

Smart City in the Making : Assessing the New Administrative Capital of Egypt From Environmental Inclusion Perspective

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Abstract: Smart cities around the world promise its citizens more resilient, inclusive and sustainable living environment. They present an integration of physical and digital planning and are perceived by governments around the world as a path to achieve a new urban Utopia. However, its application in developing countries is full of challenges, the question is how inclusive new smart cities will be in countries facing high percentage of poverty and illiteracy and how they can contribute in sustainable urban development to these countries. In Egypt, a New Administrative Capital is currently under construction. The new smart city promises a high-quality living for Egyptians. However, there is a debate about how inclusive it will be and how the smart city model can be adopted in Egypt. The paper presents a critical reflection on the topic. We question this utopian vision serves which parties. The article concludes that despite the efforts done by the private sector and the government to promote the New Administrative Capital as a model of smart cities in the Middle East, the project represents a neoliberal ideology inclined towards a business model than a social justice model and proposes a set of policies to restore the balance.

Keywords: Mega cities; Inclusive urban development; smart cities; Mega projects; NAC; Egypt

1. Introduction

Cities should be judged not by their poverty but their track record in helping poorer people move up” (Glaeser, 2011).

The opportunity of planning a new city as a seat of government is rare. It recalls models of ideal cities that emerged through history and highlights the role of utopian thinking in open experimentation, possibilities of spatial forms and different modes of collective living, in the relation to environment. In Egypt, following 2011 political reform, came a strong shift from Egyptian government to adopt new urban master plans all over the country. With a focus on building a New Administrative Capital adjacent to New Cairo. The new proposed urban master plan of NAC are to be found on the government website and international architectural, engineering and property development companies. This master plan projects a new vision of Egypt urban environment and tends to reflect an image of futuristic cities such as Dubai, Singapore or Shanghai (Figure 1). It mirrors a utopian vision and a revives Corbusier modernism. The rendered images portray landscaped freeways with fancy glass towers and gated communities. There are also major slogans used in advertising the New Capital in the Media such as (eco-cities and smart cities).





Figure 1. Rendered image of the New Administrative Capital. Source: (ACUD report, 2016).

This chapter aims to address smart cities as a new form of Utopia and relate it to the construction of new cities in Egypt. The goal is to present a critical review of the present master plan of the new administrative capital and to discuss if inclusion is indeed possible and if cities can really be for everyone and everything simultaneously. The study presents a case study of The New Administrative Capital to support the theoretical points with empirical evidence. The aim is to bring a discussion about alternative models of development and to highlight major pitfalls that work against achieving inclusivity for everyone. The paper mainly relies on assessing inclusivity Spatial and environmental analysis. The research develops a framework to put milestones for enhancing the planning process and establishing policies to achieve more sustainable inclusive urban environments that serve everyone.

The chapter is divided into three parts: the first part is concerned with the context of the creation of the new capital, its description and the analysis of the discourse to bring to light the major stakes and values involved in this megaproject. The second part is a review of tools to assess how inclusive is NAC based on available data. It briefly highlights the role of emancipatory utopian thinking in developing a critical perspective of the city. It assesses how inclusive is NAC using present indicators. The final part presents a critical reflection on the application of the smart city model in Egypt. It investigates what the city has to offer to Egypt urbanism, will it be able to answer those promises, or it just utopian dreams that is far from reality. In addition, this section attempts to assess in which extent the new administrative capital is inclusive and what are the methods and policies to redirect towards a more inclusive urban development that overcomes the physical built environment towards the social dimension. The chapter proposes a set of policies to fill the gap between the social justice point and the business-oriented development.

2. A Review of Egypt Urban Development

More than half of the world population now live-in cities and this proportion will increase to reach 70% by the year 2050. In Egypt, the current urban growth is 2% which means that Egyptian cities should accommodate one million new inhabitants every year. Cairo is considered the fastest growing city in the world, in 2017 it received alone half a million new inhabitants. Two third of the population in the greater Cairo region live in informal settlements with poor infrastructure. However, the largest share of Egypt area is desert with limited or no human settlement. (UN population division, 2018).

The beginnings of the development of new communities on the outskirts of Egyptian polarizing cities date back to the early 1970s. The aim of creating the new settlements - often called 'new communities', 'desert cities' or 'satellite cities' was to tackle serious problems such as the massive loss of agricultural land to informal urban sprawl and population explosion in overcrowded polluted Cairo megacity. Today the complex issues of Greater Cairo are likely to be exacerbated because of many factors, among them the fact that the new settlements that were developed during the past five decades failed to address housing shortage for low income and middle class. Today, the population of the Greater Cairo Region exceeds 19.8 million and the expected population increase is approximately 24 million by 2030 (CAPMAS, 2017).

It was during Egypt Economic Development Conference of March 2015 held in Sharm-el-Sheikh that the Egyptian president announced the creation of a new administrative capital. The megaproject, which

construction started in 2016, generated a controversial debate about the purpose of this ex-nihilo new city, its benefits for the population and how it is funded. On the one hand, some people believe that it is an opportunity to rebuild the image of the country after years of unrest and instability; a prospect to attract investors, promote economic development and relieve congestion in Cairo. On the other hand, many scholars and planners point out that many questions need to be addressed before embarking on the construction of new poles of growth in the Egyptian desert. What lies at the root of the problem is that planners do not learn from earlier experiences.

Planning a new city as a seat of government brings to mind models of ideal cities that emerged through history beginning with Plato's Republic in the fourth century B.C. which anticipated Thomas More's Utopia in 1516. While utopia is often bound up with paternalistic and even totalitarian projects and thus has been discredited, a large body of literature has highlighted the important role of utopia in the discourse about cities (Harvey, 2000; Hall, 2009; Levitas, 2013; Lefebvre, 2013; Choay, 2014). Utopia as it unfolds in history of planning- even though often described as naïve and imaginary- aspires to construct a good society. It was a generator of creativity, a way of articulating social reforms and community ideals with the real world.

3. Materials and Methods

The study employs an exploratory and descriptive method to analyse how NAC follows the approach of sustainable future smart city. A considerable number of cities around the world are now competing to transform their environment into smart cities to achieve more inclusive communities. In order to measure the degree of inclusivity of NAC the research relies on the "Assessment tool for inclusive cities" developed by (Liang et al, 2022) (Figure 2). Considering the nature of the city and that is still in the making some indicators are selected and that are more linked to the Hard factors (Quality of the Built Environment) in other words focusing on environmental and spatial inclusion. More research can be undertaken to cover the other dimensions of inclusive cities (Socio-economic factors).

