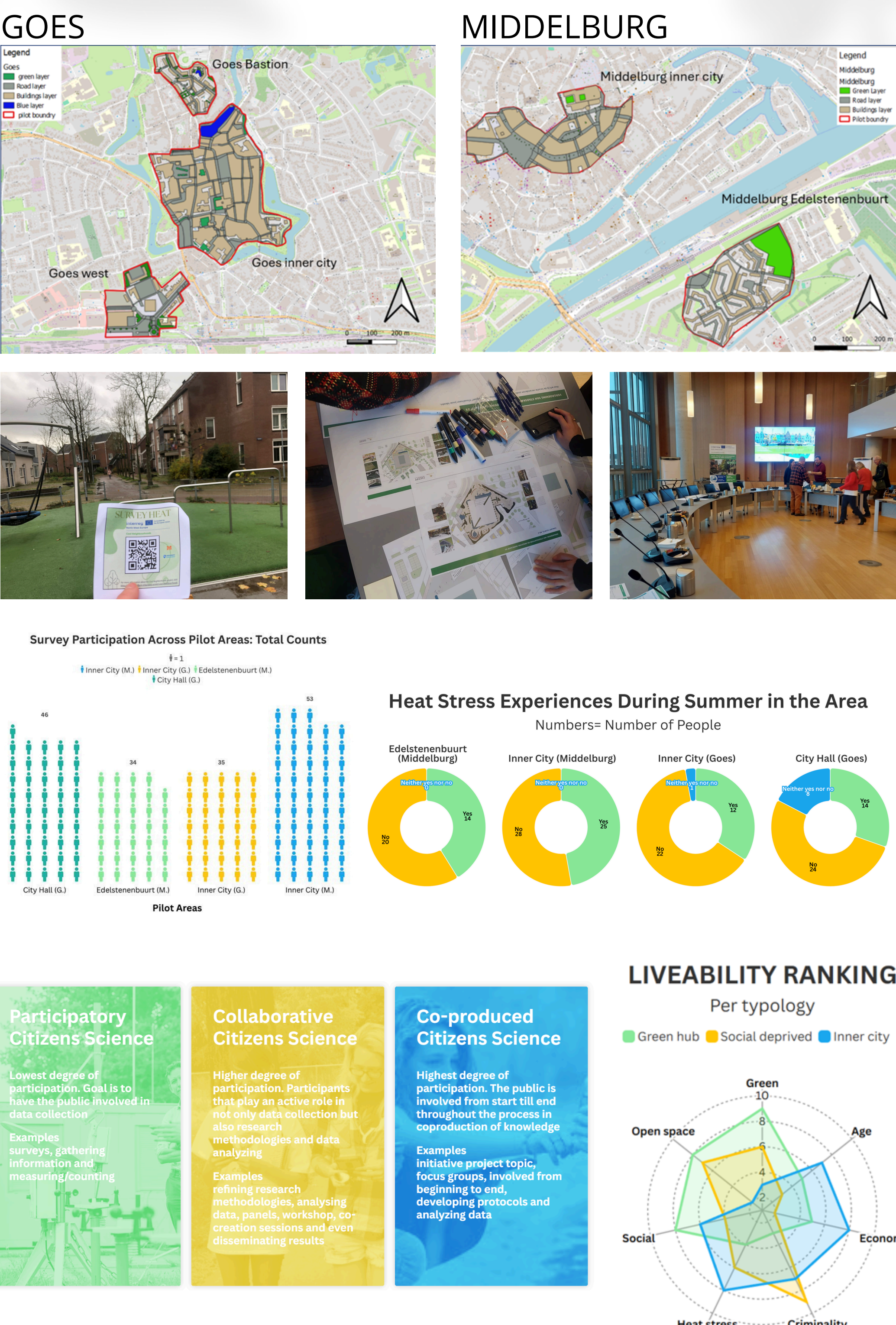# COOL NEIGHBOURHOODS

INTRODUCTION

Cool Neighbourhoods is a international project that is subsidized by the EU through **Interreg**, and set up by **hz research group**. This research is a collaboration between the **Netherlands**, **Belgium**, **Luxembourg**, **France** and **England**.

