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Unlocking Sports Potential: A Feasibility Study on Sporthood's Proposal for A Multipurpose Artificial Turf in Thiruvanthapuram

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Abstract

Purpose: The study evaluates the feasibility of Sporthood Pvt Ltd's multipurpose artificial turf project in Thiruvananthapuram, focusing on financial viability and community interest.

Theoretical framework: The study investigates the feasibility of Sporthood Pvt Ltd's multipurpose artificial turf project, incorporating financial aspects and potential collaboration for upfront costs.

Design/methodology/approach: The study employs a questionnaire with 50 respondents in Thiruvanthapuram, exploring the viability of Sporthood Pvt Ltd's artificial turf proposal, considering financial aspects.

Findings: Respondents show positive inclination for Sporthood Pvt Ltd's artificial turf proposal in Thiruvanthapuram, offering insights for strategic targeting and marketing.

Research, Practical & Social implications: Positive respondent inclination suggests viability; potential ROI and collaboration for upfront costs; funding exploration without compromising education; strategic targeting insights.

Originality/value: Originality lies in assessing viability and financial aspects of Sporthood's artificial turf proposal, backed by district-specific respondent data and insights

Keywords: Artificial Turf, Multipurpose Sports Facility, Capital Budgeting, Target Demographic, Sports Enthusiasm , Business Management , Industry , Innovation and Infrastructure , Good Health and Well -being

INTRODUCTION

The growth in the degree of awareness of the customers has led to a dramatic increase in competition as more and more companies are now trying to cater to the needs of these customersSonawane and Khang (2023). A feasibility study is a detailed analysis that considers all the critical aspects of a proposed project in order determine the likelihood of its succeedingAgustian et al. (2023). Success of the business depends upon return on investment which means the project will generate enough profit to justify the investmentSitinjak et al. (2023). In simple terms it is designed to reveal whether a project/plan is feasible. It is conducted in order to objectively uncover the strengths and weakness of a proposed project or an existing businessWelch et al. (2023). It can help to identify and assess the opportunities and threats present in the natural environment, the resources required for the project, and the prospects for success. It is conducted to find answers to the following questions Does the company possess the required resources and technology, will the company receive a sufficiently high return on its investment Different types of feasibility study are: Technical feasibility, financial feasibility, Market feasibility, Organizational feasibilityAgrawal and Jespersen (2023). The process of finding out how you're going to manufacture your goods or service to see if it's feasible for your business is called technical feasibilityDixit et al. (2022). You must plan every aspect of your business operations

before launching your offerings, starting with where you will get your production materials and ending with how you will keep track of sales. It's crucial to carry out a technical feasibility analysis because it can aid in the development of a production process planPhillips (2023). It takes a lot of planning to sell a good or a service since you must consider your budget, production team, facilities, marketing, and any other elements that are involved. There are several benefits to feasibility studies, including helping project managers discern the pros and cons of undertaking a project before investing a significant amount of time and capital into itDe Villa (2023). Feasibility studies can also enter a risky business venture. Such studies help the organization to grow and expand their operations.

All business organizations pose some level of riskSancak (2023). It has become crucial for business to outshine competition as more and more companies are now trying to cater to the needs of these customersShakatreh et al. (2023). An absence of proper planning and forethought leads to failure of entrants or decide to expand the operationsGatignon and Capron (2023). Thus, a proper plan is to be implemented before entering a new market. A proper example of this analysis is the feasibility studyWanof (2023). Feasibility studies examine taking decisions and they can be used to access funding opportunities Zaman (2023). This study focuses on financial feasibility study to analyse the business opportunity of a sports firm which is planning to expand the business operation in Kerala by starting their artificial turf in Thiruvanthapuram. At present they provide sports and fitness training in football and cricket in various artificial turf, so they are planning to start their artificial turf in Thiruvanthapuram.

The Primary objective of the study is:

- To analyse the financial feasibility of the project.
- To ascertain the cost involved in implementing the plan.
- To determine the expected year by which return on investment can be obtained.
- To take final decisions regarding the plan.

The remaining part of the paper is arranged as follows. Methodology in Section 2, Data Analysis and Interpretation in Section 3 and Conclusion and future scope of the work in Section 4.

METHODOLOGY

The study involves both primary data and secondary data. Primary data was collected through direct interviewAmelia et al. (2023). Secondary data required for the study was collected from Journals, Magazines and Publications, Websites, Reports and Studies Regarding sports sector and feasibility analysisYulmaida et al. (2023).

Tools for Analysis of Data

The data collected has been processed, tabulated and presented using two-way tables and figures. The main tool for analysis of data is percentage (%) analysis and Ranking methodPriya et al. (2023). Data collected using questionnaire is tabulated using percentage (%) of values. Data is classified based on both quantitative and qualitative.

