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Ahmad A.S.R. – post-graduate student

E-mail: dr.arch.Amira@hotmail.com

Kalashnikov Izhevsk State Technical University

The organization address: 426069, Russia, Izhevsk, Studencheskaya st., 7

New towns in Western Europe and Egypt, experiences and lessons

Resume

This paper presents a general overview on the subject of the new towns movement in countries of Western Europe and Egypt. It focuses on the evolutionary origins, best practices, present situation and future strategies of urban development. The main aim of research is to investigate possible practices and strategies to solve the Egyptian new towns problems and promote their future success. It is important to note that since 1974, Egypt has been carrying out a national strategic plan for facing problems, such as urban degradation, uncontrolled urbanization and rapid population growth through the construction of new towns. The most successful practices from Western Europe and Egypt were analyzed and compared with each other. Comparative analysis includes new towns programs in France with the case study Cergy-Pontoise. The case study in Spain concerns the town of Tres Cantos. Borg El Arab is the focus of the Egyptian case study. Lessons and recommendations are presented for the improvement of the current Egyptian new towns planning program. Many recent studies are conducted to compare the different European new towns experiences [e.g. 1, 2, 3, 4]. Researches about new towns in Egypt compare goals and results of the program to define their success [e.g. 5, 6, 7]. The researcher already published about the UK's new towns experience in comparison with the Egyptian new town program [8]. This paper aims to continue the work of revealing lessons and best practices through comparison of the city planning experiences of the Western European and Egyptian cities.

Keywords: new town, urban planning, Egypt, sustainable urban environment, Borg El Arab, slum, sustainable town.

Introduction

The new town concept is derived from Ebenezer Howard's garden cities model. This model aimed to solve problems and conflicts of cities. At the end of the nineteenth and the beginning of the twentieth centuries, Europe was suffering the negative conditions of working and life in big cities. They were unhealthy and crowded; endless urban sprawl was destroying the rural landscape. Big cities grew without any plan or order, and congestion blocked streets and roads. Other problems included housing crises, inefficiency and degradation of housing capital, the spread of slums and the lack of open green spaces. It is important to note that Egyptian cities since the second half of the twentieth century are suffering the same described urban conditions of European cities.

The garden city model offers an urban environment that takes advantages of both rural and urban: where housing, trade, culture and leisure coexist with industry, nature and environment. The new towns policy was planned to fulfill various functions and goals, such as: to provide housing for the working class, and to reduce congestion in the metropolises. This approach deals with problems of big cities by decentralization and dispersal of development through construction of smaller new urban centers [9]. New towns were planned to fulfill the need for land for housing and to be sustainable towns. New towns are distinct by the fact that everything in the town is formerly planned (infrastructure, economic activity, social services, utilities, urban structure, architecture). Therefore, it is a good chance for future residents to take part in open discussions about town governance and town planning at the design and construction stages [1].

Howard's vision formed the basis of 20th century town planning in Western Europe (UK, France, Spain, etc.) and inspired new town programs around the world [4].

This article discusses the reasons and strategies of new town planning. Are these

strategies successful? Can they lead towns to become effective and attractive urban centers?

Case Studies

The three case studies (France, Spain and Egypt) share many issues: using new towns planning to solve the problems of major cities' urban growth. In fact, the Egyptian new towns strategy aimed at following the successful examples of the self-sufficient new towns of England, France and other European countries. France and Egypt share the goal of changing the urban pattern: from a monocentric into a multicentric urban development by creating new urban centers (new towns). France, Spain and Egypt share the aim of protecting rural and green areas from urban sprawl. In France and Egypt, the planned new towns are intended to be growth poles to stimulate development in their regions (French suburbs and Egyptian desert). In France, Spain and Egypt, new town construction was dealt with as a national policy and strategy. New town projects in these three countries were financed by public funds. Spain and Egypt share the same problems of massive migration from rural to urban centers, accompanied by natural increase in population, large demand for housing and rapid uncontrolled growth of major cities.

New towns of Western Europe

Planning was inspired by the garden cities movement. These cities' planning was an attempt to build balanced towns in terms of employment, housing, nature, buildings, self-sustainability and links to major cities [2].

