

Pre - Feasibility Study for Redevelopment of Jawaharlal Nehru Stadium under PPP Mode

NITI Aayog,
Government of India

Final Report
2018



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CONTENTS

Executive Summary	1
Background	1
Existing Situation	1
Redevelopment Strategies for the Stadium.....	2
Conclusion	4
Recommendations.....	4
Way Forward	6
1. PROJECT APPRECIATION – JAWAHARLAL NEHRU STADIUM	8
1.1 Accessibility.....	8
1.2 Sports Facility Overview.....	8
1.3 Catchment Area	9
1.4 User Category and Usage.....	10
1.5 Stakeholder’s Perspective.....	11
2 MARKET STUDY.....	14
2.1 Competitive Sports Facility.....	14
2.2 Retail Market in Vicinity.....	16
2.3 Hospitality in Vicinity	17
2.4 Recreational Games in Vicinity	17
3 DEVELOPMENT CONCEPT	19
3.1 Sports Excellence	19
3.2 Planning Norms.....	19
3.3 Transit Oriented Development (TOD) Policy	21
3.4 Potential for up-gradation/ optimizing of the existing infrastructure	21
3.5 Analyzing best practice sports stadiums/ complexes	23
3.6 Creating a Viable Sports Eco-System.....	23
3.7 Analysing Sports Mix Viability	27
3.8 Proposed Product Mix & Master Plan	29
3.9 Regulatory compliances.....	32
4 FINANCIAL ANALYSIS.....	35
4.1 Project Structure	35
4.2 Project Development Concept	35
4.3 Risk Allocation.....	36
4.4 Key Stakeholders	37
4.5 Method of Financial Analysis	38
4.6 Area Statement	38
4.7 Key Cost Assumptions	39
4.8 Revenue Assumptions	41
4.9 Conclusion.....	43
ANNEXURE A1 – INSTITUTIONAL FRAMEWORK OF SI	45
ANNEXURE A2 – STAKEHOLDER INTERACTION	47
ANNEXURE A3 – COMPETITIVE SPORTS FACILITY.....	49
ANNEXURE A4 – RETAIL MARKET IN VICINITY	50
ANNEXURE A5 – TRANSIT ORIENTED DEVELOPMENT	53
ANNEXURE A6 – PPP AS AN ENABLER IN SPORTS INFRASTRUCTURE	62
ANNEXURE A7 – INTERNATIONAL BEST PRACTICES	65
ANNEXURE A8 – FINANCIAL STATEMENT.....	69

LIST OF FIGURES

Figure 1: JLN Stadium - Accessibility & sports facility overview	8
Figure 2: JLN Catchment Area.....	10
Figure 3: Facility Utilization Level	10
Figure 4: Competitive Sports Facilities	14
Figure 5: Comparison of Facility Infrastructure	15
Figure 6: Key Commercial Space in the vicinity of the JLN Stadium.....	16
Figure 7: Only 30 % Utilizable ground coverage remaining as per existing norms	20
Figure 8: Only 40 % of total built up area remaining as per existing norms	20
Figure 9: JLN Stadium Complex–Metro station distance.....	21
Figure 10: Plan of the proposed Multi-Purpose/ Multi Sports Hall.....	22
Figure 11: Floor wise utilizable area and total floor area	24
Figure 12: Ground floor of JLN stadium	25
Figure 13: First floor plan of the stadium	26
Figure 14: Second floor plan of JLN stadium.....	26
Figure 15: Design concept: Mandala	30
Figure 16: Available land parcels in JLN stadium.....	31
Figure 17: DBFOT Model.....	36
Figure 18: Revenue snapshot @ 40 FAR vs 400 FAR.....	42
Figure 19: Sports ecosystem of India	45

LIST OF TABLES

Table 1: JLN sports infrastructure.....	8
Table 2: Stadiums in catchment area of JLN Stadium.....	14
Table 3: Membership options in competing complexes.....	16
Table 4: Commercial retail rates of catchment area	16
Table 5: Commercial office space rates of catchment area.....	17
Table 6: Hospitality in vicinity	17
Table 7: Recreational games center in vicinity	17
Table 8: Planning Norms as per Master Plan for Delhi 2021.....	19
Table 9: JLN stadium area statement.....	20
Table 10: Activities permitted under divisional sports infrastructure.....	20
Table 11: JLN stadium upgradation, renovation, relocation	22
Table 12: JLN stadium area breakup floor wise.....	23
Table 13: Existing functions in JLN stadium to be used for Retail & Commercial	24
Table 14: Programme Under the Stadium stands	25
Table 15: First floor proposed plan	25
Table 16: Tentative activities under sports adventure hub	27
Table 17: Product mix at 40 FAR	31
Table 18: Product mix at 400 FAR	32
Table 19: Risk matrix	37
Table 20: Responsibility matrix	38
Table 21: Proposed area statement for JLN stadium	38
Table 22: Cost inputs at 40 FAR.....	39
Table 23: Cost inputs at 400 FAR.....	39
Table 24: Project phasing	40
Table 25: Financial cost assumptions.....	40
Table 26: Operation and maintenance cost assumptions.....	40
Table 27: Revenue Assumptions	41

Table 28: Financing structure Assumptions.....	42
Table 29: Key financial indicators	42

GLOSSARY

AFC - Asian Football Confederation

CWG – Commonwealth Games

DBFOT- Design Build Finance Operate Transfer

DCF – Discounted Cash Flow

DDA – Delhi Development Authority

EPC – Engineering Procurement Construction

FAR- Floor Area Ratio

FIFA - the International Federation of Association Football

GOI – Government of India

IOA – Indian Olympic Association

JLNS – Jawaharlal Lal Nehru Stadium

MYAS - Ministry of Youth Affairs and Sports (MYAS)

NCR- National Capital Region

NITI – National Institute of Transforming India

O&M – Operation and Maintenance

PPP- Public Private Partnership

SI- Sports India

STC – Sports Training Centre

WACC- Weighted Average Cost of Capital

TOD – Transit Oriented Development

A nighttime photograph of the Colosseum in Rome, Italy. The ancient amphitheater is illuminated from within, highlighting its iconic arches and tiered structure. In the foreground, a road with a crosswalk is visible, with long, horizontal light trails from passing vehicles in shades of white, yellow, and red. A large, semi-transparent yellow rectangle is overlaid on the left side of the image, containing the text "EXECUTIVE SUMMARY".

