

Distribution of Informal Settlements

[G4]



Topographical distribution of Informal Settlements.

Living conditions at Informal settlements and a reduced quality of life due to the proximity to waste management sites.

Geographical and social segregation from the metropolitan areas and connections between settlements.

Also referred to as champas or asentamientos, the Arrabales are an important element of the Guatemalan urban fabric. According to the Population Reference Bureau, about 43% of Guatemala's urban population are living in informal settlements. These settlements are highly variable, ranging from small single house settlements to large and complex neighborhoods. with various degrees of services and infrastructure.

Informal settlements appear in places where the population is unable to maintain a quality of life due to various reasons such as shortage of employment opportunities, etc.

These settlements can be found across the city, and tend to form in areas that are considered undesirable to live in due to a lack of infrastructure and connectivity and the proximity to waste management facilities and other similar services.

Access to general services and Infrastructure such as; Education, Healthcare and Employment opportunities as a way to improve the quality of life of the inhabitants of the community.

Connectivity network between different Informal Settlements and services.

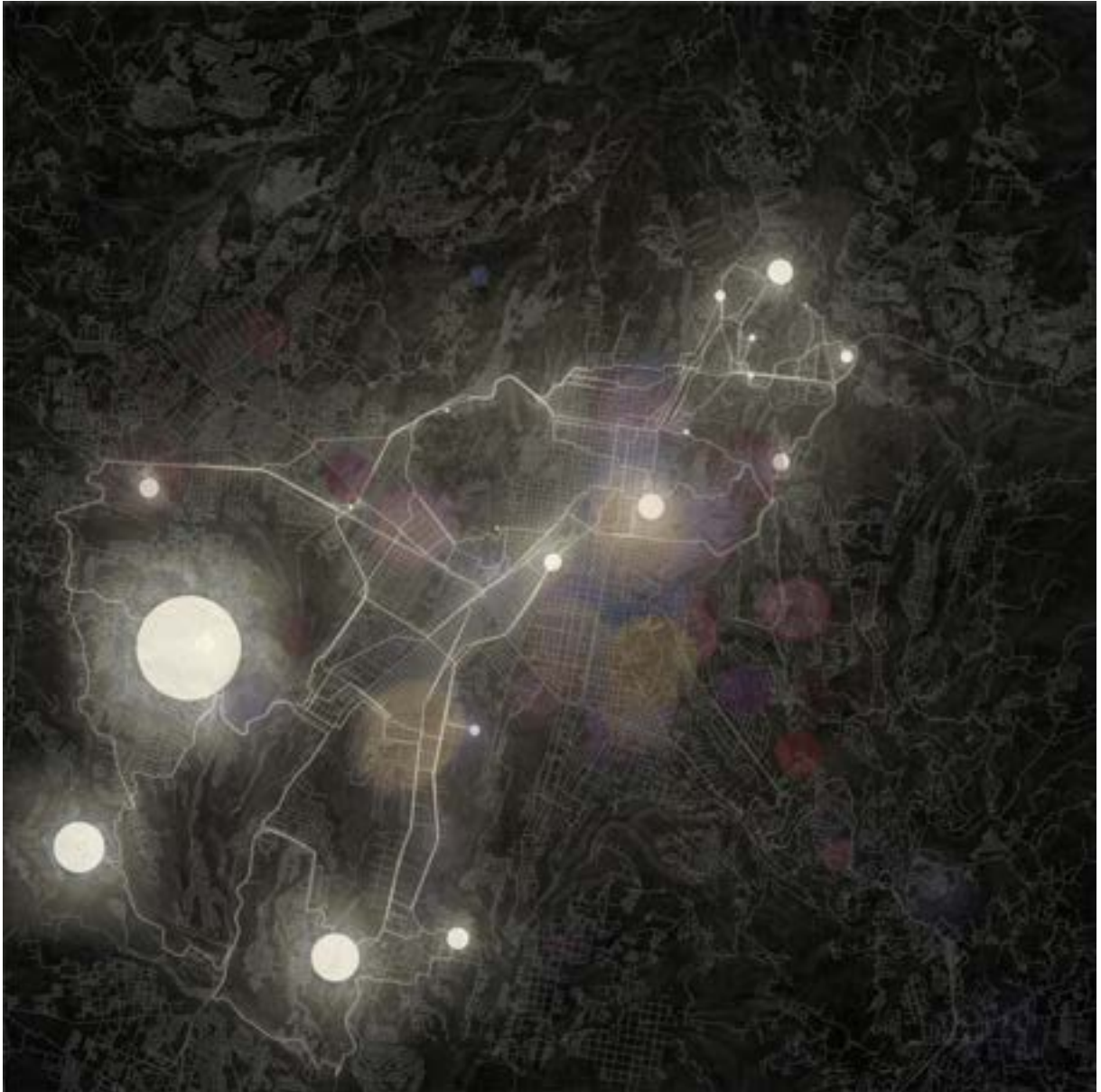
Assimilation and community development potential as a result of improved connectivity networks.