There were different cases of new towns policy in European countries. In France and Spain, it was a national policy. Policy was proposed to solve the capitals' urban growth problems. In countries such Sweden and the Netherlands, municipalities had strong authorities to initiate the new towns policies[3]. Municipal authorities held planning and construction powers of new towns. In contrast, Finland had a private fund and initiative of the city planning.

As for the size of the project, after the Second World War, the size of the new towns projects were limited in scale. The principals of the garden cities were dominant. It was thought that in towns with less than 50.000 residents, a wide variety of services and amenities could be offered. Unexpected substantial urban growth and non-fulfillment of population size assumption led to the development of larger new towns (ex. 100.000 in the Netherlands, 500.000 in the Paris region). The declining birthrate resulted in the reduction of the expected population to intermediate levels (100.000 to 250.000).

Employment: In Dutch towns, Scandinavian countries and Germany, jobs were created in newly developed areas. The jobs and population balance was not a goal, because these countries do not have long commuting times problem. In the case of new towns in France, the employment target was an average of one job per dwelling (eight jobs for ten active people). This policy succeeded and became very common in European new towns.

Finances [2]: New towns projects start with intensive public funding. After starting new city development, public funding is replaced by the local council funds, as in France. As a result, new town development is slowed down. Except for some financially successful new towns, others usually suffered slow installation of infrastructure and rapid deterioration of buildings. Some new towns face deprivation pockets. Insufficient funding was criticized along with the fact that lands for housing and development were very expensive for homeowners and developers. A comprehensive investment program is urgent to prevent further decline.

Image and Identity: The identity of a new town can be based on features related to architecture, urban design, nature and environment as in the case of Tapiola, a new town in Finland and also Vantaa (won the competition as the capital of urban design 2012), Cergy-Pontoise (Cergy-Pontoise, France won the competition for hosting the Louvre's new archeological department). These are examples to prove the importance of giving priority to unique innovative urban design quality and architecture, which shape the image and identity of the new towns.

French new towns

The 1965 master plan for the Paris region proposed changing the urban pattern from a monocentric into a multicentric region by creating new urban centers (new towns) in suburbs and newly developed areas. Along the main axes of development, this plan intended to protect

green and recreational areas around Paris, and also aimed to solve the problems of urban growth of the capital. The planned new towns also were meant to be growth poles to stimulate development in their regions [3]. In 1965, regional assemblies approved the central state planning document. Then teams were formed, which included representatives of the national state and people acquainted with the local context and representing interests of civilians. The central state with the regions found funds for the development of housing, services and infrastructure. An inter-ministerial group was also established. Study and planning missions were formed and sent to the planned new towns. Plans of the city development were kept in secret to prevent increases in land prices. After 1998, the central state abstained from controlling planning and became a partner of new towns local administration. In 1970, five towns were designed and approved. Development corporations were created to manage the following authorities: development planning, land acquisition, land preparation for housing or manufacturing activity, land sales for developers. Four other new towns were later planned for suburbs of Rouen, Lyons and Marseilles. In the French experience, most of the new towns were built on sites close to suburbs. The chosen sites were suffering from an uncontrolled urbanization process. French new towns were built to be complete urban centers with diversified centers, residential areas, manufacturing zones, open spaces, leisure areas and all services and amenities. Apartment buildings and individual houses offered a balance and variety in housing products. They provided a wide and diverse range of employment opportunities and became generators for employment, mainly in the service sector (commerce and offices) [1]. These new towns were to house 500.000 residents. The first new towns were planned on a large scale, but later target values were reduced (100.000 to 250.000) because of the declining birth rate. High grants for amenities were administered with priority for new towns. After the success of the British new towns, French new towns were encouraged to develop further following the British example [2]. Five years after the beginning of construction, Cergy-Pontoise and Évry new town had achieved huge success as commercial, recreational and cultural centers on regional and national scales. Only Cergy-Pontoise and Berre, near Marseilles, succeeded in achieving the employment objective. They provided eight jobs for ten active people (an average of one job per dwelling). Ten years after the start of construction, French new towns succeeded in partially restructuring the major metropolises, offering balanced suburbs, reducing problems of traffic and commuting and offering better environments. The French new towns succeeded in becoming attractive, especially to middle class residents[1]. They were constructed as a part of the regional development pattern. Therefore, they are integrated into an urban region. Their planning was in accordance with the national and regional planning policies. Many of the French new towns were criticized for their traditional architecture, which is not attractive to the public. Although they offer good quality and quantity of services, most French new towns are not self-sufficient[1]. Some of the French new towns are now realizing the planning for a sustainable urban environment e.g. Cergy-Pontoise.

