PESTLE and SWOT Analysis Report

Pilot Area – Municipality of Goes, Green Hub

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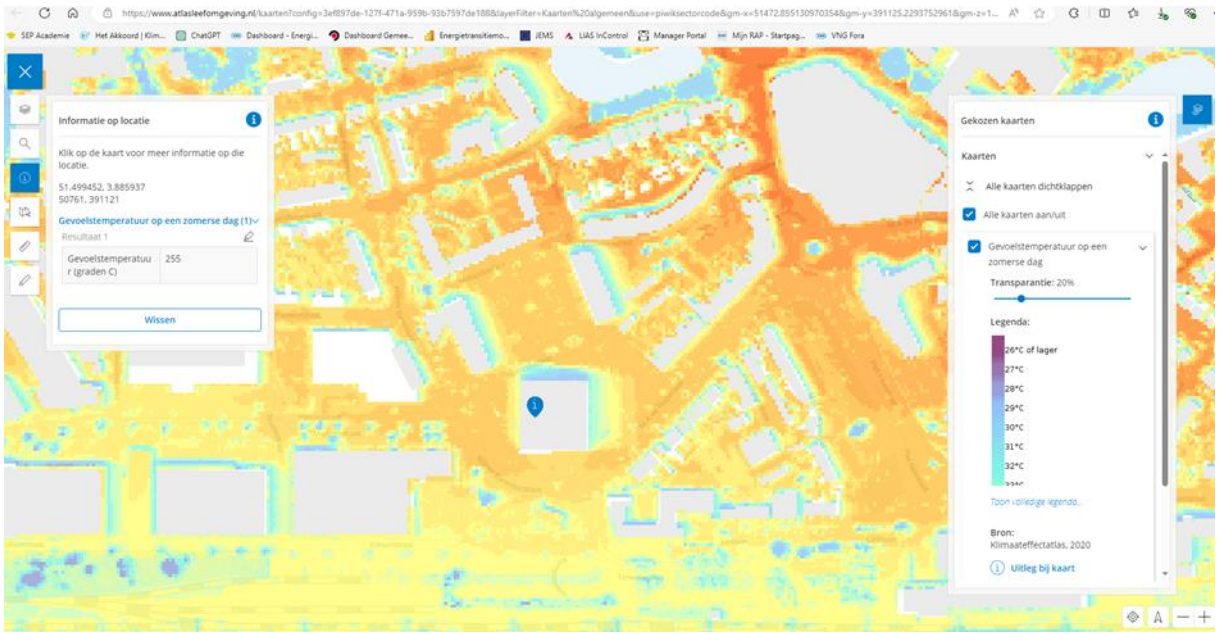
Project Overview

The Cool Neighbourhoods seeks to transform the largely paved square surrounding the city's town hall into a greener, cooler space. The area suffers from heat stress, particularly during hot summer months, as it lacks sufficient greenery. Since the electrically driven water pumps broke down several years ago, during the summer months the building is currently cooled through temporary air conditioners. The pilot aims to reduce heat stress through vertical and horizontal greening, rainwater management, and the creation of water storage for plants. These changes will address issues of saline seepage due to drought and help improve the area's overall liveability and attractiveness.

Summary

The pilot at the Green Hub in Goes presents a unique opportunity to enhance both the functionality and aesthetics of the town hall's surroundings. The project aims to address climate adaptation challenges by implementing nature-based solutions to combat heat stress and improve biodiversity. The installation of vertical and horizontal green infrastructure, along with innovative water management techniques, will not only contribute to cooling the space but also create a more pleasant environment for employees, residents, businesses and visitors. Challenges include economic pressures, structural and ecological limitations for a green wall, and the need for strong political and community support.

Image 1 – Heat Stress Map of Green Hub Area, City Hall



PESTLE Analysis

Political

- Increasing political awareness of the need for climate adaptation.
- Growing recognition of the need for a local climate adaptation strategy.
- The municipality is setting an example by making its own property climate-adaptive.
- Effective internal cooperation between municipal departments is necessary to achieve optimal results.
- Support from the city council is essential for swift decision-making, resource allocation, and public engagement.
- Opportunities exist to capitalise on nearby development plans to align with greening efforts.

Economic

- High costs for greening walls due to the current construction, such as weak anchoring of the natural stone outer wall.
- The project's success depends on securing funding from sources such as Interreg and the municipality. Limited finances could impact the scale and timing of initiatives.
- Rising costs of construction materials and labour pose a financial risk to the pilot.
- Providing subsidies for residents and businesses could encourage broader climate adaptation efforts in the area.

