NATURE 4 CITIES

A knowledge diffusion and decision platform for renaturing cities

Task 4.3. Development of an alternative value scale for NBS implementation in cities based on Quality of Life

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Conception

Environmental quality of life is a multidimensional concept and considers the benefits of environment on physical, psychological and social dimensions (Organisation Mondiale de la Santé, 1998), as well as multiple aspects of interactions between individuals and their environment (thermal comfort, noise, air quality, ambience, etc.

Qualitative data gathered in **three qualitative studies** were analyzed in order to **identify the links between NBS and quality of life**.
Six sub-dimensions of environmental quality of life often related to NBS were identified (accessibility, aesthetic properties and quality, social, security, practices, environmental challenges).

Following this identification of links between NBS and QoL, six separate modules were developed, each one dedicated to a particular type of NBS: **public gardens and parks**, **natural spaces**, **urban farms** or **collective gardens**, **green roofs and walls**, **blue spaces** and **biodiversity**.
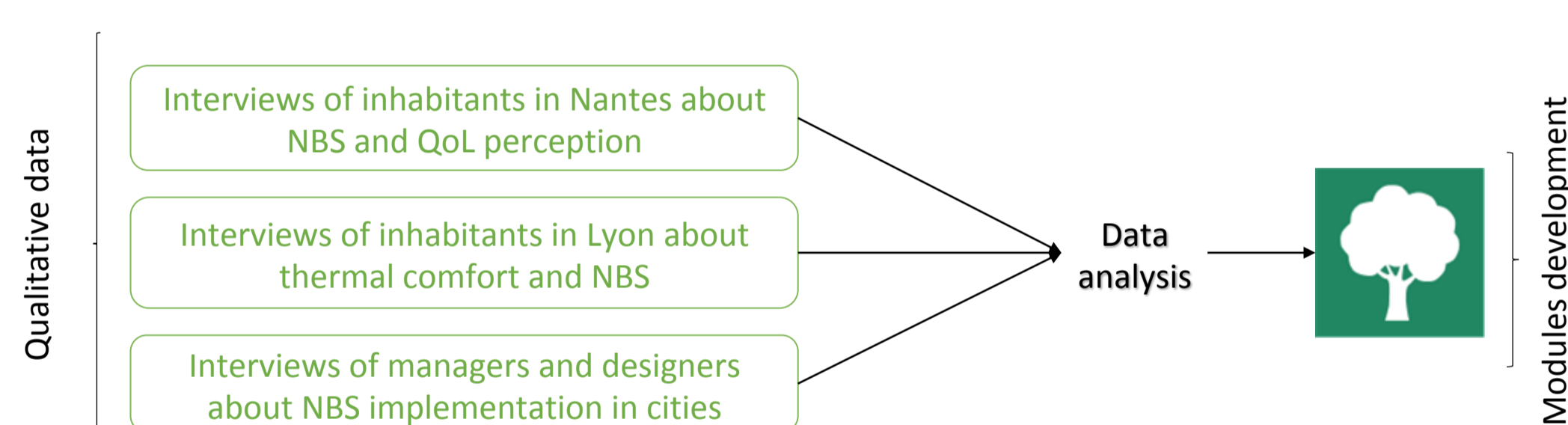
Figure 1 : Overview of the conception process of the EQoL scale

Validation

More than **1200 individual** data were collected for the validation of the scale in **7 different countries**.

Statistic indicators of **reliability** and **validity** were verified for each of the modules in the different site studied and confirmed the possibility of considering the modules of the EQoL scale as independent and reliable measures.

In addition, it confirmed its relations with general quality of life and the **estimated overall reliability of the measure was highly satisfactory**.

The **Environmental Quality of Life Scale (EQoL)** is an operational tool dedicated to the **assessment of perceived benefits of NBS** in terms of **environmental quality of life**. It can deliver a global score of environmental quality of life or independent scores for each of the modules.

