



The innovative side of the urban interaction among animals and human stakeholders: building a Hum-Animal smart city in Lucca



UNIVERSITÀ DI PISA

Giulia Granai^{1*}, Carmen Borrelli¹, Roberta Moruzzo¹, Massimo Rovai², Francesco Riccioli¹, Chiara Mariti¹, Francesco Di Iacovo¹

¹ Department of Veterinary Science, University of Pisa, Viale delle Piagge 2, 56124 Pisa, Italy

² Department of Civil and Industrial Engineering, University of Pisa, Largo L. Lazzarino, 56122 Pisa, Italy

*giulia.granai@phd.unipi.it

INTRODUCTION

Cities are expected to host most of the increasing world population in the next future, not without any problems due to emerging crisis. Also, animals in cities are growing in numbers as they already host wild animals, food producing animals and an increasing number of pets. Each of them generating an everyday interaction with the urban environment and the humans as well, stimulating new demands, opportunities, and possible solutions. Nevertheless, very few attentions are paid for an integrated urban hum-animal in a public perspective and in planning. In the public and scientific debate, the possibility to face emerging urban challenges is always linked to the promotion of the so-called nature-based solutions (NBS) and the reshape of public interventions for mobilizing existing resources and generating innovative answers to emerging urban needs. The European Commission in 2016 defined the nature-based solutions (NBS) as “solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions.” [1]. Although the debate on NBS is increasingly part of cities’ development, resilience and sustainability, it’s mainly focused on solutions based on the use of plants to improve livable cities, human wellbeing and mental health [2-4]. The NBS’ debate totally understates animals and their growing relevance in the cities and in the families, although they can be seen as an opportunity for urban life and citizens’ health and wellbeing. According to that, an innovative strategic vision and planning in the public domain might increase role and relevance of animals as NBS for emerging smart cities. The IN-HABIT (INclusive Health Ad wellBeing In small and medium size ciTies) project, funded by the European Commission (GA 869227), by the way of an action research and participatory approaches, would provide innovative pilots and good practices towards the organization of public-private people partnerships (PPPPs) [5] able to mobilize human-animal relationships in urban areas to enhance the provision of public goods.

METHODS

The traditional public interventions on urban animals and veterinary services focuses on securing hygiene and people’s health from animals. In the IN-HABIT project the focus is on the recognition of the potential of human-animal bonds to enhance the wellbeing of all citizens -especially those less empowered-. The innovative attention on animals as NBS strategically open the space for an integrated urban hum-animal policy of actions able to link urban planning within many dimensions -like social sector, cultural initiatives, economic activities, touristic sector, education, transport, environment and waste management, public infrastructures-. Towards a social innovation process and the mobilization of a public-private-people partnerships (PPPPs) with the municipality and active citizens and stakeholders, the city of Lucca is co-designing and co-deploying the first animal integrated policy at urban level in EU. The interest in PPPPs has increased over the last decade, and these instruments for coordinating and aligning the viewpoints and efforts from different sectors are aimed at empowering citizens who can share their awareness of their territory [6]. The PPPPs model attempts to involve the whole community in the urban processes warranting the consideration of the contribution and the competencies of each stakeholder [5].

The co-designing participatory process from which we obtained some preliminary research findings can be divided into two phases: a first one, where different meetings were held aimed at co-designing in the city innovative infrastructures—the so-called “Animal Lines”; the second-phase – that is still going on – has been dedicated to the co-creation of innovative “soft” nature-based solutions in the city with the purpose of offering specific services to people.

Figure 1. One of the meetings to co-design the Animal Lines.



