Case Study on Stockholm, Sweden
Design Collaborative Studio

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WHAT

Pre-Conditions

Stockholm aims to create a public and healthy environment that allows for the connection of green spaces within and outside of the city. This is achieved through the planning of public transportation around the perseverance of green spaces. The star-like shape of the planning development of Stockholm has developed over the years through the infill of these green spaces and the continuous connection that allows for accessibility from any green area to the next. Cheryl Kollin rightly states that “No matter where you live in Stockholm, you’re no more than a half-mile from a park at least 12 acres, designed with safe and convenient access.” (Nelson). Figure 1 clearly identifies the green wedges and the developed areas of parks, and the relationship between the two.

Figure 1 - Green Wedges in Stockholm

Figure 2 - Stockholm Composition

Post Conditions

According to the given plans, the results concluded in a 1.5% to a 2% of the urban green space being developed in the last 15 years. The new comprehensive plan now includes other strategies that will bring in significant changes. Currently, the community and the public officials are still working together to create an environment that is answering details that clarify initial concepts, such as “quality over quantity”, and the idea of nature being “parkified.”

WHEN

Planning in the Swedish society goes as far back as to the 19th century, where the first planning laws were drawn. The local government is largely involved in planning, although the county and state can also be involved. In the 1930’s, Stockholm started developing a radial plan for their urban growth, with “green wedges” throughout, and transportation in between the undeveloped green spaces. The radial development pattern continued throughout the region, which resulted
into accessible and ecological green open spaces. Between the 1930’s and the 2000’s, the process of developing the right plan for the city continued. In 2001, Stockholm finally approved its first spatial regional development plan. Figures 3-5 show the city development of Stockholm as time progressed.

Figure 3 - Stockholm in 1910  
Figure 4 - Stockholm in 1944  
Figure 5 - Stockholm in 1999

WHERE

Stockholm is a region located in the country of Sweden, as shown in Figure 6. Stockholm has a land area that is nearly 1/3 urban, 1/3 water, and 1/3 green space. Stockholm is currently spread over 14 islands, and has 57 bridges that connect these smaller islands to the city. Stockholm holds connective corridors, which feature regional green wedges that connect the central city parks out to the suburbs of Stockholm County. Stockholm also holds 12 large parks that are over 200 acres each. The total of these open spaces account for 1/3 of the total open space in Stockholm. Stockholm also holds neighborhood parks, natural areas and shorelines, and residential courtyards, which the city also promotes to be sustainable for a residential building. Figure 8 demonstrates the important elements in various categories, including ecological, recreational, social, and cultural.

Figure 6 - Location of Stockholm
Figure 7 - Stockholm Existing + Future Growth Areas

Figure 8 - Stockholm Values
WHO

The city of Stockholm created a plan through the Stockholm City government, regional planning authorities, all working with the input of the community that created high political pressure to push the plan forward. Figure 11 expresses the strategic planning for a new comprehensive plan, and the process behind it.

WHY

Lessons Learned

I. Green spaces improves the environment  
   A. This applies to both the ecological environment, and to the well being and health of the general public
II. The green wedges create social and recreational value to the local occupants  
   A. This creates room for sustainability without making a significant effect on recreational values while still promoting biodiversity and sustainability
III. Green wedges allow for improved water infiltration
IV. Even in suburban areas, almost all storm runoff water can be infiltrated
V. Creating a wedge-like green structure improves and promotes sustainability as a whole

**SUMMARY OF IMPACT ON SUSTAINABILITY**

<table>
<thead>
<tr>
<th>Ecology</th>
<th>Economy</th>
<th>Social aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions? (a))</td>
<td>Cost/effective? (c))</td>
<td>Participation? (f))</td>
</tr>
<tr>
<td>Use of natural resources? Recycling?</td>
<td>Willing to pay? (d))</td>
<td>Transparency? (g))</td>
</tr>
<tr>
<td>Bio-diversity? (b))</td>
<td>Effective organisation? (e))</td>
<td>Safety? Health? Amenity? (h))</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
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\(a\) Possible (but not measured) increased car use for transportation due to increased transportation distances.

\(b\) Very high; parts of the green wedges of Stockholm are unique in an international perspective, and are conserved by law in a “National Urban Park”.

Figure 12- Impact on Sustainability in Stockholm

Potential Applications for Memphis.

One city that has taken a cue from a green space focused planning is Memphis, TN. While Memphis may not have a comprehensive plan that guides its efforts to evolve harmoniously with its natural environment, it has taken a part in regional plan to develop a connected system of greenways throughout the region. The Mid-South Regional Greenprint plan (Figure 13) has not only developed a pedestrian transportation route that crosses the entire city, but it has set a goal to increase multi-modal transportation in favor of walking, cycling, and public transit. The plan calls for the creation of 10 miles externalities that accompany such growth within a community (e.g. decreased healthcare costs due to transit or other less fuel intensive modes) and the overall sense of solidarity that is common within a progressive, pedestrian friendly locale. The efforts of both cities are a testament to the growing trend of complete streets modeled communities that connect people to places and to nature.
Figure 13 - Memphis Greenprint Concept Map
Works Cited

