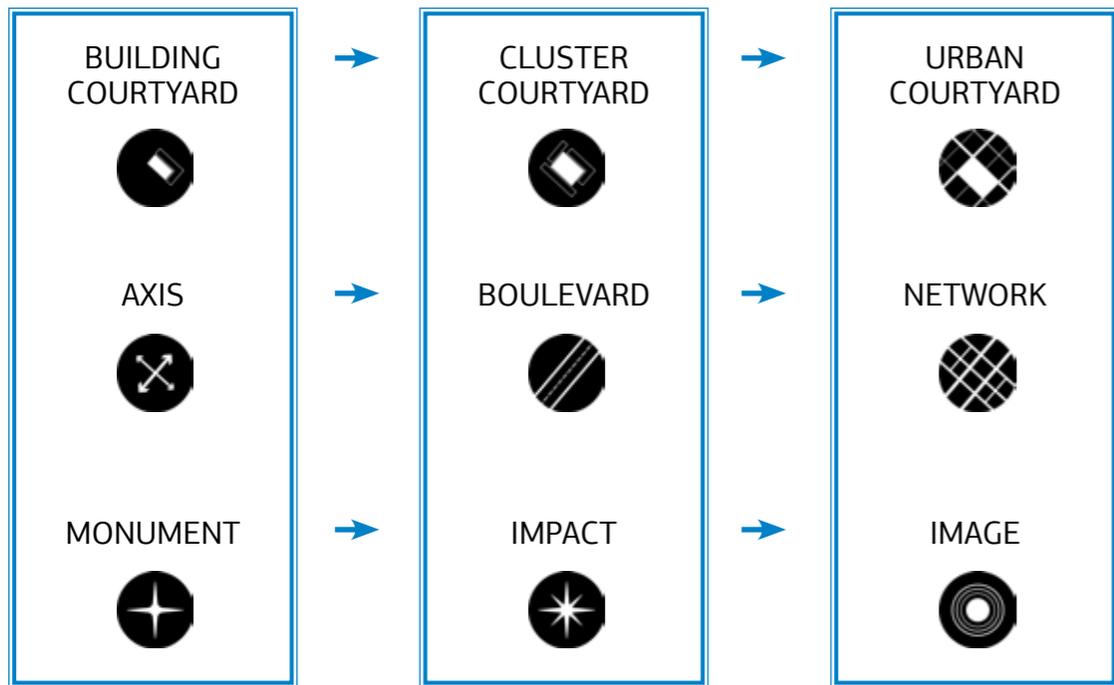
The community courtyards are critical tools in order to actually create communities, in rather larger scales than there is at the moment. Currently the communities are in the scale of a few buildings or blocks at most, and mostly consist of large families. Additionally there is a substantial need for public amenities, and community courtyards are ideal places to build the needed educational, health, religious, cultural, sports buildings that will connect people in the entire neighbourhood.