Cergy-Pontoise, France

Cergy-Pontoise (fig. 1) is one of five new towns in the Paris region created by the government in the 1970s to control and balance development of the region. It is located in the suburbs 25 kilometers to the northwest of Paris, in the heart of the loop of the Oise River and on the Paris-Rouen-Le Havre development axe. This town was established and comprised thirteen communes that already existed in the chosen location. Its location is characterized by natural landscapes. In 2004, Cergy-Pontoise became known administratively as an agglomeration. Since 2004, a plan of sustainable urban development has been applied. In 2009, the new town started carrying out its infrastructure for a cycling master plan. In the 2011 Boulevard de l'Hautil project, Cergy-Pontoise won the prize of «Communities-Green infrastructure». The new town is now considered a model for sustainable planning, environmental protection and high quality of life. As for population, in 1975 Cergy-Pontoise housed 41.576 inhabitants. In 2014, the new town achieved its population goal and housed more than 200.000 persons [10]. Cergy-Pontoise succeeded as a commercial, recreational and cultural center at regional and national scales. The new town won the competition for hosting the Louvre's new Archeological

Department. The new town also succeeded in achieving employment target values of providing average of one job per dwelling (eight jobs for ten active people). Cergy-Pontoise is characterized by innovative planning, creative design and architecture.

New towns in Spain

In the 1950s and 1960s, Spain was suffering the following major problems [1], which included large amounts of migration from rural areas to urban centers, accompanied by natural increase in population, high housing demand in cities, especially in Madrid, rapid, considerable, uncontrolled urban growth of the Madrid Metropolitan Area and legislative problems hindering the creation of new urban lands. In 1970, the «Decreto-Ley 7/1970» law was issued to address urgent urban actions. The creation of the law aimed to solve these problems. The goals of the law were housing provisions for big cities, especially Madrid and Barcelona, speeding up land requisition with the help of the modified land law and establishing reserves of land for activities and community equipment. Subsequently the National Institute of Housing started the new towns project. Locations were selected, land was acquired and funds were allocated for the new towns' construction. Following successful examples of the self-sufficient new towns of England and France, it was decided eight new towns would be built. The sizes of these new towns ranged from 78.000 to 165.000 residents. The central Administration could create only one new town: Tres Cantos. Other towns were not developed. Some of them became suburbs, while others were restructured. The project was criticized for being unrealistic and not considering the Spanish context.

Tres Cantos, Spain

The Tres Cantos (fig. 2) new town project was initiated in 1971. Residential occupation began in 1982-1991. The new town was built on rural land ceded by the city of Colmenar Viejo, located 22 km to the north of the capital, Madrid. This location was chosen for the following reasons: moderately priced land, natural environment, flat landscape and proximity to Madrid. Tres Cantos is considered a model for planned development and environmental protection. In 1991, Tres Cantos became an independent municipality. The new town was planned to house 144.000 inhabitants. In 1982, it had 50 inhabitants. Within ten years, the population increased to 22.000 inhabitants and in 2011, Tres Cantos has 41.343 inhabitants. The new town planning included: residential area (36.000 homes), industrial area and all the infrastructure and services that the town needs. Tres Cantos is a self-sufficient town. It offers employment not only for its residents, but also for 30.000 workers living in other municipalities around it. The economy of the new town mainly depends on the service sector. The economic success of Tres Cantos is due to its relative closeness to Madrid and major highways, the availability of train transportation connecting it to other municipalities and good accessibility to the Barajas airport. Since the early stages of the new town's development, Tres Cantos residents formed associations to deal with different issues, such as the demand for services such as transportation, schools and health centers. These associations also had representatives at the Colmenar Viejo city administration board when the new town was dependent on it. In 1991, representatives of the Tres Cantos residents associations obtained approval for the new town to become a separate municipality with its own local government. Tres Cantos at first was a «satellite» town, then grew and became a «self-sufficient town». Housing provision: the developer of Tres Cantos new town project was a public company, Tres Cantos S.A. Financial funding was also provided by the public administrations. At the beginning of construction, houses were built by cooperatives (formed by the central administration). Since 1986, housing provision has become a conglomerate of construction including cooperatives and private firms.