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

BACKGROUND

Sports India (SI), the implementation body under Ministry of Youth Affairs and Sports (MYAS) currently operates and maintains five stadiums in Delhi i.e. Jawaharlal Nehru Stadium (JLN Stadium), Indira Gandhi Stadium (IG Stadium), Dr. Karni Singh Shooting Range, Dr. Shyama Prasad Mukherjee Swimming Pool Complex and Major Dhyan Chand National Stadium. Out of these 5 stadiums, SI intends to improve and upgrade existing sports infrastructure to world class standards and assess the potential of developing other sports, allied and supporting commercial activities at Jawaharlal Nehru Stadium and Indira Gandhi Stadium on Public Private Partnership (PPP) basis.

In consultation with NITI Aayog, as mentioned in Box-1, SI appointed Ernst & Young LLP (hereafter referred to as “EY LLP” and “consultant”) to carry out a Pre-Feasibility Study for Redevelopment of Jawaharlal Nehru Stadium (JLN Stadium) and Indira Gandhi Stadium (IG Stadium) on PPP basis to achieve the aforementioned objectives¹.

BOX-1: Objectives of the Project

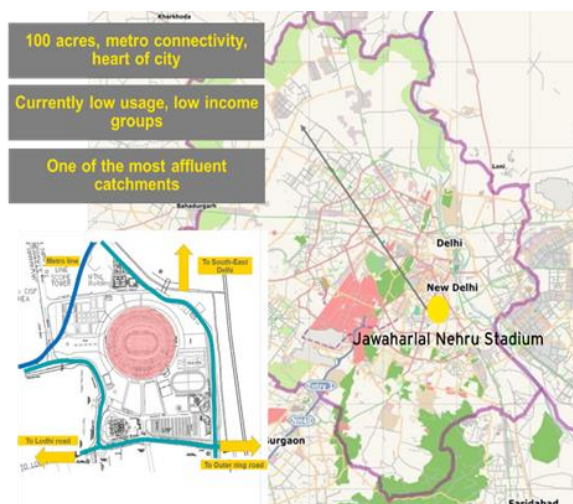
SI consulted NITI Aayog to undertake development of JLN Stadium with the primary objectives as stated below:

- The stadium should address the needs of all sections of sports community
- The development should be financially self-sustainable
- The design should incorporate hostel / hotel / service apartment accommodation requirement for players and coaches (3 to 5 star accommodation)
- The stadium should be able to accommodate a footfall of 20 lakh
- The stadium should be open and accessible to every strata of society
- Sporting facilities for senior athletes should not be affected during construction phase
- The design and operative mechanism of the stadium should encourage younger generation to use the facilities
- The stadium should adhere to international standards of athletic events

EXISTING SITUATION

Jawaharlal Nehru Stadium, a national level stadium, is located in central Delhi on the periphery of Lutyen’s designed old Delhi. The stadium is spread across 100 acres with a seating capacity of 60,000. The stadium is designed and constructed to meet international sports standards. It is owned and managed by SI on behalf of Ministry of Youth Affairs and Sports (MYAS).

The land use in the vicinity of the stadium is dominated by high income group residential and commercial areas. Defence Colony, Sewa Nagar, Lodhi Colony, and Pragati Vihar Khan Market, Khanna Market and Meherchand Market are some of the areas situated in the catchment zone of the stadium. The stadium not only caters to the high income group residential areas, but also the mix of society within 5-10km distance range of stadium through its various initiatives for sports.



Accessibility

The stadium is easily accessible through roads, metro and other modes of public transport. The nearest metro stations for accessing the stadium are Jangpura metro station and JLN metro station, located at a distance of 300 meters and 800 meters, respectively.

¹ The objectives have been identified in consultation with SI and NITI Aayog for self-sustainable development of sports infrastructure facility.

REDEVELOPMENT STRATEGIES FOR THE STADIUM

The objective of developing JLN stadium is to introduce “Sports in the DNA of the nation”. A mini sports city shall be developed which would offer “state of the art” training facilities. It would be accessible to all classes of people/ strata of society at national and international level.

Based on preliminary assessment of the existing facilities at JLN Stadium² and proposed objective for overall development of the stadium, two options were evaluated for undertaking financial viability.

1. Redevelopment by 40 FAR as prescribed by Master Plan for Delhi 2021

The stadium complex falls under Zone D of the Zonal Development plan under Master Plan of Delhi (MPD) 2021. It is categorized as Public Service-3 (PS-3) under Public-Semi-Public Zone which includes Sports Facilities / complex/ Stadium/ Sports Centre. With the applicable FAR (Floor Area Ratio) of 40, a ground coverage of 20% is permitted as per existing Delhi Bye Laws.

As per MPD-2021 under PS-3 5% sports related commercial activities are permitted which includes multi-use stadium for exhibitions, trade shows, multiple sports related events, extreme sports, academies, sports medicine, water slides, residential accommodation like hostels, ward residences etc.

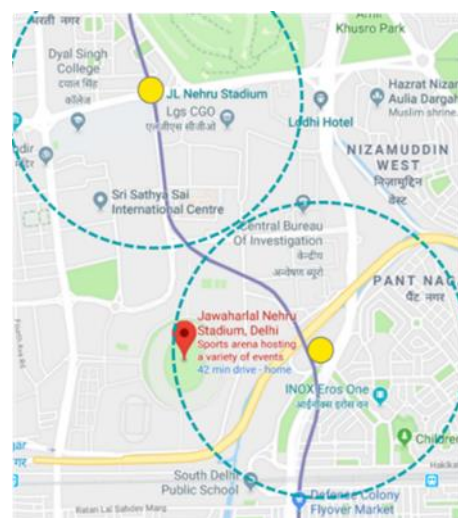
Planning Norms	Area (Sq.mt)
Site Area	3,87,302
Allowed Ground Coverage @20%	77,460
Already Consumed Ground coverage	53,417
Remaining Utilizable Ground Coverage	24,043
Allowed Built Up @40 FAR	1,54,921
Already Consumed Built Up	92,830
Remaining Built Up Area	62,091

2. Redevelopment by 400 FAR as per Transit Oriented Development (TOD) Policy

The National TOD policy focuses on creating high density mixed land use development of areas falling in the influence zone of transit stations, i.e. within a walking distance of 500-800 meters or along the transit corridor, provided the station is within 1km of site.

In case of JLN stadium, the nearest metro station, i.e. Jangpura metro station and JLN metro station are within 300 meters and 800 meters, respectively. On account of this, the TOD norms shall apply wherein an FAR of 400 can be utilized for development.