FOCUS AREA FOR RESEACH

The selected area shown on the right measures 20km by 20km, and it contains the greater extents of the Guatemala City metropolitan area. Within this area it is possible to find areas 4 to 12 on a North - South orientation and zones 8 - 16 on West to South. And it was selected as it shows various changes in topography and degrees of urbanization.

This area will be used to analyze the distribution of Informal settlements in terms of their seggregation from the metropolitan areas and the lack of services required to improve the quality of life of these communities.





PROYECT STRATEGY:

Informal Settlements form in many areas around the world. These settlements are the result of inequalities, social segregation and many factors that cause economic stress on sectors of the society. While informal settlements tend to be considered a problem they are in fact the manifestation of larger socioeconomic issues. Hence the solution for these communities is to upgrade them, allowing the living conditions to improve and with them the quality of life of their inhabitants.



DISTRIBUTION OF INFORMAL SETTLEMENTS:

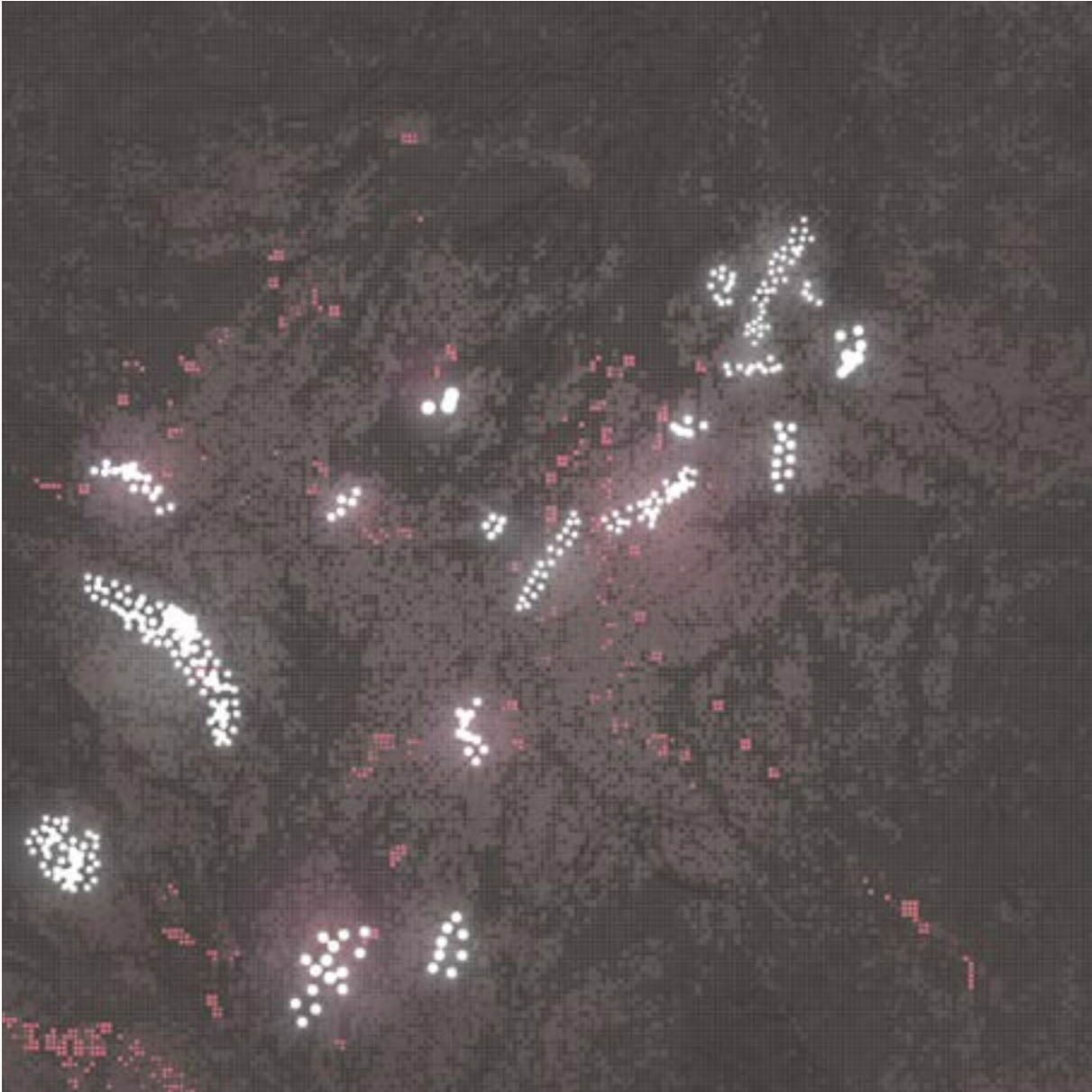
There is a correlation between the topographical features of Guatemala City and the distribution of informal settlements. These settlements are indicated by the white circular grids, and it is possible to see a clustering pattern where smaller settlements tend to form in close proximity to settlements of larger sizes. Most of the informal settlements in Guatemala City are located in areas that are not accessible due to the topographical distribution or due to a lack of connectivity.