Global climate change increasingly **threatens urban life** and **public health**. This study investigates how **green, blue, and grey** infrastructure **mitigate urban heat stress** and **improve liveability** in diverse neighbourhoods. The **problem statement** of this project is to gain **green, grey, blue insight** and gain sufficient information through **citizen science** research into the issue of heat stress within neighbourhoods.
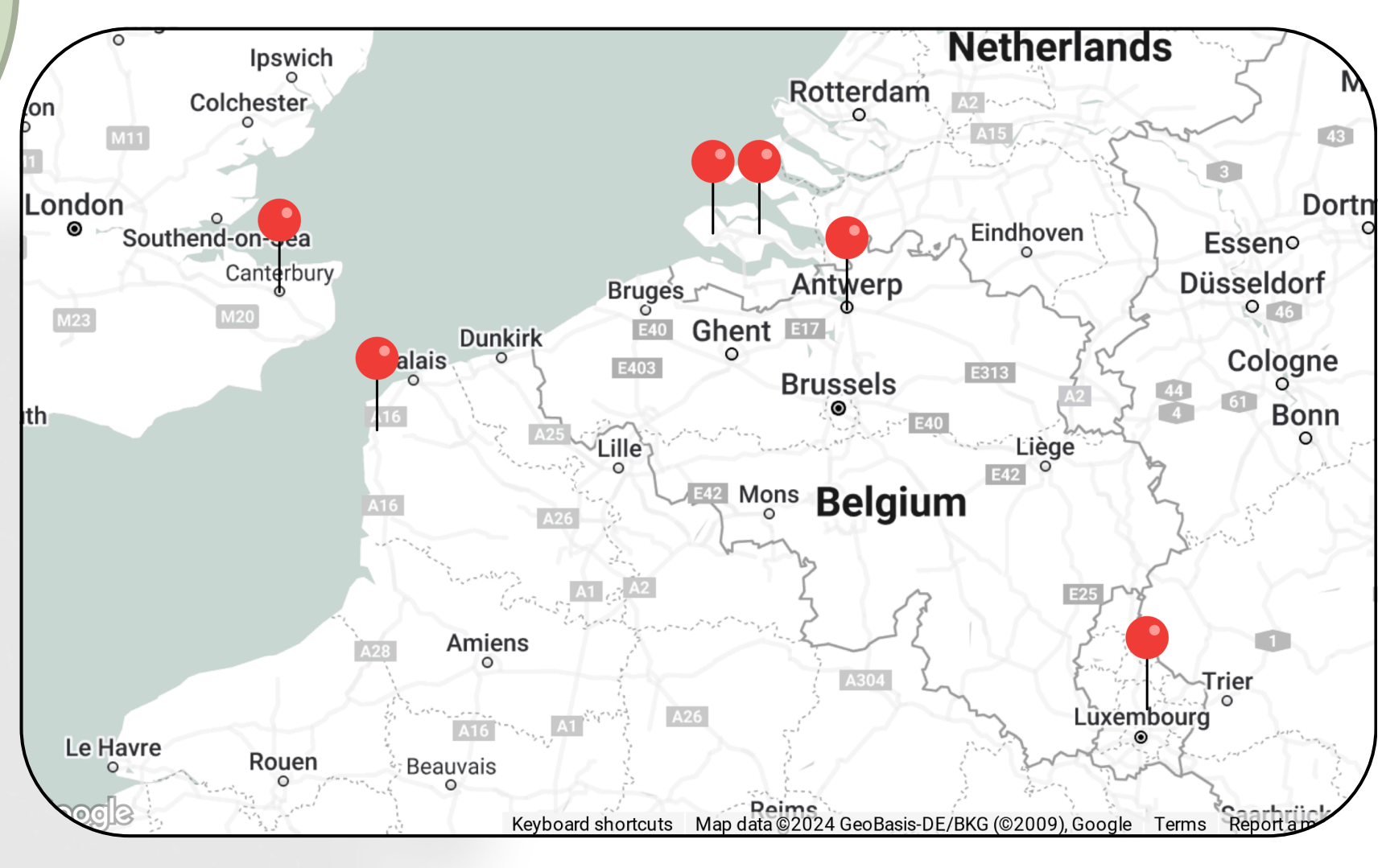
GOALS & OBJECTIVES

The Cool Neighbourhoods project objective is to:
- Mitigate heat stress & UHI
- Enhance liveability in neighbourhoods across the Netherlands, Belgium, France, Luxembourg, and England as an observatory partner.