Based on the FAR utilized and FAR available as per the TOD norms, the area statement of JLN stadium is presented in the table below:



Planning Norms	Area (Sq.M)
Site Area	3,87,302
Allowed Ground Coverage @20%	77,460
Consumed Ground coverage	53,417
Remaining utilizable Ground Coverage	24,043

² The consultant conducted site visits of JLN and IG stadium and carried out primary surveys with users and SI, in order to evaluate existing user profile and assessment of infrastructure facilities.

Allowed built up @40 FAR	1,54,921
Consumed built up	92,830
Remaining built up area	62,091
On TOD @400 FAR additional built up	14,56,378
Probable loss on built up area due to TOD influence zone & ASI norms @ up to 50%	0
Net available Built up on TOD (probable)	14,56,378

Based on the above estimates, the total area available in case of 40 and 400 FAR is ~62,000 sq.mt and ~15 lakh sq.mt respectively. An indicative product mix for both the options were evaluated. The table below highlights the product mix for redevelopment @ 40 FAR:

Product Mix at 40 FAR			
S. No.	Products	Built Up (Sq.mt.)	Cost (INR Cr)
1	Existing Infrastructure Sports	67,400	34
2	Commercial (Under the stadium)	29,015	145
3	Professional Sports Facilities + Up gradation	6,591	40
4	Sports Hubs	500	33
5	Sports University with highest sports quota in the country	51,000	140
6	Utilities and Amenities	4,500	10
Total		1,59,006	401

In the existing FAR byelaws of the MPD 2021, the built up area includes, Adventure sports hub and sports university apart from the up gradation, utilization and optimization of the existing sports facilities. The total base cost as per current prices is estimated at INR 268 crores which includes the cost towards renovation/refurbishment/relocation of existing sports infrastructure, a sports university and development of area for commercial exploitation. Such commercial area shall be restricted to sports related activities only and may include, sports shops (Decathlon), retails units (Nike, Reebok, Adidas), virtual gaming (Smaash, BluO), adventure zones or any other allied activity.

As per TOD norms by Delhi Development Authority, “the overall development mix shall include 30% of available FAR is mandatory for residential development in every new/redevelopment project within influence zone.” Based on interactions with officials at SI and NITI Aayog, and in the light of the objectives set for this project, to develop JLN stadium as a “hub for promotion of sports for all”, the residential development shall be restricted and SI or the private developer shall seek approval from the competent authority in this regard.

The table below highlights the product mix for redevelopment @ 400 FAR:

Product Mix at 400 FAR			
S. No.	Products	Built Up (Sq. mt.)	Cost (INR Cr)
1	Existing Infrastructure Sports renovation	63,815	34
2	Professional Sports Facilities + up gradation	6,591	27
3	Sports Hub	500	20
4	Commercial (Under the stadium)	29,015	73
5	Sports University	51,000	109
6	Sports Academies + School + Community use	1,58,921	342
7	Retail/Commercial/Hotel	3,09,842	1,336
8	Government offices	3,09,842	667
9	Semi Government offices		
10	Commercial Offices	1,54,921	583
Total		11,00,372	3,221

In case of 400 FAR as per TOD Zone, a mix of Sports Adventure hub, University, Academies, Retail, Commercial offices and Government offices is proposed. The total base cost as per current prices is estimated to be INR 3,221 crores which includes cost towards renovation/refurbishment/relocation of

existing sports infrastructure, sports university, sports academies, hotels (3/4/5 star, budget hotels, AirBnB etc.) and development of area for commercial exploitation.

CONCLUSION

Identifying Jawahar Lal Nehru Stadium as a dedicated Football stadium capable of hosting international events has been one of the key takeaways of the study. The programme consisting of Sports Universities, Academies, Hostels for players, workspaces for sports-related outfits, sports retail, sports club and 3 star-4 star hotel accommodation for visiting teams, national-international training camps completes the ecosystem of sports sustainability and is a viable revenue model for the private sector.

Based on the conceptual development options for 40 and 400 FAR, financial analysis was carried out by the consultant. The table below summarizes the key results of the analysis.

Particulars	Unit	@ 40 FAR	@ 400 FAR
		Value	Value
Total project cost	INR Crore	490	3,929
Annual revenues (stabilized operations in 6 th Year)	INR Crore	305.5	2,878
Equity IRR	%	18%	18%
Annual concession fee (escalated by 5% year-on-year)	INR Crore	100	750
Revenue share – bidding parameter	% of total revenues (from sports and non-sports/ commercial)	26%	34%
Concession period:			
a. For stadium	Years		a. 30 years
b. For commercial			b. 45 years