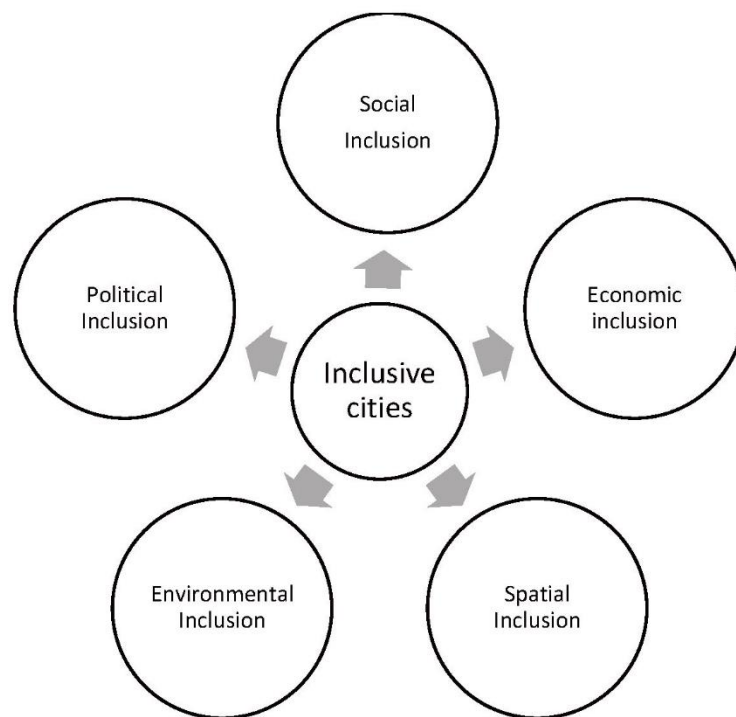


Figure 2. Dimensions of inclusive cities. Source: (Liang et al, 2022).

The research questions how inclusive NAC is? As an attempt to answer these questions the body of research relies on two types of sources. First concerning the New Administrative Capital: most of the data covering the NAC were very limited, confidential and unpublished and therefore the research has drawn extensively on the following sources: relevant texts produced by the media, the official website of the New Urban Communities Authority (NUCA) which is an Egyptian government structure affiliated with the Ministry of Housing, Utilities and Urban Communities, the critical analysis of the discourse of media reports and interviews with government officials, to identify fundamental issues at stakes. Secondly, regarding the relation between utopia, new cities, smart cities developments, social reforms

and physical planning, the research has drawn on texts produced by seminal authors such as Françoise Choay, Jane Jacobs, Peter Hall, and David Harvey. In addition, empirical data is collected through site visits and observation of current status of the city from January 2019 till June 2025.

We adopt liang findings and evaluate the degree inclusion in NAC based on the two available dimensions that are available to assess until this date (Table 1). The research builds on previous research in urban inclusion related to urban development to assess major inclusion indicators following five categories: spatial inclusion, Social inclusion, Environmental inclusion ,economic inclusion and political inclusion.

Table 1. Key terms of inclusive dimensions source: (Liang et al, 2021).

Dimensions	Key terms
Spatial Inclusion	Affordable housing Spatial justice
Environmental inclusion	Environmental sustainability Waste management Water management Natural quality of the urban space

4. The Ongoing Desert Conquest and Its Critical Issues

The government has built more than 20 new cities since 1974 to decongest Cairo and to absorb population growth. But many critical issues arise from the current desert conquest in Egypt: segregation of functions, gated communities, uncontrolled and unsustainable sprawl, waste of resources, fragmentation and alienation. David Sims (2015) argues that indications that things were going seriously wrong have been around for decades. He observes that the results, despite colossal expenditures, have been derisory and that today Egypt's desert is scattered with abandoned projects and uninhabited towns (Sims, 2015).

According to researchers who have examined new cities' development in Egypt, there is a wide gap between original goals and objectives (Figure 3), policies and what is realized, in both physical and non-physical aspects in terms of completed phases and imbalance between key land-uses, i.e. housing area, community facilities and industry. The factors included; poor management, deficient coordination and conflicts between central government institutions and local authorities. Furthermore, poor monitoring, lack of relevant documentation and continuous assessment, as well as poor housing policies, land allocation and deficient settlement policies (Abdel-Kader and Ettouney, 2013).

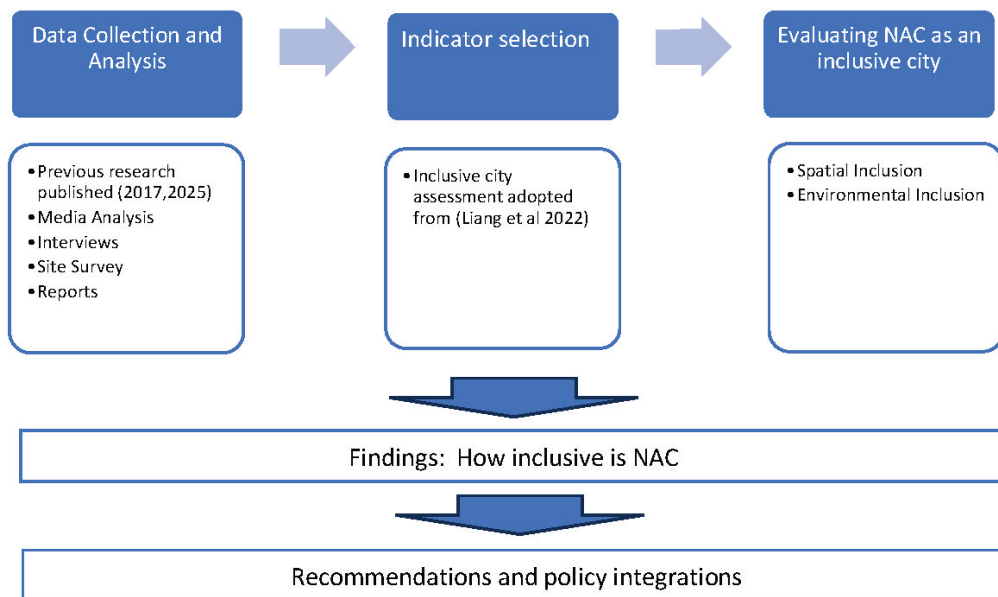


Figure 3. Methodology source: Author.

The Ministry of Housing launched the national social housing program in identified areas in various

governorates around Egypt and in New Urban Communities. This Program should provide affordable housing units for the growing population in those governorates (Sims, 2014). However, a deeper look into housing policies in NUC reveals that land finance represents a major part of revenue to the local government. The consequences of adopting the land finance policy is a booming in real estate prices despite the availability of housing stocks. In addition to housing, NUC aims to attract low-income and middle-income immigrants from different governorates around Egypt as a mean to control the expansion of informal areas in old cities.

5. The New Administrative Capital's Difficult Beginnings

The new administrative capital, which has yet to be named, was at first planned by the renowned firm Skidmore, Owings & Merrill LLP (SOM). The planning scheme proposed during the Conference of 2015 was anecdotal as it was totally disconnected from the reality on the ground. The project at the time followed a Dubai model with its sleek towers and luxury facilities; it was labelled 'global city for Egypt's future' and 'a city shaped by nature'. Besides the seat of government, the program included a central business district, 20 residential districts, a stadium, hotels, malls, huge theme park (four times the size of Disneyland), an airport and energy farms (The Capital Cairo, 2017). Negotiations failed between The Egyptian government and Emaar (The major Emiratis real estate developer). In comparison to the present master plan which construction had actually began, the proposal of SOM however had the merit of following natural features of the site (See Figure 4).

