

Planning Failures and the Gravity of Traffic Problem

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Abstract

The planning, in fact, significantly affects the lives of people in all aspects, planning regulate there , Home & Garden , streets, parking, services and architectural spaces and environment and everything related to human life and all that makes a man happy with his surrounding and strengthen the affiliation to his homeland, so the imbalance resulting from the planning process necessarily reflection on the reality situation and embodied in the form of problems of traffic jams and multiple environmental problems which make a big challenge for planners and decision-makers

The scup of this research is that we diagnose the mistakes which had been done in planning for different prior periods since the creation of Irbid city it was easily processed by the decision-makers in Irbid Municipality and Ministry of Municipal Affairs, and Transport Authority, as well as improving the standard of living of the inhabitants of this region sector. The problem is that the random in the planning process led to the following issues: -

- 1-houses scattered irregularly, leading to difficulty and poor delivery of services from the streets and infrastructure.
2. High and unexpected financial cost in the organization's budget.
3. Unequal distribution and systematic infrastructure and services.
4. The presence of large areas not covered by public transport and essential services.

Keywords: planning architecture, transportation, geographic information system

Introduction

Irbid Municipality was established in 1889. Since that year, it has been striving to the local community in accordance with feasible potentials and resources. But, due to the scarcity financial resources and potentials, it did not adopt the pre-planning method that is followed in other cities in the Kingdom as shown in Figure (1).

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Figure 1: An Aerial Photograph of the city of Irbid in 1948

According to what has been stated above, various distortions have appeared in the urban structure and numerous residential slums can be seen in many parts of the city. The Municipality is struggling to offer suitable services to these communities as a result of the pressure on the Municipality officials from people. It is worth mentioning that the method of regulation that has been adopted in the Kingdom's municipalities has aggravated this problem and increased its complications because of absence expertise and realism. Various zones in many parts of Jordan used to be regulated by the Department for Regulation in the ministry of Municipalities without adequate knowledge on the part of regulators about the zones. They were a group of engineers, surveyors, and draftsmen who had never seen these tones in their lives. They used to plan streets within slopes that were not suitable to drive or walk on them such as what happened in some tones in Irbid. An example of this exists in KufrJayes and Bait Rass where I was the manager in 2005. Furthermore, the area witnessed ill individual acts, infringements on setbacks and requests to cancel street curves especially in commercial areas and the city center.

In 2001, Irbid Municipality began to establish the Department of Geographic Information Systems (GIS). Effects were great, support was strong and desire was honest to materialize this project . It was accomplished in corporation with the European Union represented by ADME for every research studies. Its support was provided in the form of expertise, courses, conferences, and aids such as computers etc, which enabled the municipality to do the first transport scheme in the MiddleEast that was based on local capabilities and expertise. This great achievement was inaugurated under the patronage of the Ministry of Transport at that time. The results this project revealed to us that there was a bog effect in the transportation process. Analytical studies revealed that the transportation process must be re- examined to ensure an effective transportation system that can serve all zones in Irbid city as well as its various suburbs.

1.1 Public Transport in Irbid:

Public Transport Authority and other stakeholders in the Hashemite Kingdom of Jordan exert great efforts to solve the problem of public transport. The current condition of transport in Irbid can be analyzed as follows:

1. Personalization and monopoly in the means of transportation.
2. Randomness and complexity in transportation.
3. The lack of commitment, punctuality, and Discipline.

4. Bad-level and weak financial potentials.

Public transport in Irbid is marked by personalization as the owner of the means of transportation enjoys a complete freedom in deciding times and methods of transports movements without strong regulations to ensure his compliance with rendering suitable services to citizens and respecting their time.

The Unit of Diversification of Planning Elements for Housing Projects and Its Role in solving the problem of Transportation:

The establishment of new residential areas, which are caused by the large increase in the number of population, constitutes one of the important tasks of the official authorities which are responsible of meeting the demand for housing.

These areas are designed according to the area topography; the area could be mountainous, plain or desert area. Therefore, roads are designed in a way that suits the area. This contributes to solving the transportation problem in that area as well as the distribution of the population density.

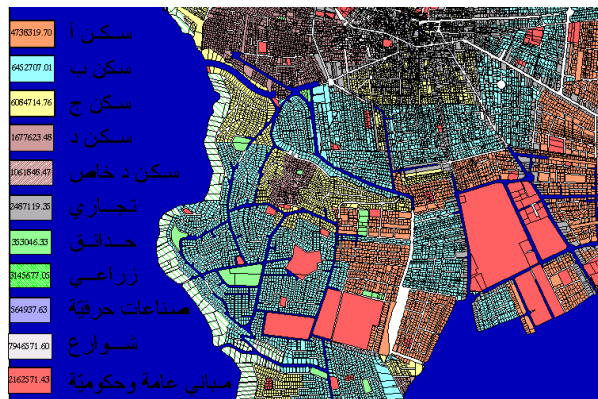


Figure 2: Land used in the Western Zone in Irbid

The scheme illustrates the land use in the south-Western zone of the city of Irbid (Zabda region). This scheme is available for all areas in Greater Irbid Municipality without exception and it shows the extent of randomness in choosing regulatory provisions of the various regions. We can see that the classifications of provisions A, B are the most.