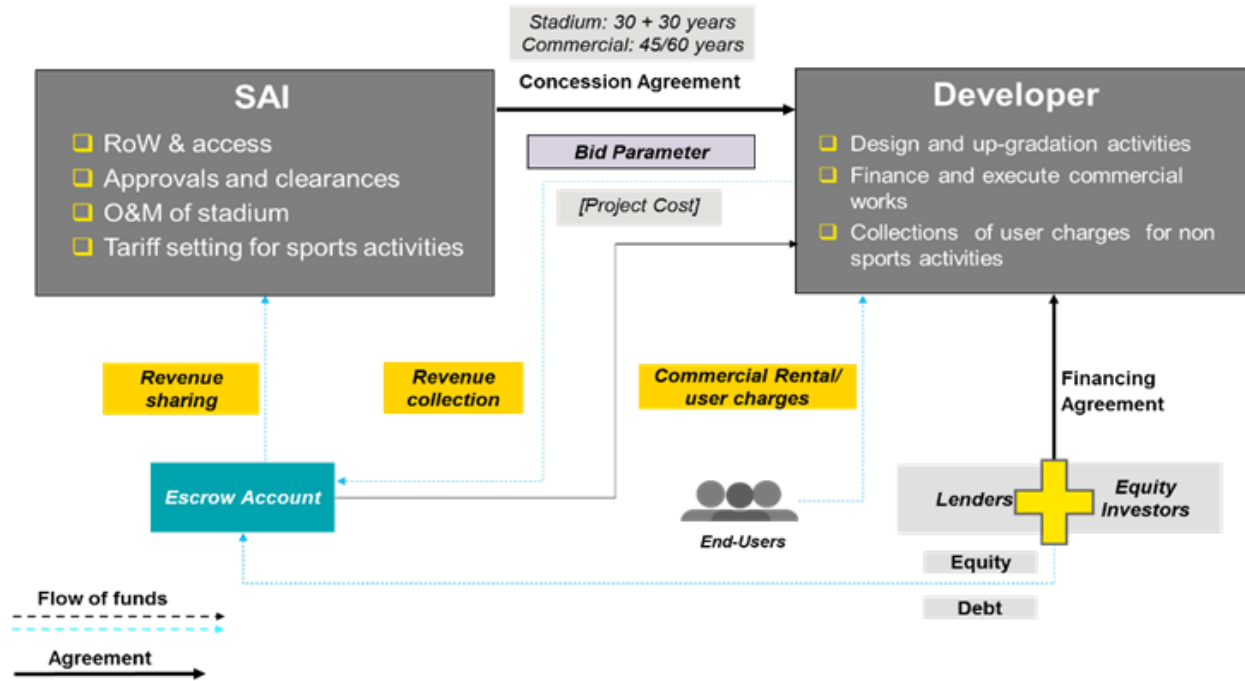
RECOMMENDATIONS

Given the steep timelines for development of JLN stadium on PPP basis, it is recommended to undertake construction in a phased manner. The first phase shall be based on 40 FAR option with incremental proposed plan of 400 FAR to be taken up in further phases. If the Authority chooses the option of 400 FAR, several statutory approvals shall be required from SI prior to the transaction phase which may result in implementation delays.

As per the financial analysis, for an equity IRR of 18% the revenue share is estimated to be between 25% - 30% with a provision of an annual concession fee of INR 100 crores escalated annually.

Proposed Project Structure

A DBFOT concession structure is proposed for development of JLN stadium for a 45 year concession period and a 30 year period for stadium operations. The model has been summarized in the figure below:



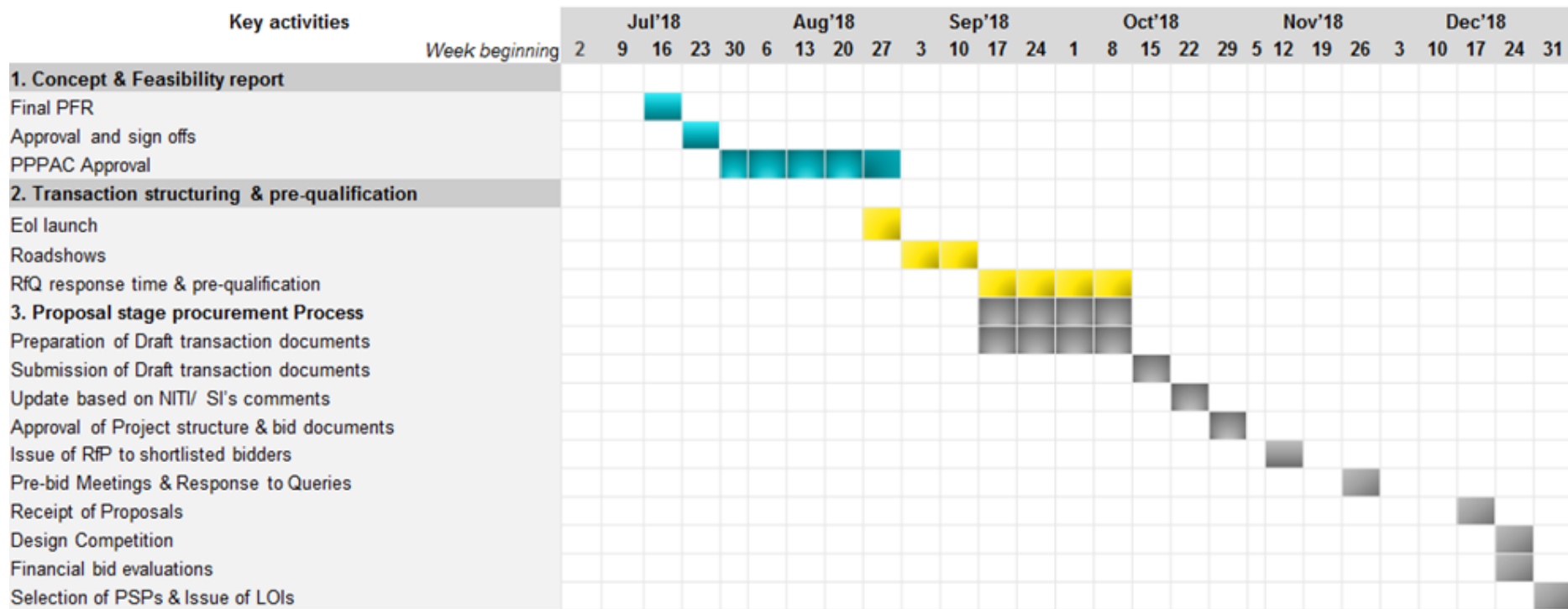
Key contours of the model are:

- To upgrade current sports facilities, operate and maintain the same for 30 years as per specified performance standards.
- Further, develop additional sporting facilities, operate and maintain them for 30 years
- Develop, operate and maintain commercial areas as per applicable laws for [45 (30+15) - 60 (30+30) yrs.].
- Sports facilities to be regulated by SI but operated and maintained by private sector

WAY FORWARD

Based on the recommendations for development options, SI may take the proposal to bidding stage. As per standard industry practice, a two stage bidding process shall be undertaken wherein the first phase is the qualification stage to shortlist applicants based on technical and financial criteria. The second stage is the bid stage wherein the Request for Proposal along with draft a Concession Agreement may be shared with the shortlisted bidders to invite financial bid. The bidding parameter for selection of preferred bidder shall be based on highest revenues share (the bidder offering highest per cent of total gross revenues from sports & non-sports activities shall be selected).

Prior to floating the RFP documents, SI shall seek approval from the competent ministries (Ministry of Youth Affairs and Sports and Ministry of Finance – Department of Economic Affairs). An indicative timeline for the implementation of project is presented below:





**PROJECT
APPRECIATION**

1. PROJECT APPRECIATION – JAWAHARLAL NEHRU STADIUM

Jawaharlal Nehru Stadium, a national level stadium, is located in central Delhi on the periphery of Lutyen's designed old Delhi. The stadium is spread across 100 acres with a seating capacity of 60,000. It has been designed and constructed to meet the international standards of the Asian Football Confederation (AFC), the International Federation of Association Football (FIFA) and the International Association of Athletics Federations (IAAF). It is currently owned and managed by Sports India on behalf of Ministry of Youth Affairs and Sports, Government of India, (infrastructure owned and managed by the central government). The institutional framework for sports in India and current schemes undertaken by Government of India for promoting sports have been detailed in Annexure A1 at the end of this report.

The Jawaharlal Nehru Stadium was constructed by the Government of India to host the athletic events and ceremonies of the Asian Games in 1982. It also hosted the Asian Championships in Athletics in 1989. The stadium was renovated/upgraded for the Commonwealth Games (CWG) in 2010, hosting the track and field events and opening and closing ceremonies.

