PESTLE and SWOT Analysis Report

Pilot Area – Provincial Institute for Food Companies Antwerp, PIVA – Green Hub

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Prepared by: Province of Antwerp (PoA)

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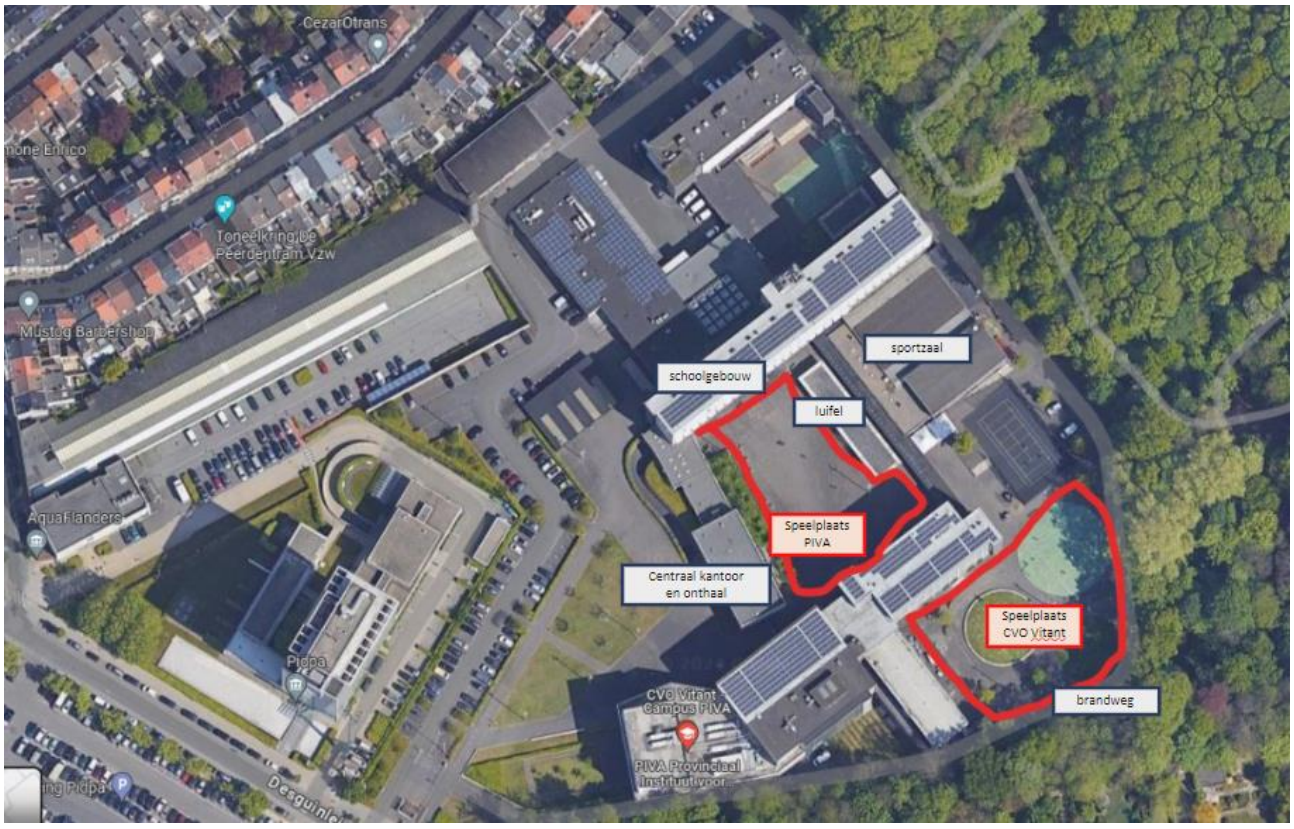
Project Overview

The Cool Neighbourhoods Project aims to mitigate heat risks and improve liveability across the Interreg North West Europe regions. This report provides a PESTLE analysis (Political, Economic, Social, Technological, Legal, Environmental) for the Province of Antwerp (PoA) Green Hub, PIVA, identifying key factors that will shape the implementation of climate adaptation strategies. Additionally, a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis has been conducted to further inform strategic planning.

Summary

The Province of Antwerp's PIVA pilot area consists of a school and educational grounds that currently suffer from heat stress due to the absence of greenery. The PoA has developed a master plan with ambitions to make the area climate-neutral, focusing on softening and greening, including public connections and a focus on water management. The PIVA site lies between a small provincial green area and the Antwerp Ring Road, making it an important location for urban connections. However, rising construction costs and governance complexity may hinder progress. This pilot will focus on creating green spaces that contribute to both the community and the environment.