Social

- Growing awareness that heat stress poses serious health risks, particularly in urban areas.
- Encourage behaviour change through the principles of climate psychology (e.g., "What is my environment doing?").
- Ensuring widespread community participation will be essential for success.
- Communication must be clear and accessible to inspire others to create their own "cool neighbourhoods."
- Proposed greening solutions will be inclusive and accessible to all residents and businesses.

Technological

- Technical challenges include managing underground cables and pipes, which may hinder greening efforts.
- The existing building structure may not support a green wall without costly modifications.
- Potential for innovative water management, such as using rainwater to irrigate green infrastructure, although current systems have limitations.
- Data collection through sensors will be key in measuring both the need for greening and its effectiveness.

Environmental

- Greening efforts can lead to long-term economic savings by reducing energy use and improving water management.
- Saline soil presents challenges for planting and maintaining greenery.
- Greening will enhance biodiversity, mitigate heat stress, and improve soil conditions.

- The area faces increasing environmental risks due to climate change, including extreme weather and rising temperatures.

Legal

- The municipality is constrained in its ability to impose additional obligations on property owners, which may create barriers to implementation.
- Navigating complex and time-consuming permitting processes will be crucial for maintaining project timelines.
- There is a legal risk of damage claims from property owners or other stakeholders, such as complaints about tall trees blocking views or light.

SWOT Analysis

Strengths

- Growing political awareness of the urgency for climate adaptation.
- Strong need for a local climate adaptation strategy.
- Technological advancements offer scalable solutions for heat mitigation.
- Significant opportunities to introduce greening and shading initiatives in a highly paved environment.

Weaknesses

- Economic vulnerability of residents could limit financial participation in climate adaptation efforts.
- Cables, pipes, and saline soil conditions in the subsoil may complicate greening efforts.
- Lack of existing green infrastructure has led to heat stress and poor spatial quality.
- Dependency on swift decision-making and financial support from the city council.

Opportunities

- Advancements in technology and greening techniques can be applied to reduce heat stress.
- Opportunity to engage municipal staff, colleagues, and local government in collaborative adaptation strategies.
- Gradual introduction of affordable, small-scale interventions, such as mobile greenery and shade sails, can set the stage for larger improvements.
- There is potential to showcase the inclusivity and accessibility of greening solutions for all residents and businesses.

Threats

- Rising costs of materials and labour could delay or reduce the scope of climate adaptation projects.
- Real costs for installing the green wall may exceed initial estimates, leading to budget overruns.
- High maintenance and management costs may become a long-term challenge.

- Economic deprivation could deprioritise climate adaptation in favour of addressing immediate community needs.
- Technical challenges related to greening the wall may arise, especially if the current structure cannot support it.
- Lack of cooperation from property owners and key stakeholders could obstruct the project's progress.
- The risk of vandalism could undermine efforts to create a sustainable and attractive public space.

Picture 1 – Improvement Area, Green Hub, City Hall Goes

Conclusion

The Green Hub pilot project in Goes represents a crucial step in adapting to climate change by mitigating heat stress and improving the area's liveability through urban greening. The PESTLE and SWOT analyses reveal that the project is well-supported by growing political awareness and has the potential to foster strong community involvement. However, the success of the initiative will rely on securing adequate funding and overcoming both technical and legal challenges. Rising costs, coupled with structural limitations, present potential setbacks, while cooperation from key stakeholders will be essential to ensure smooth implementation.

The benefits of greening, such as reduced heat stress, improved biodiversity, and increased attractiveness of the area, align with the long-term goals of sustainable urban development. Despite the threats posed by vandalism, high maintenance costs, and legal hurdles, the Green Hub pilot has the potential to be a transformative project for the municipality. Careful planning, sustained political and financial support, and the engagement of employees, visitors, local residents and businesses will be necessary to ensure that this project serves as a model for future urban climate adaptation strategies in Goes and beyond.

Recommendations

Enhance Public Awareness

- Launch awareness campaigns targeting employees, visitors, residents and businesses to raise understanding of the benefits of urban greening and its impact on heat stress reduction.

Strengthen Technical Expertise

- Invest in technical training for municipal staff and local stakeholders to improve the knowledge and skills necessary for maintaining green infrastructure, especially vertical greening systems.

Foster Community Engagement

- Develop inclusive community engagement strategies to involve municipal staff, visitors, local residents and businesses in both the design and maintenance of green spaces.

Explore Alternative Funding Sources

- Seek additional funding opportunities from regional, national, and EU programs to support the implementation and long-term maintenance of the pilot, particularly given concerns over rising costs.

Collaborate with Key Stakeholders

- Work closely with property owners, housing corporations, and businesses to secure their cooperation and support for climate adaptation efforts. Legal agreements should be pursued to avoid delays and potential conflicts.

Mitigate Vandalism Risks

- Implement preventative measures, such as community monitoring programs and the installation of surveillance systems, to protect the green spaces from vandalism and ensure their longevity.