1.1 ACCESSIBILITY

JLN Stadium is easily accessible through roads (as depicted in Figure 1) and is in close vicinity of ring road of Delhi that circles around the key destinations and offers connectivity to main centres of NCR region.

Elevated road over Barapullah Nallah was developed as an exclusive corridor for the sports personnel between the games village in East Delhi and JLN Stadium during the Common Wealth Games 2010. This road is operational and provides an efficient connectivity for general public to reach stadium from far off areas of East Delhi and NCR region.

The nearest metro station for accessing the stadium are Jangpura and JLNS metro station located at a distance of 300 meters and 800 meters from the stadium, respectively.

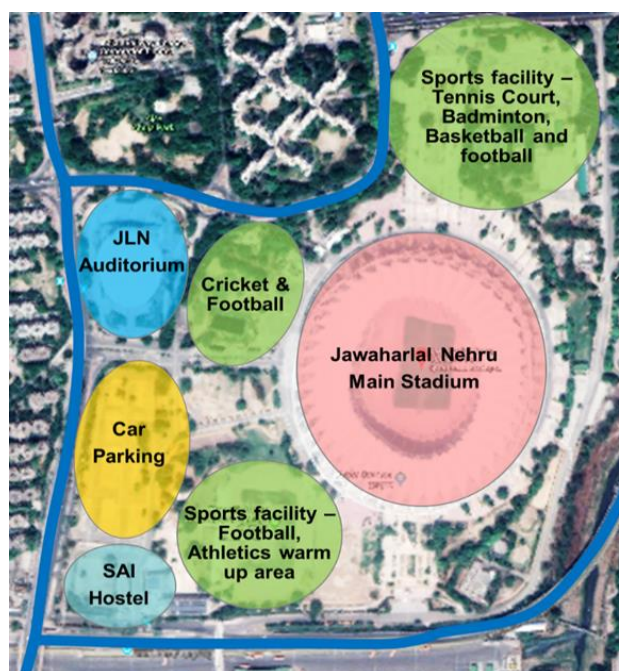


Figure 1: JLN Stadium - Accessibility & sports facility overview

1.2 SPORTS FACILITY OVERVIEW

JLN stadium was developed as a multi-use sports ground where several national and international sports events have been held in the past. The stadium was constructed with an objective to meet the international standards of football and athletic sports events. The stadium houses the following sports activities³:

Table 1: JLN sports infrastructure

JLN Existing Sports Infrastructure		
No.	Description	Discipline
1	JLN stadium	Athletics
		Football
		Weightlifting
2	Weightlifting auditorium	Wushu
		Wrestling

³ Information has been collated based on site visits on JLN Stadium and discussion with SI.

JLN Existing Sports Infrastructure		
No.	Description	Discipline
3	On ground (Come & Play)	Archery
		Cricket
		Football
		Basketball
		Badminton
		Table Tennis
		Tennis
		Volleyball
		Handball
		Lawn Ball
4	Others	Fitness center + Spa
		Players hostel

The main athletic track is located inside the stadium forming a periphery of the main football ground. Practice area outside the main stadium constitutes of Javelin throw, shot put and discus throw along with a practice track. The stadium incorporates two full size football grounds, one futsal ground and a small park for non-sports activities. The main ground is used to host football sports events and futsal ground with synthetic pitch has been constructed for small practice sessions and is used to train children below the age of 10-12 years. JLN stadium also houses infrastructure for archery wherein dedicated space is allocated with high boundaries and different target ranges.

Other sports facilities, like badminton, basketball, lawn tennis and table tennis facilities are located in close proximity to each other. Four volleyball outdoor courts are provided. Weightlifting area has ample space for pre-workout on the ground floor and the practice area is located in the basement. The stadium also provides hostel facility to athletes and campers within the complex with fitness centre.

The primary source of revenue of the stadium is from users registered under the 'Come and Play Scheme'⁴ and renting out assets to national teams/ league franchises. Use of facilities for hosting events such as concerts and other non-sports activities are also undertaken. SI has improved their level of service offerings through online viewing and ease of booking of stadium for sporting events to enhance asset utilization.

1.3 CATCHMENT AREA

A review of leisure and sporting facilities in the catchment area and benchmarking principles indicate that local or municipal recreation or sporting facilities have a primary catchment radius of approximately 5 km and a secondary catchment radius of 10 km. Approximately 75% to 85% of users reside within a 5 km radius while the remaining 15% to 25% come from areas within the 5 km to 10 km radius of the facility. Developing a stadium with state of the art sports infrastructure will attract users from a much wider catchment area⁵.

The catchment area is also influenced by a number of other factors, including range and quality of facilities and services offered, natural and built barriers i.e. road connectivity, travel times and the availability of any other competing facilities. Considering regional planning principles, it is common that facilities usually share catchment areas, particularly secondary catchment area. The figure 2 below illustrates catchment area within 5 km, 10 km and 20 km influence zone of JLN Stadium.

The major residential areas near the stadium include Defence Colony, Sewa Nagar, Lodhi Colony, Pragati Vihar and Kotla-Mubarakpur. JLN is also closely located to high end market places such as Khan Market, Khanna Market and Meherchand Market.

⁴ The Come & Play Scheme was initiated by SI at various stadium complex for optimum utilization of sports facilities in Delhi and across the country. The scheme primarily focusses on encouraging local sports persons and sports enthusiasts with an opportunity to train under SI coaches. The trainees are provided with playing arenas/non-consumable equipment such as field, track, tables, mats, etc. and minimum inescapable consumables like balls, shuttle-cocks, etc. by SAI. However, trainees are required to bring sports equipment like racquets, bats etc.

⁵ Major Regional Sports Facility Feasibility Study, City of Darebin, September 2014

Lodhi Colony is mainly dominated by government residential areas with a mix of low and middle class income groups. Sewa Nagar is another government colony with lower level income group population. On the south of JLN, Defence colony has a mix of government and private accommodation with independent houses majorly constituting high income group. Pragati Vihar is inhabited by government employees belonging to high income group. Jangpura and Lajpat Nagar have private colonies which are mainly inhabited by middle class income group. Jor Bagh has private colonies catering to high income group category and Kotla-Mubarakpur constitutes of lower income households.