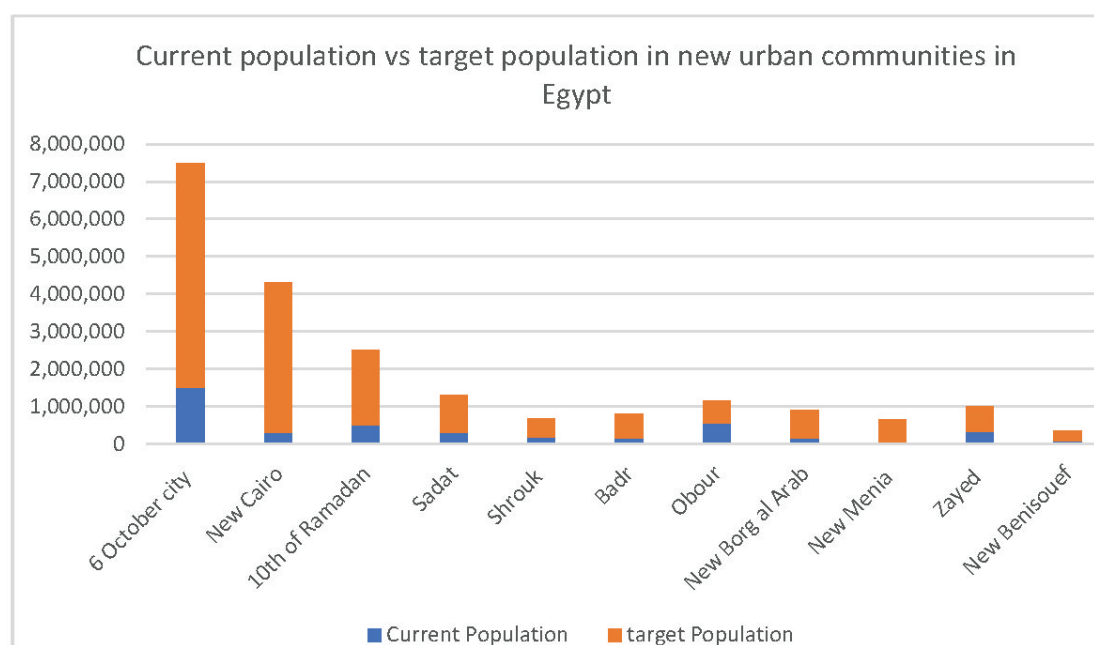


Figure 4. Targeted population vs current population in New Urban Communities in Egypt Source: Authors, data retrieved from (NUCA, 2025).

Few weeks after the failure of this first Memorandum of Understanding, another agreement was signed with China State Construction Engineering Corporation concerning the administrative city ("Egypt New Capital City", 2016). As to the first phase that comprises the infrastructure and the first phase of all housing districts, it was endorsed to a new management body: The Consortium composed of the Armed Forces Engineering Authority (one of the agencies of the Ministry of Defense), the Ministry of Housing, Utilities and Urban Communities, as well as several public and private construction companies. The construction, which has begun since May 2016, is now underway but the lack of transparency over many issues have presented major challenges in monitoring the current situation and envisioning the future challenges the city might face.

6. Masterplan and Utopian Promises

The New Administrative Capital (NAC) is situated 45Km east of Cairo, adjacent to New Cairo and just outside The second Greater Cairo ring road halfway to the seaport city of Suez. The New Capital is intended to be a smart city, meaning that the city will be using digital technology to connect, protect and

enhance the live of its citizens and to manage the urban infrastructure (CISCO, 2021). Its target population during the first phase is about 5 million inhabitants (Ministry of Housing, Utility and Urban Communities) (MOHUUC, 2021). Around 100,000 government employees will be transferred from Cairo to the new Capital by 2023 which is already in progress this June (Egypt Independent, 2020). According to government officials, job creation is among the major goals with the creation of new job profiles that is absent in other cities in Egypt. Government officials have stated that the city should provide quality of life for everyone regardless of their income.

NAC is intended to overcome the major problems present in Egypt's older cities (such as decaying urban environment, poor governance, informal immigration, infrastructure management, overcrowded transit systems). The new city is to be considered a model of smart cities in the region. However, during the process of urbanization, the city will face major challenges, one of which how it will answer the needs of its diverse residents and how it can achieve a considerable degree of urban equity especially within the economic instability that is facing the country.

6.1. Concept

The Egyptian firm called Urban Development Consortium (UDC5+) designed the master plan and Cube Consultants is a part of this union of five Consultant offices (Ministry of Housing, the Ministry of Defense and UDC+5, 2017). The video published on their website depicts an imaginary world that is a long way from reality. On the official website of NUCA, only extremely limited information is published. This is perhaps related to the fact that most of the plan was not yet officially ratified, except for the first phase, which is currently under construction. The published drawing documents demonstrate a settlement organized around a central winding green spine 'the Green River' with segregation of function between residential, commercial, recreational, administrative and other amenities zones (See Figure 2) (NUCA). The official portal only provides a small scale master plan with limited details. The capital consists of 13 wadi which means valleys (districts) (Figure 5).

In the official advertising video, the *raison d'être* of the city is summarized as the following: 'We are dreaming for a liveable city with spacious green areas, managed with the latest techniques of sustainable energy, supporting the business sector, its districts are connected with walking and bicycles tracks, providing all kinds of transportation networks, a smart city containing all segments of the community' (Ministry of Housing, the Ministry of Defense and UDC+5, 2017). According to the official website of NUCA, the new city phase is planned to accommodate a population of 5 million people (NUCA) with an area of 38,000 feddans (168 km²), with a total population of 15million when the remaining phases are accomplished (UDC5+, 2015) covering an area of 170.000 feddans (714 km²). The plan demonstrates subdivisions of neighbourhoods that would likely to be separated on the basis of household income. It was declared on several occasions that subsidized units will be provided and all segments of society will be accommodated in the new city. However, in an interview with general Ahmed Abdeen (chairman of the board of the New Administrative Capital for Urban Development company and managing director) that NAC targets investments and land revenues stating that unit's prices would surpass the average income of Egyptian citizens. (Abdeen, 2019).

