New Capital Cities: A Timeless Mega-project of Intercontinental Presence

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Abstract. Mega-projects are projects that require immense resources to create. This includes all different aspects; funding, labour, etc. These projects are meant to create a massive effect on the city or national level through providing job opportunities during construction as well as after completion. Moreover, these projects usually have an intercontinental effect that echoes worldwide and may affect other projects, cities or even countries either positively or negatively. Mega-projects are not restricted to certain project typologies; in fact they range from Olympic cities to water dams and channels. We can even claim that the first mega-project was the great pyramid. Mega-projects can also be linked to mega-events thus achieving more international acknowledgement. This paper discusses the creation of new capital cities as a mega-project typology. It analyzes different examples worldwide where a new capital city was created to act as a mega-project that would create ripples of economic and urban development through a country. The capitals of Brazil, Kazakhstan and Egypt are studied to display the authors view of them as mega-projects that have the same function but span across time, space and cultures.

1. Introduction
Mega-projects take their viewers and users beyond the direct value and into the symbolic value and international perception of the project and its country as a whole; government, community and environment. Various projects can be labeled as mega-projects and many of them can also be linked to mega-events. These projects are not merely mega-engineering projects that provide a valuable enhancement to users, but they are also symbols of their countries; societies and policies. Additionally, they have a huge effect on their surrounding environment both natural and man-made. This research discusses new capital cities as mega-projects of worldwide and timeless presence. Countries across the globe resolve to moving their seat of government and creating a new capital city for that purpose at certain points of their history. The decision of developing a new capital city is a critical decision that involves multiple aspects; political, social, economic and environmental. This paper mainly focuses on three of such cases; Brasilia of Brazil, Astana of Kazakhstan and the new capital of Egypt.

2. Methodology
The authors discuss the concept of mega-projects and their possible variations. The authors then focus on new capital cities as a unique type of mega-project that occurs repeatedly across time and across the globe despite all differences; cultural, environmental, financial, political.
3. Mega-projects
Megaprojects are projects of large scale in terms of structure, visibility, cost and above all invested human effort. Some researchers describe them as ‘large-scale and high-risk investments’ that require a large amount of time and funds to realize but rarely achieve their intended outcomes and thus may induce economic failures (1). These projects have a wide typological spectrum ranging from airports to public transportation infrastructure networks. Some of them are related to mega-events and tourist attraction; e.g. Olympic cities while others may be closely linked to political and societal changes; e.g. new capital cities. On one hand, These projects are indicators of ideas, policies and development strategies while on the other hand they have great effects on the economy, the people and the environment (2). Megaprojects are usually linked to large corporates or state officials and thus carry symbolic gestures of power that are mediated to the viewers(3). The symbolic aspect of such projects is a display of legitimacy and managerial effectiveness that is expected as an added value along any other functional aspects of such projects (3).

This paper argues that mega-projects and mega-events are closely linked. Hosting mega-events attracts the world’s attention to the host city. Consequently, this attracts various interested segments; workers, residents, investors, etc. This can be a reason and a tool to enhance the city’s conditions and enlarge its development schemes (4). Megaprojects like the Olympics and world-fairs can have noticeable effects on regional planning and land use management (5). Beyond the media and the noise of the short-term event itself, the mega-event changes the host country with megaprojects; e.g. public transportation systems, stadiums, Olympic villages and landmarks (5). Hosting mega-events has become one of the strategies used by cities to attract international attention and thus support local development plans (4). Several studies on the subject claim that mega-events can provide a positive image of the host city, boost its economy and increase the rate of its economic development (6). The competition between cities for such events is continuously escalating and can be linked to the global economy and the globalization phenomenon in general (7). Hosting mega-events grabs the attention and absorbs the host’s resources. Related budgets of recent events have reached 10 billion dollars, in addition to the land, public transportation requirements and other related services needed to efficiently serve thousands of visitors (6). This leads to other studies that account for the negative consequences of such events as these events mostly go over budget and may leave behind a legacy of economic loss and underused facilities (6). Although the mega-event bidding process produces more losers than winners, cities worldwide are still willing to take the risk in the hope of winning and achieving their development ambitions (8). As such, some researchers describe mega-events as reflections of the modern contradictions displayed in tangible; urban development and intangible aspects; social aspects (9).