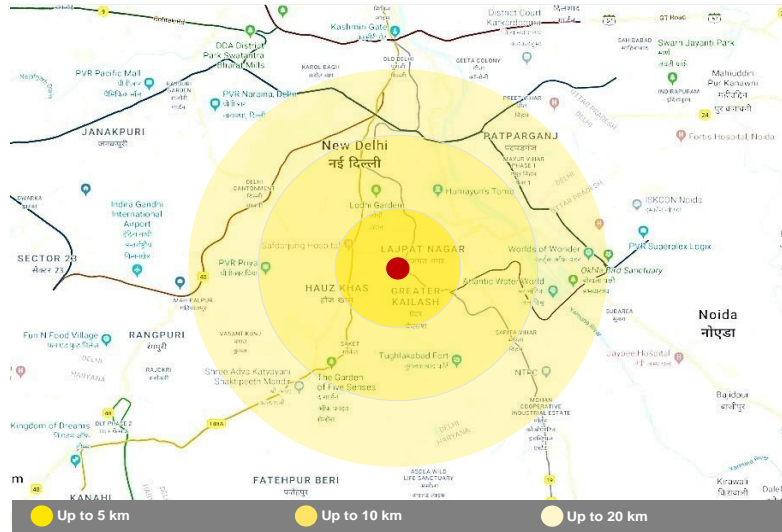


Figure 2: JLN Catchment Area

1.4 USER CATEGORY AND USAGE

The figure 3 below illustrates existing user category which are registered with JLN stadium. Core sport facilities at JLNS is utilised substantially by come & play users; specialized sports facilities are used by campers and academy trainees⁶. At JLN stadium, majority of users registered under come and play users scheme have enrolled for athletics (track & field, short put, javelin, etc).

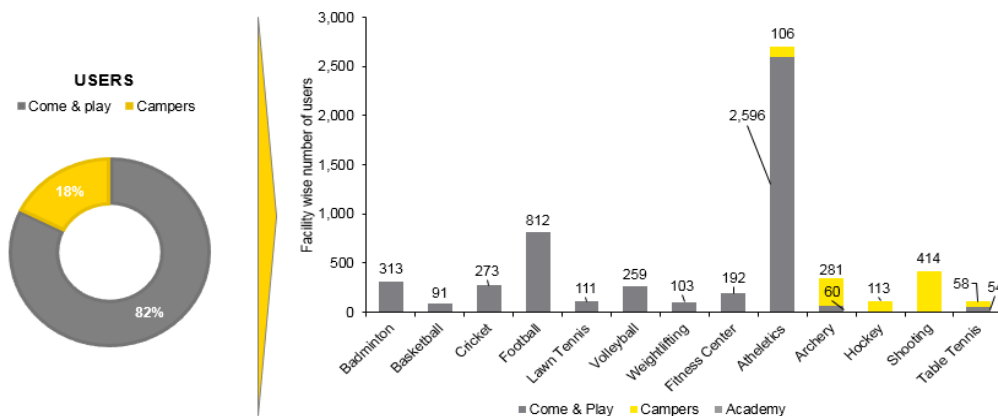


Figure 3: Facility Utilization Level

⁶ The analysis has been carried out based on secondary data collection from SI officials.

1.5 STAKEHOLDER'S PERSPECTIVE

It is imperative to identify major stakeholders of the project who would help define a vision for the development. A comprehensive stakeholder engagement would help identify the requirements of the sports fraternity and accordingly design the facilities. This would also help achieve higher utilization of the infrastructure facilities.

1.5.1 Sports India

SI intends to upgrade the current facility at JLN stadium into a world class sports stadium in terms of infrastructure and utilization. Below are some of the key objectives which SI aims to achieve⁷:

- The stadium should address the needs of all sections of sports community.
- The development should be financially self-sustainable
- The design should incorporate hostel / hotel / service apartment accommodation requirement for players and coaches (3 to 5 star accommodation).
- The stadium should be able to house a footfall with 20 lakh viewers
- The stadium should be open and accessible to all classes of people/ strata of society
- Sporting facilities for senior athletes should not be impacted during construction phase
- The design and operative mechanism of the stadium should encourage younger generation to use the facilities
- The stadium should adhere to international standards of athletic events
- The sports facilities should be segregated for elite athletes and recreational sports

1.5.2 User Interaction

Users' perspective

- 80% of the users use public transport to commute while few users use private vehicles, and others residing in the nearby areas prefer to walk
- 70% of the users are attracted because it has experienced coaching staff
- 65% of the users have positive intentions towards new facilities such as 24x7 gyms and swimming pools
- 90% of users believe that the facility is well run and maintained with minor issues pertaining to location of washrooms and water coolers.

Parents

- 79% of the parents willing to send their children on account of any increases in tariff up to Rs. 150 per month.
- 80% of the parents were satisfied with the current sports infrastructure. However, there are no waiting area/hall for parents.
- One major concern highlighted during our interaction with parents was lack of adequate in house medical facility.

Coaches and Administrators

- Archery and cricket facility is small in terms of area and needs to be expanded in order to cater large number of users.
- No warm up area provided for basketball users while more futsal fields are required for football.
- Badminton courts are not built as per international standards.
- Designated changing rooms and drinking water facility is required for the weightlifting facility.

⁷ The objectives have been identified in consultation with SI and NITI Aayog for self-sustainable development of sports infrastructure facility.

- The administrators highlighted shortage in manpower and inadequate marketing campaigns to promote existing schemes and benefits provided at the stadium.

The details of the primary survey conducted at JLN stadium is included in Annexure A2.



MARKET ASSESSMENT

2 MARKET STUDY

Market study is the most crucial aspect driving project conceptualization and feasibility assessment. It is critical to understand the competitive assessment framework of the market in which the stadium is expected to operate and expected footfall. The first key task for assessing potential development in these proposed facilities is to determine the market demand for each offered sport as well as latent demand for new facilities. This was undertaken through conducting a detailed site assessment and study the competitive developments in the vicinity of the stadium. This section undertakes detailed assessment of competitive sports and retail facilities in the vicinity of JLN stadium.

2.1 COMPETITIVE SPORTS FACILITY

Jawaharlal Lal Nehru stadium was developed with a vision of providing world class sports infrastructure to the next generation of sports talent of India, irrespective of the economic strata they belong. The current sport facilities provided by SI in JLN stadium are highly subsidized in order to cater the needs of dedicated sportsmen which majorly embark from low to middle economic strata.

Considering the geographical location of JLN stadium in Delhi, some of the major sports complexes which provide similar sporting infrastructure and allied activities were assessed⁸. These included Siri Fort Sports Complex, Saket sports Complex and Thyagraj stadium. Saket and Siri Fort sports complex are operated by Delhi Development Authority (DDA) and are mainly influenced by higher income group users as compared with JLN stadium.