QUALITY OF LIFE

Some of the informal Settlements on the city of Guatemala have formed in areas that were, or have become waste lands. People that live in these communities often work on these sites searching for metatals and other items that they can sell as a resource.

This represents a great sanitary threat for the people who do this for a living as they are exposed to larque quantities of pollutants and dangerous materials, that put them at risk and pottentially reduce their life expectancy.





WASTE CYCLES

The pink areas on this map represent areas that are wastelands, landfills, waste processing plants, illegal embankments and other areas of waste deposit and accumulation.

In relation of the road map, it is clear that these areas are created away from densely populated or developed areas, often in close proximity to the informal settlements, affecting the quality of life of these communities.



CONNECTIVITY NETWORK

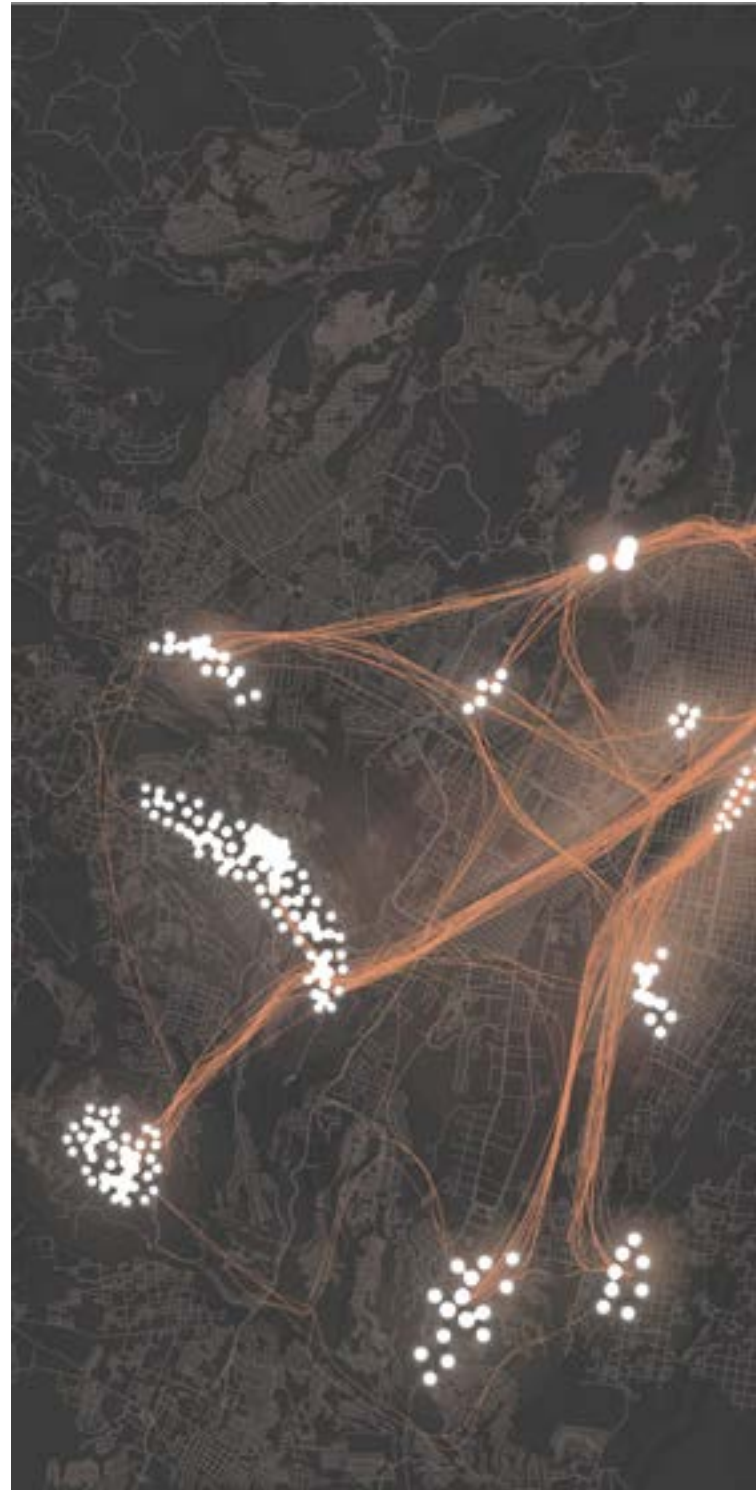
While informal settlements are segregated from the rest of the urban areas, the clustering formation of these settlements suggests the presence of a network that could be for connectivity, resources or other reasons. The map above attempts to identify the possible network through the creation of proximity paths that connect the 18 informal settlements in this region through the existing road map.

INFORMAL SETTLEMENT COMMUNICATIVE NETWORK

This map attempts to depict an intangible network between the 18 informal settlements within our focus area. This network does not rely on existing infrastructure or connectivity services such as the road network or public transportation.

The purpose of this map is to understand the clustering formation of these settlements and the importance of the larger settlements for the smaller ones.

Understanding the proximity and connectivity of these settlements is important as it allows us to understand the reason for their formation on specific location in order to help us predict their growth and development.





CONNECTIVITY STRATEGY

The following maps identify the presence of various types of services, infrastructure and opportunities that are essential to improve the quality of life of a community. These services are present across the city, however due to the road network and connectivity services are isolated from the Informal Settlements.

The maps on the following pages focus on an area of 25 Km². At this scale it is possible to identify the relationship of the distribution of informal settlements to services such as:

- Work Opportunities
- Access to Education
- Access to Health services



INFORMAL SETTLEMENT NETWORK

The orange lines on this map attempt to illustrate the shortest routes that connect the various settlement clusters. The line paths on the map overlay with some of the greatest roads on the site as an attempt to create connections between the settlements.



INFORMAL SETTLEMENT AND WORK OPPORTUNITIES

This map depicts the selected cluster of Informal Settlements in relationship to businesses, industrial areas and other locations for potential employment opportunities. As the map suggests, areas capable of sustaining a large working sector are not in proximity to these communities.



