



# Environmental Sustainability Challenge

Hi Sports application

## Hi Sports

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# Data, hardware & software for sustainability !





# The measuring equipment: HiPster

The NEW sensor technology to support the grass team for the best pitch! HiPster is supporting the groundsmen to keep track of the quality and safety of their sports pitch and stay in control of the important game and safety properties of the pitch. A one-in all measurement tool which presents the data automatically in the groundsmen's dashboard so they can directly analyse and act without any (manual) administration. Having also an independent tool to communicate with the players about the quality of the pitch. And that's without mentioning the direct safety aspect: many injuries can be prevented with a safe pitch: another major cost item in modern top sport, not to mention the personal suffering.

## How does the HiPster work?

The HiPster is driven to the right measurement location by the groundsmen where he can start the measurements supported by an easy-to-use tablet. The groundsmen are fully in control and after executing and accepting the measurement values the results will be sent by Wifi to the dashboard as soon as there is a stable connection.

In the meantime results are stored on the tablet. The HiPster also can be used as standalone system.

**HiPster**  
Holland Innovative Pitch Screener



# FIFA Quality Programme

**The measuring kit is executing the following measurements according to Fifa Standards:**

- Soil hardness (G)
- Shock absorption (mm)
- Energy restitution (%)
- Vertical deformation (%)
- Rotational resistance (nm)
- Ball rebound (m)
- Grass density (NDVI)
- Grass vitality (NDRE)

The sensors in the Hipster, a compact device the size of a family lawnmower, does all these measurements in one go. All the information obtained in this way goes automatically straight to the Dashboard, where results are displayed in trend figures and further analysis can take place.

The HiPster is prepared for the future by its modular design having slots for extension for optional sensor modules like grass density, grass vitality, Soil compaction, soil moisture levels and Temperature.



# The dashboard

The dashboard is supporting the groundsmen to collect and present all the required data and with it's engine it can predict the quality of the pitch. Beside the performance data of the FIFA which is measured with the HiPster the dashboard is also collecting the data of our soil sensors, climate data of the weather stations, LED grow lighting data as well as the players feedback.

Besides the data, also recipes and groundsmen logbook-data are stored in the dashboard. Thus the dashboard is the platform supporting smart pitch maintenance and pitch management.

## What does the Dashboard do?

The Dashboard, which in addition to the data from the HiPster also uses other data captured in real-time in and around the pitch, has become the groundsmen's most important tool. In fact, it has already become his buddy! Thanks to the predictive value of the system, there is insight at any time into the maintenance measures required for the perfect turf.





# Roll-out Eredivisie (Dutch Premier League)

In 2022-2023 the HiPster together with the Dashboard is introduced in the Dutch premier league. All 14 clubs playing on Natural Turf are now collecting weekly data on the quality of the Pitch. Providing the Eredivisie League insight in the uniformity of the pitches and giving Field managers a tool to further optimize their pitch maintenance towards Sustainable management.

**“Pitch maintenance use of Energie and Water can be reduced with 30% by implementation of a data driven approach.”**

In 4 on-site modules field managers learn how to collect and interpret the data. After implementing a data driven approach improvements are made towards injury prevention and sustainable management, without compromising the quality of the pitch! Because the HiPster provides detailed insight in the quality of the Pitch a field manager can start experimenting with alterations in their maintenance.



# Use-cases

## Johan Cruijff ArenA

The Johan Cruijff ArenA has the goal to be completely Carbon Neutral in 2030. One way to do this is to save on Energy Costs. The Pitch heating system is currently set at 15 degrees using an insane amount of energy. By lowering the pitch temperature with one degree the stadium can save a lot of energy. By monitoring the effect on the quality of the pitch, field manager feel more confident in making the necessary adjustments.

**“By monitoring the effects on the quality of the pitch, field managers feel more confident in making the necessary adjustments.”**

## RKC Waalwijk

Hardness measurements provided Thimo, Field manager at RKC Waalwijk with interesting differences between the south and the north side of his pitch. Not only could he reduce the amount of aerification on the south side and save time and energie. He could also take this data towards the technical staff who prefers to play and exercise more on the north side. Together they came up with a Pitch Protection Training Map, in which they could spread the training more even over the pitch.





# The Team

Hi-Sports is a spin-off from Holland Innovative and expertise company for Product Development, Reliability Engineering and Data-Science for the High Tech Industry in The Netherlands. After 5 years of product development, together with our Brain port partners Hi-Sports was founded as an independent company in 2023. The team can still rely on the expertise of her mother company, Holland Innovative.

The current HI Sports team consist of 5 FTE with in the core team:

- **Menke Steenbergen:** Overall management and business development.
- **Bart Breurs:** Senior engineer and projectleader for hardware and software development
- **Joep van Cranenbroek:** Turf Specialist, Agronomists and Data Scientist responsible for product development and training.

**The team received the  
Dutch Grass Innovation Award 2023**





# Market Potential

The dashboard and measurement equipment are developed and proven in the multifunctional stadium Johan Cruijff ArenA, the home of AJAX Amsterdam and of the Dutch National Team. Professional Stadiums is one of the 4 market segments that we target.