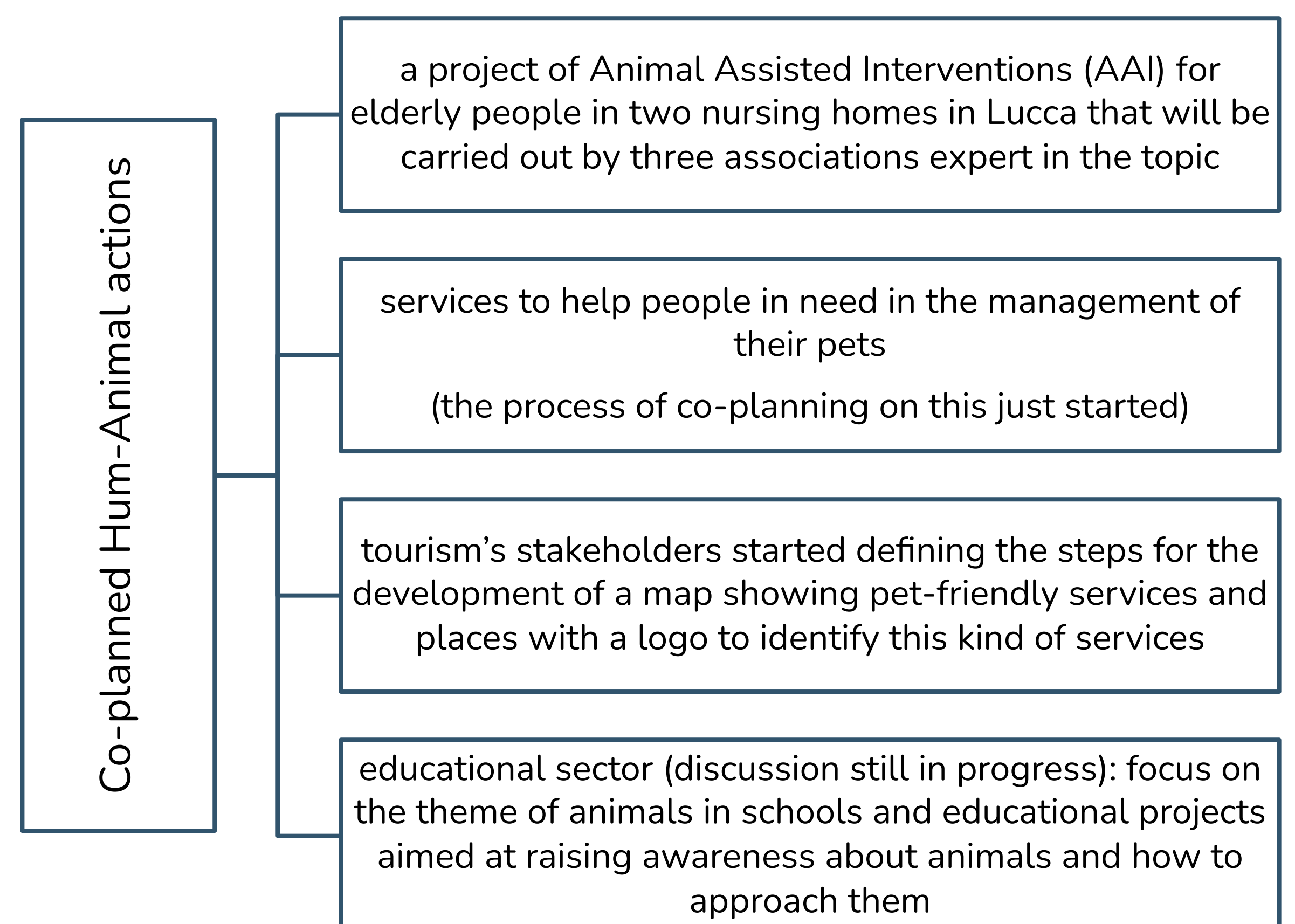
Figure 2. Co-creation of services’ meeting.



RESULTS

The PPPPs approach allowed us to understand the main features and needs of the territory and to fix the most important aspects to be considered in the design of the “Animal Lines”—the infrastructural solutions of the project. It also managed to bring together different stakeholders to start discussing the main actions to be implemented in the territory to build a hum-animal city. In regard to the participative process aimed at co-designing the infrastructures, the meetings helped in gathering the information, needs and ideas about what to implement inside the areas, what materials to use to create an accessible place and how to make the areas comfortable for both people and their pets. What emerged in the end of the process are pathways that links the suburbs areas with the city centre of Lucca. Along these pathways specific fenced areas - “relational areas” - will be built to enhance the relationship between owners and their pets, as well as between humans.

The co-creation phase – still in a development stage – has been very useful to start exploring the ideas presented and thinking about their development.



CONCLUSIONS

Nature-based solutions and PPPPs are becoming more and more useful topics to face the emerging challenges in our cities. In our work, these topics were applied to the introduction of human-animal bonds in order to increase the enhancement of public health in public spaces in cities and stakeholders actively participated with a great enthusiasm in the participative process.

The study offers some first lessons regarding the potential as well as some limits in the process of transformation exploring the potential of animal nature-based solutions in innovative cities, and it represents a starting point for an ongoing conversation about how the presence of animals in cities can be seen as a positive implication in the humans’ life.

REFERENCES & BIBLIOGRAPHY

- https://ec.europa.eu/info/research-and-innovation/research-area/environment/nature-based-solutions_en
- Raymond, C.M.; Frantzeskaki, N.; Kabisch, N.; Berry, P.; Breil, M.; Nita, M.R.; Geneletti, D.; Calafapietra, C. A Framework for Assessing and Implementing the Co-Benefits of Nature-Based Solutions in Urban Areas. *Environ. Sci. Policy* **2017**, *77*, 15–24.
- Van der Jagt, A.P.N.; Smith, M.; Ambrose-Oji, B.; Konijnendijk, C.C.; Giannico, V.; Haase, D.; Laforteza, R.; Nastran, M.; Pintar, M.; Železnikar, S.; et al. Co-Creating Urban Green Infrastructure Connecting People and Nature: A Guiding Framework and Approach. *J. Environ. Manag.* **2019**, *233*, 757–767.
- Vujcic, M.; Tomicevic-Dubljevic, J.; Grbic, M.; Lecic-Tosevski, D.; Vukovic, O.; Toskovic, O. Nature Based Solution for Improving Mental Health and Well-Being in Urban Areas. *Environ. Res.* **2017**, *158*, 385–392.
- Boniotti, C. The Public-Private-People Partnership (P4) for Cultural Heritage Management Purposes. *J. Cult. Herit. Manag. Sustain. Dev.* **2021**.
- Marana, P.; Labaka, L.; Sarriegi, J.M. A Framework for Public-Private-People Partnerships in the City Resilience-Building Process. *Saf. Sci.* **2018**, *110*, 39–50.



This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 869227

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