New towns in Egypt

Planning was inspired by the new towns experience in Europe. New towns policy: After the end of the October 1973 war, the construction of new towns in Egypt became a national strategic program. Following the war, the Egyptian government started a national plan for socioeconomic development. The plan had the goals of: decentralization and de-concentration of congested urban development on land in the Nile Valley and Delta (5 % of Egypt's area which houses 95 % of the total population) [11], stopping sprawl in rural areas [5],

housing the rapidly growing population[5], building self-contained growth poles in the desert [11]. Law № 59 of the year 1979 organized and controlled the creation of new urban settlements[12]. The first generation (mid-1970s to early 1980s) included the development of two different types of towns, self-contained towns and satellite towns. Their locations were adjacent to existing cities to take advantage of the employment opportunities and services of them. The new towns were meant to provide cheaper prices for land plots and housing [6]. Second generation (early to mid-1980s) included self-contained towns and satellite towns [6, 7].

Third generation (mid- to late 1980s); Most of these towns were built in upper Egypt as satellite towns. Until this moment the Egyptian government continues on its plans for building new towns [5].

As for the size of the project: The first generation of Egyptian new towns:

- Self-contained growth poles were planned to reach the target of housing 500.000 residents in a time of 25 years [6, 13];

- Satellite towns were planned to reach the target of housing 150.000 residents in 25 years. The second and third generation new towns were planned to reach the target of housing 75.000-250.000 residents in 25 years [6, 13].

Employment: By 2014, 21 new towns were built in Egypt. They housed over 8,75 million people. Thousands of new factories operate in the new towns. They provided an enormous number of jobs and attracted employment. However, it is argued that success in encouraging people to relocate to the new towns has been limited, and most employees in new towns near Cairo and other big cities commute from these big cities every day [7].

Finance: Funds for building new towns in Egypt are provided by the Egyptian National Investment Bank, which provides financing for the planned investments in new towns projects. These investment plans are part of the national plan of economic and social development. They are mainly allocated for infrastructure and services provision [14]. New Urban Communities Authority (NUCA) is an agency under the Ministry of Housing, Utilities and Urban Development. It is the competent authority in charge of developing new urban cities as mandated in law 59 of 1979 [13]. NUCA funds new town projects with revenues of selling land, exploitation of assets, investments in various projects and different fees (on services, utilities, infrastructure, documentation, etc.). Despite considerable financial investment in new towns in Egypt, they are criticized for unaffordability of low-income housing. Many of the urban poor in Cairo and big cities of Egypt find an affordable housing solution in squatter settlements rather than in new towns. Housing in the new towns is generally considered to be overpriced and under-serviced. Crucial criticism of the Egyptian program points that it is not providing a medium-term solution for population growth [4].

Image and Identity: Egyptian new towns' architecture is not attractive in comparison to the wealthy architectural heritage in old neighborhoods in Egyptian cities (ex. Cairo and Alexandria). The innovation in urban planning is represented in more green areas organized in every neighborhood, which is inspired by the garden cities model.

Urban planning of new towns in Egypt comprises many aspects of sustainable design: mixed land uses and diversification, green spaces in every neighborhood and a hierarchy of roads which allows only walking paths inside the neighborhood unit. Some of the new towns in Egypt succeeded in gaining an international identity as important economic bases (e.g. 6th-October, Borg El Arab). But none of them could gain cultural or architectural importance.

Borg El Arab (fig. 3.)

One of the self-sufficient new towns in Egypt. Construction was initiated in 1979. Location of the new town is consistent with the following goals [14]: constructing new urban settlements in the desert, relieving congestion and overpopulation in urban settlements along the River Nile's banks and its delta.