4. Capital cities
Creating a new capital city is a mega-project that has immense political, social, economic and environmental ties and variations. Some researchers describe a planned new capital city as one of the world’s highest impact and highest expense projects (10). The creation of a new capital city may be a result of political, economic, societal reasons among others. Whatever the reasons, the relocation comes at a great expense on several aspects; time, resources, etc. and is meant to show a planned change in the country’s future (11). Mega-projects in general, and new capital cities specifically, are closely linked politics and politicians rather than to development experts or communities (10).

Usually, a capital city is the political as well as economic and demographic center of the country but sometimes it only holds the political power. The separation of political and economic centers is present in several countries; e.g. China (Beijing & Shanghai), United states of America (Washington, New York), Canada (Ottawa, Toronto) (12). As a capital city grows with its political power well established, it attracts social, economic and cultural momentum of national and international audience. Consequently, huge funds are required to provide adequate infrastructure for the developing and variating activities and users; education, culture, health, trade, etc. (13).

The relocation of a capital city is a complex decision as it has multidimensional aspects and consequences. The relocation can take place when an existing capital can no longer adapt and modernize
to fulfill its role as a national keystone, which has happened several times across recent history in different
countries across the world (14). The following table shows some of these new capitals since 1960.

Table 1: Some of the new capitals since 1960 (based on Hall, 2006 and updated by researcher, 2017)

| Date  | Old capital | New capital | Country       |
|-------|-------------|-------------|---------------|
| 2011  | -           | Juba        | South Sudan   |
| 2005  | Rangoon     | Naypyidaw   | Myanmar       |
| 2005  | Seoul       | Sejong      | South Korea   |
| 2001  | Kuala Lumpur| Putrajaya   | Malaysia      |
| 1997  | Abidjan     | Astana      | Kazakhstan    |
| 1983  | Abidjan     | Yamoussoukro| Ivory coast   |
| 1975  | Lagos       | Abuja       | Nigeria       |
| 1973  | Dar es salaam| Dodoma     | Tanzania      |
| 1965  | Zomba       | Lilongwe    | Malawi        |
| 1964  | Zomba       | Gaborone    | Botswana      |
| 1960  | Rio De Janiro| Brasilia   | Brazil        |
| 1959  | Karachi     | Islamabad   | Pakistan      |

It is usually more common to move the capital to a more central location of the country; e.g. Brasilia,
Astana, Sejong (15). Some researchers view a capital relocation as an action taken to face severe community
problems and enhance nation building, that is especially linked to post-colonial countries (16). The
relocation is commonly to display and symbolize a future of unified communities and modern statehood
that would enhance a country’s position within the international system (16,17).

This paper discusses three cases of new capital cities as mega-projects that were created to develop their
regions and countries as well as create a global impact and empower their nations worldwide; Brasilia,
Astana and the new Egyptian capital.

5. Brasilia
The world-famous model of new capital city development. It was conceived not only as a national symbol
of Brazil’s future of modern development, but also as a beacon of modern architecture for the whole world
(15,16). It was planned and executed to become an idol for modern city development in terms of both
architecture and urbanism through providing an organized, clean, calm and efficient environment
throughout the city (18). In 1960, Brasilia was inaugurated amidst global accreditation and celebration by
world leaders who acclaimed it as a ‘capital of hope’ and a symbol of progress and modernism. The United
Nations Educational, Scientific and Cultural Organization (UNESCO) declared Brasilia as a ‘World
Heritage Site’ in 1987. Researchers claim Brasilia to be a prototype for globalization and the megalopolis
and thus should be studied and celebrated rather than criticized (19). The costs of this new capital
development were equal to 10 percent of the country’s wealth, which could be measured in today’s value
as equal to 83 billion dollars (20).

The initial steps to create a new capital and move the seat of government from the coastal capital; Rio
de janeiro were taken in 1955. The Brazilian president at the time Juscelino Kubitschek declared his view
of the necessity of developing the country’s central areas to ensure a more inclusive and successful future
for the whole country. Consequently, was his decision to create a new capital that would attract residents
and investors to the country’s interior not just the coastal strip (18). In 1956, an international competition
was held for the design of the highly anticipated new capital of Brazil. The winner was the Brazilian Lúcio
Costa whose plan featured the famous Plano Piloto (21).

The original plan featured separate functions and identities for different parts of the city. The world-
famous layout resembling an airplane is seen as an indicator of Brazil’s commitment to a successful future
of modernity (18). The satellite cities surrounding Brasilia were not part of the competition’s winning
proposal but were introduced later. As the housing needs multiplied substantially during the construction
of the Plano Piloto, it was decided to add these areas, especially Taguatinga as it had been noticeably developed, to be connected to the original plan by highways but kept relatively separated (21).