Image 1 – PoA Piva Pilot Aerial View



PESTLE Analysis

Political

- Governance is divided between the Province of Antwerp, which owns the site, and the City of Antwerp, which controls decision-making for the future ambitions of greening the surrounding urban area (corridor).
- Provincial and local elections on 13th October 2024 could impact climate policy direction.
- PoA's master plan aligns with the provincial and city climate goals.

Economic

- Rising material and construction costs could negatively impact the realisation of blue-green measures in the master plan.
- Interreg subsidies provide a buffer for green-blue investments, but further financial pressure from inflation remains a concern.

Social

- Complaints of heat stress from students and staff highlight the need for improved green infrastructure.
- The urban survey shows dissatisfaction with green space, particularly in the Brederode District, with only 25% satisfied (stadmonitor 2023).
- More breathing space, through accessible green areas, would add value to the neighbourhood and meet local needs for better access to green spaces.

Technological

- The PoA is committed to meeting BEN+ (Nearly Energy Neutral) standards and implementing renewable technologies such as solar panels and heat pumps (Energiestandaard Passief Deputatiebesluit 13052023)
- Technological upgrades, including ventilation systems and heat networks, are integral to the master plan for making the site climate-neutral.

Environmental

- Climate projections indicate an increase in heatwave days from 6.1 (2019) to 50.7 (by 2100) (stadincijfers.be). This necessitates urgent action to create green spaces and implement cooling measures.
- The Brederode district has a higher risk of flooding, with 24.5% of the area susceptible to floods from heavy rainfall, demanding robust water management systems.

Legal

- The accessibility ordinance and stormwater ordinance impose specific conditions for new construction and renovations, particularly in terms of rainwater management.
- While playground safety regulations are advisory, the advice serves as the basis for decision-making, particularly concerning the use of plant species in educational spaces.

SWOT Analysis

Strengths

- Green-blue investments are guaranteed by Interreg subsidies.
- The overarching master plan provides a long-term vision for a climate-neutral and climate-resilient PIVA site.
- The project is aligned with the province's climate plan, strengthening its strategic foundation.

Weaknesses

- No established practice of involving students in the design and renovation process.
- School safety concerns regarding the mixing of public and private domains, particularly with respect to logistics and through traffic.
- A lack of expertise in on-site green management could limit the effectiveness of the green infrastructure.

Opportunities

- Addressing water issues in the Brederode neighbourhood through blue-green infrastructure could have a positive local impact.
- Involving students, teachers, and staff in the design, implementation, and maintenance of green spaces provides educational opportunities and ensures long-term sustainability.
- The project could align with broader city plans for green corridors.
- Collaboration with neighbouring organisations like PIDPA could expand the green space beyond the PIVA immediate site.

Threats

- Rising costs of building materials could undermine the financial viability of green-blue measures.
- Collaboration challenges across different governmental bodies may slow down progress.
- The uncertainty of election outcomes could affect long-term climate objectives and available funding for green initiatives.

Image 2 – PIVA, Green Hub Improvement Area

Conclusion

The PESTLE analysis of the Province of Antwerp's PIVA site reveals a range of challenges and opportunities related to climate adaptation and greening efforts. Rising construction costs and governance complexity pose significant threats, but the master plan offers a strong foundation for long-term climate resilience. The involvement of students and the community in design and maintenance, combined with technological advancements in energy and water management, provides a pathway to success. The project aligns with city and provincial climate goals, making it a key component of Antwerp's future green network.

Recommendations

Strengthen Political Collaboration

- Build strong collaborations between the Province of Antwerp and the City of Antwerp to ensure alignment of policies and decision-making authority.

Focus on Low-Cost, Scalable Green Solutions

- Prioritise low-cost, high-impact green solutions that can be expanded incrementally as more funding becomes available, such as green facades and permeable paving.

Community Engagement

- Involve students, teachers, and staff in the design, implementation, and maintenance of the green spaces to create a sense of ownership and ensure long-term sustainability.

Long-Term Green Connections

- Work with the City of Antwerp and neighbouring organisations to integrate the PIVA site into a broader green network that benefits the entire community.

Monitor Technological Upgrades

- Ensure that the technological upgrades, such as PV panels and heat networks, are fully integrated into the master plan, adhering to BEN+ standards and supporting the site's climate-neutral goals.
