

# UN HABITAT

FOR A BETTER URBAN FUTURE

Smart and Sharing Cities

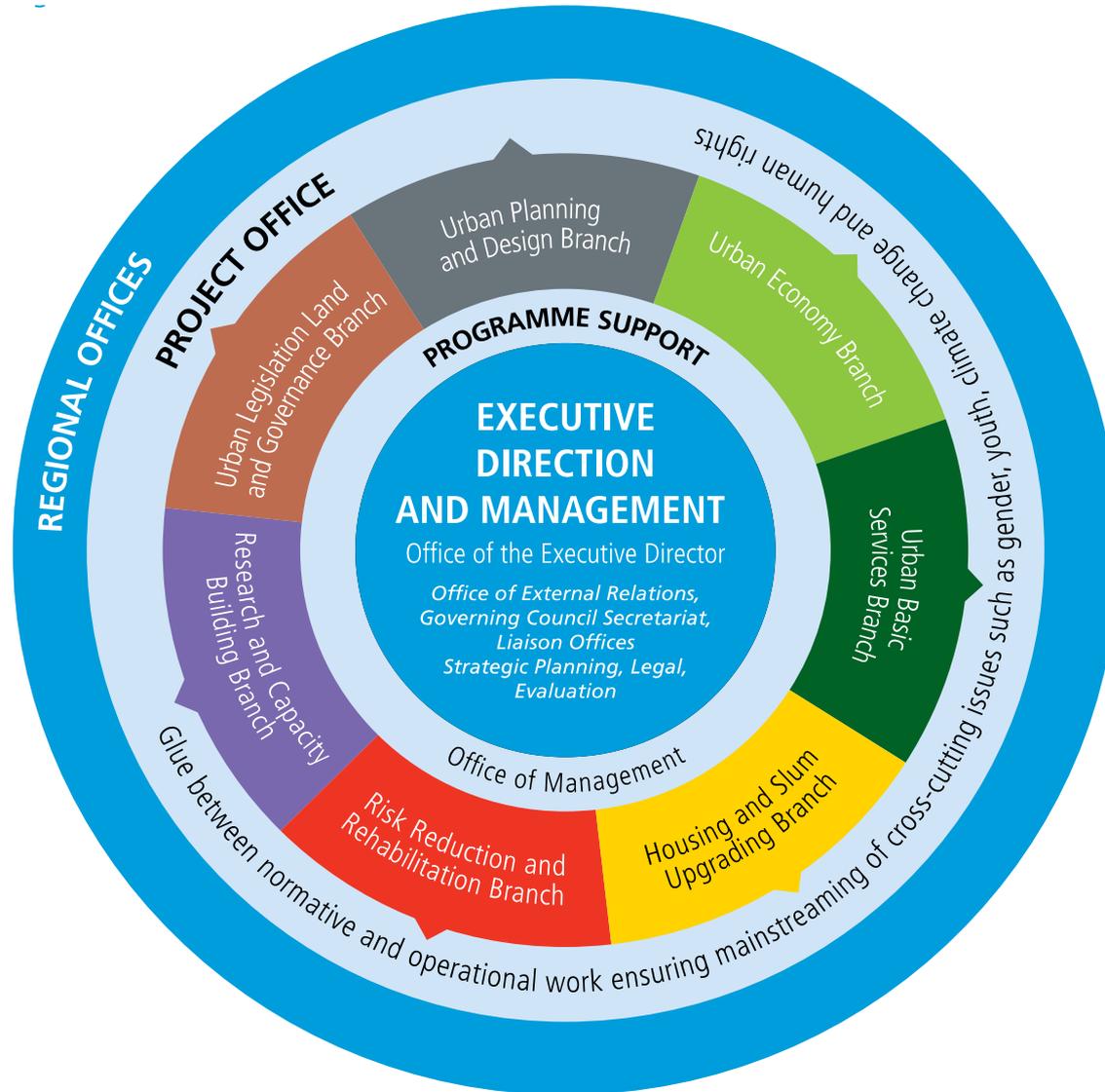
Javier Torner

*Javier.torner@un.org*

Urban Planning and Design Lab

[www.unhabitat.org](http://www.unhabitat.org)

# UN-Habitat Organization



# UN-HABITAT OFFICES



50 countries

# Sustainable Development Goals and New Urban Agenda

## Smart and Sharing Cities



**Access to services, housing, transport, and public space, urban planning and management  
Inclusiveness, participation, environmental quality, urban-rural linkages, vulnerable groups**

# Sustainable Development Goals and New Urban Agenda

## Smart and Sharing Cities



**Smart cities, digitalization, citizen-centric, circular economy and prosperity  
Access and inclusiveness, participation, environmental quality**