The city was planned to ascertain that the governmental functions take priority over all other functions (16). As such, there was a planned and obvious separation of different city functions. The main governmental buildings were aligned overlooking the main avenue and into the area resembling the airplane’s cockpit, while the residential areas were formed as medium rise buildings forming super-blocks in the areas resembling the airplane’s wings (18). The neighboring satellite city of Taguatinga was planned in a highly functional grid pattern and linked to the capital using highways (21).

Brasilia was planned to accommodate a population of 500-600 thousand people that was seen as the maximum residential capacity possible to maintain the intended quality of life (18,21). Yet, its population growth continued along the years to reach 2.5 million in 2010 and 2.9 million in 2015 (21). Brasilia’s Plano Piloto grew to become just a piece of a vast urban area within the fastest growing metropolitan region in Brazil (19,21). It has grown to develop problems and challenges similar to that of all other world cities and capitals; increased urbanization, insufficient housing supply, overcrowding, etc. (21). Despite these growing challenges, Brasilia has acclaimed a living standard as high as that of leading European countries (21). The following Figure 1 shows a satellite image of Brasilia and its surrounding urbanization.

![Figure 1](image1.jpg)

**Figure 1.** Satellite image of Brasilia (center right) and the surrounding urban area (Google Earth, 2020)

6. Astana

‘The most attractive and competitive capitals in the world’ and ‘a bright, strong, prosperous city which unites all Kazakhstan’s people’ (Nazarbayev, 2010) cited in (15).

Kazakhstan gained its independence as a result of the fall of the Soviet Union in 1991. The newly independent country was faced by various challenges both interior and exterior that required taking firm actions to ascertain its sovereignty (17). On one hand, the newly gained independence was seen prone to danger from surrounding powerful countries, namely; Russia and China (17,22). While on the other hand, the Kazakh population were only 41% of the total population with a noticeable population of Russians and Russified Kazakhs especially near the Russian-Kazakh borders (17). Also, the existing capital ‘Almaty’
was seen as a symbol of the Russian control over Kazakhstan and a sign that Kazakhs were uncapable of creating their own governance systems (16,22).

The decision to relocate the capital was taken by Kazakhstan’s president Nursultan Nazarbaev in 1997. The decision was based on several reasons; first of which is the manifestation of power and sovereignty to both national and international audience to prevent any possible threats to the country’s independence (17). The relocation was also justified by the problems of the existing capital as the location was unsuitable for further urban expansion due to geographic and topographic difficulties and seismic activity (22).

The location chosen for the new capital of Kazakhstan ‘Astana’ was more central to the country thus providing higher safety measures from possible hostile attacks and also providing a motivation for urban development in the central underdeveloped areas of the country (17,22). The location was more suitable for future expansion and development as it had plain topography and away from any significant seismic activity (22). The relocation created a wave of power redistribution and nation building among the country’s residents; giving Kazakhs the trust they needed to believe in their leadership and unite behind the new capital as a national mega-project that symbolizes their heritage and their future (16). The new capital was created to unify all residents of Kazakhstan and become an idol for modern Eurasian capitals (17).

The design of the new capital was chosen through an international competition that was won by the Japanese architect Kisho Kurokawa. Researchers claim that the jury’s decision was to some extent related to the architect’s reputation and not just his proposal of a sustainable and metabolic capital (22). Astana was planned and designed to display both the modern Eurasian future and the rich Kazakh heritage and culture. The main buildings and landmarks were designed in a modern style but based on the authentic Kazakh culture (22). In addition, the state officials focused their efforts on hosting mega-events; international conferences, festivals, etc. to attract international attention and display the newly created capital (15).

At first, the cost of the new capital’s development was estimated as 400 million dollars but gradually increased during construction and development (16). The project required immense funding as the location was of a small rural settlement and thus required great efforts and funds to create the required networks and infrastructure for a modern and futuristic capital city (17,22). The cost is estimated to have reached 8 billion dollars in total which the president of Kazakhstan publicly announced wouldn’t come from the country’s budget (16,22). Instead, the funds were linked to the oil and gas excavation companies whose activities expanded significantly and they donated large amounts to support the new capital during its construction phase (16).