Pay Back Period

Pay Back period(PBP) is calculated as:

$$PBP = \frac{II}{CI} \qquad (1)$$

Where II is the initial investmentand CI is the cash inflow.

Net Present Value

Net Present Value(NPV) is calculated as:

$$NPV = PVCI - PVCO \qquad (2)$$

where, PVCI is the Present Value of Cash Inflows and PVCO is the Prsent Value of Cash Outflows.

DATA ANALYSIS AND INTERPRETATION

Estimate expenses required to start a new football turf in Thiruvanthapuram

As the Sporthood is providing training to students in various disciplines by tie up with various artificial turfs in various locations in Kerala they have a plan to start their own turf in Thiruvanthapuram near Technopark area as that will be the best suitable place to start the turf. requires an initial investment of Rs 6000000/- Since Sporthood is a partnership firm with 2 founders each partner can either invest Rs 3000000/- each as owners funds or they can

claim govt subsidies to start the business. Also, we must bear additional expenses like lighting, electricity, turf maintenance, cleaning, purchase of gears etc. The company will be providing training facilities in collaboration with Kerala Blasters FC, also private artificial turf owners. For that company is planning to start a new artificial turf. Additionally, they intend to provide football training equipment, which will allow them to include the expense of doing so in the training package while not doing so for others.

Comparison of age groups in 2022 and 2023 (projected)

Once the turf is open age group between 5 to 19, it comes to an estimate that 18 students would be enrolled for football or cricket training, and it will increase in future and the stimated revenue from this programme would be doubled. Other than that, adults whose age group above 20 will be issued pass to get access the turf and will be charged Rs 1200/hr as shown in Table 1. Table 2 shows the estimated potential cricket and football team that the turf can occupy. During the year 2022 it is estimated that there would be 10 potential cricket teams and 15 potential football teams. During the following years there is an increase in frequency of 10 till the year 2024. Once the demand is fulfilled, we decided to change to 25 teams for cricket and 30 teams for cricket.

Table 1: Comparison of age groups in 2022 and 2023 (projected).

Age Group	Projected 2022	Projected 2023
5-19	18	30
20-30	20	40

Table 2: Details regarding Full time potential team players.

Team	Projected 2022	Projected 2023	Projected 2024	Projected 2025
Potential Cricket	10	20	30	25
Potential Football	15	25	35	30

Site suitability matrix

According to Figure 1, it is estimated that 5 points will be awarded to factors like site access that means the most suitable location for the turf is important so that pedestrians, car and bikes can be easily accessible, restroom facilities, turf lighting, restroom facility, and first aid are the factors are considered to be very important for this project. Secondly factors like neighbourhood compatibility, cafeteria, quality artificial grass, safety and security seating capacity, parking facilities are awarded with 4 points as it is also considered as the important factor, due to availability of excess land this land can be used for parking facilities that is why it is given 4 points. After the lifetime expansion possibility has got a less chance so it is given as 2 points

Site suitability factors	Score (1 to 5)	1	2	3	4	5
Site Access (cars, bikes, pedestrians)	5					✓
Small cafeteria for refreshments	4				✓	
Neighborhood compatibility	4				✓	
Sports lighting existing conditions	5					✓
Available area (11000sqft)	5					✓
Artificial grass	4				✓	
Expansion Potential	2		✓			
Security and Safety	4				✓	
Access to restrooms	5					✓
Hazardous materials	3			✓		
Seating Capacity	4				✓	
Parking facility	4				✓	
Location	4				✓	
First aid	5					✓

Fig. 1: Site suitability matrix

Payback period of the project

After computing payback period and net present value as shown in Table 3 and Table 4 of both the cases it came to conclusion that payback period in both the cases is the same which means if the revenue is stable/not stable the year of return on investment would be same 2 years, hence accept both the cases. Secondly, in both cases the present value of cash inflows is more than the present value of cash outflows, accept the project.

Table 3: Net Present Value of the project.

Year	Cash inflows	Present value@10%	Present value
2022	2400000	0.909	2181600
2023	2400000	0.826	1982400
2024	2400000	0.751	1802400
2025	2400000	0.683	1639200

Table 4: Computation of Payback period and Net Present Value.

Year	Cash inflows/ Revenue (Per month)	Revenue (Per year)	Present value at 10%
1	200000	2400000	0.909
2	300000	3600000	0.826
3	350000	4200000	0.751

Descriptive Statistics (Market demand analysis) - Age wise classification

It can be seen ffrom Figure 2 that out of 50 respondents, 8 respondents were between the age group of 6 to 15, 6 respondents were in age group between 15 to 18, 19 respondents were in age group between age group 19 to 25 and age group between 25 to 50 respondents are 17. Out of which age group between 19 to 25 are in majority and with an average age of respondents is 20.