# How does the smart and sharing city look like?



St. Nicholas, Malá Strana, Prague

# How is the smart city represented?



# How is the smart city represented?



# How is the smart city represented?





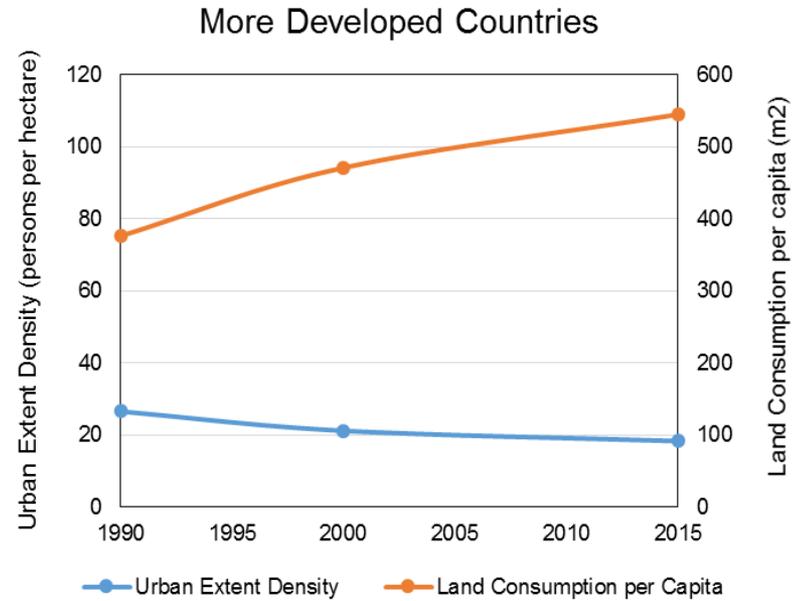
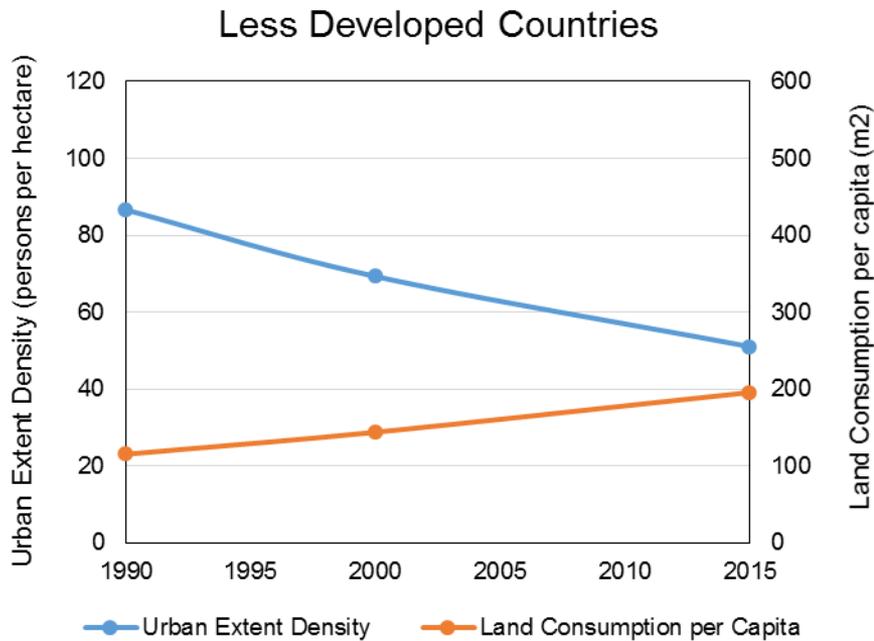
# Urbanization Challenge: Urban sprawl



Greater Accra, Ghana

# Urban Sprawl

## Urban Land Consumption Increases vs. Urban Density Decreases



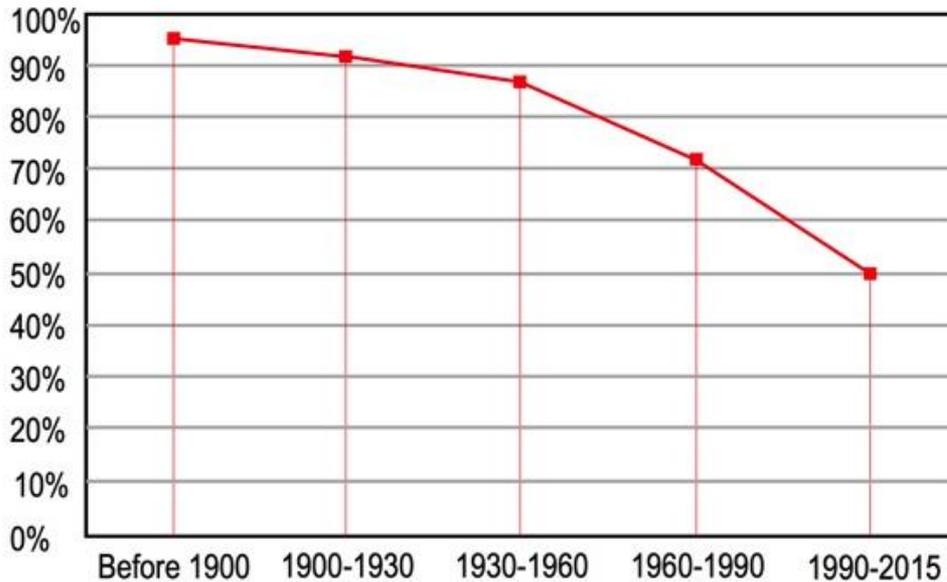
UN Sample of Cities (2016)