It was planned in Alexandria's region as a growth, development and relief pole to stop the sprawl of the region's major city Alexandria on rural land around it, providing land for housing and investment to face scarcity of land in Alexandria city, Offering better quality of live for the residents of the region and its city stained with fast growing slums. Borg El Arab was planned

to house 500.000 by 2004. In 2006, population reached 150.000 residents. The town is expected to house 570.000 persons by 2022. The town planning included residential areas, industrial areas, educational facilities (universities) and infrastructure and services. It offers employment not only for its residents, but also for workers living in the Alexandria region. The economy of the new town mainly depends on industries. Although Borg El Arab achieved economic success, most of the workers in the new town live in and daily commute from Alexandria and other urban settlements in the region.

Comparative analysis between the new towns cases

Criteria for the comparison: Location, town planning, image and identity are key factors affecting and determining the success of a city or town.

Location: The geographical location, proximity of the new town to the major city of its region and its impact on the new town's success. The proximity of the new town location to major highways and the availability of transportation connecting it to other regions and urban centers.

Town planning: Technical and political process concerned with the use of land and design of the urban environment, availability of different functions in urban context (residential, industrial, recreational, etc.); The availability of infrastructure and services and their quality; New towns projects fund and active society.

Image and Identity: The image of the city, which is formed by its architectural composition, landscape design, urban pattern, and environment. City identity is the sense of a city that distinguishes itself from other cities.

Location: Critics argue that the relative proximity (60 km) of Borg El Arab to Alexandria (second major city in Egypt) is one of the reasons of its failure in achieving the goals of its planning. This proximity and availability of transportation led to the result that many workers in the new town live in Alexandria and commute on a daily basis to work in Borg El Arab. In the case of Tres Cantos, its relative proximity (22 km) to Madrid was one of the reasons for its economic success. This success factor is similar to the case of Cergy-Pontoise, located 25 km from Paris. The second factor in Tres Cantos' success was the proximity of its location to major highways and the availability of transportation connecting it to other municipalities. In Borg El Arab, the town is connected only to Alexandria and Mtrouh (tourist town) and Cairo, due to the proximity of its location to Alex-Matrouh and Alex-Cairo highways. No highways network connecting the new town to other towns nor cities in Egypt. Only in 2011 an experimental railroad started working (but not on regular basis) between Alexandria and Borg El Arab. The construction of this railroad was criticized because it will encourage people to live in Alexandria and only work in Borg El Arab. No railroads connecting the new town to other towns nor cities in Egypt. In Tres Cantos, the availability of railways connecting it to other municipalities is a success factor. In general, Borg El Arab, like all new towns in Egypt, suffers from the lack of road networks and railways connecting them to each other and to locations of raw materials and markets for trading their products. International Barajas airport (Capacity 35 million passengers a year) and its proximity to Tres Cantos is the reason for its economic success. In the case of Borg El Arab, the new town is near International Borg El Arab airport (1,2 million passengers a year). It is the only airport serving the Alexandria region.

Town planning: In the presented three cases of new towns, urban planning had housing, industrial and leisure functions. Infrastructure and services were also provided. The crucial factors are, A – the lack of governmental offices and services in Borg El Arab case. As a result, the new towns residents have to travel to Alexandria for government services. B- The low quality of residential product and inadequate infrastructure and services in case of Borg El Arab. Borg El Arab and all new towns in Egypt are criticized for the lack of security. Also the lack of public transportation on daily basis is another problem. In the case of the French new towns, the government always gave high grants and priority for infrastructure, services and amenities provision was given to new towns. As for Egyptian new towns, they suffer from the low quality and slow provision of infrastructure, services and amenities as the priority is given to major cities. In Tres Cantos, since the beginning of the new town, residents formed association to deal with different issues, including the demand for services such as transportation, schools and health centers. In the case of Borg El Arab, residents are not that organized to advocate for their needs.