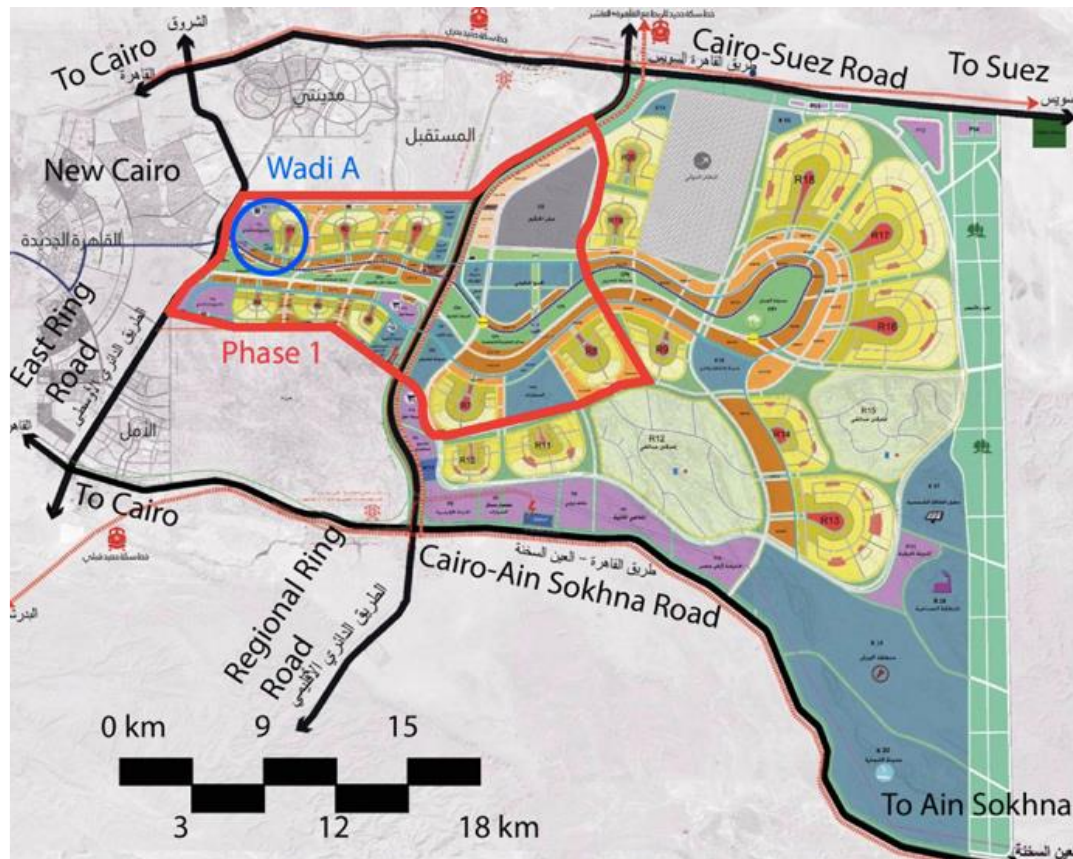


Figure 5. Master plan of NAC Showing green spine and residential area. (Source: <https://cubeconsultants.org/home/cairocapital/>).

6.2. The Master Plan

- The first phase of the master plan should provide 3.6 million housing units. Housing districts of this first phase includes eight residential wadi, the few information disclosed about the housing district is that the apartment buildings will be from 6 to 8 story height and will include units which areas range between 130 m² and 330 m² for the unit (NUCA). Indeed, the recent TV broadcast showed 8-storey apartment buildings (ONlive Channel, 2017a). The plan features a central area probably dedicated for services, but there is no mention of close proximity of daily activities and needs in the neighbourhood that would encourage active and sustainable modes of transport.
- The governmental district comprises the official residence of the president, the parliament, 12 ministries, embassies 'diplomatic district', the constitutional court, administrative buildings, etc. (Figure 7)
- The international airport (ONlive Channel, 2017a).
- The business district: computer-generated images of the project show skyscrapers—symbols of corporations' power and success- sleek office buildings and air-conditioned high-rise banks.
- A cultural centre, an opera house, exhibition halls and conference halls, mosques and churches.
- Hotels and commercial areas. Al-Masah Capital Hotel that was inaugurated by the president in October 2017 is not on the master plan, but it seems that it was a priority for the propaganda of the new capital (ONlive Channel, 2017b).
- A medical city.
- A compound of national and international universities and schools 'city of knowledge' and 'Smart Village'.
- Three investment zones. Figure

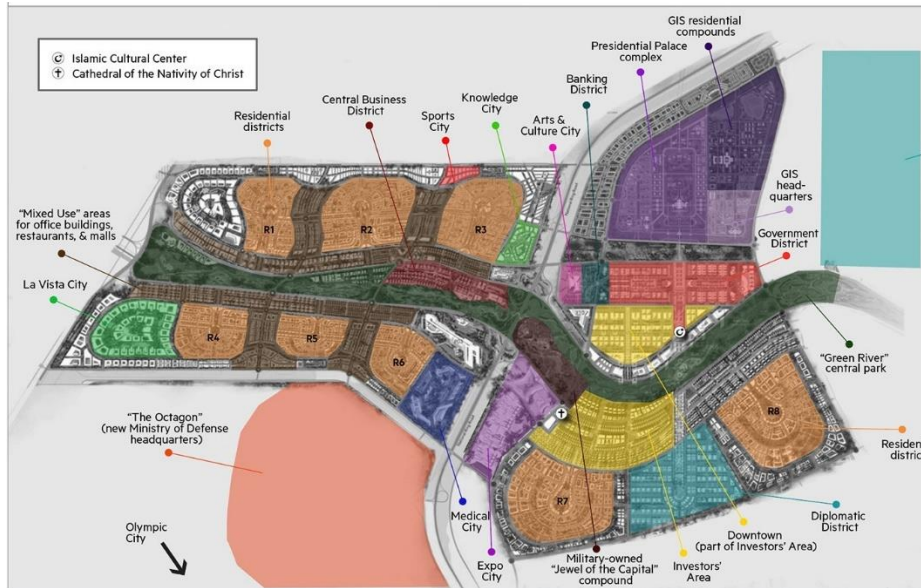


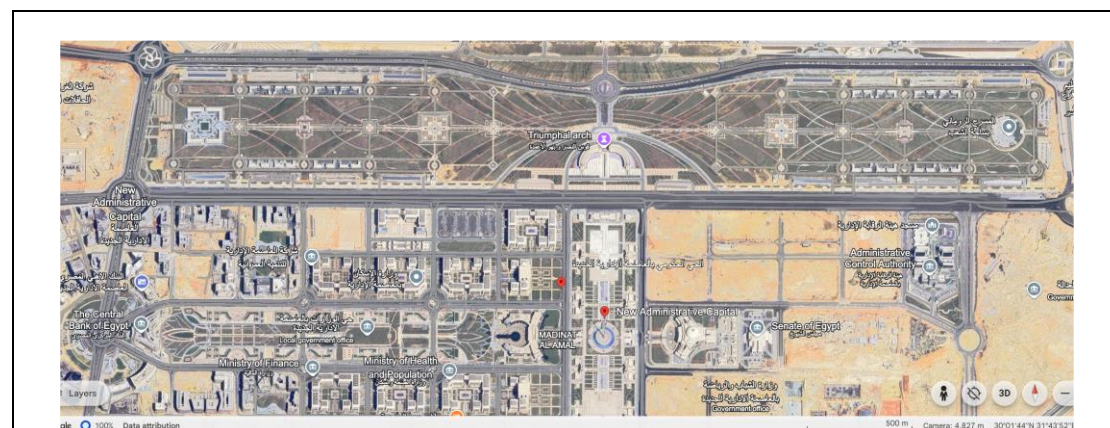
Figure 6. NAC first phase masterplan. Source: (Data Compiled from MHUUC ,Google Maps and MEDC, 2025).

