



The IN-HABIT project: co-designing a hum-animal city

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INTRODUCTION

The beneficial effects of human-animal interactions on physical and psychological health as well as the improvement of socialization with other individuals have been documented by several papers [1-3]. However, there has not been much research to evaluate the advantages of human-animal interactions as an innovative resource to improve people's health and wellbeing in urban environments. In this regard, the IN-HABIT (INclusive Health And wellBeing In small and medium size ciTies) project, funded by the European Commission (GA 869227), serves as a good example of a framework that suggests an original approach on the subject of interactions between people and nonhuman animals in urban settings. IN-HABIT is a Horizon 2020 project that aims at implementing visionary and integrated solutions to foster inclusive health and wellbeing in small and medium size cities with a focus on gender and diversity.

Lucca's case study looks at the human-animal relationship as a resource to improve the well-being and the quality of life of both parties in the urban environment. Among other goals, IN-HABIT will further investigate the human-animal bond to fully understand benefits and drawbacks of adopting a companion animal, as well as deepening the knowledge regarding the specific activities that bring positive effects on health and wellbeing, since not all benefits are strictly linked to just owning a pet.

MATERIALS AND METHODS

The project identifies two different kinds of solution:

- **Hard:** infrastructures to enhance interactions between people and animals
- **Soft:** innovative services that revolves around the topic of human-animal bond.

A group of stakeholders, the "IN-HUB", divided into 5 subgroups, were engaged and worked through a bottom-up participative process from February to May 2021 on the co-design of the Animal Lines (hard solutions; figure 1) and its relational areas (figure 2 and 3) [4]. Subsequently, the 5 subgroups worked from June to December 2022 at the co-design of innovative services with the aim of improving people's health and wellbeing as well as human-animal relationship.

In particular the project is working for:

- Implementing Animal Assisted Interventions (AAI) in nursing homes
- Promoting educational activities in schools
- Mapping pet-friendly services (to help tourist that travel with their pet)
- Creating services aimed at pet-owners