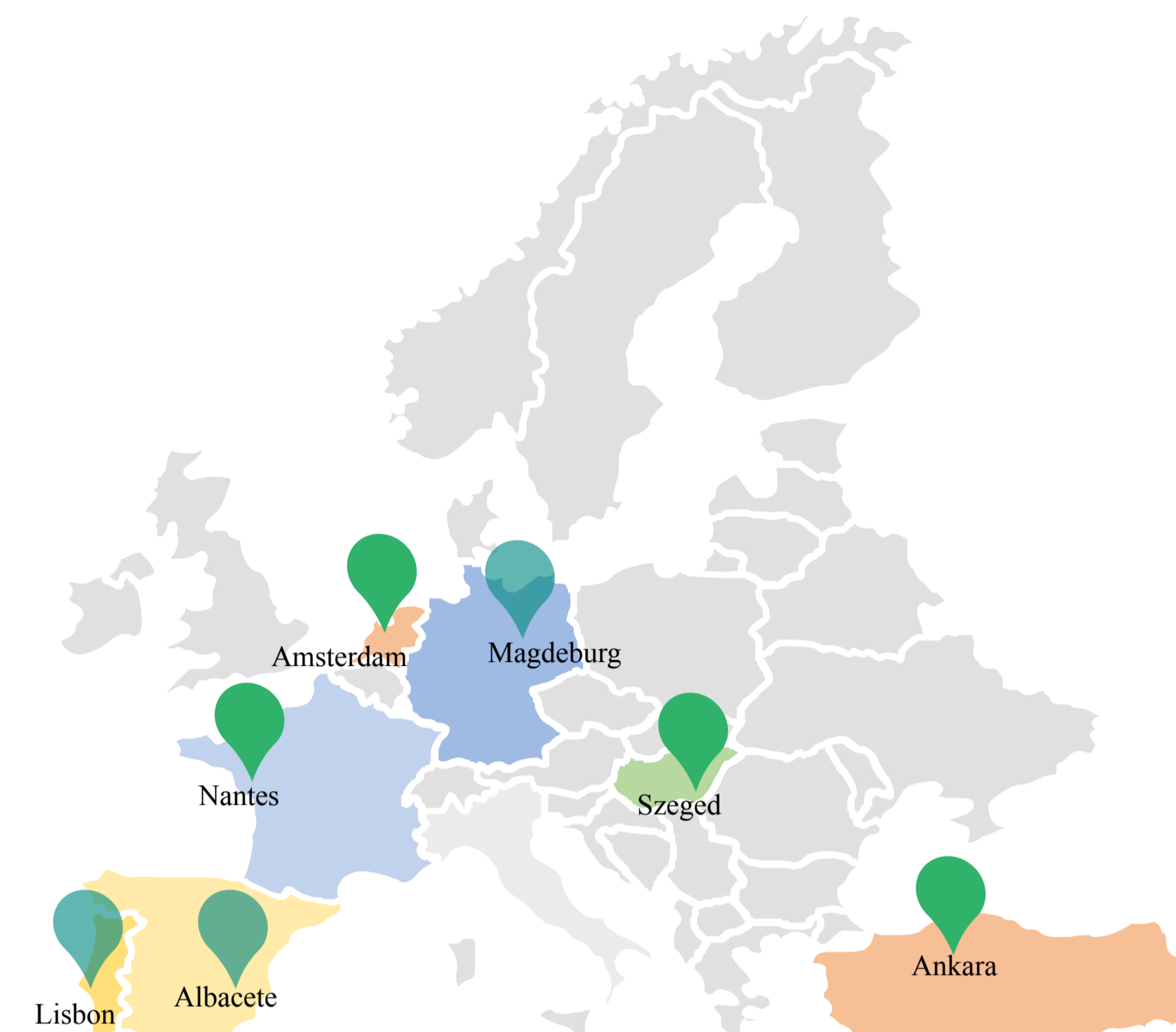In its final form, the EQoL scale can be used in a variety of ways:
As a diagnostic tool :
- To **assess the overall satisfaction** of individuals regarding their environment or existing NBS in their environment ;
- To **assess users' satisfaction** if a given NBS is targeted ;
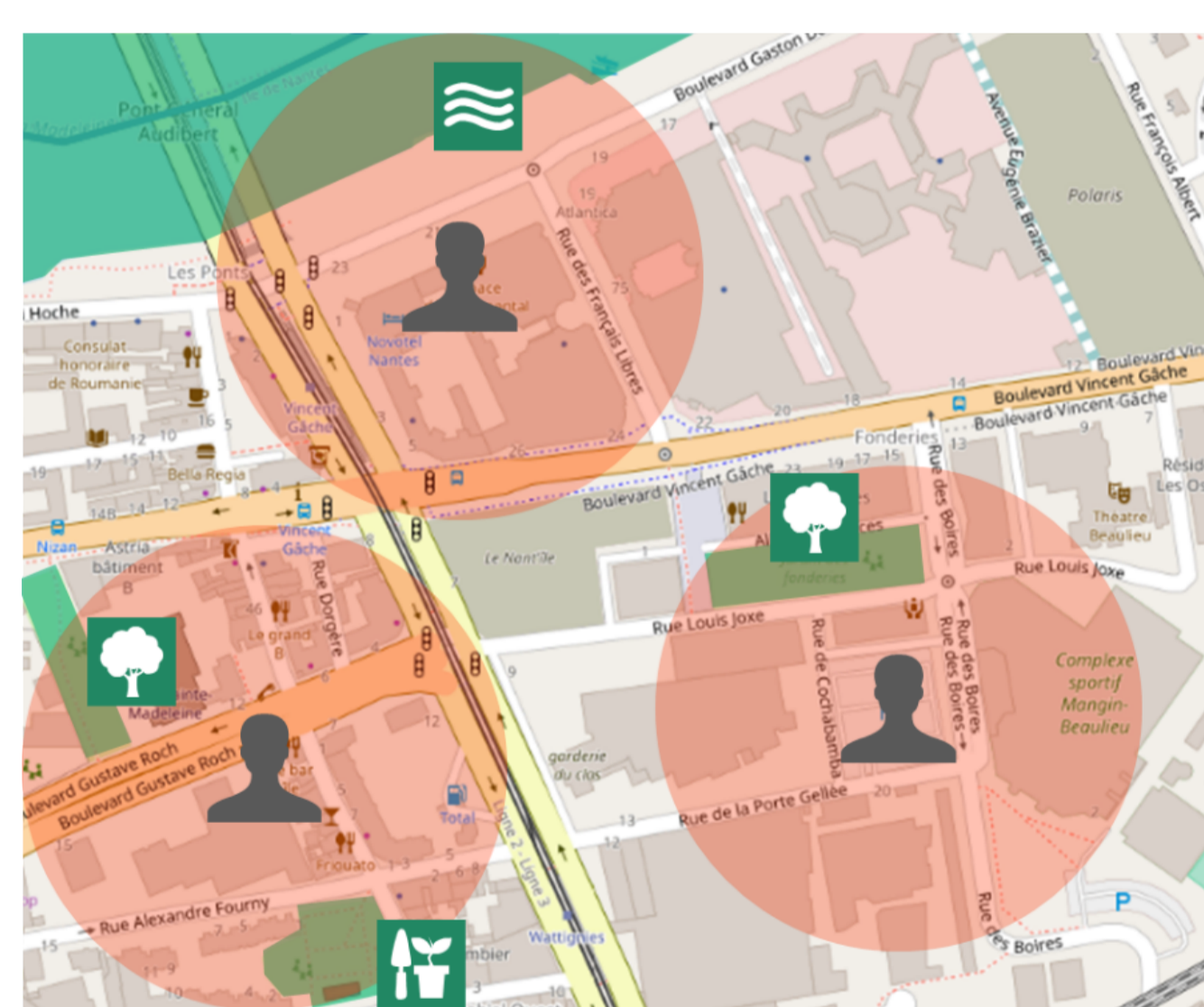
As an assessment tool :
- To **measure the efficiency of an NBS** after its implementation by comparison with environmental quality of life before the NBS implementation.

Finally, the EQoL scale can give **specific hints** if specific public are targeted (for example, **elderly people** or **patients**).

Implementation

Implementation scenarios of the EQoL scale were tested in Nantes, for public parks and gardens and blue spaces independently. Results reveal that **the environmental quality of life** regarding these two kinds of NBS is **linked to physical, perceived and psychological predictors**. Interestingly, in both scenarios, it appears that the perception of NBS near places where people live is a better predictor than the actual availability of NBS (estimated by the distance between the NBS and the home). This implies that the **availability and proximity** of these spaces around where people live have **a positive impact on the environmental quality of life** but that this availability is not sufficient and that better **communication and visibility of the benefits of NBS are necessary**.