Planning for Rapid Urbanisation
The perfect global storm?

- Rapid urbanisation
- Climate change
- Natural resource depletion
- Rise in pandemics
• Rapid urbanisation
• Lessons from organic/planned city extensions
• ‘Bare bones’ rapid planning
• Rapid urban planning – Bo case study
Growing trend towards sprawl and unplanned settlements

Nairobi, Kenya is forecast to increase its total area 5.3-fold by 2050

Source: Marron Institute of Urban Management
Rates of urbanisation, 2019

Source: Commonwealth Association of Architects, Survey of the Profession
Architects per 1,000 population, 2019

Singapore, Australia and Namibia did not provide registered architect numbers.
Information from Uganda’s partial response is shown here.

Source: Commonwealth Association of Architects, Survey of the Profession
Professionals and Urbanisation, 2019

Source: Commonwealth Association of Architects, Survey of the Profession
With more than 80% of global GDP generated in cities, urbanisation can contribute to sustainable growth if managed well by increasing productivity, allowing innovation and new ideas to emerge.

The World Bank
UN Sustainable Development Goals, 2030

Source: Centre for Innovation, Leiden University
Sustainable cities & communities, the convening SDG

Source: Centre for Innovation, Leiden University
Organic Growth - the urban village

Walkable neighbourhood
‘Planned city extensions will be one of the essential elements to take into consideration in the creation of a pattern of sustainable urban development fostering a new model city.’

Joan Clos
Under-Secretary-General,
United Nations Executive Director, UN-Habitat
The urbanisation process should be planned for the long term; it should provide the *spine, the matrix, the pattern* of how the city will expand. Over time, economic activities and the various social needs will shape the urban land uses, but not the pattern. This essential element must be defended and protected by the *local authority*, the repository of political legitimacy, and the rule of law.
Universal structures and regional variety - spine and pattern
The Spine = The street (universal)

The Matrix = The block (universal/local)

The Pattern = Spaces/buildings/uses (local)
The street
Manhattan’s grid has two main factors that create variety: street widths and block dimensions. Although block widths are constant (60m), block lengths vary. The street network considers the territorial and the local scales. The 30m wide, NE-SW Avenues, represent the territorial scale. The 30m wide major cross streets and the 18m wide standard cross streets represent the local scale. Broadway is the exception to the grid.

Street hierarchy
A: Avenues 30m
B: Major cross streets 30m
C: Standard cross streets 18m

Street types
- Avenue 30m
  33% Pedestrian space
  67% Vehicular space
  Building height/Street width prop.: Front plane: 1.5V/1H
- Major cross street 30m
  40% Pedestrian space
  60% Vehicular space
  height/width prop.: 1.2V/1H
- Standard street 18m
  45% Pedestrian space
  55% Vehicular space
  height/width prop.: 0.75V/1H

The block
- Business block
  FAR: 10m²/m²
  Land coverage: 40%
  Average plot size: 750m²
- Mixed residential block
  FAR: 7m²/m²
  Land coverage: 90%
  Average plot sizes: 150-600m²
- Residential block
  FAR: 3.25m²/m²
  Land coverage: 90%
  Average plot size: 150m²
- Industrial and residential block
  FAR: 3m²/m²
  Land coverage: 90%
  Average plot sizes: 150-1500m²
Surface of extensions and existing city at time of extension:

- Existing city at time of extension
- Extension limit (built area)
- Extension limit (metropolitan/total plan area)

Block and street sizes and orientation:
The block

Neighbourhood units

- Blocks B1, typical blocks: Residential
- Height: GF=2
- FAR: 2.2m²/m²
- Lot coverage: 80%
- Plot size: 400m²

- Blocks B2, multi-family block and facilities (intended for institutional and representative buildings)
- Height: GF=2
- FAR: 2.6m²/m²
- Lot coverage: 85%
- Plot size: 600m²

Open spaces & facilities

The plan of Savannah neighbourhood units composed of eight building blocks surrounding a central local square. The square, the core of the unit, served originally as town meeting area and a center of business. Facilities such as markets or churches were grouped around the square, in blocks of different sizes and shapes, increasing the activity of the public space.

Planned City Extensions: Analysis of Historical Examples

1. Huascar zonal park SW-NE avenues with central open spaces:
2. Av 1 de Mayo
3. Av el Sol
4. Av Juan Velasco Alvarado
5. Av Cesá Valdejo
6. Av José Carlos Mariategui
7. Av 200 millas
The grid & the open space structure
More than 50% of urban growth will occur in the Commonwealth with more than 50% of that in Secondary Cities.

Rapid Planning Toolkit

Source: URBED Wolfson prize
Rapid Urban Planning process – first make it a political priority!

- Mayors and local politicians like simple and short term
- Spatial urban planning is often complex and long term
- Rapid planning engages local communities
- Rapid planning gets stakes in the ground quickly
- Rapid planning is politically attractive and effective!
Step 1 Rapid Urban Planning process – first make it a political priority!

- Write a charter for your rapidly growing city
- Communicate to citizens what spatial planning does and why it’s important
- Show its impacts on health and prosperity now and in the future (SDG’s)
- Describe the impacts of not planning
Rapid Urban Planning Process

- Growth Area Options
- Walkable Neighbourhoods
- Neighbourhood Quarters
- Building Types Demonstration
Rapid Urban Planning Process

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Building Types Demonstration
Urban extensions:
urban to rural
Protection and regulation: street widths, block size and uses

A NEIGHBOURHOOD = 4 QUARTERS
20 HA x 4 = 80 HA
10 - 30 HA RANGE

CREATE GREEN SQUARE IN EACH QUARTER + LOCAL REGULATION CENTRE AND SCHOOL
Urban extension to Libreville, Gabon.

Map the key constraints such as water/flood zones, sensitive ecology, existing settlements and routes etc.
New structure

Primary and secondary routes with walkable neighbourhoods
Agree the ‘bare bones’ key fixes plan which needs staking out and protecting
Regulations - density grading from high to low/urban to rural (10-2,000 people)