To get the desired results, it is important to find and use the best methods. The project focuses on transforming over 30,000 m² of public space through greening initiatives.

PILOT AREAS

SCOPE

In this research proposal the scope is mainly on testing in **Middelburg and Goes**, but methods should be applicable for all pilot areas.
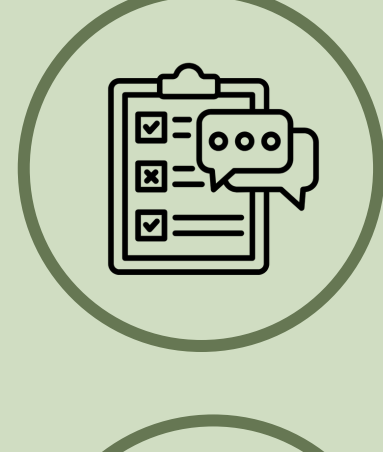
Every country has, however, its own representative, often the municipality, responsible for:
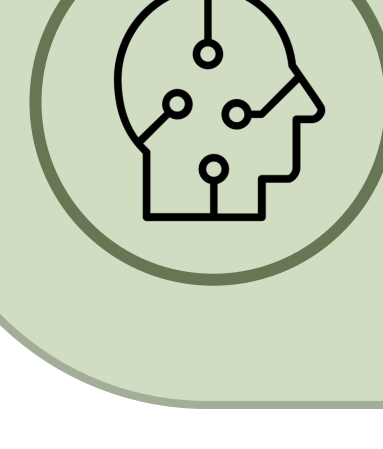- Directing local activities
- Making decisions and
- Discussing issues with the involved partners on micro level

All projectpartners:

RESULTS

GOES

MIDDELBURG

Survey Participation Across Pilot Areas: Total Counts

Heat Stress Experiences During Summer in the Area
Numbers= Number of People

Edelstenenbuurt (Middelburg) | Inner City (Middelburg) | Inner City (Goes) | City Hall (Goes)

Participatory Citizens Science — Lowest degree of participation. Goal is to have the public involved in data collection. Examples: surveys, gathering information and measuring/counting.

Collaborative Citizens Science — Higher degree of participation. Participants that play an active role in not only data collection but also research methodologies and data analysing. Examples: refining research methodologies, analysing data, panels, workshop, co-creation sessions and even disseminating results.

Co-produced Citizens Science — Highest degree of participation. The public is involved from start till end throughout the process in coproduction of knowledge. Examples: initiative project topic, focus groups, involved from beginning to end, developing protocols and analyzing data.

LIVEABILITY RANKING
Per typology

Green hub | Social deprived | Inner city

METHODS

The main research question of this research proposal is: **How can the proposed methods be applied to analyse neighbourhood typologies against heat stress and produce results that improve liveability in the 'Cool Neighbourhoods' project?**

1. GIS How can green/blue/grey index identify risks and opportunities in regard to heat stress in the pilot areas?

2. SURVEYS How can surveys (field research) provide insights into the pilot areas?

3. CITIZEN SCIENCE What citizens science method is best used for each of the neighbourhood typologies regarding heat stress?

DISCUSSION - CONCLUSION AND RECOMMENDATIONS

KEY INSIGHTS:

- Unique GIS opportunities in each pilot area for green/ blue integration, however, developments are hindered by historical importance & infrastructure.
- Residents had mixed experiences of heat stress and wanted more green implemented. Residents living closer to green had lower perception of heat. However, perception of heat did not correlate with grey, green, grey percentages.
- Combining typology with citizens science levels: Green hub suits best with participatory citizens science, Innercity with collaborative citizens science and Socially deprived with Co-produced citizens science.

OPPORTUNITIES, GOES

OPPORTUNITIES, MIDDELBURG

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