

Creating better living conditions for dogs in the animal shelters

An assignment for Dierenopvangcentrum Enschede (Animal Shelter)

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Over the years, the living conditions of animals has been an important topic. Animals should have a good well-being, as is underlined by various studies and guidelines. However, animal shelters are still looking for an adequate solution. Especially in the field of dog welfare. If dogs have a poor welfare, it occurs that their stress level will increase and this can contribute to unwilling behavior like constant barking, disobedience, etcetera. Dogs can be even becoming aggressive, towards themselves, towards other dogs and/or to people. When this happens, it's more difficult to find a good new home for them. It might even lead to euthanasia.

The aim of this research project is to identify and create a solution that will give the dogs an improved well-being in the animal shelters. This assignment has focused on Dierenopvangcentrum Enschede. They already have tried some solutions to make it better, but it's still not convenient enough. The assumption is that better living conditions are created through an improved well-being of the dogs, the main research question is: *'How and with what can the Animal shelter Enschede improve and ensure better living conditions for the dogs in the shelter?'*

An important first step is to find out what contributes to an improved well-being of dogs. The answer, 'A better well-being can be achieved by changing the sensory perceptions of the dogs in a positive way', is found after researching different areas. Besides this, the stakeholders are considered, the area and environment of and in the shelter, products that are already on the market and efforts of other shelters to improve dog well-being are looked into.

With all this information in mind, a brainstorm session is held with volunteers of the shelter. The main topics of the brainstorm session are temperature, sounds and sight. The most interesting outcome were solutions which came back in two or three of the topics and/or can be combined together. With these ideas, different ideations are executed. In discussion with the Dierenopvangcentrum Enschede, a choice is made to continue with one of the most desirable options, 'a doghouse as addition to the kennel'. The most important requirements for this doghouse are; the design reduces noise, improves the temperature and obstructs the sight; the design is easy to clean; the sleeping place of the dogs is not in direct contact with the ground; all dog breeds can use it; and various safety requirements. A new ideation started, focused on the doghouse. Starting with a wide range and resulting in three concepts of which one of them is chosen: 'The Night Doghouse'.

Several things were considered to finalize the design in Solidworks; different solutions for design problems within the design, material and costs. This final design (on the right) must ensure that (1) the dogs experience less noise produced by the dog wing, (2) there is an improved stable temperature within the design, (3) the dogs have a freedom of choice, and (4) the dogs can hide from the sights of other dogs and the volunteers.



Because dogs cannot speak, it is important that the Night Doghouse is tested. During this test, several aspects have to be examined. For example, practical matters and various measurements, but most importantly; the reaction and the behavior of the dogs. Based on these components, a conclusion can be drawn whether the designed Night Doghouse contributes to improved living conditions of dogs in the Animal Shelter, or whether it needs some adjustments.