Astana grew to become a main attraction of Kazakhstan and Asia. Its population expanded to reach 780 thousand people in 2013, thus achieving the highest population growth in the country (17). In 2019, Astana was renamed to become ‘Nursultan’ to honor the efforts of its founder president Nursultan Nazarbaev upon his resignation from the presidential position (23). The following Figure 2 shows a recent satellite image of Astana and its surroundings.

7. Egypt’s New Administrative Capital

“The masterplan is to create a global city with smart infrastructure for Egypt’s future, which will provide a multitude of economic opportunities and offer a distinct quality of life.” (The Capital Cairo, 2015)

Since the revolution in 2011, Egypt has been going through political, societal and economic turbulences that rendered it in need of bold actions and changes to direct it to a more stable future. After several years of instability and constitutional changes, president El-Sisi became elected to hold the presidential position in the country. This was the beginning of a set of development plans across the country aiming to restore the country’s political, social and economic stability and enhance its future. The most significant of these projects is that of creating a new administrative capital to replace the existing.

The relocation of Egypt’s capital is specifically challenging as it was planned by earlier presidents but was never fully achieved. In the 1980s, president Sadat initiated a plan to move all governmental institutions to a newly developed location around 95 km from Cairo named after him; Sadat City (24). The relocation was never realized as the employees of the target institutions firmly objected and even threatened a strike
and later with Sadat’s assassination the whole project was dropped. Later in 2007, another relocation proposition was made by President Mubarak to another desert location but was also never realized due to funding and jurisdictional issues (24,25). This new capital is the latest attempt to relocate the existing administrative centre that is the heart of the existing Urban agglomeration of Cairo to a newly developed desert location.

Figure 2. Satellite image of Astana and its surrounding area (Google Earth, 2020)

The decision of the capital city relocation was publicly announced in 2015 along with a proposed masterplan developed by the international firm Skidmore Owings, & Merrill (SOM) (26,27). The official statements reason the relocation as a solution to the existing problems of Cairo; over-population, traffic congestions, urban deterioration, etc. that are continuously escalating as Cairo is one the most crowded cities in the world (27). The project is heavily publicized as a move towards a modern and bright future for Egypt and an international display of its power and sovereignty (28,29).

The new capital city is located 45 km to the east of the urban agglomeration of the existing capital’ Cairo. It is planned to provide all needed facilities to accommodate 5 million residents including housing, permanent jobs, shopping centers, educational, cultural and medical facilities (30). In addition, all main governmental entities are to be moved there as well as foreign embassies. The development will also include a new airport, a theme park and several hotels (30). The initial cost estimation reached 45 billion dollars (26). As the country had recently undergone great economic instability, the president El-Sisi regularly assures the public that the funding of this mega-project is based mainly on investors both national and international (28). In fact, among the first buildings to be finished were the main mosque and the cathedral that were funded through public donations upon the president’s request to the nation (29).

State officials have already started resolving to mega-events to attract attention to the new capital; e.g. the international forum for higher education and scientific research (31). Also, several international delegations were invited to visit the location of the ongoing construction to encourage international support and investments; e.g. members of the United States congress, members of the French chamber of commerce, ministers and investors from Saudi Arabia, etc. (31,32). The following figure shows a prediction of the urban agglomeration of Cairo upon the completion of the new administrative capital that is currently under-construction.
Figure 3. The Urban agglomeration of Cairo (center left) upon completion of the new administrative capital (to the right)(30)

8. Conclusions
Mega-projects are of wide variety and typology, only brought together by immense costs and international effects. They can be closely linked to mega-events due to their common attributes of heavily mediatized presence and societal inclusion. It is an alternating relationship as hosting mega-events requires mega-projects and creating mega-projects is a mega-event of a sort.

One of the most unique mega-projects are new capital cities. It is a mega-project that continuously develops across the world regardless of time, location, ideology and culture. It is a mega-project that aims to create an intercontinental effect and show a country’s power and commitment to modernization. A new capital is a multidimensional project of political, economic, social and cultural aspects that greatly affect the country’s nation and the country’s relations with others within the global realm.

This paper examined three cases of New capital mega-projects that are apart in time and space but share the same typology, if we may call it so. Those three capitals; Brasilia, Astana, Egypt’s new capital were created as symbols of their countries’ strength and effective international presence. They were meant to enhance their countries positions on both the local and the international levels. The three cases can also be described as mega-events as they claimed great media attention and became an attraction for worldwide audience.

A new capital is a mega-project and a mega-event that appears to be timeless and of effective intercontinental presence.

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