Egypt's largest public park named the 'Green River' is spanning 2000 Feddan (8.4 km²) for the 1st phase and 5000 Feddan (21 km²) along 35 kilometers of the city's spine for the whole project, which is approximately two and half times the area of Central Park in Manhattan. Knowing that shortage in water is expected in upcoming years due to the problems faced with the Nile Basin countries, the cost of water stations intended by the Government for irrigation in the middle of the desert will be aberrant and exorbitant (ONlive Channel, 2017c; Urban Development Consortium UDC5+, 2015). Additionally, the two huge main arteries of the city bordering the park hinder pedestrian connectivity between residential neighbourhoods and open spaces.

7. Assessing Environmental Inclusion

7.1. Transport

The Cairo-Suez Road and the Ain-Sokhna Road already link the settlement to Cairo and a large-scale new network is currently underway. This new network will include two new highways at the centre. Contemporary planners agree that high-speed roads have a place in the regional transportation system, but not through the heart of neighbourhoods. Such streets act as barriers to the free movement of pedestrians and cohesion of the community. The minister also spoke about lanes for buses and an electric train to bond the new settlement with Cairo, Alexandria and Ain el Sokna (Mehwar TV channel, 2016). 2). A high-speed electric railway will be one of the kind in Egypt. This railway will connect NAC with Cairo, 6 October city, Burj Al Arab and Alexandria. It will cover 15 stations with a line length of 543 (Construction review, 2021). In 2022 the government signed a contract with siemens mobility to finalize 2000km fast train project in Egypt. In addition a monorail project is expected to connect NAC to Eastern Cairo with a length of 98 km. This should make it the longest monorail system in the world (Figures 8&9).



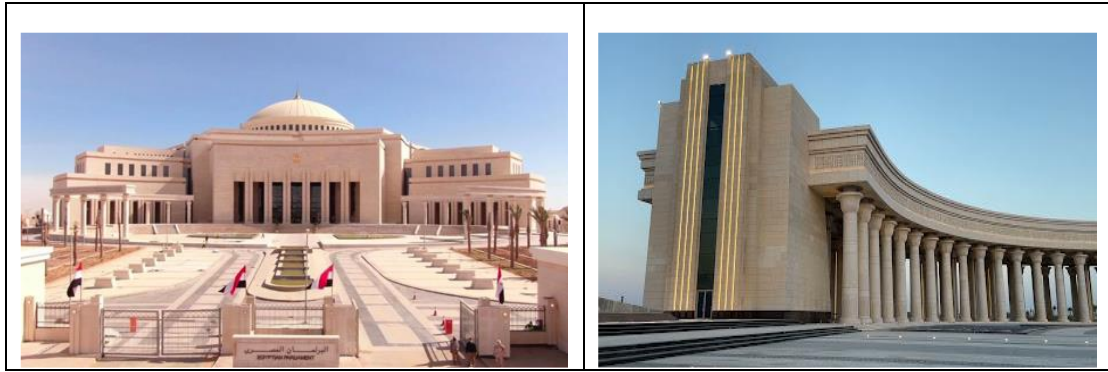


Figure 7. Photos from different zones in NAC: Up the people square parliament, lower right classic monumental style of the NAC. source compiled (Google Maps and Authors, 2025).

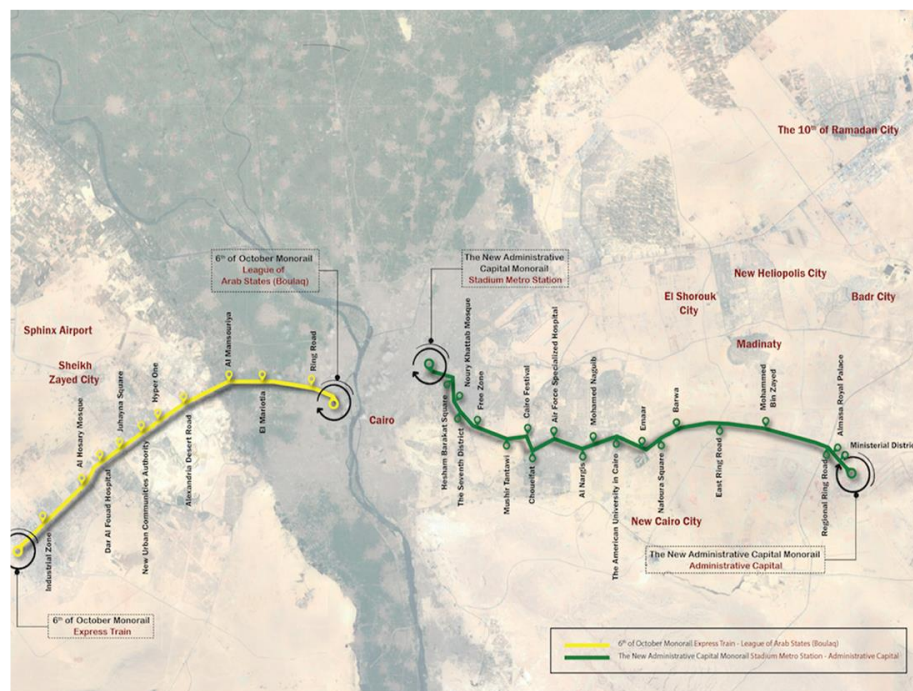


Figure 8. Monorail Masterplan. Source: Wikipedia, Bombardier.

It was mentioned that government employees that are transferred to NAC will receive transport passes from the government or sponsored through their company (Abdeen, 2019). A total of 14 government ministries and entities have relocated to the New Administrative Capital (NAC), according to a statement released by Presidential Spokesperson Ahmed Fahmy (Ahmed Fahmy, 2023). However, how these transport projects will be integrated with the existing transport network, is still not comprehensive. There is a risk of fragmented urban development due to the layout of transport infrastructure, which tends to shape the spatial distribution of economic clusters. This will cause rapid development in some areas while other areas will be left behind. The extent to which these areas will develop depends on other factors that should be considered in long term assessment studies like seasonality of places (Ain Al-Sokhna and Alamein) and the affordability of these transit systems. In other words, without affordable modes of public transportation to reach the new city and without job opportunities, the 'capital' is destined to become just another dormitory suburb at its best, and most probably another isolated city that does not reach its target population.

A historical review of Sadat New City developed in 1978 to be a new administrative center for Egypt shows that reason behind the failure of Sadat New city is a problem of accessibility: substantial economic development could not be achieved and could not mobilize any social change. Located 94 kilometers northwest of Cairo, the ministries' employees, that were supposed to transfer there at the time, refused to go, due to the lack of any affordable transportation means. Until today the poor remain dependent on a system of minibuses and distances create a serious problem to all family members, especially after the

rise of fuel prize and the costs of cars with the series of floatations of the pound from 2016 till october 2022. (Sims, 2012).

