



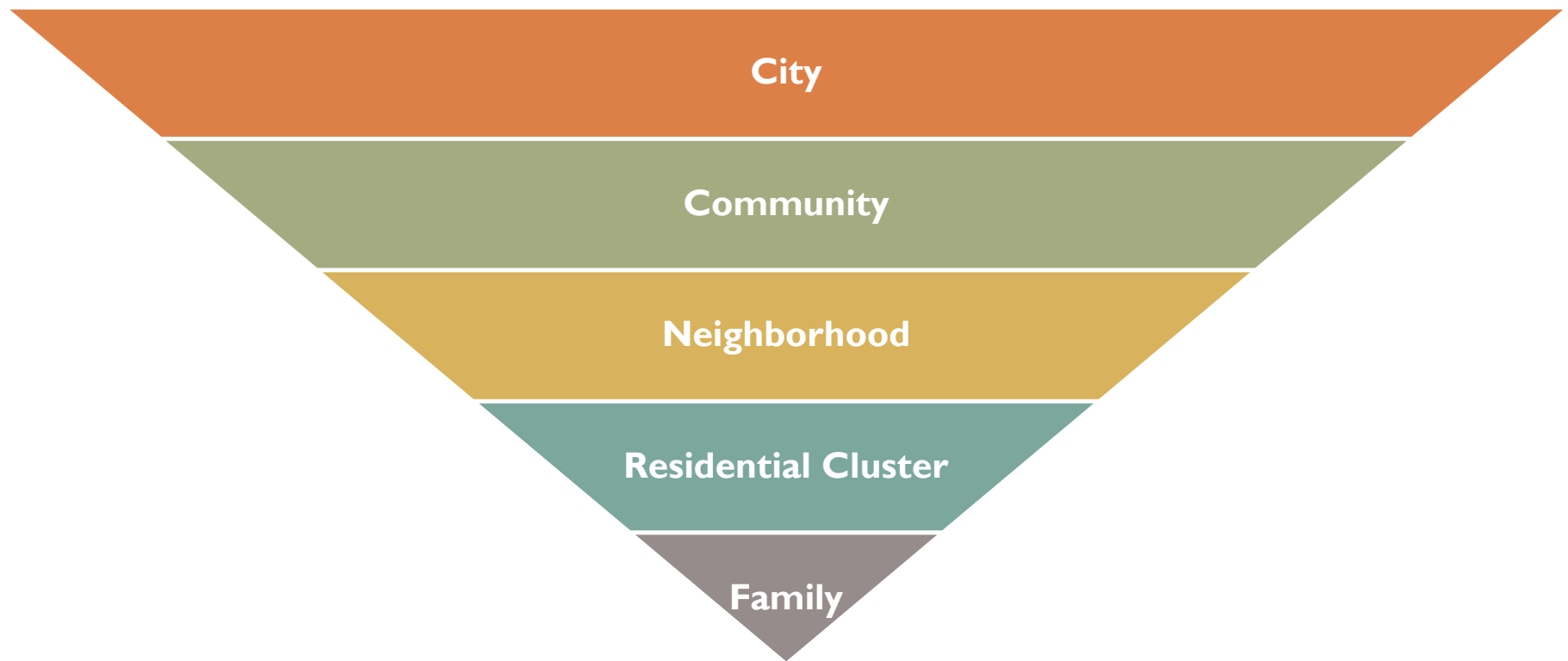
TOWN PLANNING I

DR. SAMEIR M. HAMMAD

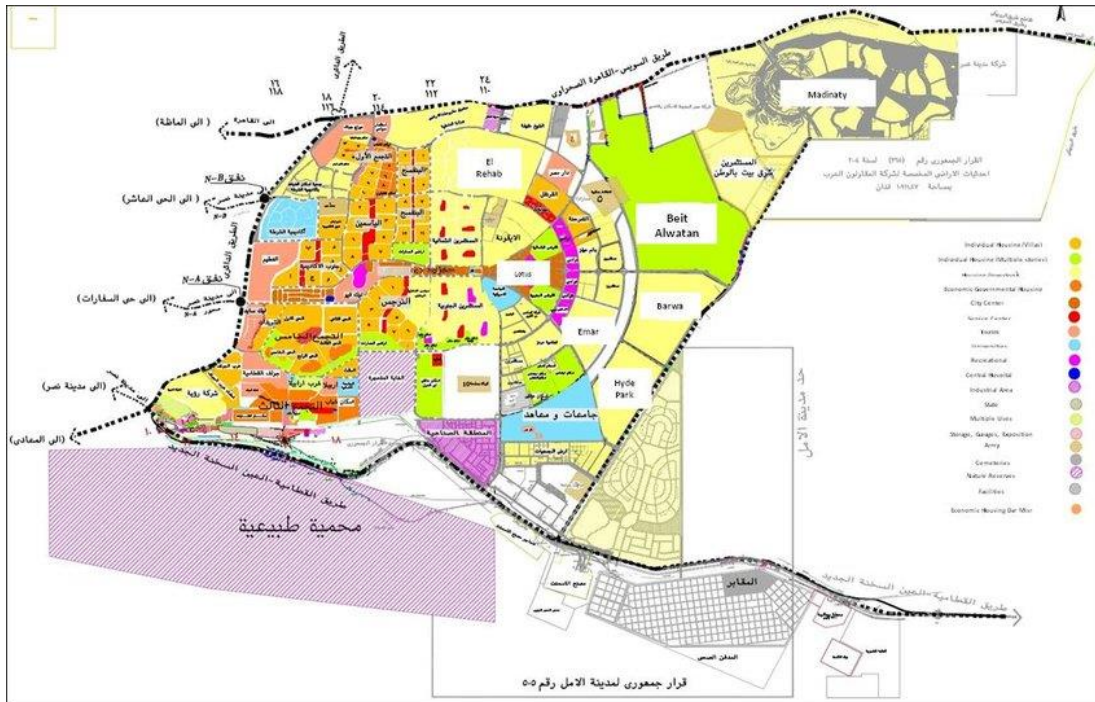
ASSISTANT PROFESSOR, ARCHITECTURAL ENGINEERING DEPARTMENT, BENHA FACULTY OF ENGINEERING