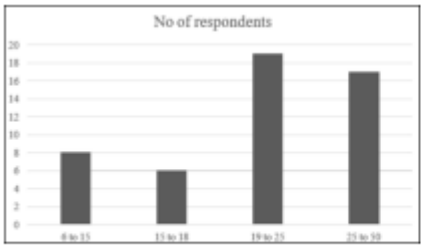

Fig. 2: Age wise statistics

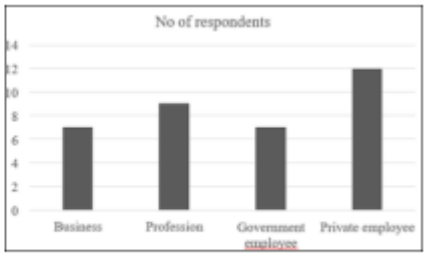

Fig. 3: Occupation wise statistics

Descriptive Statistics (Market demand analysis) - Occupation wise classification

It can be seen from Figure 3 that 7 respondents are in business, 9 are professionals, 7 are government employees, 11 are private employees and 15 are students. Of these 15 students are the majority and contributes 50 respondents.

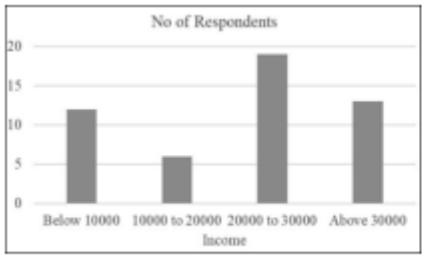

Fig. 4: Income wise statistics

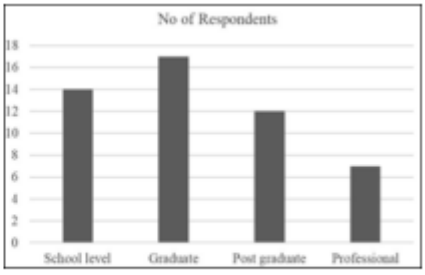

Fig. 5: Education wise statistics

Descriptive Statistics (Market demand analysis) - Income wise classification

It can be seen from Figure 4 that 12 have a monthly income below 10000, 6 have monthly

income between 10000 to 20000, 19 of them are in income group between 20000 and 30000, 13 have income above 30000. On this income group between 20000 and 30000 are more which has 19 respondents.

Descriptive Statistics (Market demand analysis) - Education wise classification

It can be seen from Figure 5 that 14 of the respondents have school level education, 7 have professional qualification, 12 are postgraduates and 17 the respondents are graduates.

Descriptive Statistics (Market demand analysis) - Sports enthusiast classification

It can be seen from Figure 6 that 34 of respondents are sports enthusiasts and the remaining 7 of them are not sports enthusiasts and 9 of them support sports activities. This figure implies that 34 of the respondents are sports enthusiasts.

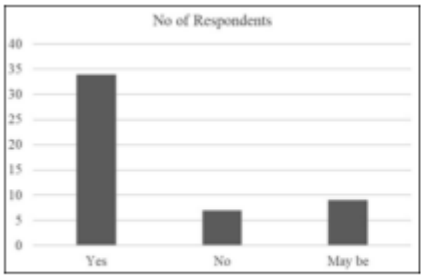

Fig. 6: Sports enthusiast classification

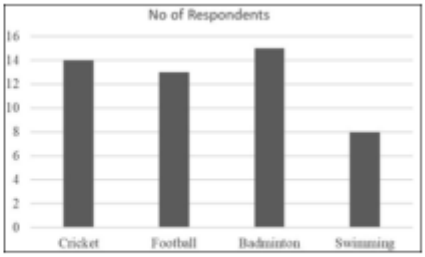

Fig. 7: Sports activities classification

Descriptive Statistics (Market demand analysis) - Sports activities classification

According to the Figure 7, 28% of the respondents support Cricket, 26% support Football, 30% likes badminton and 16% likes swimming. It can be concluded that majority of the respondents support badminton, which is 30%.

Classification based on sports location.

It can be seen from Figure 8 that 17 of the respondents play their preferred sports in artificial turf, 18 of them play their preferred sports in outdoor places, 5 prefer swimming pools, 4 use indoor courts to play their favourite games and the remaining 6 plays in badminton courts. Majority of the respondents prefer to play their games on artificial turfs.