# Urbanization Challenge: Physical infrastructure and Public transport

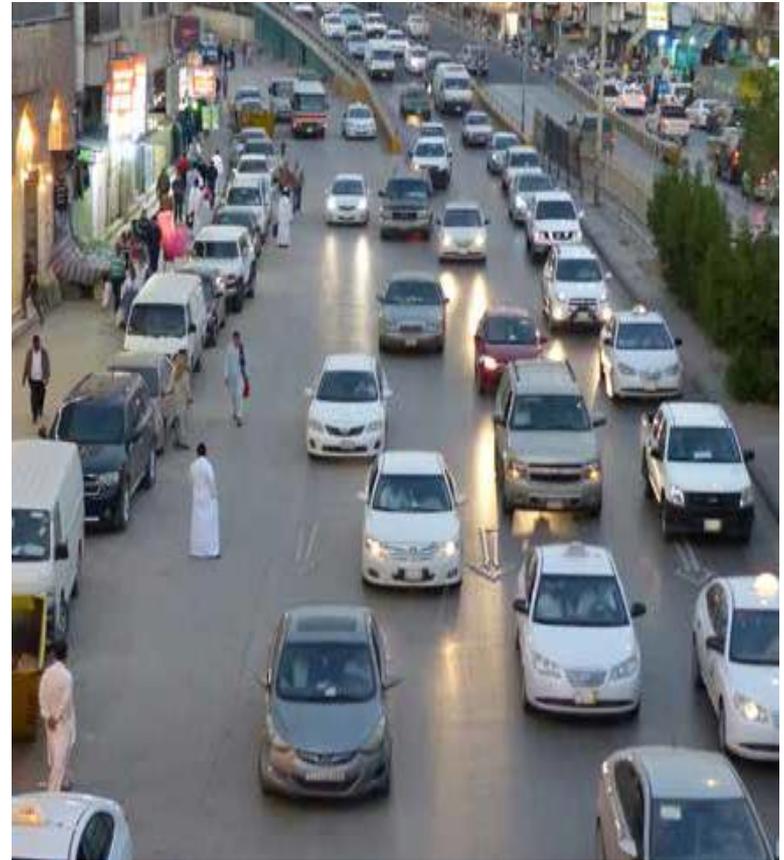


# Access to infrastructure

Access to arterial roads has fallen over time



Areas of the city within a walking distance to an Arterial Road



UN Sample of Cities (2016)