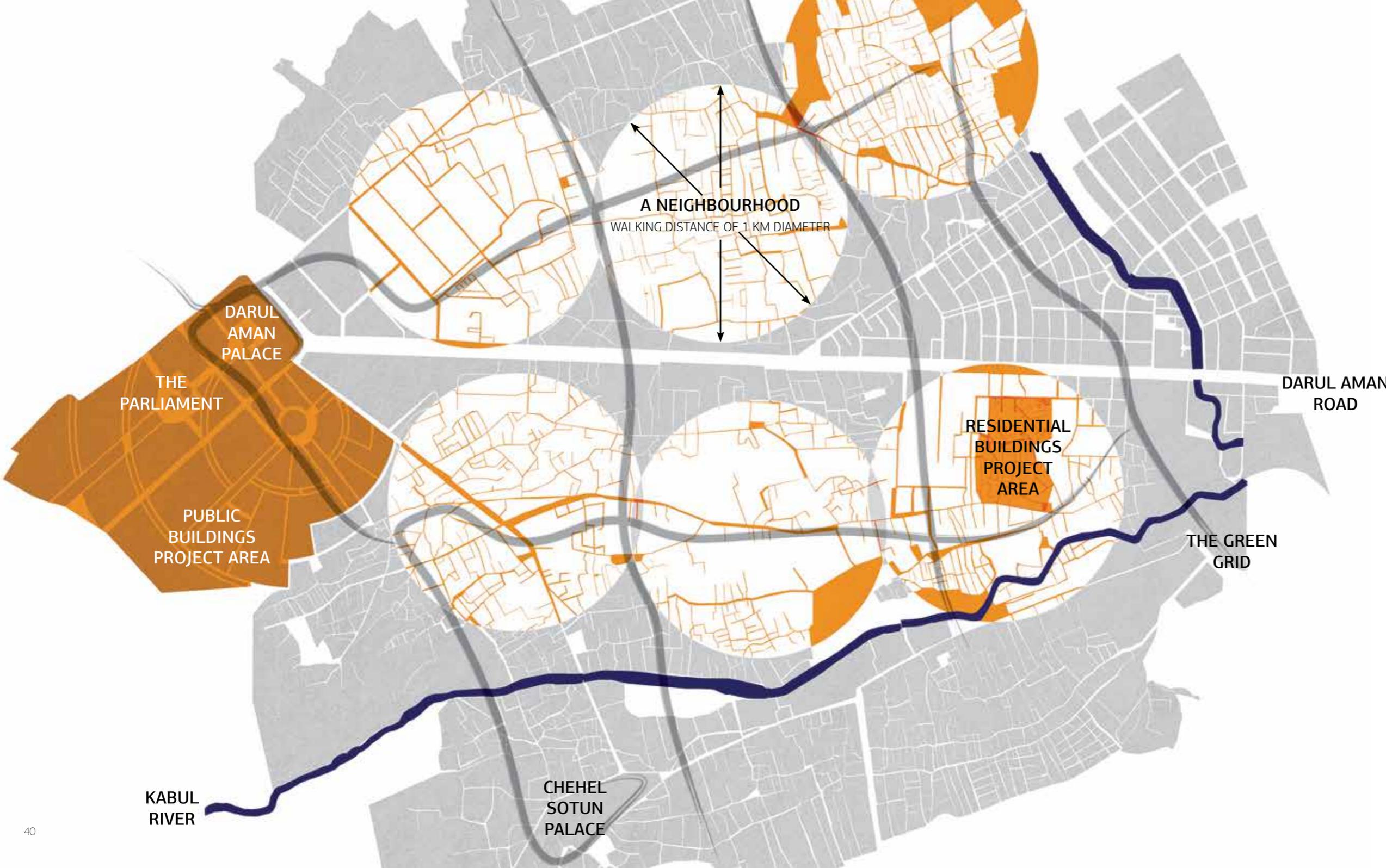


**THE PALACE**



**THE PLACE**



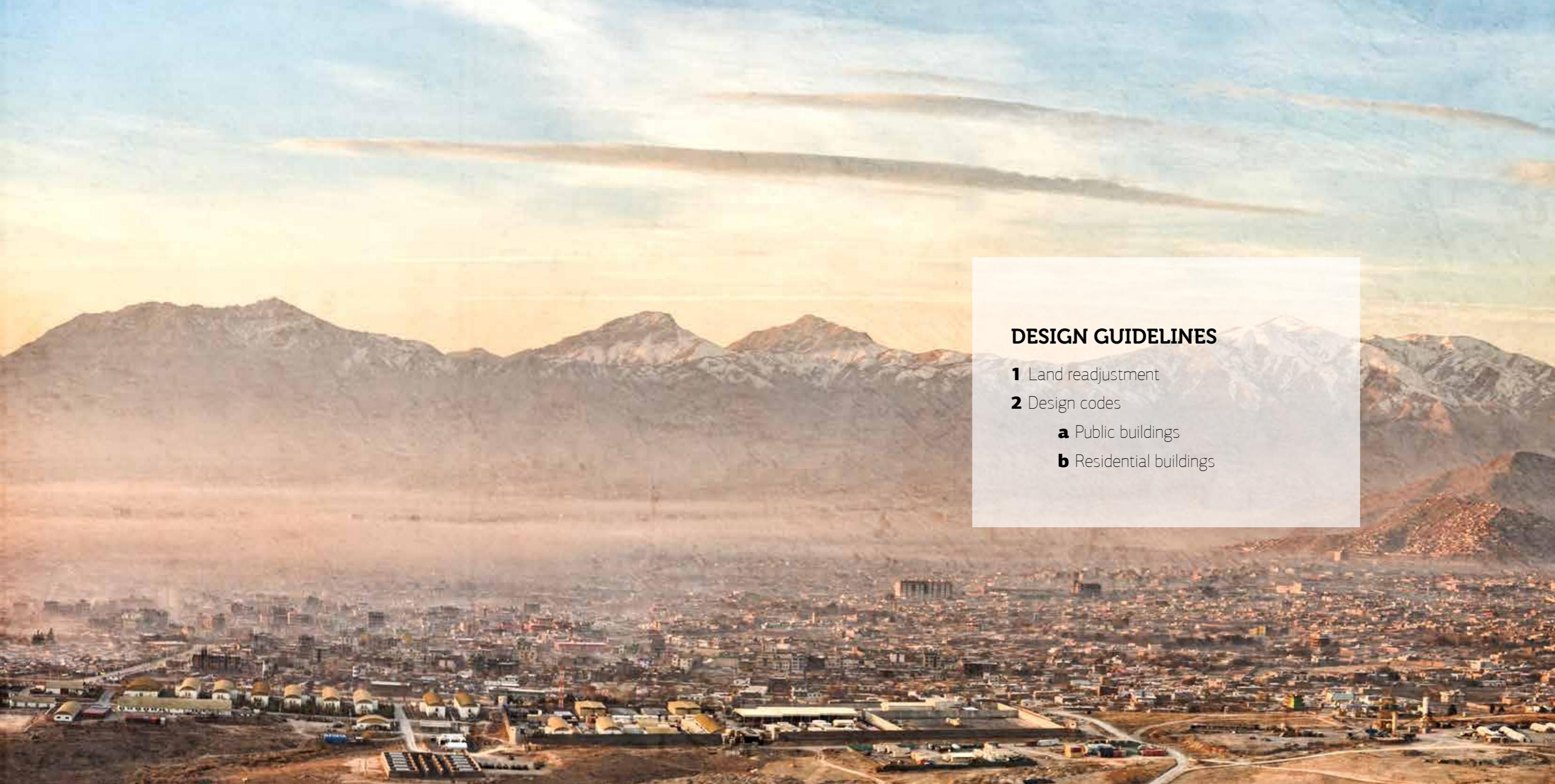


### THE NEW URBAN PATTERN

The image to the left depicts the sample project areas for residential and public buildings' development in a larger context together with the previously proposed green grid system.

The orange circles illustrate an area of 500 m in radius, which is the accepted walkable distance for a person. The circles coincide at the focal points of the green grid, where the commercial activity is imagined to be at its highest.

While the public buildings are tailor-made to their site; the design thinking for residential buildings presented in the guide is a mere model that needs to be replicated while mutated to fit in different contexts. For example, the building height and mixed use building numbers will be higher as you get closer to main roads such as Darul Aman Road or the new Green Grid; or the density will be completely different near water bodies, etc.

An aerial photograph of a city at sunset. The city is densely packed with buildings, and the sky is a mix of blue and orange. In the background, there are large, rugged mountains. A semi-transparent white box is overlaid on the right side of the image, containing text.