This increases the population density and decreased it in other regions. It also increased the prices of lands which have become difficult for middle- income and limited – income citizens to buy. Other regions should have been planned. These regions should be C and D provisions. In addition, streets have not been regulated in a safe way. You can see many road junctions which can threaten road users. These problems have been embodied through information systems as this has not been possible before using GIS software. This software has entered in the heart of the planning process and Urban Activities especially public transport in the Greater Irbid Municipality.

GIS software and its various tools have proven their remarkable ability in facilitating communication and analysis processes among teams of work in planning and public transport projects which are carried out by specialized parties. Among the processors that have been used are:

1. **Social Analyses:** They show target group, groups and classes and the type of means of transportation that are required for public transport.
2. **Economic Analyses:** They give the economic level of the study target group.
3. **Environmental Analyses:** They show pollution type. Impact and proximity to the target areas.
4. **Demographic Studies:** They show ages and nationalities of the people residing in the areas and their needs in the field of public transport.
5. **Geological Analyses** of the target area.

Public Transport Scheme: New Vision and Promising Horizon



Figure 3: Public transport in the City Irbid.

The scheme of public transport in the city of Irbid as we have conducted through GIS software shows multiple lines for all areas of the city of Irbid and the city center showing the distortions and randomness in lines. The scheme of public transport in Irbid was accomplished through the process of monitoring and follow up for all transport lines inside Irbid and directions of traffic in them. The result shows the defect in public transport routes. The projected schemes show that there is a large part of Irbid city that does not have public transport service. The number of people living in these places was defined.

The study shown the utmost need to restructure and organize the transport sector in Irbid Completely to ensure high quality service. It is worth mentioning that the majority of this sector is a private sector.

The relative price of purchasing and operating these software's has helped Irbid municipality to use them in the fields planning, studies, transportation and the exchange of data among competent parties that aim to render their services to the citizens at the level of the governorate.

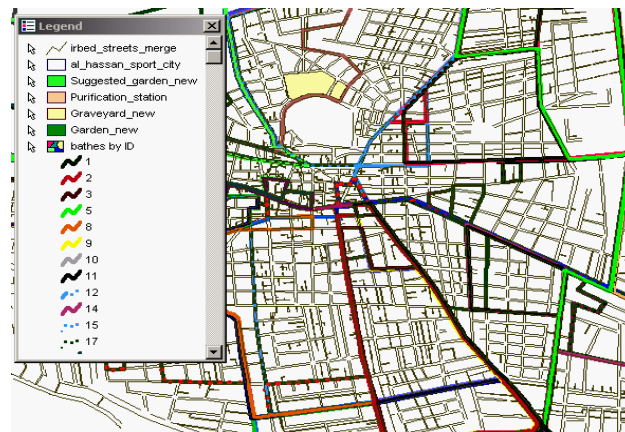


Figure 4: Public Transport Routes and lines in Irbid

The above scheme shows public transport routes and lines in Irbid and the extent of overcrowdedness in these lines which increases traffic jams in the city center and causes environment pollution in it. This scheme facilities for decision makes the process of planning, study traffic problems and provide suitable organizational solutions to them by paving new streets and changing public transport routes to ensure smooth motion effectiveness and consequently reduce the duration of movement reduce the duration of movement within the greater Irbid municipality regions and this saves effort and money.



Figure 5: Public Transport Routes and lines in Irbid center.

Here it is possible to discover the positive inter dependence and interactions between GIS and analyses in urban planning:

1. Improving the spatial plan through clarity of data.

2. Improving public transport scheme analyses in terms of population density and the number of the mean of transportation means operating there and those used by the software.
3. Using GIS software in managing the public transport at the city level.

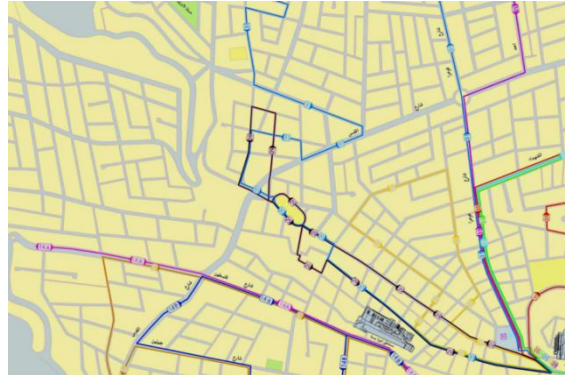


Figure 6: A part of public transport scheme in Irbid According to the current Situation The scheme shows inhibited zones in Irbid which are without public transport service area.