7.2. *Quality of Urban Space*

In terms of pedestrian-friendly design, the observation of the master plan and satellite images revealed that the scale of each wadi or valley does not encourage walkability. While the preferred reasonable distance for a pedestrian shed is around 400 meters (5 minutes' walk), the average radius from the centre of any residential neighbourhood of the master plan exceeds this recommended range. For example, the radius from the centre of wadi E to its edge is approximately 1200 meters (Figure 3). The problem also lies in the fact that documents do not show a mixed-use planning on the block scale. Permeability and connectivity are also important qualities of the environment that support walking but the lack of detailed information related to these issues impede an objective judgment on the studied neighbourhood.

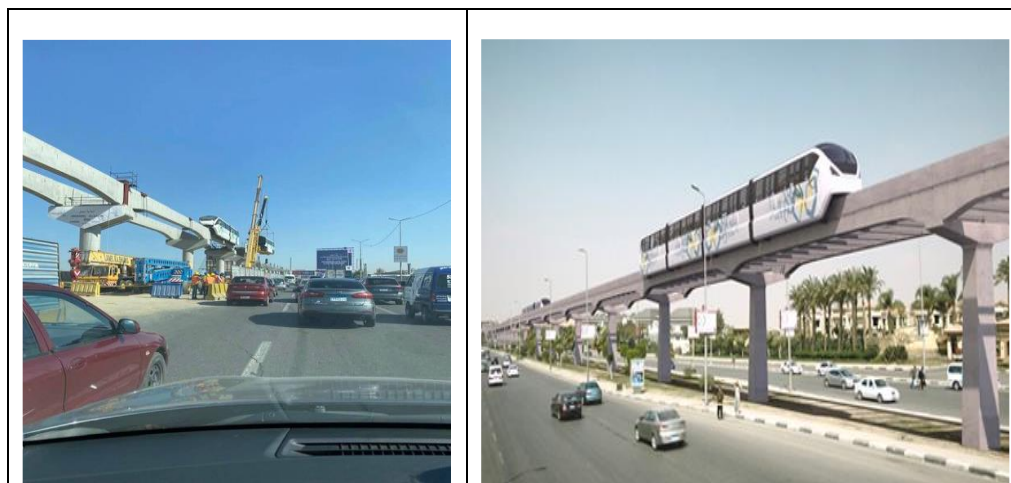


Figure 9. Monorail development 2022 to 2025. Source: Author.

7.3. *Environmental Sustainability*

As a smart city, the city promises the adoption of sustainable infrastructure with efficient use of resources. The city is developing a clean power plan, communication networks and electrical transmission line. Moreover, a sustainable waste management system is adopted in NAC. It will be adopting a refused-derived fuel facility which can process solid waste to fuel for cement industry. An engineered landfill was designed for non recycable waste (Construction Review, 2021). Billions of egyptian pounds have been spent to provide and construct these services and it was made official that the cost of this advanced infrastructure mainly depends on land revenues (Abdeen, 2019). It was announced several times in the media that the megaproject will cost US\$ 45 billion and that it is a public-private partnership for the management, funding and execution of works. As the negotiations with foreign investors had failed at the beginning, the question of the financial feasibility of the project was raised frequently in the media but again, information about the source of the funds was not disclosed. (Mehwar TV channel, 2016).

Moreover, research conducted concerning water management and flood simulation has proven that there is compatibility between the city morphology and the existing flood basins. This is clearly not taken into account during the planning process (Marcus, 2010). In earlier SOM's masterplan this was considered while in the new masterplan flood water will not find its own way through natural channels. This is observed in the street network and urban structure within the land use scheme in incompatible ways with flood direction (Abdelhamid & el khouly, 2019).

8. *Spatial Inclusion*

Egypt recent urban history is full of examples of lifeless and ghost cities that came to existence in order to escape from pervasive complex conditions of Cairo, such as gated communities that were established as islands for the rich in a defensive posture towards the rest of the city. In the last century Egypt urban planning policies were inclined towards area-based development to reduce poverty and achieve better urban inclusion .However this approach has peoved not successful. Likewise, the new capital seems to embody striking imbalance between the wealthy and the poor, and contribute to further

urbanization of inequalities.

Although the authorities have recognized that Cairo's peripheral satellite cities are in need of revitalization and replanning in order to encourage people to settle, the current trend is to continue sprawl in the desert. The sustainable approach would have been to develop numerous under-utilized parcels and abandoned buildings that can be reused for job-generating economic activities and housing, instead of spreading into the deserts of East and West of Cairo. So giving value to existing desert towns should be a priority in State strategies instead of allocating more and more tracks of land to real estate developers whose only logic is profitability.

In gated communities that are based on strictly controlled access of people through confining walls, concepts of citizenship, social belonging, and mutual support are undermined. Advertising and marketing graphics, 3D movies and urban visualization of the 'New Capital Cairo' depict an oversized dream city of happy people, living in harmony and enjoying parks and attractive buildings (Ministry of Housing, the Ministry of Defense and UDC+5, 2017). But these computer-generated videos are just a reflection of an increasingly consumer-oriented society described by the French situationist Guy Debord who has argued that 'we have entered a world of alienated consumption, in which people are only connected to the world by images created by someone else' (Hall, 2009, p.373). Who are the people depicted in these advertisements living and working in the administrative capital? How many of the Egyptians they represent? So whose utopia is it? How can middle class and low-income groups be excluded from national schemes? In fact, the images published on the website of the Capital Cairo demonstrate an imaginary world disconnected from the reality and from the difficult environment in which the great majority of Egyptian is living ([The Capital Cairo, 2017](#)).

Housing Affordability and Public Spaces

Land finance presents a major part of revenue for the local government to meet the huge capital needed for the construction of the work. The consequence of this policy is clear in the rapidly rising property prices. Property prices (A medium of 15000 EGP/m² and a minimum price of 2.2 million EGP are far from adequate to cover the needs of a wide range of social classes expected to inhabit the city ([Aqarmap, 2023](#); [property finder, 2023](#)). The master plan suggests that the city will be relying on surrounding cities such as "Badr" located 7Km from NAC, to provide housing for low-income residents. The Housing project is expected to accommodate nearly 30000 residential units for low-income groups ([Egypt Today, 2020](#)). These policies can cause clear social segregation between ancillary cities and NAC. Badr is connected to NAC through the electric train that is now already in operation.

When it comes to measuring real estate, affordability is by measuring price to income ratio. According to CAPMAS, the average annual household in 69,059.600 EGP in 2020 ([El-Assady, 2020](#)). This means that the average price unit in NAC (Around 2 Million EGP) requires 30 years of the annual average income of the Egyptian household free of interest, demonstrating crucial segregation in housing prices. Most of the housing projects in the new capital (Public and private sector) is dedicated to households which income is largely higher of the middle class and employees of the public sector. ([Figure 10](#)).