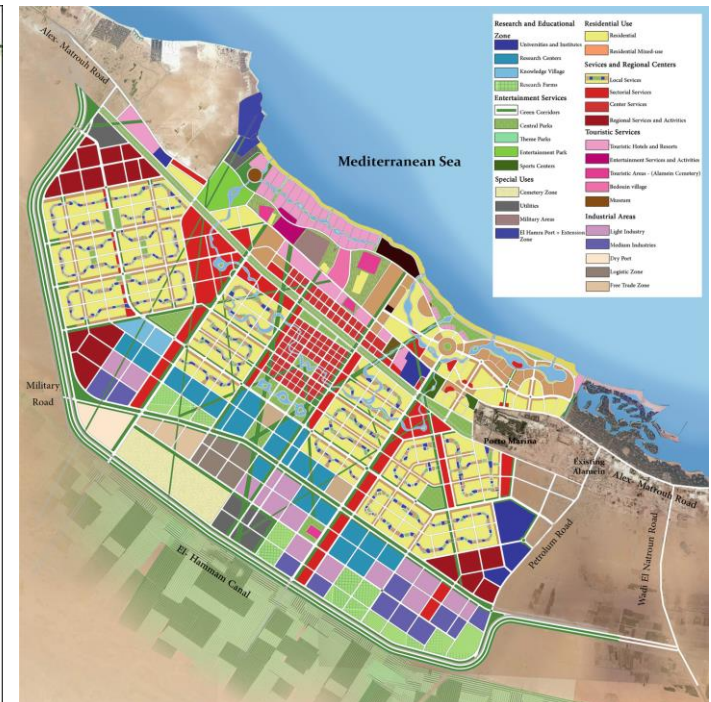
CITY STRUCTURE



CITY MAIN COMPONENTS







New Cairo City Map



New Alamein City

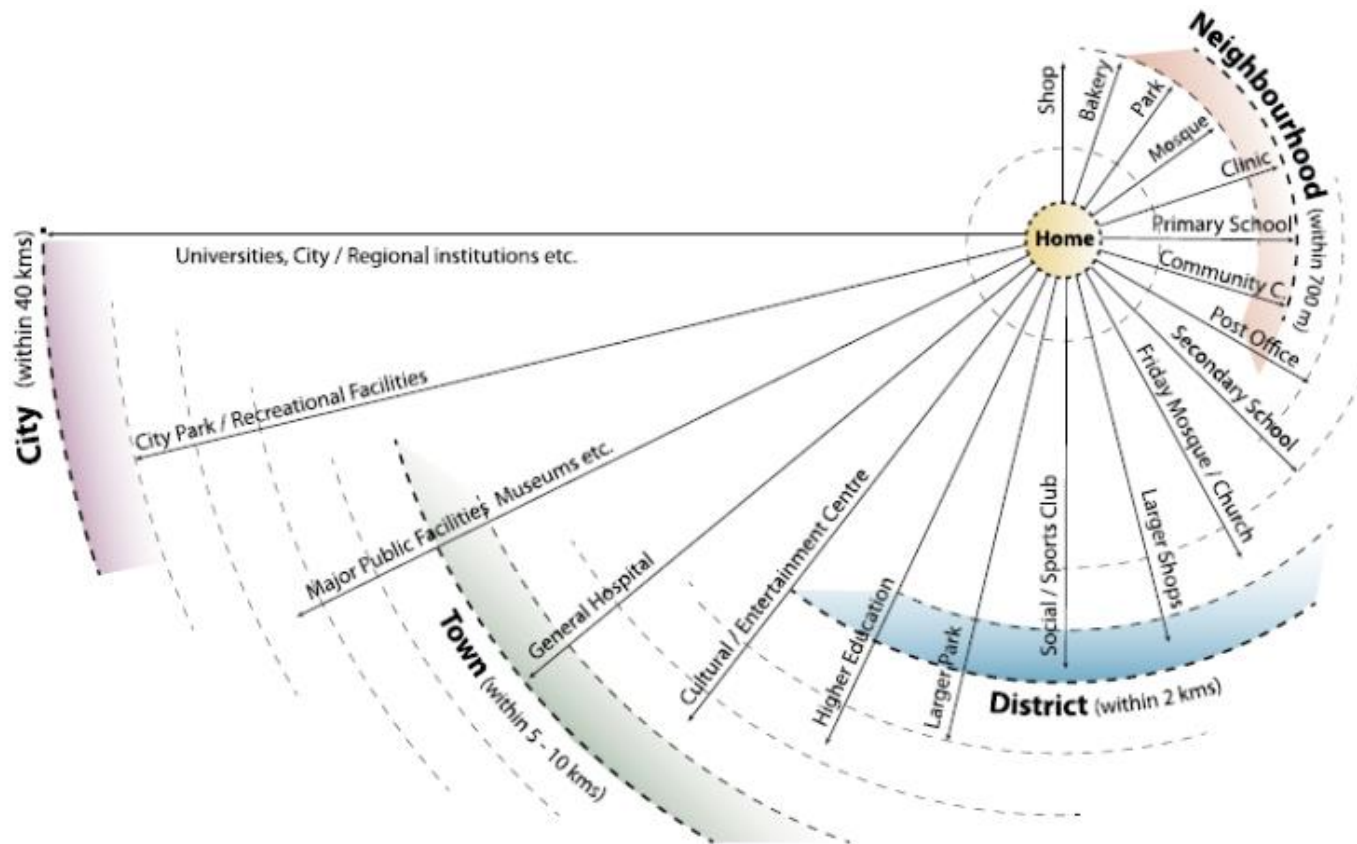
CENTRAL AREA

Visiting Rate	Walking Distance	Economic Feasibility	Target Population
Daily/Weekly	Short 500-800 m	Small 500 p.	General
			
Yearly/ Limited Times	Long More than 3 km	Large 500000 p.	Specific

CENTRAL AREA

Services	Neighborhood	Community	City
Commercial	Kiosks/ Shops	Super market	Mall/ Hyper market
Educational	Elementary school	High school	University
Health	--	Clinic	Specialized Hospital
Administration	--	Post Office/ Police Station	Government Offices
Cultural	--	Library	Opera house/ Culture center
Social	--	Social services	Orphanage
Religious	Mosque	Mosque	Islamic Center/ Church
Entertainment	Play ground	Sport Club	Stadium Club