Image and Identity: Cergy-Pontoise, France gained its image and identity by sustainable urban planning and attractive architecture. It became a cultural center that is competing with major cities in France. Cergy-Pontoise is hosting one of the Louvre's Archeological Departments. Since 2004 the new town was leading a strategy for sustainable transformation and creating public spaces for people. Now Cergy-Pontoise is a pedestrian town whose residents also use cycling and enjoy green infrastructure of the new town. High living standards and a healthy urban environment characterize Cergy-Pontoise. In the case of Tres Cantos, Spain, the remarkable experience about this new town is the active society and public participation in decision-making and town administration. Tres Cantos gained its image and identity for being a sports center. The new town has 20 sports and dancing clubs. The new town was the bid host for 2018's International Ryder Cup. In 2013, Tres Cantos hosted more than 70 sport events (national and international and local). Borg El Arab, Egypt is known for being an industrial center. Its urban planning and architecture reflects the non-attractive neither innovative approach used to design and plan new towns in Egypt. In fact, even many of the old neighborhoods in Egyptian cities are attractive for their architectural and planning heritage. The new towns stand in the middle between the glamorous old neighborhoods in Egyptian cities and the revolting slums eroding them.

Recommendations for the Egyptian new towns projects

Based on analysis the study formed a number of practices and strategies, which can help to solve Egyptian new towns issues and promote their future development. Egyptian new towns planning should include employment plans and targets. Two jobs for each family should be provided (average of two jobs for four persons). Priority for employment in the new towns economic base, should be given to new town's residents to encourage people to move and live in new towns. Establishing agencies for organizing events in Egyptian new towns (sports, art, conferences, etc.) can help attract people to them and make them living towns, attracts investments, and generate employment opportunities in the service sector. Borg El Arab can host scientific festivals and conferences, because it has the Egyptian-Japanese university and the institute of scientific research and technological application. Borg El Arab Stadium, the largest in Egypt, is nearly 20 minutes from the new town. It is a good potential for the new town to host sports events, which will help attract people to the new town, investments, and generate employment opportunities in the service sector and form its identity as a science and sports town. A direct road connecting Borg El Arab, the airport and stadium is recommended for the economic and urban development of the new town. Upgrading the existing streets networks in Egyptian new towns as cycling street networks will help provide affordable, sustainable and healthy solution for transportation problem inside Egyptian new towns. Egyptian new towns planning projects should not consider the new town as an entity. Regional economic, environmental, and social studies and plans should be part of the project in order to effectively build connections and interrelationships between existing cities, new towns, rural areas and raw material locations. One of the fatal mistakes the Egyptian government makes is the installation of infrastructure in hazardous slums areas[15]. This encourages the evolution of more slums. Priority of provision of infrastructure, services and urban development funds should be given to new towns to encourage residents of deteriorated areas inside the congested cities in Egypt to move to new towns. Another practice, which can be immediate and very advantageous for both new towns and big cities, is programs of hazardous slum areas clearance from big cities and relocation to middle and economic class housing in new towns. This should be accompanied by social and cultural rehabilitation programs for slum dwellers, employment, economic and renting plans. This strategy will result in upgrading living standards for slum dwellers. This is a more suitable solution than slum upgrading in places, which ends up as providing infrastructure for unhealthy hazardous housing in slums. Alexandria is the biggest Egyptian port and second market after Cairo. Borg El Arab is an industrial new town. It is recommended to connect it with Alexandria through high standard highways and railroads. This will hugely improve investment environment and upgrade living standards in the new town. Another lesson from the west European experience, new towns plans should include the immediate construction of roads and railroad networks on regional and national scales. This is to connect new towns, cities, markets, raw material sites, ports and industrial areas. This enhances economic and urban

interrelations. The research recommends the immediate implementation of sustainable public transportation projects in new towns in Egypt. This will improve living condition and help develop healthy urban environments. A best practice can be learned from Cergy-Pontoise, France, that a sustainable urban plan is suggested for implementation in Borg El Arab, Egypt. This will give the new town a privilege over Alexandria, which suffers from an unhealthy and full of conflicts urban environment. Some practices such as: cycling plan and planning a cycling marathon in the new town, plan for amelioration and intensification of trees and green areas all over the new town. Active societies should be encouraged in Egyptian new towns. NGOs and associations of new town residents can help in improvement, management and maintenance of the new town. They will also keep municipalities updated with the needs of the new town, monitor the fulfillment of these needs and help in urban improvements by their efforts or by funding. NGOs and associations of residents will enhance social life and activities and reinforce social bonds in Egyptian new towns. The future plans and designs for new towns in Egypt should be unique and innovative to attract residents. In existing new towns, a local art project can be carried out for the amelioration of façades using folk art and graffiti to transform the unattractive façades in them into unique murals. These arts have been always famous and common in many regions in Egypt.