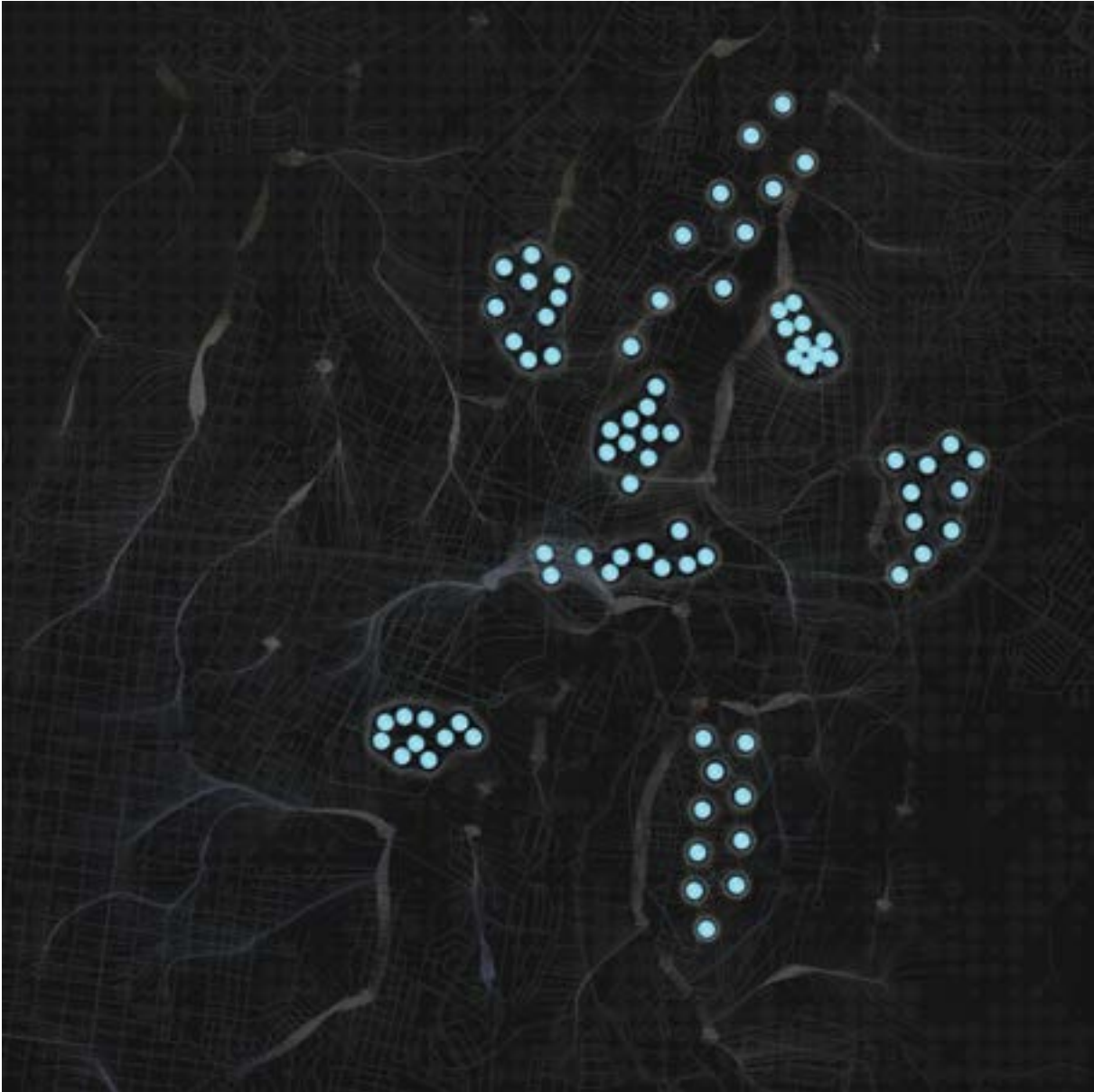
INFORMAL SETTLEMENT AND HEALTH SERVICES

Having various degrees of services and infrastructure, sanitary issues and the potential spread of diseases is one of the major issues that reduce the quality of life of the inhabitants of these communities. . The cost of medical attention, medicines and vaccinations is unaffordable and hence medical services are generally away from these areas as the map demonstrates.