## DESIGN GUIDELINES

**1** Land readjustment

**2** Design codes

**a** Public buildings

**b** Residential buildings

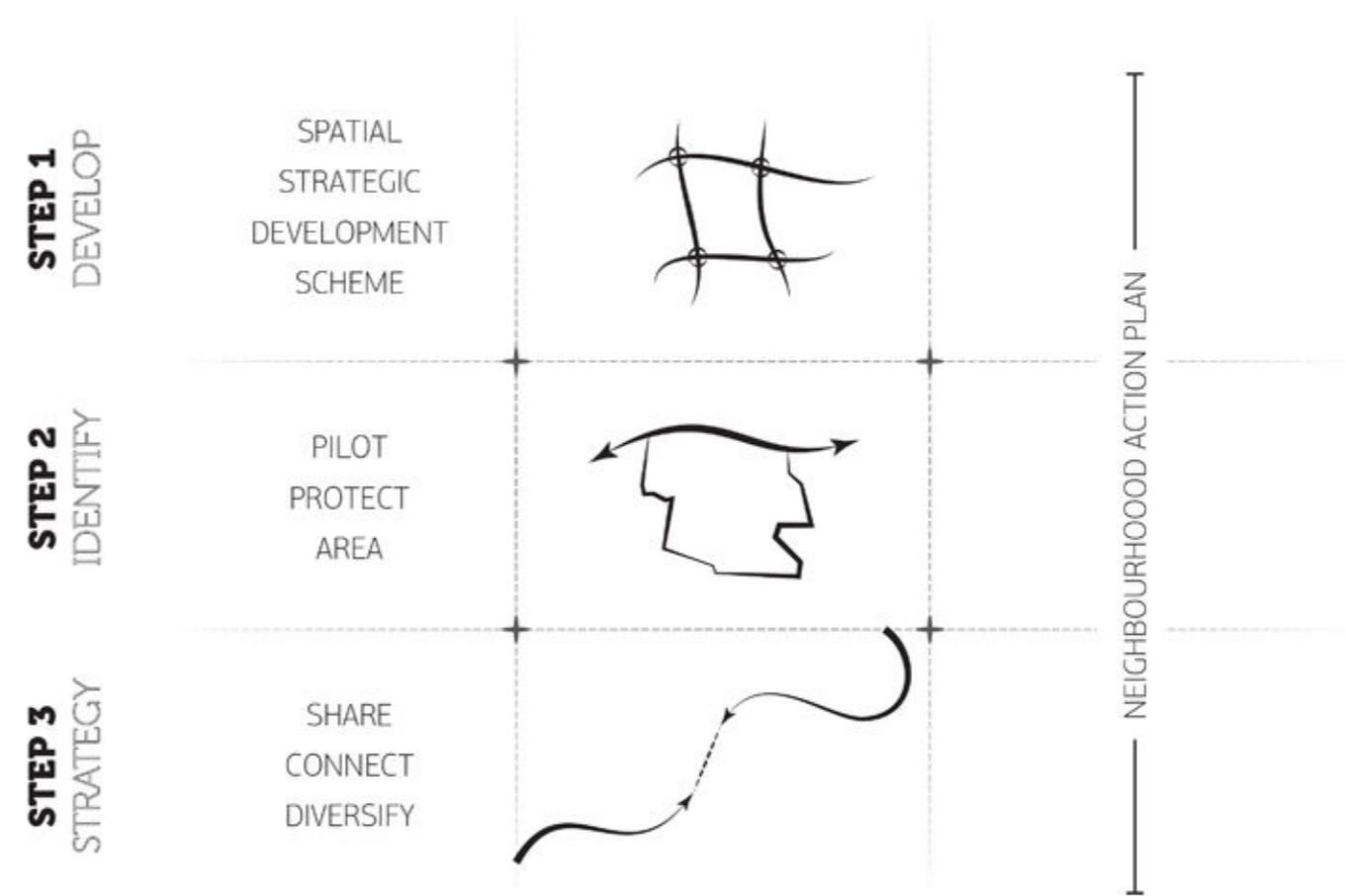
# LAND READJUSTMENT

The main steps and stages in carrying out a typical pooling project can be listed as follows:

1. Identification of the group of adjoining landholdings for pooling which is then designated as the land pooling area;
2. Assessment of the value of each landholding in order to calculate each landowner's share in the project;
3. Preparation of a draft pooling scheme (and supporting financial plan) in consultation with the landowners and the relevant government authorities (the highway, public utility, etc. authorities)
4. Public exhibition, review and amendment of the draft scheme followed by central government approval of the final scheme and its publication;
5. Preparation of engineering works designs;
6. Compulsory acquisition and consolidation of the landholdings, roads, etc. in the designated pooling area;
7. Raising of short term loan for working capital;
8. Carrying out of land servicing and subdivision works by contractors and relevant government authorities;
9. Physical and legal subdivision of land into streets, parkland and sites for buildings;
10. Sale of some of the building sites to recover costs and repay the loan;
11. Distribution of the other sites to the landowners;
12. Final cash adjustments to achieve each landowner's precise share of the project.