A comparative analysis between JLN Stadium, Siri Fort and Saket Sports Complex was done on the following parameters:

- Provision of sports facilities
- Provision of non – sports facilities
- Land availability and utilization
- User profiles
- Membership options
- Number of academies / camps

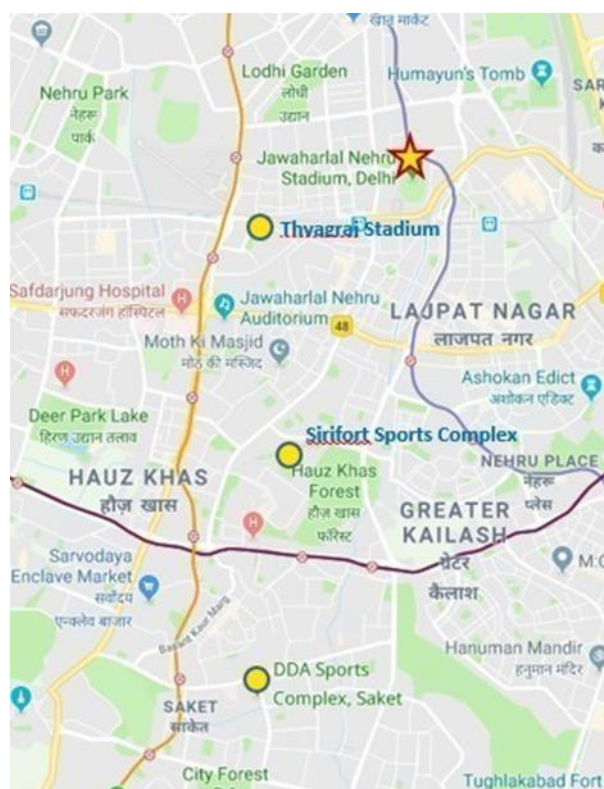


Figure 4: Competitive Sports Facilities

Table 2: Stadiums in catchment area of JLN Stadium

No.	Name of facility	Area (in acre)	Distance from JLN Stadium (in Km)	Opening year	Managed by
1	Thyagraj Stadium	16.5	2.8	2010	GNCTD
2	Siri fort Sports Complex	32	4.8	1989	DDA
3	Saket Sports Complex	18	9	1990	DDA

⁸ The assimilation of information was undertaken by consultant from information available in public domain through DDA website.

2.1.1 Provision of Sports and Non-Sports Facilities

The figure below illustrates the gap in non-sport activities that other competing sport complexes offer to its users ultimately leading to an enhanced sport experience with other allied recreational activities. Effective land utilization of JLNS is significantly lower as compared to Siri fort and Saket that have demonstrated substantially higher utilization owing to their small area and no. of users availing higher number of facilities. The higher number of offering of these sport complexes have significantly mobilized the youth in catchment area to inculcate these sports/recreational activities in their daily life and therefore, sport complexes are now a hub of youth affairs.

Note:

- Sporting facilities includes cricket, football, athletics, wrestling, weightlifting, cycling, shooting, badminton, lawn tennis etc.
- Non – Sports facilities include aerobics, yoga, recreational games such as bowling, virtual games etc.

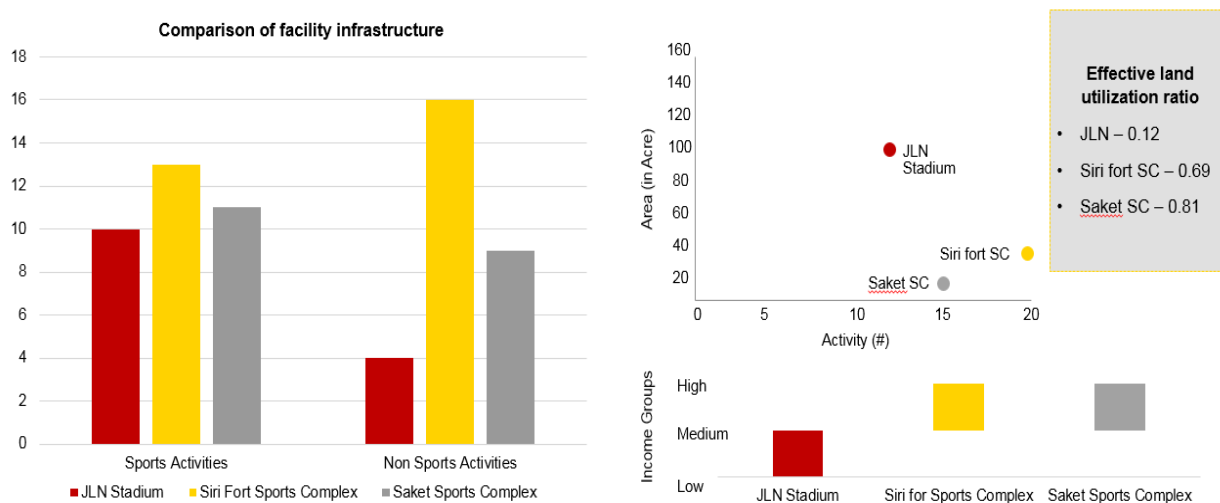


Figure 5: Comparison of Facility Infrastructure

The land utilization ratio of Siri Fort is the highest as compared to the other two stadiums. It offers over 20 activities in less than 50% area of JLN.

2.1.2 User Profile

The primary survey conducted highlight that >70% % of users at JLN have an average annual income of 4 - 8 lakhs p.a., while for Siri Fort Sports and Saket Sports Complex is majority are high income group users.

2.1.3 Membership Options

JLN does not offer casual membership as well as corporate membership. This restricts the number of users as compared to the other competing sports facilities. The minimum membership tenure is 1 year while the other sports complex offer flexibility in defining the membership period. Also, the number of academies are much lower as compared to Saket Sports Complex and Siri Fort Complex. The table below compares the membership options available at the three stadiums. The details of competitive sports facility is given in Annexure A3.

Table 3: Membership options in competing complexes

Potential user category in sport infrastructure	Membership options at JLN	Siri fort sports complex	Saket sports complex
Casual membership (for a day)	No	Yes	Yes
Corporate	No	Yes	Yes
Short term membership (monthly/ quarterly basis)	Yes	Yes	Yes
Long term membership (1/ 3/ 5 years)	Only 1 year	Yes	Yes
Guests	No	Yes	Yes
No. of Academies/ Camps	6	23	15

2.2 RETAIL MARKET IN VICINITY

The commercial activities in the vicinity of JLN stadium includes shopping centre, neighbourhood centre and community centre. Mixed land use dominates the development pattern here. The following figure provides information on commercial centres operating in the vicinity of the JLN stadium.