Conclusion

By analyzing and comparing case studies, research came to the conclusion that: Western European countries and Egypt share the aim of solving megalopolises' problems by planning new towns. New towns offer better urban environments compared to existing cities. These new towns also achieved the goal of decentralization and deconcentration of urban development and economic activities. Targets and goals set at the beginning of the project should take into consideration the current situation and needs to avoid unrealistic expectations (as in the Spanish case). They should be subjected to evaluation and change in accordance with regional, local and national circumstances (as in the French new town case). For instance, in France's program, the population target changed in accordance with the different national circumstances (large urban growth then birth rate decline). In Egypt's case, the population target changed too when experience proved that the former expected target was exaggerated. New towns can succeed in providing employment not only on the local scale, but also on the regional scale. These case studies succeed in providing housing and land for economic activities. Borg El Arab achieved in its urban planning some principles of sustainability, such as walkable neighborhoods and green areas. Tres Cantos is a people-oriented town. Encouraging active society is a sustainable practice that can be learned from Tres Cantos. As for Cergy-Pontoise, it succeeded to be a sustainable new town. A remarkable practice from the French experience is to set an employment goal. When goals were set, tools can be found to achieve them. The Egyptian new towns program still depends on traditional policies and urban planning to attract residents. This is through low prices of housing and land and thus, low standards, Also attracting investment and producing employment opportunities through industrial activity. These are not the only ways to build livable and attractive towns. The study found that the identity and image of the new town can be shaped by architecture and sustainable urban planning as in Cergy-Pontoise (France). Other ways as attracting people and investments include through organizing events and festivals (as in the case of sports events in Tres Cantos, Spain), which will also provide employment opportunities in services and commercial sectors as a result improving living standards in the new town. If new town were meant to attract residents of big cities, then new towns should be given priority in development and infrastructure and amenities provision (like in the case of the French experience). Another lesson from the French new towns program: new towns planning should be part of a regional plan and not only a national plan. Proximity of the new town to a big city is an advantage, as in Cergy-Pontoise, Paris and Tres Cantos, Spain. This is a good lesson that can be used in Borg El Arab. Public transportation on a regular basis with affordable prices is one of the elementary needs for residents. A lesson can be learned from the Cergy-Pontoise, France case. Architecture and urban planning are very important tools for creating livable new towns.

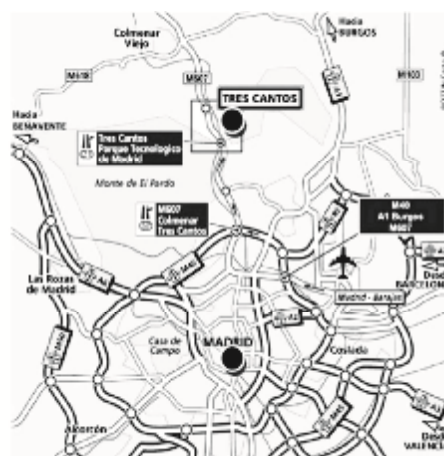
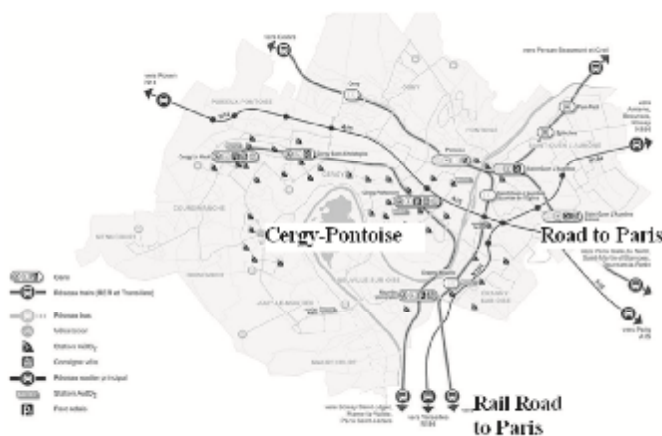