**Urbanization Challenge:**  
**Lack of adequate planning**  
**and public space**



Tehran, Iran

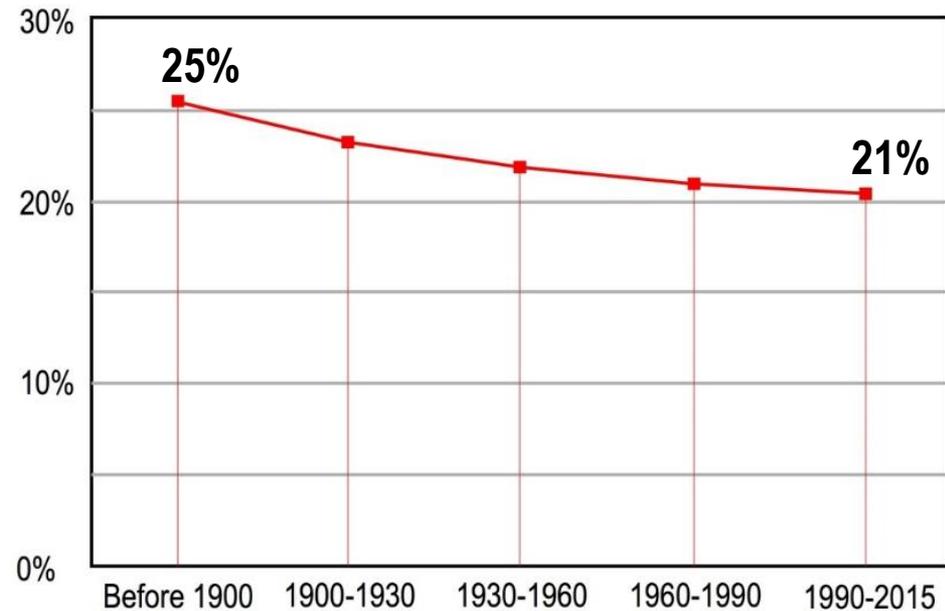
# Public space

## PUBLIC SPACE

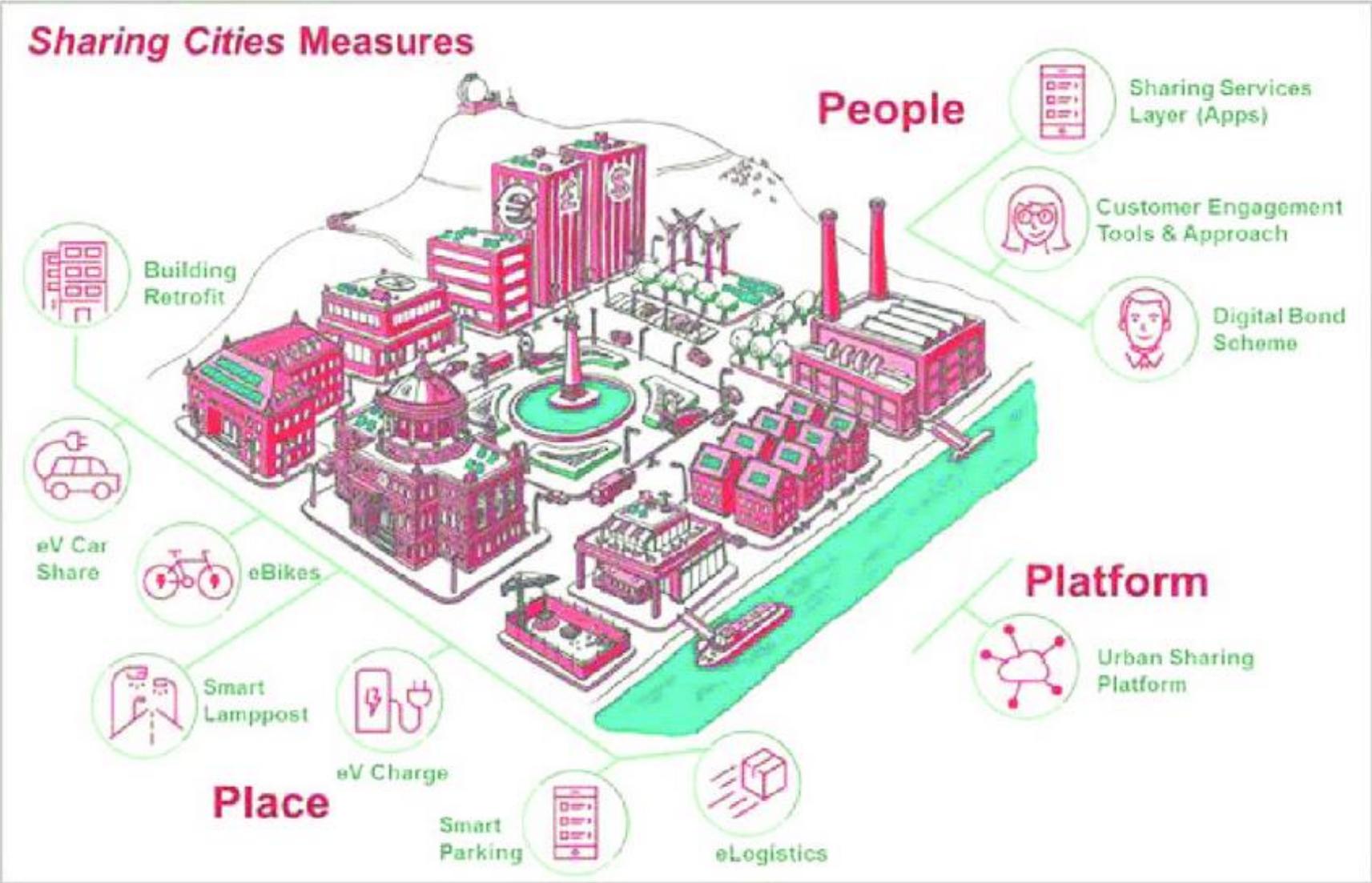


But **48%** of cities have less than 20% of land allocated to streets

...also decreased



# How is the sharing city represented?



Source: Researchgate

# Principles of the sharing economy

Cities make the sharing economy work



- Digital platforms that connect
- Access over ownership
- More collaborative forms of consumption
- Branded experiences - emotional connection

# Areas of opportunity for cities

- Urban planning - crowdsourcing of data: OSM, drones, remote sensing, data analysis and visualization
- Citizen engagement – monitoring of urban services
- Sharing logistics, manufacturing facilities, community goods, transport, delivery, offices
- Optimization of use of municipal assets (public space and facilities, logistics, operations)
- Financing of projects

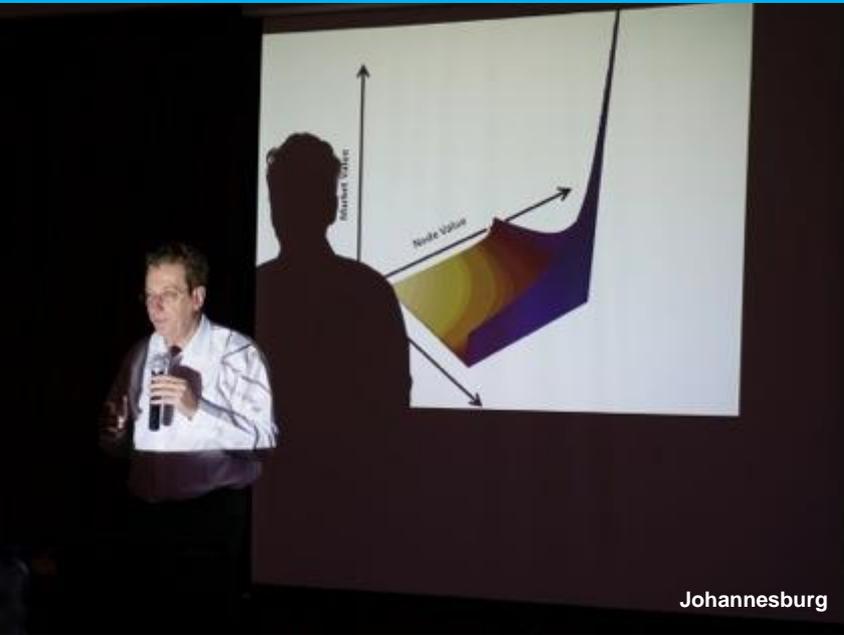
# Areas of opportunity for city administration

- Identifying government-focused sharing opportunities to create efficiencies
- Encouraging employees to use sharing platforms
- Work with smart and sharing economy initiatives to ensure the benefits of the citizens prioritized
- Encourage the creation of new insurance products (and/or) remove the regulatory impediments
- Examining mechanisms to ensure sharing economy participants understand their tax obligations