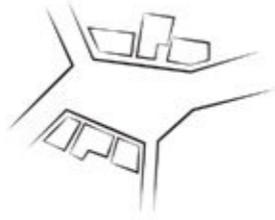
In the case of the renovation of residential areas, the particular strategies taken into consideration were as follows:

1. Narrow down the lots for the court-yarded, single family housing in order to create semi-public cluster courtyards and public community courtyards.
2. Connect and enlarge the existing roads for motor traffic and add new pathways for pedestrian path network. The pedestrian path network is expected to connect the cluster and community courtyards.
3. Add an additional level of houses with terraces on top of the built areas. This extra volume will not only cover for diminished footprint area, but even provide additional space to payback for the investment. The higher housing blocks can be mixed-use; and while some parts belong to the original landowners, new additions are rentable for commercial activities or as residential apartments for smaller families. This way, the diversity is not only provided by building use but also people using them. Plus, providing high density, multi-story housing blocks is also important to prepare for the future density envisioned for the Darul Aman area.



**STEP 4**  
PLACEMAKING

HOUSING COURTYARD  
CLUSTER COURTYARD  
COMMUNITY  
COURTYARD



**STEP 5**  
CONNECT

PATH  
ROAD  
AXIS



**STEP 6**  
DESIGN  
CODES

BUILDINGS  
STREETS  
NEIGHBOURHOOD



SOCIAL IMPACT DESIGN GUIDE

**STEP 7**  
IMPLEMENT

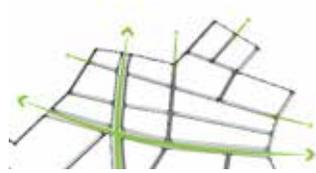
COMMUNITY  
INVOLVEMENT  
LAND VALUE  
BONUS



IMPLEMEN-  
TATION  
PLAN

# DESIGN CODES

## RESIDENTIAL CODES



### Main Arteries

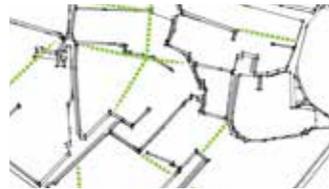
According to the proposed green grid layout, main arteries should be formed, providing thru connections.

Main arteries will host the vital infrastructure as well as the commercial activity. Primary arteries connect the boulevards and should be at least 15 m wide, with two way connections and parking lanes. Secondary arteries connect through primaries and boulevards.



### Public Courtyards

Each neighbourhood should have 2 or 3 public courtyards, each marked by a vital public function (a mosque, a marketplace etc.). At least one primary or secondary artery should connect the public courtyard.



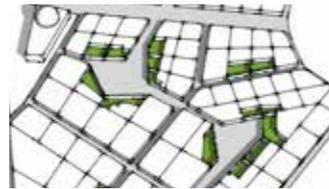
### Existing streets

Existing paths will be connected, eliminating "cul de sacs" and dead ends. Road connections are critical for emergency vehicle accessibility and the continuous flow of the traffic.



### Densification

In order to accommodate a higher population and a more efficient use of infrastructure, a more dense use of land is proposed on the main arteries and around public courtyards. Primary arteries have permitted 5 stories with mixed use, while secondary arteries have 4 or less. Densification also provides bonus building area that can counterbalance the upgrading cost.



### Family Courtyards

In the centre of the residential blocks, traditional houses with private courtyard are located. These protected courtyards are reached directly from houses or the cluster courtyards.