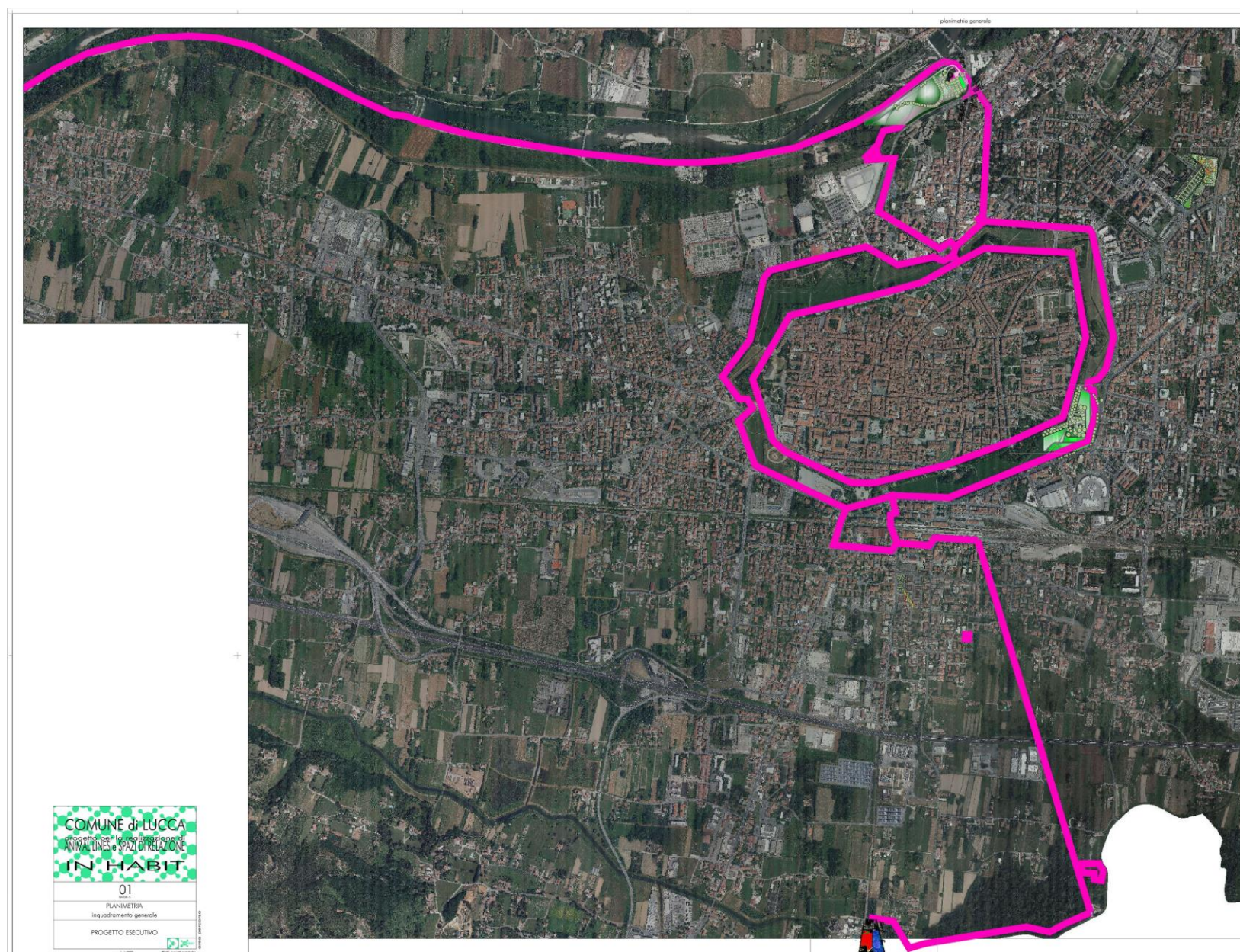


Figure 1: Animal Lines path



Figure 2: One of the relational areas that will be implemented along the Animal Lines