# How UN-Habitat is working with smart and sharing cities?

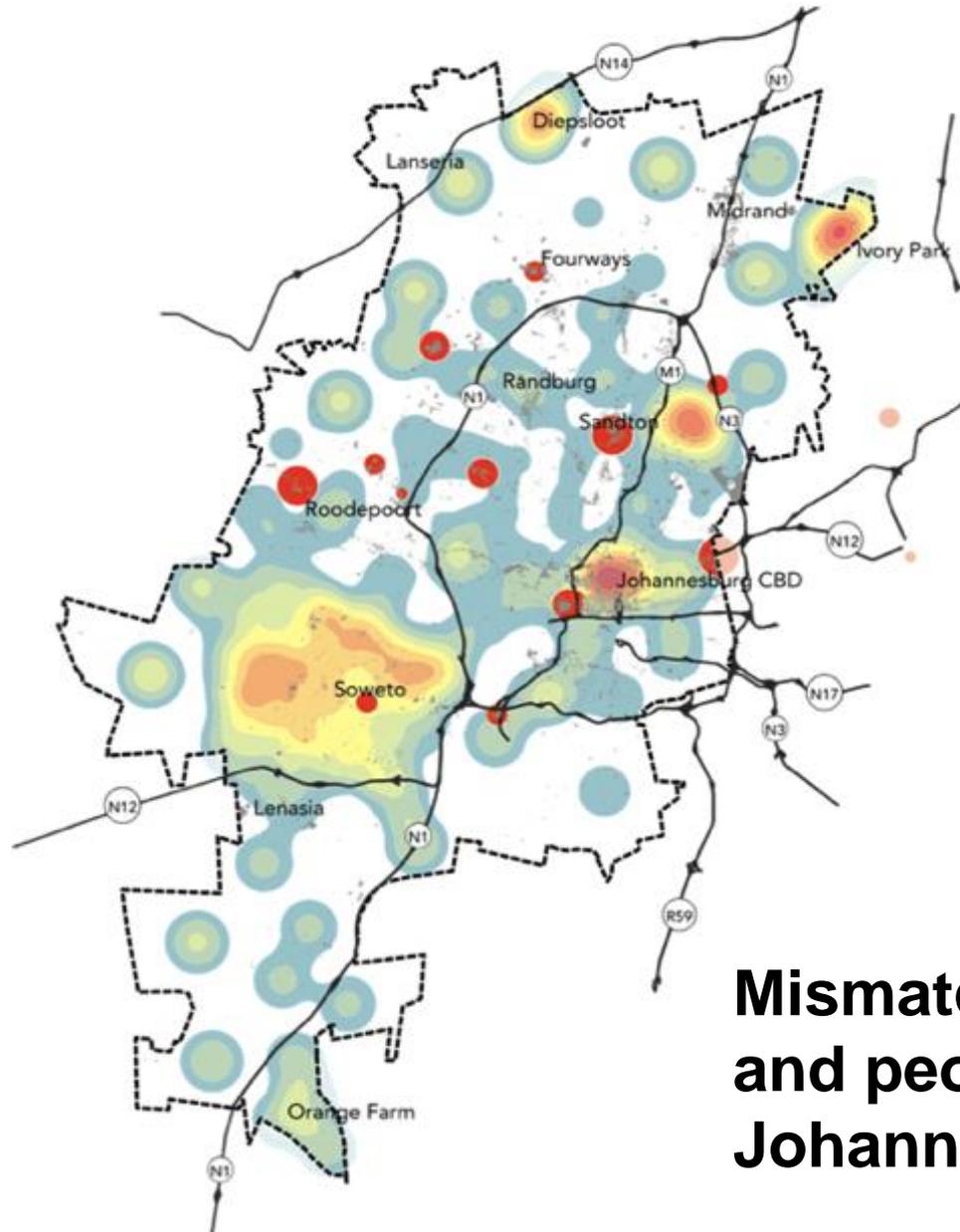
- Guidelines for Digital Inclusion
- U4 Smart Sustainable Cities KPI
- Urban Planning and Design Lab
- Smart City Master Plans
- Block by Block

# The Urban Planning and Design Lab



Urban data and participatory planning for decision-making  
Big data analysis to support municipalities in project formulation

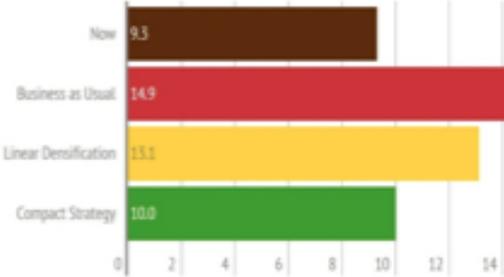
Johannesburg, South Africa



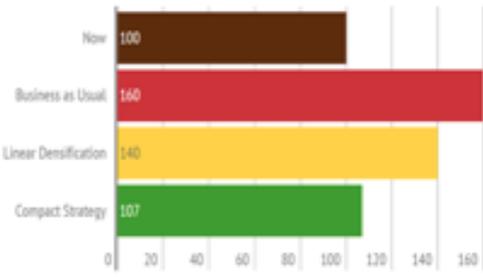
**Mismatch of jobs (red)  
and people (yellow) in  
Johannesburg**

# Urban Model Scenarios

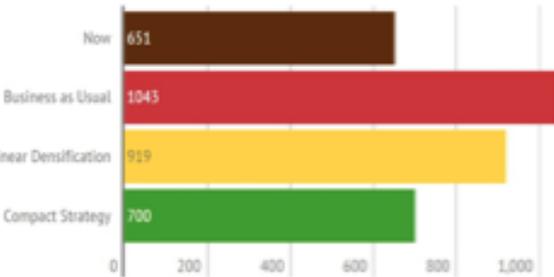
**Transport energy consumption per Capita (Mj/Cap)**