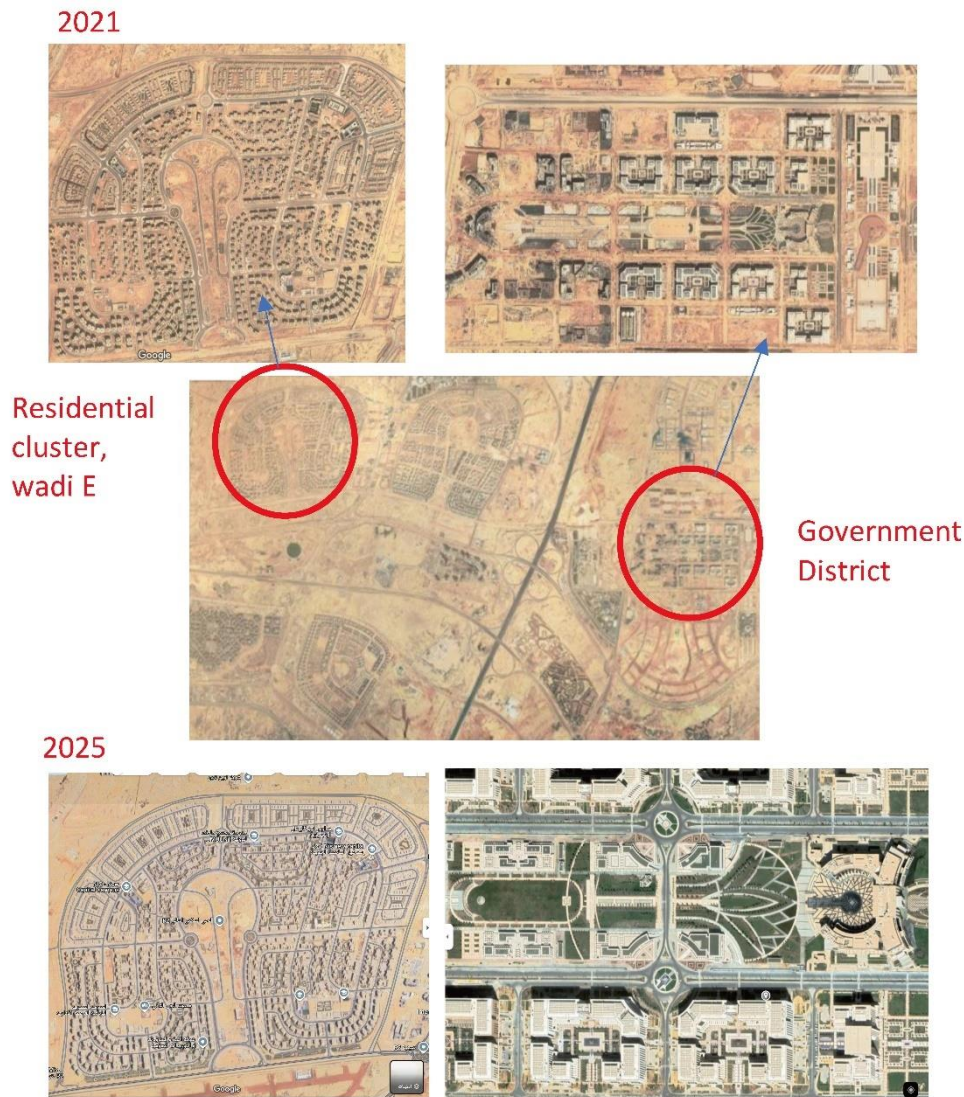


Figure 10. Aerial views showing development in NAC from 2021 to 2025. (Source: Author compiled with google map, dated @2021,2023,2025 google).

9. Is It a Utopian City?

The ACUD has published in its first report that the main target of NAC relies on 7 principles :1-sustainable city, 2-smart city. 3-green city, 4-walkable city, 5-livable city, 6-connected city, 7-business city. Smart cities initiatives have been looked at recently as a new concrete utopia. (Söderström, Paasche, & Klauser, 2014; Wiig, 2015; Datta, 2015; Vanolo, 2016; Marvin et al., 2015; Anthopoulos, 2017). In the administrative capitals there were advocates for this concrete utopia in the public sector (The ministry of housing, the New urban communities, Egypt Army Engineering Authority), the private sector (real estate developers). It is a common thing now in Egyptian Newspapers and media that the New Administrative Capital is projected as a new way of living in Egypt. New Images from a perfect urban environment is projected, slogans such as "fourth generation city", "Egypt: Major building boom breathes life into 37 new smart city projects"; "Egypt new Capital, A smart city in the making"; (Tarek, 2021; Global Fleet, 2021).

10. Conclusion

While Egypt faces today tremendous challenges to bring about social and economic development aggravated by factors such as rapid population growth, there is an official disturbing opacity concerning a project of such enormous magnitude. The city is a complex reality embedded in the whole territory context, it is difficult to foresee accurately the rhythm and the different directions that its development

would take but it is possible to create optimal conditions for future developments by relying on sound place-based knowledge that can enable a spirit of change, criticism, reason and reform.

Communities need to be involved in the decision-making process. Planners do not have the ability to shape urban and regional space by depending only on-site analysis and empirical methods of observation. Methods must be introduced to help communities engage in an open planning process. Different properly designed tools of public participation are needed so diverse points of views from interest groups, developers and public officials can be openly discussed. In practice, there is no public voice, so planners can be faced with the necessity of making judgments between various segments of society. In Egypt, some segments of the society have to be educated to participate, as they could ignore what is best for their community, but these obstacles of ignorance can be overcome. Gradually, the problem of unpreparedness for radical change can be resolved if reforms include a reconstruction of the social process for a physical and institutional change. All change processes evolve constantly, so rigorous questioning is recommended at regular points during the planning process. The ideal city of today cannot be achieved unless it is created throughout an ideal process. Communities need to be empowered and to have a say in the environment of their everyday life. The utopia of Lefebvre: autogestion may seem an unattainable ideal today in Egypt, nevertheless there is now a growing awareness among academic circles that future must be grounded in the social condition.

Of course, public participation can be pulled up against powerful interests and the lack of transparency coupled with corruption problems is a major hindrance for the progress of governance. Following the 25 January Revolution in 2011, Egypt needs to be oriented on the right track; by addressing the rampant corruption and supporting transparency not only in land allocation but extend it to all areas as a basis for development. This will require the reappraisal of processes and mechanisms of research and management in planning to reconcile demands of social justice, economic development and environmental protection as an opening to new more humane urban policies in Egypt. Taking this as a point of departure, future cities in Egypt will be better places to all.