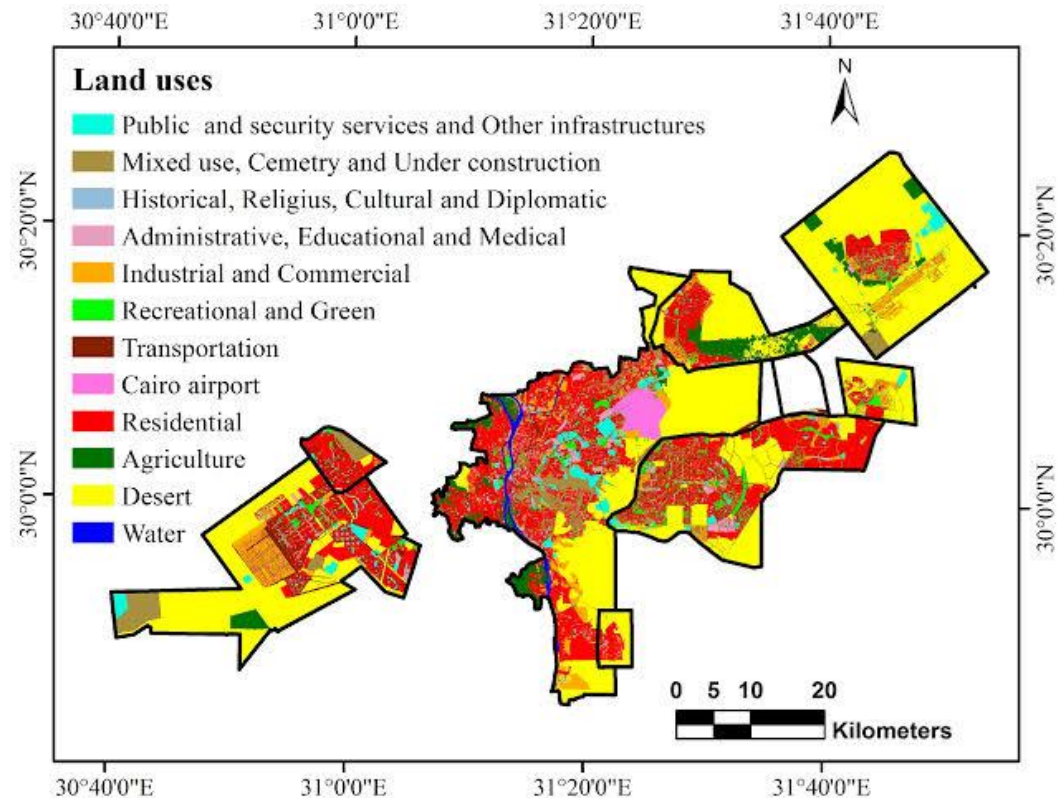
CENTRAL AREA



LAND USE PLANNING

Land use definition:

- Assigning specific area(s) for each activity in city.



LAND USE PLANNING



Consultative process were used to develop this land use map of a neighborhood in Manshiyet Nasser (source: GIZ)

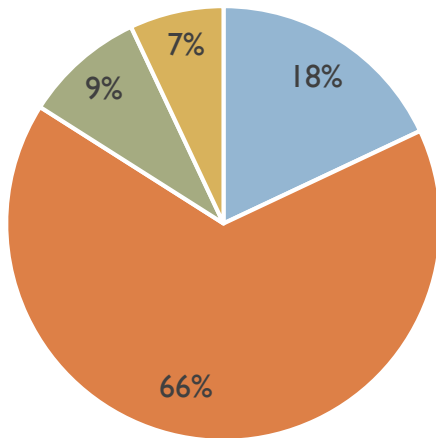
CITY CALCULATIONS .. LAND USE BUDGET

Land Use	Rate (m ² / person)	No. of Users	Total Area (m ²)	Total Area (Feddan)	Percentage (%)
Commercial	1.4	5000	7000	1.66	22.5
Educational	4	800	3200	0.76	10.3
Administration	0.05	5000	250	0.06	0.9
Religious	0.2	3000	600	0.14	1.9
Entertainment	4	5000	20000	4.76	64.4
Total Cell Area			31050	7.39	100