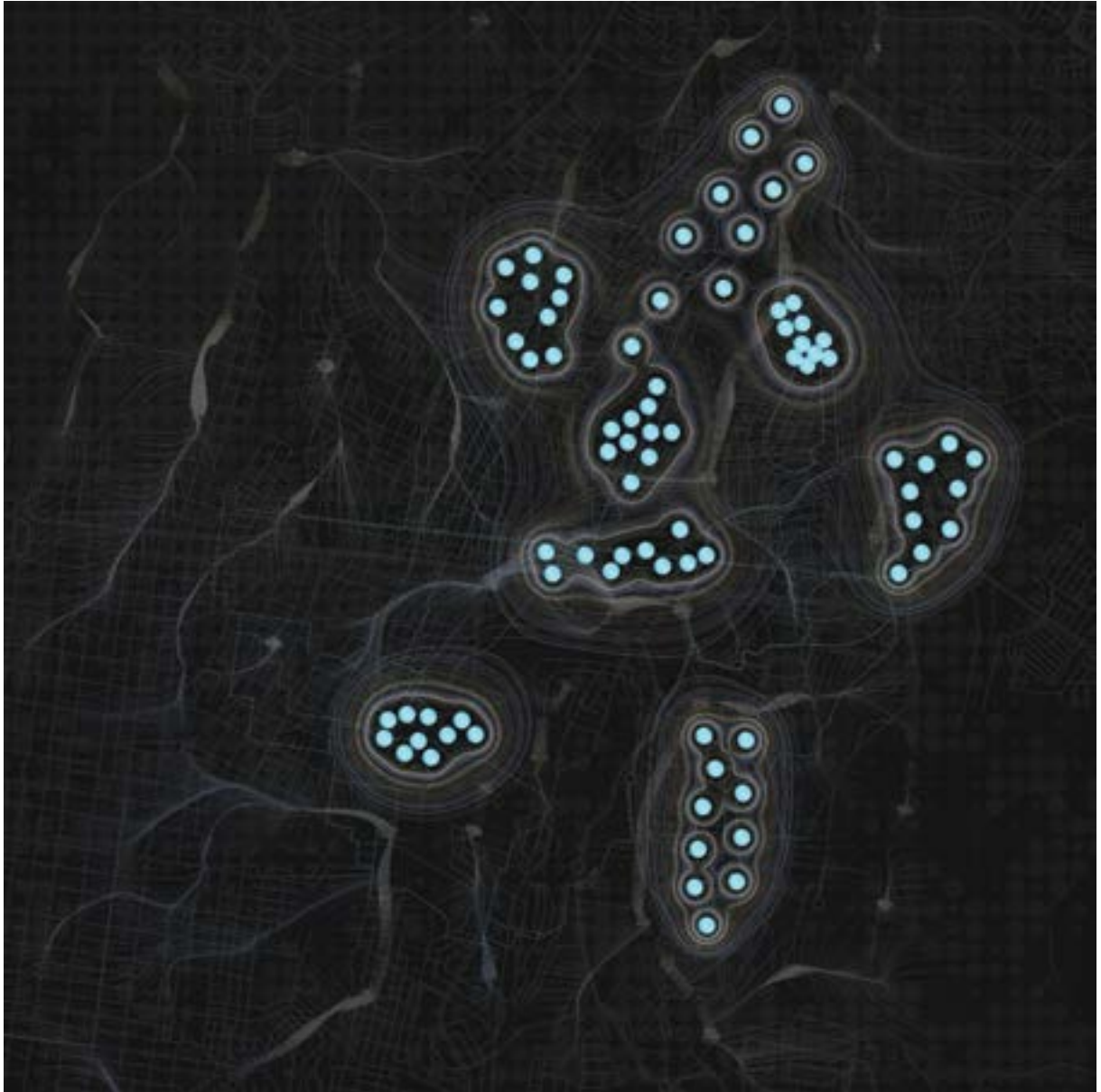
INFORMAL SETTLEMENT AND EDUCATION OPPORTUNITIES

Education is one of the key factors capable of improving the living conditions within the Informal Settlements and it allows members of the community to potentially secure better jobs and ultimately improve their quality of life.



IMPROVED CONDITIONS FOR EXPANISON

This map illustrates the field of growth around these communities as a tool to understand their potential growth and the merging of the smaller settlements into larger ones. In this map there are waste management facilities in close proximity to the settlements resulting in an obstructed growth pattern.



This map shows the growth field of these communities after the displacement of these facilities, resulting in a more even development pattern.

This suggests that an increased distance between such infrastructure could potentially allow the communities to thrive and develop in a better way, potentially allowing the Informal Settlements to develop, the communities to strengthen and start to assimilate with the urban areas of the city.

NETWORK SOLUTIONS