References

- Abdeldayem, W. S., & El-Khouly, T. A. M. I. R. (2019). A macroscopic view of water management of the new administrative capital city of Egypt. In *Proceedings of the 12th space syntax symposium*, Beijing, China
- Abdel-Kader, N., & Ettouney, S. (2013, September). Rethinking New Communities Development-with Reference to Egypt's 40 Years Experience. In *Proceeding of the 39th World Congress on Housing Science*, Milan (pp. 127-137).
- Anthopoulos, L. G., & Anthopoulos, L. G. (2017). The rise of the smart city. Understanding smart cities: A tool for smart government or an industrial trick?, 5-45.
- Blackie's Dictionary of Quotations (2013). New Delhi, India: S. Chand & Co Ltd.
- Cairo Population (2017). from <http://worldpopulationreview.com/world-cities/cairo-population/>
- Choay, F. (2014). L'Urbanisme, utopies et réalités, Une anthologie. [Urbanism, utopias and realities, an Anthology]. Paris: Editions du Seuil.
- Construction of Electric Train Linking New Capital to Greater Cairo to Begin in 2018. (November 1, 2017). from <https://egyptianstreets.com/2017/11/01/construction-of-electric-train-linking-new-capital-to-greater-cairo-to-begin-in-2018/>
- Cube consultants © 2018 CUBE. (2018). from <https://cubeconsultants.org/home/cairocapital/>
- Glaeser, E. (2011). Triumph of the city: How urban spaces make us human. Pan Macmillan.
- Egypt's New Capital City: Construction of First Phase to Provide 1.5 million Jobs. (February 14, 2016). from <https://egyptianstreets.com/2016/02/14/egypts-new-capital-city-construction-of-first-phase-to-provide-1-5-million-jobs/>
- Frampton, K. (1980). Modern Architecture: A Critical History. New York: Oxford University Press.
- Fleet, G. (2021, May 18). Egypt's new capital - a smart city in the making. Retrieved from Global Fleet: <https://www.globalfleet.com/>
- Hall, P. (2009). Cities of Tomorrow. (3rd ed.) USA: Blackwell Publishing.
- Harvey, D. (2000). Spaces of Hope. Edinburgh: Edinburgh University Press.
- Jacobs, J. (1992). The Death and Life of Great American Cities. New York: Vintage Books.
- Kostof, S. (1993). The City Shaped: Urban Patterns and Meanings through History, London, Bulfinch Press.
- Lefebvre, H. (1991). The Production of Space. Translated by Donald Nicholson-Smith. Oxford: Basil Blackwell.
- Lefebvre, H. (2013). Le Droit à la Ville (3 rd ed.) [The Right to the City]. Paris: Economica & Anthropos.
- Levitas, R. (2013). Utopia as Method: The Imaginary Reconstitution of Society. Palgrave Macmillan Ltd, Basingstoke.
- Liang, D., De Jong, M., Schraven, D., & Wang, L. (2022). Mapping key features and dimensions of the inclusive city: A systematic bibliometric analysis and literature study. *International Journal of Sustainable Development & World Ecology*, 29(1), 60-79
- Macrorie, R., Marvin, S., Smith, A., & While, A. (2023). A Common Management Framework for European Smart Cities? The Case of the European Innovation Partnership for Smart Cities and Communities Six Nations Forum. *Journal of Urban Technology*, 30(3), 63-80.

- Marcus, L. (2010). Spatial capital: A proposal for an extension of space syntax into a more general urban morphology. *Journal of Space Syntax* 1, 1.
- Mustafa, Ahmed et al. (2018). Procedural generation of flood-sensitive urban layouts. *Environmental and Planning B: Urban Analysis and City Science*.
- Mehwar TV Channel. (2016, July 27). 90 minutes inside the site of the new administrative capital, in Arabic. [Video file]. YouTube .1:02:34 Posted. from <https://www.youtube.com/watch?v=GWCJvz6yb1Y&sns=em>.
- Ministry of Housing, the Ministry of Defence and UDC+5. (2017, February 25). The Capital-Cairo, the new administrative capital, in Arabic. [Video file]. YouTube.7:43 Posted. from <https://www.youtube.com/watch?v=XU-ePo9ETHU>.
- Misr El mostakbal Channel. (2015a, March 14). Al-Sisi to the vice president of the United Arab Emirates: I want this project ended by yesterday, in Arabic. [Video file]. YouTube.4:13 Posted. from <https://www.youtube.com/watch?v=4bc0l-8dVRE&feature=youtu.be>.
- Misr El mostakbal Channel. (2015b, March 15). Closing speech of the president for the Economic Conference, in Arabic. [Video file]. YouTube.50:38. Posted. from <https://m.youtube.com/watch?v=8QxoGdYnr7Q&feature=youtu.be>.
- Mumford, L. (1961). *The City in History: Its Origins, Its Transformations, and Its Prospects*. New York: Harcourt Brace Jovanovich, Harvest Publishers.
- New Urban Communities Authority NUCA. from https://newcities.gov.eg/know_cities/NewCapital/default.aspxhttp://newcities.gov.eg/know_cities/NewCapital/default.aspx.
- ONlive Channel. (2017a, July 3). New capital Egypt - update June 2017 - Residential districts in Arabic [Video file]. YouTube.1:26 Posted. from <https://www.youtube.com/watch?v=VOnz9Jo4y4U>
- ONlive Channel. (2017b, October 11). Information you may ignore about the new administrative capital and Al-Masah Hotel, in Arabic. [Video file]. YouTube.8:05 Posted. from: <https://www.youtube.com/watch?v=RQwMMgoTT9w>.
- ONlive Channel. (2017c, October 11). A documentary on the Green River in the new administrative capital, in Arabic. [Video file]. YouTube.3:44 Posted. from <https://www.youtube.com/watch?v=oiKpSAs3b0o>.
- Sims, D. (2012). *Understanding Cairo: The Logic of a City Out of Control*. Cairo: The American University in Cairo Press.
- Sims, D. (2015). *Egypt's Desert Dreams, Development or Disaster?* Cairo: The American University in Cairo Press.
- Söderström, O., Paasche, T., & Klauser, F. (2014). Smart cities as corporate storytelling. *City*, 18(3), 307-320
- Tarek, S. (2021, September 23). Egypt: Major building boom breathes life into 37 new smart city projects. Retrieved from The Africa Report: www.theafricareport.com
- Tempia, E. (1969). L'imaginaire et le réel [The imaginary and the real]. *l'Architecture d'Aujourd'hui (Villes Nouvelles)*, 146,3-9.
- The Capital Cairo. THE CAPITAL © 2015. (2017). from <https://thecapitalcairo.com/vision.html>.
- The Unified Building Law 119/2008 and its executive regulations (2009). Cairo: Amiria Press.
- Urban Development Consortium UDC5+ (2015). from <http://www.udc5.com/project/wedian-new-capital-city/>
- United Nation Population Division (2018).World Urbanization Prospects.from <https://www.un.org/development/desa/pd/content/urbanization-0>.
- United Nation Development Programme UNDP. (2018). About Egypt. from <https://www.cg.undp.org/content/egypt/en/home/countryinfo.html>.
- United Nations Human Settlements Programme UN-HABITAT. (2017). Cities & Citizens series: Bridging the Urban Divide. Cairo: City in Transition. Cairo: The American University in Cairo & UN Habitat. From https://issuu.com/unhabitat/docs/cities_and_citizen_series_bridging_the_urban_divi.
- Vanolo, A. (2016). Is there anybody out there? The place and role of citizens in tomorrow's smart cities. *Futures*, 82, 26-36
- Walters, D. R. (2007). *Designing Communities, Charrettes, Master Plans and Form-based Codes*. Oxford: Elsevier.
- Wiig, A. (2015). IBM's smart city as techno-utopian policy mobility. *City*, 19(2-3), 258-273