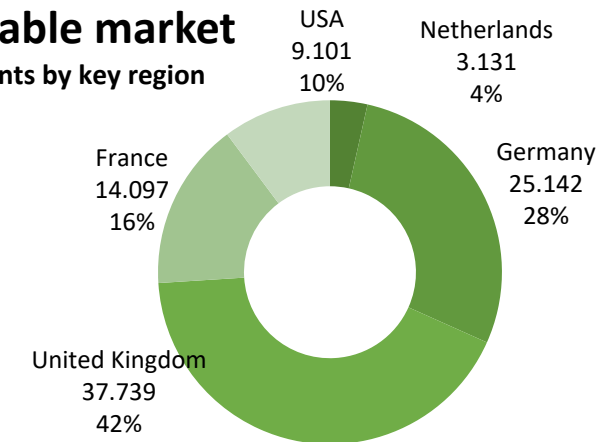
1. Professional stadiums
2. Leagues
3. Contractors & Municipalities
4. Amateur clubs

With amateur clubs making up the largest portion of the market, making this also the segment with the largest potential for sustainable improvements. Already we have set up a couple of Field labs in the Netherlands at municipalities and amateur clubs where we implement the new technologies developed at professional stadium towards solutions for maintenance of recreational fields.

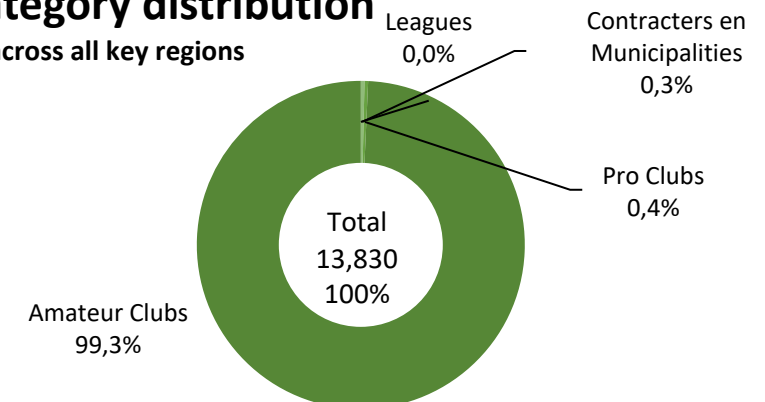
**“Amateur clubs use the biggest portion of the 1.7 million M<sup>3</sup> water used for Dutch football pitches annually”**

HI-Sports is scaling up internationally by building strong partnerships with local businesses such as other supplier in the industry. Already partnerships in the German, Belgium and US market are set-up.

## Addressable market # participants by key region



## User category distribution across all key regions



# Business Model

HI-sports is utilizing a highly scalable Data As A Service (DAAS) business model.

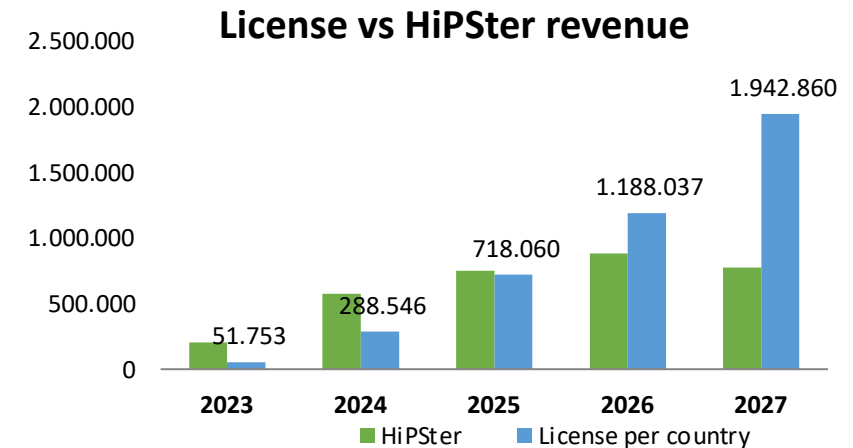
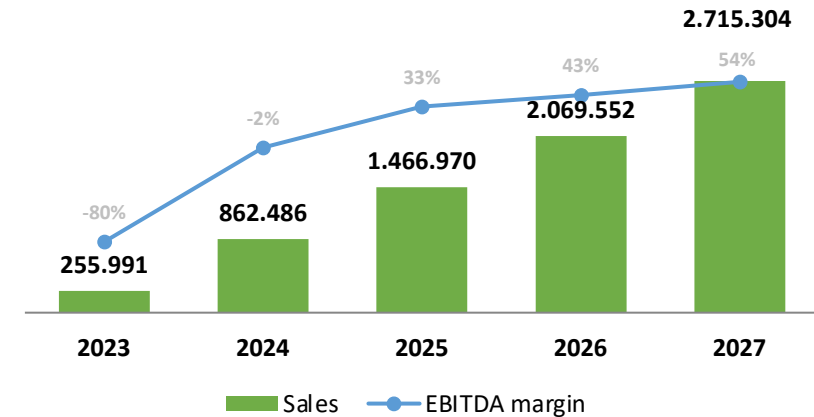
Hardware sales brings in a fair amount of revenues, but the main intellectual potential lays in the analytics and Insights that our data scientist provide on the data. Provide Fiel managers with automated Disease prediction models, Watering programs and custom lighting recipes. This is where the true value of HI Sports is monetized through a software licencing model.

Looking at the professional market alone we aim to be able to grow into a 2.7 million revenue by 2027. 70% will come from software licenses in year 5.

Additional revenue growth is foreseen into

- Other Market segments such as the recreational market.
- Additional Sensor development
- Internationalisation towards other markets such as Spain.
- Spil over to other sports, such as golf and cricket.

## Total Sales & EBITDA % Professional market





# Disclaimer

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Hi Sports reserves the right to change specifications and/or parts without prior notice. The contents of this Presentation are also subject to change without notice.

# Thank You!



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