### Diversification

In addition to height variations, diversifying the use is essential. While the storefronts facing main arteries will be commercially programmed, the varying housing types in densified areas will allow the neighbourhood to house a more diverse user profile.



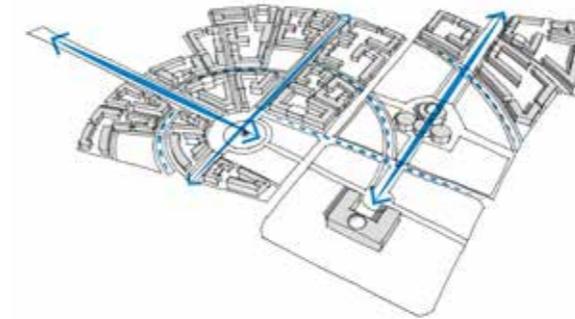
### Cluster Courtyards

Cluster courtyards are formed in the middle of dwelling unit clusters. These less dense centres serve as semi public courtyards for nearby residents. At least 2 pedestrian access from surrounding streets is required, vehicle access is optional and limited (if all buildings can be reached from street as well).

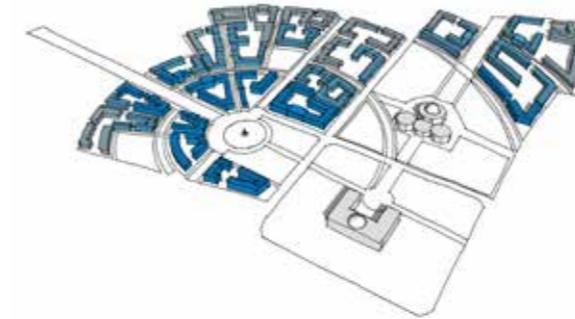
## PUBLIC BUILDING CODES



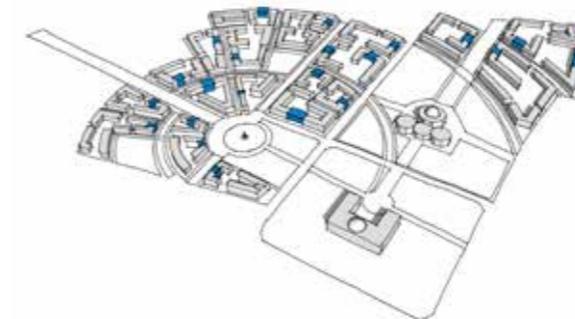
The new buildings can never be higher than the Palace. This height restriction allows the Palace and the Parliament to be visible from the surrounding area, enhancing their monumental value. The Palace itself and the Parliament are never adjoined or neighbored by new buildings, therefore they are always highlighted in the midst of a well-designed, green urban courtyard.



The design starts with establishing the main axis. In the case of Darul Aman area, the main axis connects the Darul Aman Palace, the Parliament Building and Chehel Sotun Palace. This axis is not only a vehicular connection but also a historical, iconic and a monumental one. Width of these axis are determined hierarchically, varying between: 64, 32 and 16 meters.



Scale variation among each public building imposes the hierarchy throughout the city; the residential buildings are smaller both in footprint and height while the public buildings are larger although respecting the proportions and dimensions of the historical structures. It is important to have an imposing mass in a public building but instead overshadowing the historical palaces, highlighting and complimenting them. The differences in heights of the buildings are designated as a result of the Palace's natural and man-made topography. As the Palace rises above the hill, the buildings around urban courtyards get higher mimicking the Palace's effect on its surroundings.



Public buildings from residential buildings and public spaces from private spaces should be clearly be distinguished and recognizable. Locally manufactured, brightly colored native stones of Afghanistan has been envisioned to create this separated and dynamic feel by highlighting the publicly accessible areas. By using different colors and textures, a diverse cityscape will be achieved through out the administrative zone.

**This guide is prepared by** A. Faruk Göksu with Mert Çiğizoğlu, Elif Ensari, F. Efe İlgen, Bilge Kobaş, Can Sucuoğlu. **in** 2016



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KABUL

2016