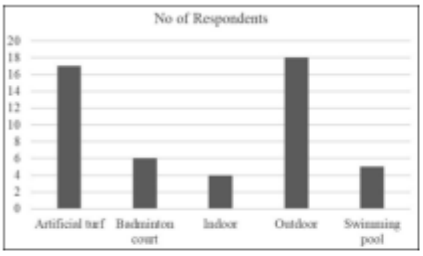

Fig. 8: Classification based on sports location

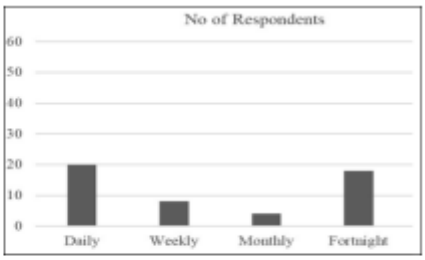

Fig. 9: Classification based on how often do you play

Classification based on how often do you play

According to Figure 9, 18 of the respondents play every 2 weeks, 20 of them play daily, only 8 of them play on weekly basis, 4 play in Monthly basis, after analysis 20 of the respondents are in majority who supports playing in daily.

Classification based on new Turf membership

It can be seen from Figure 10 that 24 of the respondents are willing to take membership in the new turf, 10 of them are not willing to take membership and 16 of the respondents may be willing to take membership. After the survey it was concluded that majority of the respondents would like to take membership in the turf.

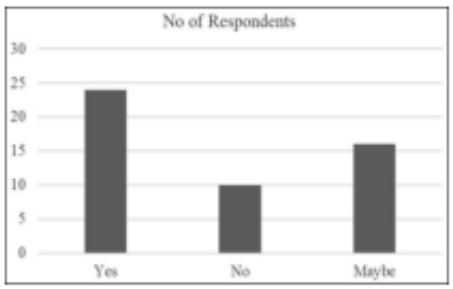

Fig. 10: Analysis on new turf membership

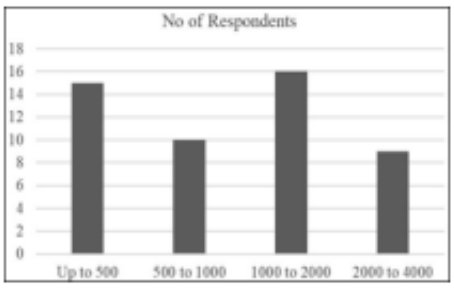

Fig. 11: Classification based on Membership Fees

Classification based on membership fees

According to Figure 11, 16 respondents are willing pay fees in range 1000 to 2000, 15 respondents are ready to pay fees up to 500, 10 willing to pay fees in between 500 to 1000 and remaining 9 ready to pay between 2000 to 4000.

Findings of the study

Based on the analysis and interpretation of data collected, the following findings were derived:

- It was estimated that the initial investment required to start football turf is Rs 6000000
- The following expenses will be included for operations of the business-like staff salary, maintenance cost, electricity, cleaning, turf repair expenses, turf lighting and purchase of gears except maintenance cost that that may be incurred in every 6 months.
- Would earn a revenue of Rs 236000 P.m.
- During last year students whose age group is between 5-19 used the turf and that recorded to 18 and we put an estimate that it would increase to 30. Adults whose age group is between 20 to 30 we got 20 players who took membership and next year it would increase to 40 players.
- It was found that in site suitability matrix 5 points were awarded to the most important factors that need to be considered while building the turf and it decreases its importance as it decreases the rating.
- After computing the payback period, after 2 years partners would get back their returns on invested amount in both cash flows are stable and not.
- It was found that the net present value for the business would be Rs 1605600/- if the cash inflows are stable every year and if the cash inflows are not stable net present value is Rs 2314200. It is concluded that we are ready to accept the business proposal.

Secondly, we also conducted a market analysis to find out whether society would accept the planned proposal and came to the findings that are listed below:

- In 50 respondents, as sample majority of the respondents were from the age group between 19 to 25.
- Out of 50 respondents, based on occupation wise classification 15 respondents are students and contributes 31.
- Based on income wise classification, 19 respondents have income group between 20000 and 30000.
- It was found that 17 respondents graduated on classifying on level of education.
- It was found that 34 respondents are sports enthusiasts, which contributes to 68.
- Based on sports activities, 14 respondents prefer to play cricket, 13 respondents prefer to play football, 15 respondents prefer to play badminton and 8 prefer swimming majority of the respondents like to play badminton.
- 17 respondents are playing their sports in artificial turf which constitutes 34.
- It was found that 20 respondents will go and play their sports activity daily.
- 24 respondents are willing to take new membership in our turf.
- Out of 50 respondents 16 respondents are willing to pay membership fees between 1000 to 2000.

CONCLUSION

The study on Sporthood's proposal for an artificial turf in Thiruvanthapuram affirms the

potential success of the venture. The positive response from the respondents surveyed highlights a demand for such a facility, supporting the decision to expand beyond football and cricket to include badminton. The financial analysis emphasizes the need for collaboration to share costs and suggests a sustainable funding strategy within the existing budget. This project not only navigated challenges in feasibility and financial terms but also provided valuable insights into diverse aspects of sports facility development. The successful completion of this study underscores the dedication of the Sporthood team and sets the stage for a promising sports-oriented venture in Thiruvanthapuram.

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