CITY CALCULATIONS .. LAND USE BUDGET

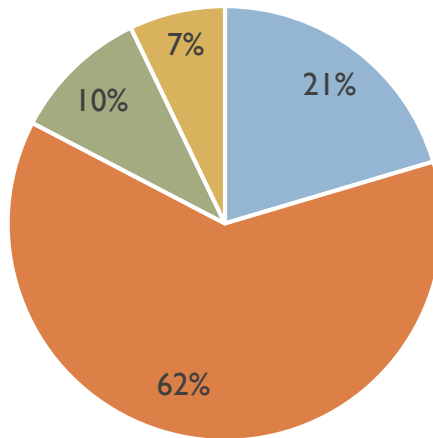
Neighborhood

- Services
- Residential
- Roads
- Open Spaces



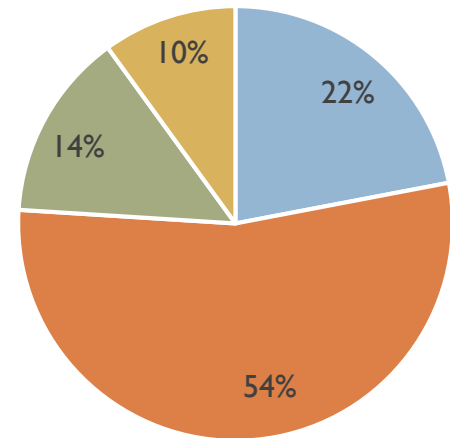
Community

- Services
- Residential
- Roads
- Open Spaces



City

- Services
- Residential
- Roads
- Open Spaces



CITY CALCULATIONS .. LAND USE BUDGET

2
Land Budget
قرية شلقان

CALCULATIONS OF POPULATION(2022)
 $R1 = 14739 / 12282 = 1.2$
 $R2 = 12282 / 10350 = 1.2$
 $R1' = (R1)1/10-1 = 1.02-1 = 0.02$
 $R2' = (R1)1/10-1 = 1.02-1 = 0.02$
 $R(AVERAGE) = R1'+R2' = 0.04 / 2 = 0.02$
 $P2022 = P2006 (1 + RAVG)16 = 14739 (1 + 0.02) 16 = 20192$

TOTAL AREA REQUIRED TO ACHIEVE DENSITY (130 PERSON/FEDDAN) = 156 FEDDAN.

REQUIRED LAND IN 2022= $20192/130 = 155.3$ FEDDAN
 AREA OF LAND TO BE ADDED= 25.8 FEDDAN

NEIGHBOURHOOD CALCULATION:
 PERCENTAGE OF STUDENTS BETWEEN SIX & TWELVE YEARS= 16% OF POPULATION
 NUMBER OF STUDENTS= $16/100 \times 20192 = 3231$
 NUMBER OF PRIMARY SCHOOLS NEEDED= $3231/800 = 4$ SCHOOLS
 NUMBER OF NEIGHBOURHOODS= 4 NEIGHBOURHOODS

DISTRICT			
SERVICE	PER PERSON	AREA (M2)	AREA (FEDDAN)
EDUCATION	1.42	28676	6.8
HEALTH	0.12	2424	0.6
COMMERCIAL	0.32	6464	1.6
CULTURAL	0.17	3636	0.9
SOCIAL	0.01	204	0.04
RELIGIOUS	0.13	2020	0.5
ADMINST.	0.08	1616	0.04
ENTERT.	0.42	8484	2
TOTAL AREA OF SERVICE CENTRE= 12.5 FEDDAN			

NEIGHBOURHOOD			
SERVICE	PER PERSON	AREA (M2)	AREA (FEDDAN)
EDUCATION	2.13	10752	2.56
HEALTH	0.24	1212	0.24
COMMERCIAL	0.27	1363	0.32
RELIGIOUS	0.13	656	0.12
TOTAL AREA OF NEIGHBOURHOOD SERVICE CENTRE= 3.24 FEDDAN			


AREA OF VACANT LANDS= 1.77 FEDDAN
 AREA OF AGRICULTURAL POCKETS= 21.6 FEDDAN
 AREA OF LAND NEEDED FOR THE TARGET YEAR 2022= 25.8 FEDDAN
 TOTAL AREA OF ADDED VACANT LAND= $1.77+21.6+25.8 = 49.2$ FEDDAN
 AREA OF ROADS TO BE CREATED= $49.2 \times 20/100 = 9.8$ FEDDAN
 AREA OF SERVICES TO BE CREATED= 12.5 FEDDAN
 REMAINING LANDS FOR RESIDENTIAL USE= 26.9 FEDDAN

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THANK YOU

NEXT LECTURE: RESEARCH AND ANALYSIS FOR URBAN PLANNING