Category: **Product and Services**

Project: **Weight Control Tool**

What was the challenge?
According to a recent study by the Association for Pet Obesity Prevention, half of dogs in the United States are overweight or obese. This is a major concern for pet owners as it can lead to serious health issues, including diabetes, heart disease, and joint problems.

In an effort to help address this issue, we are planning a cutting-edge mobile application that can help pet owners assess their dog's weight status. The application utilises advanced technology to analyse images of dogs and provide an accurate assessment of their body condition, measured as the BCS (Body Condition Score). The BCS is similar to the BMI (Body Mass Index) in humans and provides insight into a dog's body condition.

However, to ensure that the application performs optimally, it must first undergo a rigorous calibration process. This involves training the application's algorithm to recognize and accurately classify images of overweight and obese dogs versus those of healthy weight. To do this, a robust and reliable dataset is required.

The challenge lies in acquiring this data in a systematic and credible manner, working with veterinarians to collect the necessary data to train the application effectively.

What was the solution?
We created a complementary mobile application called the Weight Control Tool to populate the training datasets and fine-tune the algorithm.

Veterinarians can use the Weight Control Tool to assess the health of their canine patients by taking pictures of the dogs and then manually associating a Body Condition Score.

The calculation of the BCS depends on various factors such as the location, age, breed, and sex of the pet, which the veterinarian enters into the application. The system then uses this data in combination with the accompanying pictures to train the algorithm.

What was the effect?
The Weight Control Tool is still collecting pictures. To this day, thousands of submissions have been collected. Development is still underway to verify the quality of images submitted by veterinarians before they are uploaded to the application. There are also ongoing efforts to add metadata (e.g., morphology) to improve the algorithm.

From the data collected by the Weight Control Tool, the ultimate goal is to create an application for pet owners that would enable them to determine in a single photo if their pet is overweight or not.
Overall, the Weight Control Tool represents a significant step forward in the fight against pet obesity and has the potential to substantially improve the overall health and well-being of dogs.

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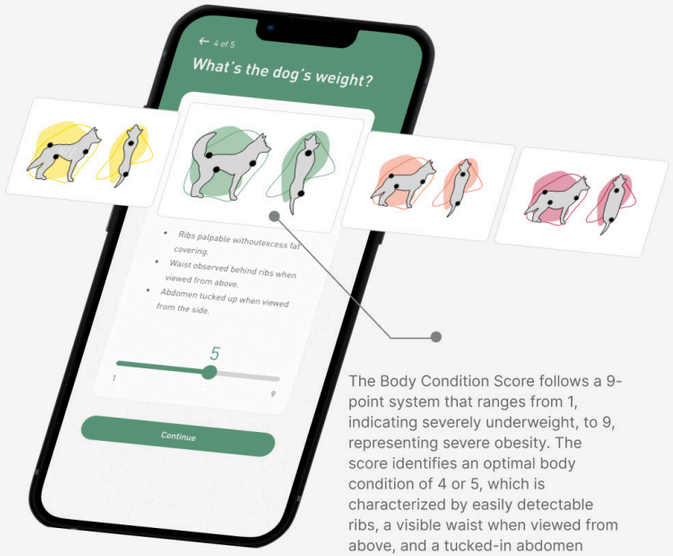
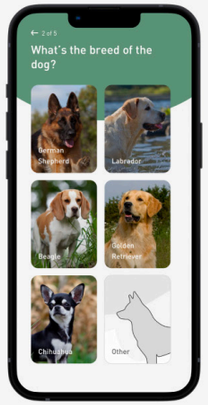
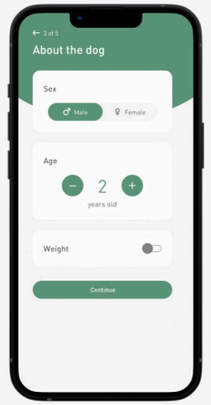


The Body Condition Score follows a 9-point system that ranges from 1, indicating severely underweight, to 9, representing severe obesity. The score identifies an optimal body condition of 4 or 5, which is characterized by easily detectable ribs, a visible waist when viewed from above, and a tucked-in abdomen when viewed from the side.

Dogs morphologies, for the same breed, can vary according to the region. It is therefore important to know where the dog comes from.





To have accurate data, it is also necessary to fill in the details of the animal (age, sex, weight).