**Travel costs per capita (base 100 now)**



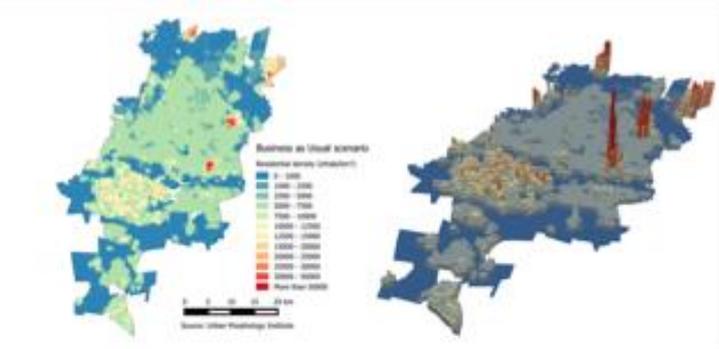
**Carbon per capita (kgCO2/cap)**



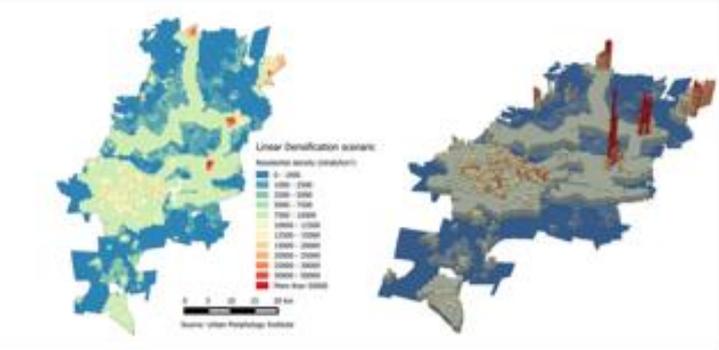
# Urban Models

# Scenario Planning

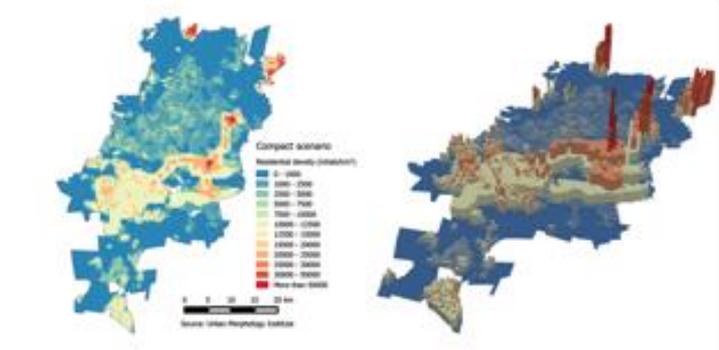
**Business as Usual**



**Urban Corridor**



**Compact Urban Center**



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# SMART CITY RWANDA MASTERPLAN

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Each initiative has also been linked to the city flows, city services, smart citizen services and smart city domains found in the Smart and Sustainable Cities Blueprint for Africa.



Water and Sanitation



Education



Governance



Cross agency collaboration



Transportation and mobility



Business services



Energy and Buildings



Citizen services



Tools for citizen engagement



Information and Open Data

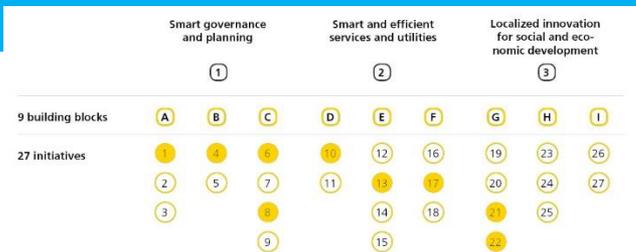


Healthcare



Connectivity

# STRATEGIC INITIATIVES



## STRATEGIC INITIATIVES

## PILLAR

## BUILDING BLOCK

**1** Integrated, GIS-based urban management platforms

**1**

**A**

**4** Dynamic data-supported master planning

**1**

**B**

**6** Develop data strategies including open data, privacy and cybersecurity

**1**

**C**

**8** Digital citizen engagement tools

**1**

**C**

**10** Digitally monitor and manage utility infrastructure

**2**

**D**

**13** Promote smart data-led 'door-to door' mobility solutions

**2**

**E**

**17** Establish innovation teams in ministries and local authorities

**2**

**F**

**21** Provide a national fund for startups and innovation accelerator centers

**3**

**G**

**22** Establish innovation teams in ministries and local authorities

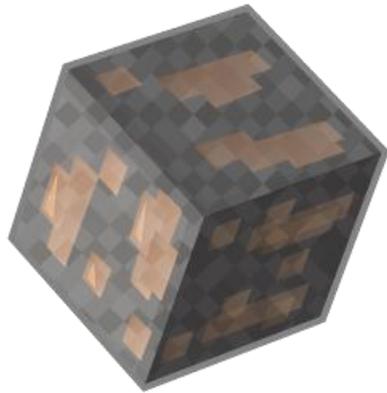
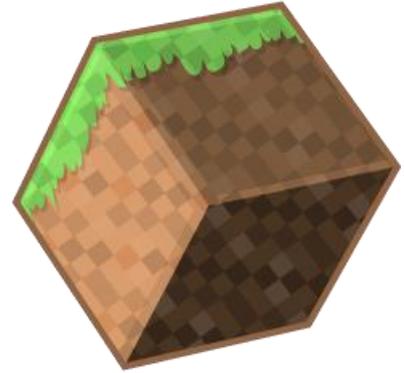
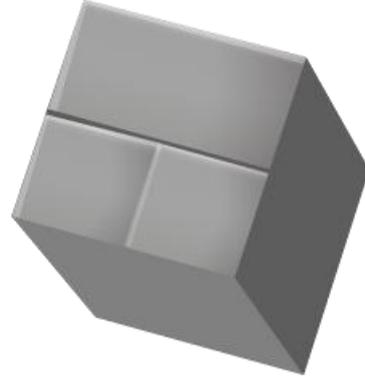
**3**