Fig. 1. Rail ways and roads network connecting Cergy-Pontoise to Paris and all regions around it.
Source: http://www.cergy-pontoise.fr/jcms/rec_2_52545/en/venir-a-cergy-pontoise

Fig. 2. Locations of Tres Cantos, Madrid, Barajas airport and roads connecting them.
Source: infotrescantos@astrium.eads.net

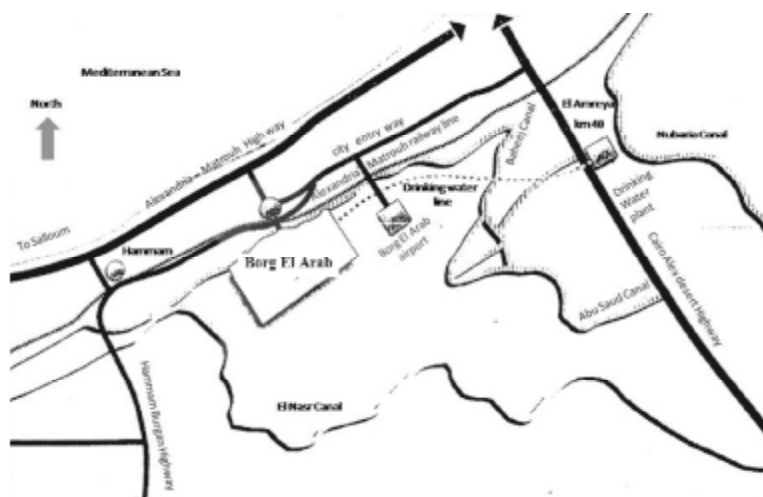


Fig. 3. Locations of Borg El Arab, Borg El Arab airport and roads connecting Borg El Arab with Alexandria and Cairo. Source: [14]

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Ахмад Амира С.Р. – аспирант

E-mail: dr.arch.Amira@hotmail.com

Ижевский государственный технический университет им. М.Т. Калашникова

Адрес организации: 426069, Россия, г. Ижевск, ул. Студенческая, д. 7

Новые города Западной Европы и Египта: опыт и уроки

Аннотация

Данная работа представляет общее описание развития новых городов в Западной Европе и Египте. Она сконцентрирована на исходных точках, передовом опыте, существующей ситуации и стратегиях будущего городского развития. Основная цель исследования заключается в изучении возможных методов и стратегий преодоления проблем новых городов в Египте, а также для поддержания их будущего успеха. Важно

отметить, что с 1974 года Египет осуществляет национальную стратегию преодоления проблем, таких как деградация городской среды, неконтролируемая урбанизация и быстро растущее население, за счет строительства новых городов. Наиболее успешные примеры Западной Европы и Египта были проанализированы и сопоставлены друг с другом. Сравнительный анализ включает в себя программы новых городов во Франции, как например, Сержи-Понтуаз (Cergy-Pontoise). Пример изучения Испании представлен городом Трес Кантос (Tres Cantos). Примером исследования в Египте стал город Борг Эль Араб (Borg El Arab). Уроки и рекомендации изложены для улучшения существующих программ планирования новых городов в Египте. Многие последние исследования проведены для сопоставления опыта разных Европейских новых городов [e.g. 1, 2, 3, 4]. Исследования новых городах в Египте сопоставляют цели и результаты программ для определения их успешности [e.g. 5, 6, 7]. Исследователь уже опубликовывал работы относительно опыта новых городов в Великобритании, сопоставляя их с программами новых городов в Европе [8]. Данная статья продолжает работу выявления уроков и лучших практик, сопоставляя опыт городского планирования городов Западной Европы и Египта.

Ключевые слова: новые города, городское планирование, устойчивая городская среда, Борг Эль Араб, трущобы, устойчивый город.

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