This shows the what extent the people of this area suffer and it specifies to decision makers in the transport sector how to re-distribute lines and re-organize them effectively to ensure high quality services to all population in the region.



Figure 7: Paid car parking project

The preceding image shows the scheme of organizing paid car parking lots within the project that aims to solve the problem of traffic jams at Irbid city center. The projects played an effective role in reducing the number of cars coming into the city center for more than 30% of the total number of cars coming to that area tradesmen used to park their cars in the neighboring streets all day, i.e. for about twelve hours. Therefore, visitors could not find parking lots when they came to do their shopping. But the project stumbled after its operation for few months because of bad management by the investing company. Therefore, traffic was brought back to its previous condition.



Figure 8: Random distribution of buildings and Roads.

One of the regions which were studied is Eyon zone neighborhood of the Irbid City at the entrance of Eidon. The image shows the random distribution of buildings, roads, and traffic intersections. It also shows the wrong use of valley streams due to lack of knowledge of planners who worked in organizing residential areas because they lived in Amman and did not know the nature of the area to solve the problem

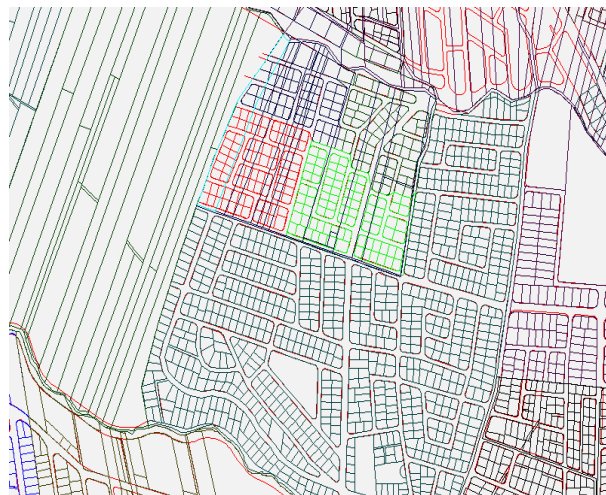


Figure 9: Distribution of Residential Areas on Agricultural Land

The above image is a scheme that shows the distribution of residential areas on Agricultural land of random partition and specifying the type of classification that suits the target group in Urban planning under the partition law according to which a number of spacious parks and streets were decided.

Results and Discussion

It was possible to benefit from GIS Department's data in the process of planning and distribution which was conducted in the area. It was possible to specify the number of trees buildings and their locations for compensation purposes as a resulting the appropriation process which were decided accurately. This allowed us to work according to budgets which were allocated to accomplish work and set up the infrastructure that would be suitable for public transport and the number of transportation means which would be required. The area was studied for traffic purposes. Besides, it was possible to specify places which constituted danger to cars and pedestrians with the aim of solving them by installing warning signs and traffic lights.

Conclusion

To complete this research, we must define the role of planning in solving the transport problem. It is a scientific approach to effectively achieve goals through available means. Available means can be specified in the following items:

1. GIS is a main scientific means to provide the necessary data about the target region, its area, its geographical nature, the ratio of downward slope, i.e. contour lines, population distribution, population density, the classification of the social structure of the area population, the type of urgent needs and less urgent needs, the nature of the neighboring regions, possible pollutant points, transport roads that this region. This proves the strong relationship between planning and GIS software through the departments working in this field.
2. Knowledge of all aforesaid data will enable us to identify problems that need to be solved in every region through connection with other solutions in the neighboring regions to ensure high quality services in all fields including public transport in urban regions and this is one of the objectives planners strive to achieve.
3. Most countries in the world today tend to use these software's in urban planning works and managing pertinent projects such as transport projects, street lighting, traffic studies, environment problems, collecting and removing solid waste in a speedy and effective way, and suggesting solutions to these problems by marking a good use smart data systems because of the accurate and speedy data provided to us by this program that exclude reckless random departments to a large extent.
4. The compilation of the required lyres (digital drawings and raster core panels) together with modern aerial photographs gives a clear picture to the researchers in the field of planning and transportation to suggest perceptions and solutions without any effort to search for them on the ground and this saves too much money, time and effort.

The Urban planning process is closely linked to the accurate data and statistics which would help to come up with the required results and the appropriate solutions to the problem of transportation. Knowing the type of inhabitants and their number as well as the places where they live, would make it easy for us to decide the means needed to serve them. At the present time, we cannot dispense with the department that operates GIS software or their outputs. But there should be more interest in establishing a specialized division of these software including specialized Urban planning studies teams in all fields such as transportation Etc.

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