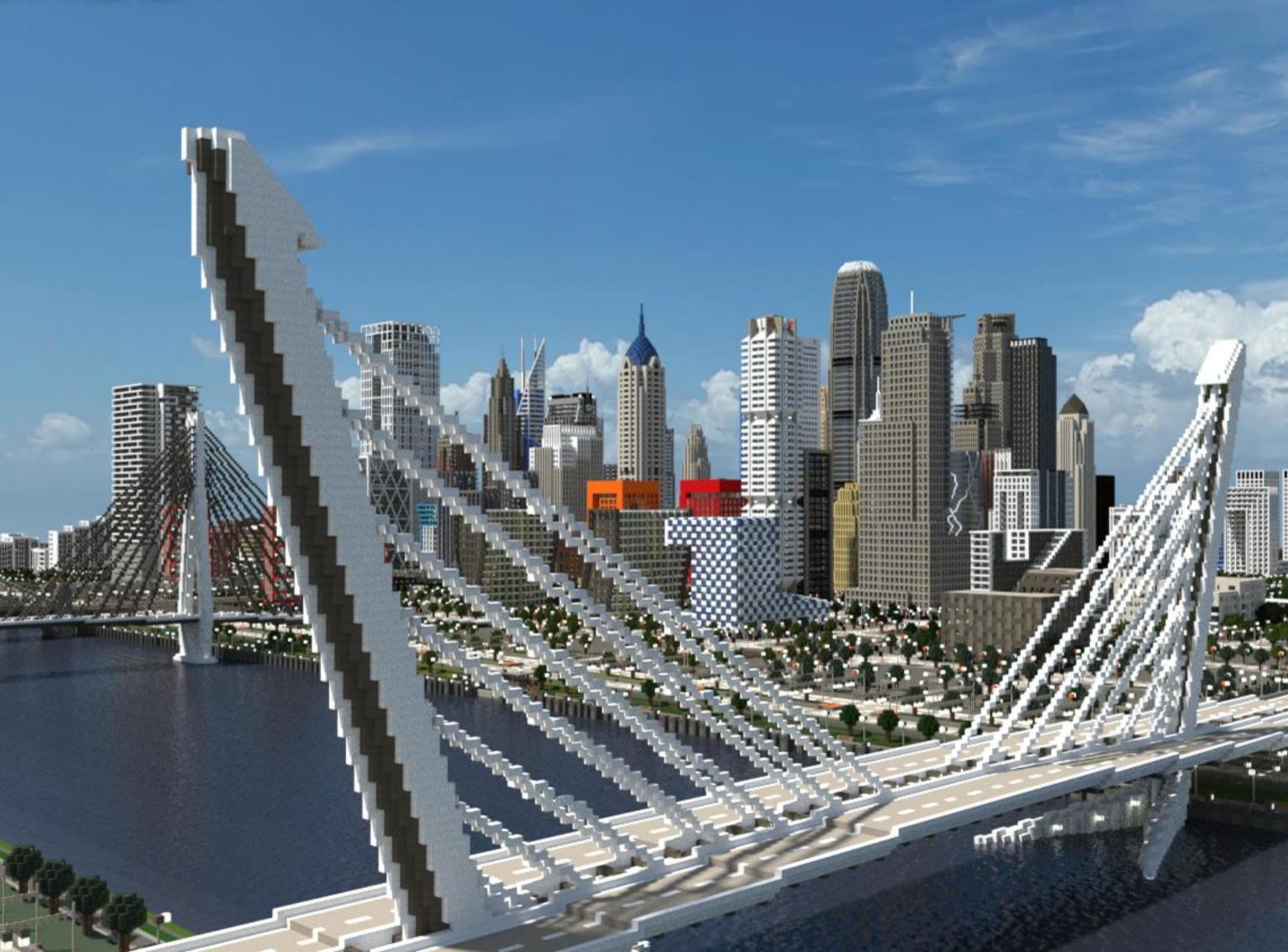
**G**

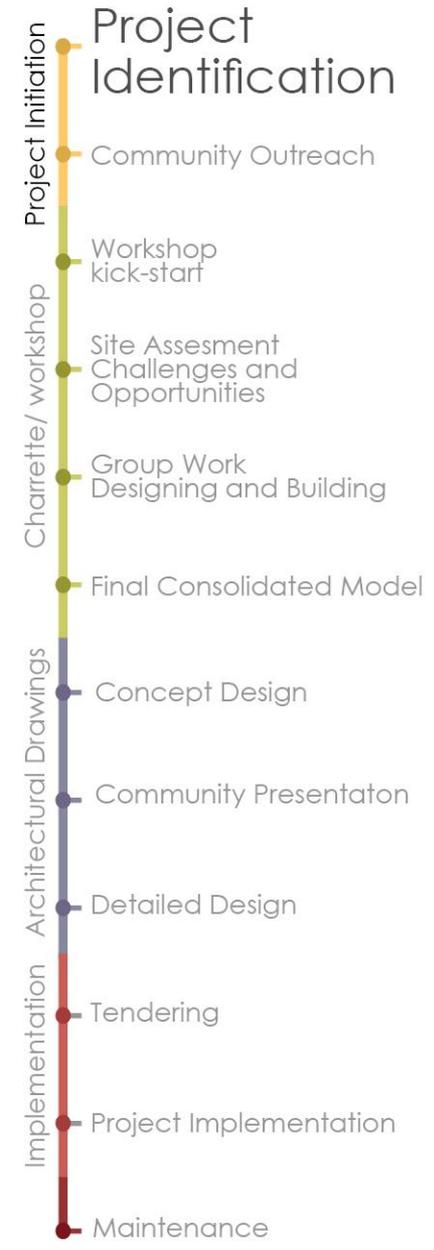


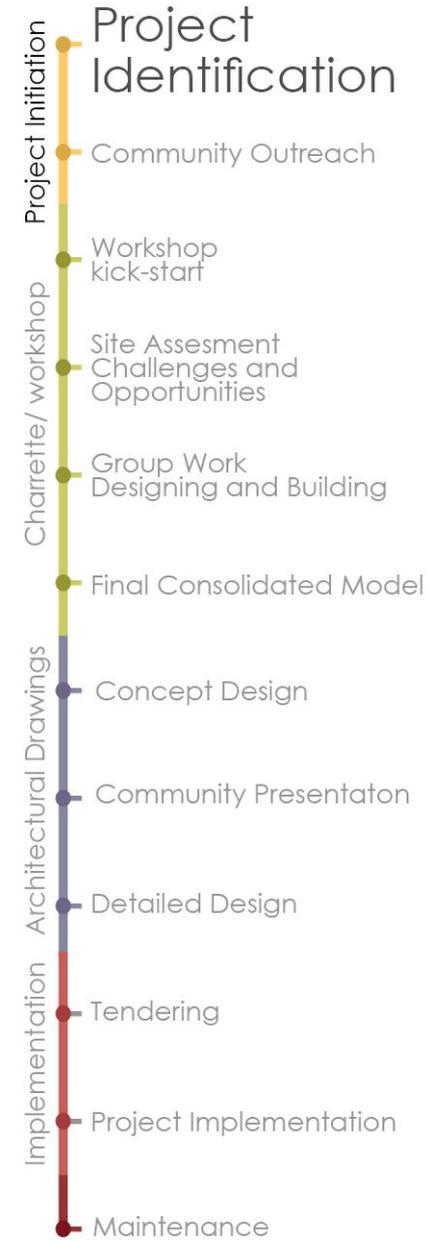
# BLOCK BY BLOCK

# WINE CRAFT









Project Initiation

Project Identification

Community Outreach

Charrette/ workshop

Workshop kick-start

Site Assessment Challenges and Opportunities

Group Work Designing and Building

Final Consolidated Model

Architectural Drawings

Concept Design

Community Presentation

Detailed Design

Implementation

Tendering

Project Implementation

Maintenance

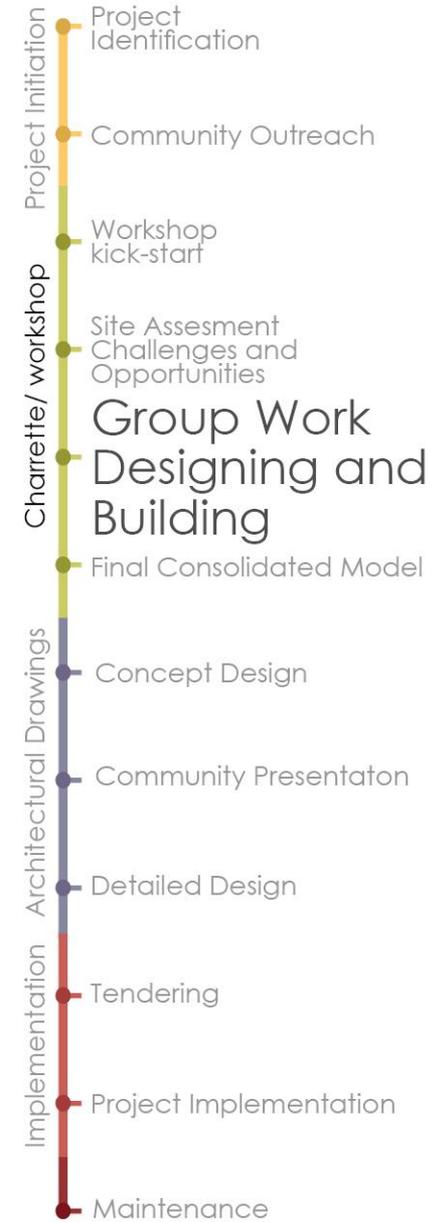


# Designing and Building

17 Teams

2 - 4 Members

1+1/2 Days



- Project Initiation
  - Project Identification
  - Community Outreach
- Charrette/ workshop
  - Workshop kick-start
  - Site Assesment Challenges and Opportunities
  - Group Work Designing and Building**
  - Final Consolidated Model
- Architectural Drawings
  - Concept Design
  - Community Presentaton
  - Detailed Design
- Implementation
  - Tendering
  - Project Implementation
  - Maintenance





	Map 91	Map 71	Map 98	Map 67	Map 77	Map 73	Map 93	Map 94	Map 66	Map 95	Map 68	Map 63	Map 64	Map 74	Map 92	Map 97	Map 96	Total
<b>Requests</b>																		
Green Areas/Trees																		17
Floor Rehabilitation																		17
Tables and benches																		16
Playgrounds																		12
Wall Art/decoration																		12
Market Rehabilitation																		12
Public Lights																		10
Round About Rehabilitation																		10
Fountain																		9
Sports Court																		8
Public Library																		6
Skate Park/Skate Ramps																		5
Jogging/Bicycle Track																		5
Pedestrian Bridge																		4
Minibar																		4
Amphitheater																		4
Solar Panels																		4
PingPong Table																		3
Underground passage																		3
Speed Bump																		3
Drinking Fountain																		3
Public Toilets																		2
Climbing Wall																		2
Monument																		2
Exercise Area																		1
Community Gardening																		1
Anti Parking Barrier																		1
Car Wash																		1
Parking Lot																		1

**Petitions**









[Minecraft Virtual Reality Video](#)

Видеоролик виртуальной реальности «Майнкрафт»





Děkuji za pozornost!