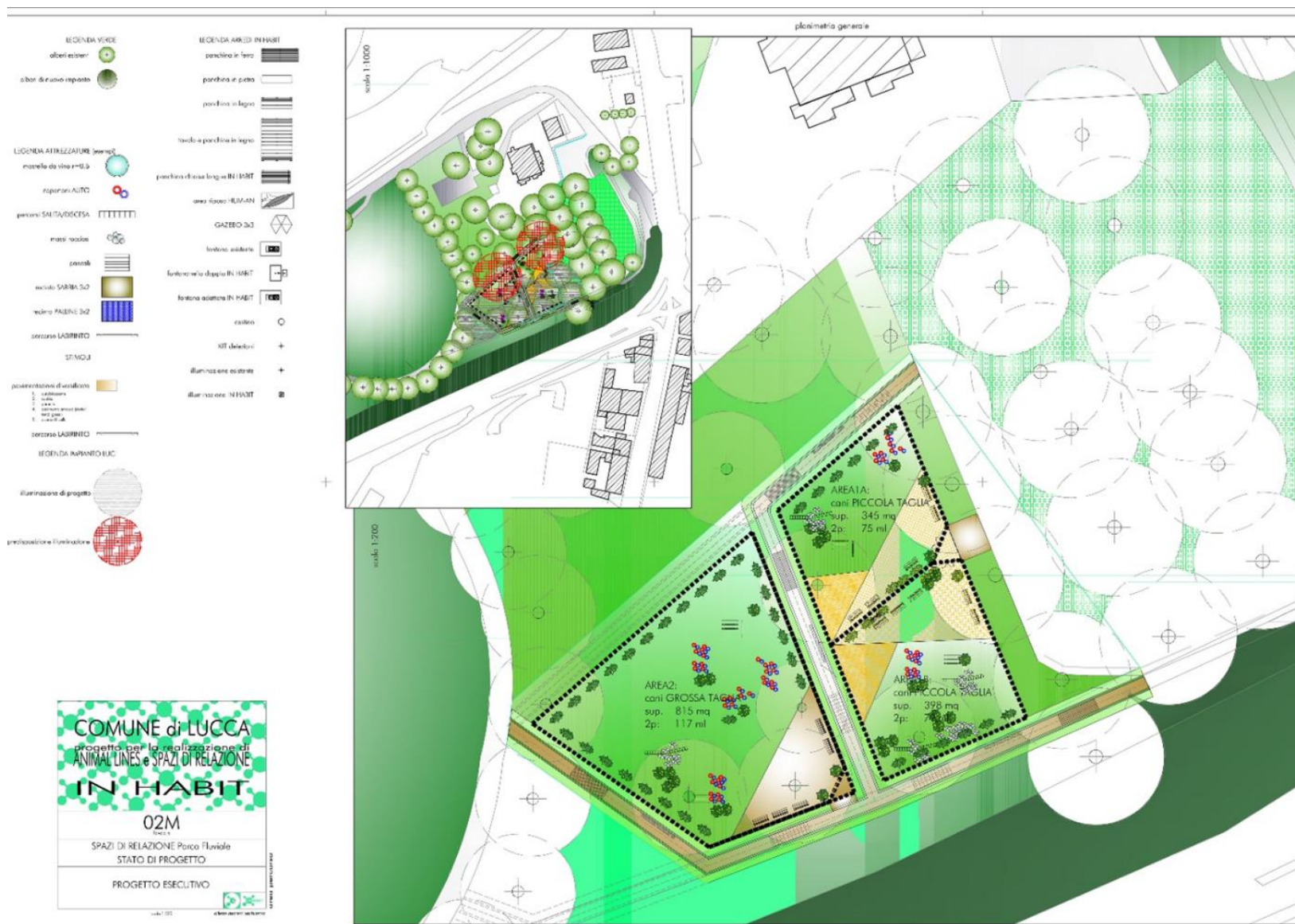


Figure 3: Another relational areas that will be implemented along the Animal Lines

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RESULTS AND NEXT STEPS

Hard solutions:

At the moment the project is implementing the Animal lines and the two relational areas; one will be ready on 15 th June (see fig. 4 for differences before and after works). Works in the second relational area already began and the inauguration is foreseen for end of June (see fig. 5).

Once the relational areas will be ready, educational activities carried out by dog trainers will be provided to pet owners (as basic training-education classes, knowledge of dog management, puppy classes etc...) as well as AAI.

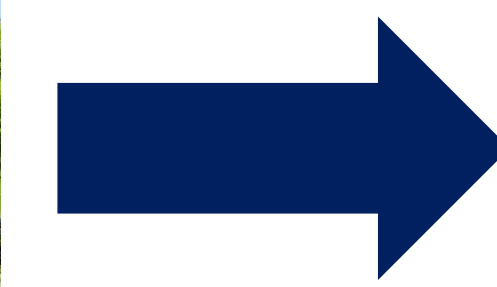


Figure 4: First relational area that will be inaugurated on 25th June. On the left before works and on the right after works

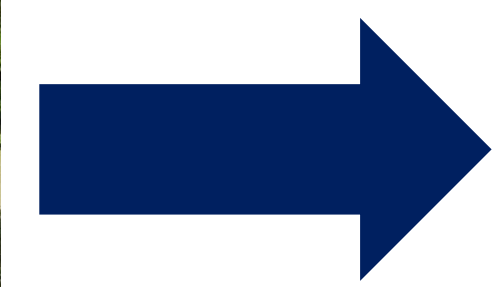


Figure 5: Second relational area. Works recently started. On the left before works and on the right during works

Soft solutions:

Currently the project is working on the co-design of Animal Assisted Interventions in nursing homes. Three social associations applied to the public call promoted by the Municipality of Lucca and together with the University of Pisa, from March to June 2023, co-designed the activities to be carried out in two nursing homes in Lucca. The associations are all duly formed to carry out AAI as reported in the Italian National guidelines [5].

AAI (mainly AAE) will start on September 2023 and will provide a total of 15 meetings (biweekly) with the aims of improving:

- Emotional sphere,
- Motor activity,
- Sleep quality,
- Anxiety and depression states

Monitoring of the AAI will be carried out to evaluate effects on both elderly people and dogs.

Specifically:

- Variables like anxiety, depression, quality of life and sleep will be monitored with pre and post intervention surveys
- Salivary cortisol and oxytocin concentrations will be measured in both people and dogs
- Physiological parameters like heart rate, respiratory rate, temperature will be measured before and after each intervention in dogs

Monitoring:

All the solutions (hard and soft) will be codified into experimental activities and evaluated to determine their effectiveness and then replicated in other cities.

The monitoring will be carried out through:

- Ex ante and ex post questionnaires
- Focus groups and interviews
- Physiological parameters

CONCLUSIONS

Stakeholders actively participated in the participatory process of both hard and soft solutions. This serves as evidence that a key component of the new governance development is public engagement that, when properly directed toward facilitation techniques, has the capacity to define novel solutions and activities.

Innovative projects like IN-HABIT should be taken into consideration by policy-makers to prioritize preserving the benefits of the human-animal relationship and fostering the integration of pets into society.



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