SUMMARY

To conclude, the idea of this thesis was to analyze current methods and technologies used for drying tennis courts, determine the optimal solution, and try to improve it by changing design or adding new features. In addition, it had to be determined if there is the solution is viable.

The optimal solution was chosen to be a water collector due to its advantages such as its ability to remove the water from the surface and ease of use. While designing the model and imitating some mechanisms from existing solutions, a few changes were made, for instance, the rolling mechanism is modelled to work on 3D-printable bushes that are lightweight.

A short business model was proposed along with a partial smart solution to support the business idea. The business model is very brief and can be considered in the future alongside with the improved version of the smart solution.

One of the more important goals was to figure out if the product is feasible in the local climate. This was done by analyzing weather data from 2016-2020 and cross-referencing that data with some recent testing and drying. The results were satisfactory. The analysis showed an 8.9% increase in tennis court playtime during 2020 season.

The cost and benefit analysis found that the product is not cheap, just the materials, with some ready machined pieces, are around 530€. This does not include assembly and other necessary work. On the other hand, based on the weather analysis, the drying solution can produce 2-4 times greater benefits to a tennis club per season.

To be considered in the future in addition to the business model, is to estimate the necessary investments to produce the solution on larger scales.

Although the results are estimates, I find them interesting and there is potential for the solution. It is clear that the results may vary depending on the location and how is the clay tennis court built.