Figure 6: Key Commercial Space in the vicinity of the JLN Stadium

A catchment area assessment was conducted to determine the commercial retail rates of market areas in the vicinity of JLN Stadium. This would help reflect the lease potential of any proposed commercial development. Annexure A4 gives details of the identified market spaces.

Table 4: Commercial retail rates of catchment area

Type of property	Locality	Distance from JLN Stadium (in Km)	Per sq. ft. price per month	Area (Sq. ft.)	INR/ Sq.ft.
Commercial shop	Khan Market	2	1500	500	7,50,000
Commercial shop	Meherchand Market	2	658	380	2,50,000
Commercial shop	Andrews Ganj (Ansal Plaza)	5	333	630	2,10,000
Commercial shop	Defence colony	4	300	300	90,000

Type of property	Locality	Distance from JLN Stadium (in Km)	Per sq. ft. price per month	Area (Sq. ft.)	INR/ Sq.ft.
Commercial shop	South Extension	4	300	500	1,50,000
Commercial shop	Jangpura	3	267	300	80,000
Commercial shop	Jor Bagh	3	267	300	80,000
Commercial shop	Lodhi Colony	2	250	400	1,00,000
Commercial shop	Hauz Khas	7	160	500	80,000
Commercial shop	Kola Mubarakpur	3	156	320	50,000
Commercial shop	Lajpat Nagar	7	117	300	35,000

Table 5: Commercial office space rates of catchment area

Type of property	Locality	Distance from JLN Stadium (in Km)	Per sq. ft. price per month	Area (Sq. ft.)	INR/ Sq.ft.
Office Space	Khan Market	2	565	1,000	5,65,000
Office Space	Andrews Ganj (Ansal Plaza)	5	361	900	3,25,000
Office Space	South Extension	4	300	2,000	6,00,000
Office Space	Lodhi Colony	2	150	1,000	1,50,000
Office Space	Hauz Khas	7	120	1,800	2,16,000
Office Space	Jor Bagh	3	100	1,000	1,00,000
Office Space	Kotla Mubarakpur	3	95	2,100	2,00,000
Office Space	Lajpat Nagar	7	93	1,350	1,25,000
Office Space	Jangpura	3	55	1,100	60,000
Office Space	Defence colony	4	47	1,900	90,000
Office Space	Indian Habitat Centre	4	860	7,500	64,50,000

2.3 HOSPITALITY IN VICINITY

JLN falls in the proximity of Lutyen's Delhi that is known for its hospitality to foreigners in form of various Five Stars Hotels namely:

Table 6: Hospitality in vicinity

Name of facility	Locality	Average Tariff per night (INR)
The Park	Connaught Place	7,000
The Ashok	Chanakyapuri	5,000
The Lalit	Connaught Place	8,000
Taj Palace	Sardar Patel Marg	8,500
The Surya Hotel	Nehru Place	5,500
The Claridges	APJ Abdul Kalam Road	7,000
ITC Maurya	Dhaura Kuan	8,500
Hyatt Regency	RK Puram	8,500
The Leela Palace	Chanakyapuri	13,500
Taj Mahal Hotel	Khan Market	13,500
The Imperial	Connaught Place	10,000
The Lodhi	Lodhi garden	9,000
The Oberoi	India Gate	12500

2.4 RECREATIONAL GAMES IN VICINITY

JLN falls in the proximity of other recreational activities in the vicinity. Below are the details as under:

Table 7: Recreational games center in vicinity

Name	Area	Facilities
Smaash	Vasant Kunj	Laser blast, Cricket, Twilight Bowling, Super keeper, Finger Coaster, Walk the plank, 9D Extreme Interactive Theatre, Smart Arcade, Jurassic Escape
Essex Farms	Hauz Khas	Bowling, Air Hockey, Pool, Bumpy cars, Redemption games, Virtual Reality Game
Delhi Rock	Greater Kailash	Rock climbing



**DEVELOPMENT
OPTIONS**

3 DEVELOPMENT CONCEPT

The development concept of the JLN stadium complex has been derived by keeping the objective of introducing 'Sports into the DNA of the nation' as the pivotal point in establishing the context. A sports hub envisaged to offer state of the art training facilities come and play schemes, sports practice, recreational sports and competition based ecosystem to catalyse the development of sports at multiple levels. This includes fitness as a way of living, accessibility to the best of facilities to all strata of the society, recreational sports to encourage the spirit of sportsmanship and competition across the board, training national and international level sports players as well as creating an infrastructure capable of hosting international sporting events with supporting allied facilities. The same was arrived at through the following steps:

3.1 SPORTS EXCELLENCE

The stadium complex was analysed, studying the existing infrastructure and the applicable development regulations to optimize the potential of the facility with respect to up-gradation and addition of new facilities. Following are the key points undertaken in the assessment:

- Studying & analysing the planning norms and policies applicable to the site.
- Analysing the existing infrastructure of the stadium complex.
- Analysing the components and potential for up-gradation /optimizing of the existing infrastructure to enhance sports facilities/ disciplines under come and play scheme as well as international level training facility.
- Benchmarking and analysing best practice sports stadiums/ complexes (hosting major international competitions) with allied facilities.

3.2 PLANNING NORMS

The stadium complex falls under Zone D of the Zonal Development plan under Master plan Development 2021. It is categorized as PS-3 under Public Semi- Public Zone which includes Sports Facilities / complex/ Stadium/ Sports Centre. The category of Sports Facilities was updated from Recreational Category to the Public- Semi Public category to ensure building of stadiums and facilities capable of hosting International / Mega Sporting Events like the Common Wealth Games. With an FAR (Floor Area Ratio) of 40 applicable under this category, ground coverage of 20 % is allowed as per the existing bye laws.

Table 8: Planning Norms as per Master Plan for Delhi 2021

Name	Description
Zonal Development Plan	D
Use Zone Designated	Public Semi Public
Sub category	PS-3: Sports Facilities / Complex / Stadium
Ground Coverage	20% (including Amenities)
FAR	0.4
ECS	2 ECS/ 100 Sq. M

The total area demarcated as the stadium complex is 95 Acres (38 Hectares). With a built up of 40% available, 60 % of the applicable FAR has already been consumed in making various sports facilities. Similarly, nearly 70 % of the total applicable Ground coverage is consumed in the existing facilities, not including open to air field- of- play and other facilities. This gives a total of 62000 Sq. Meters of remaining Built up and 6 Acres of remaining ground coverage to build additional facilities.

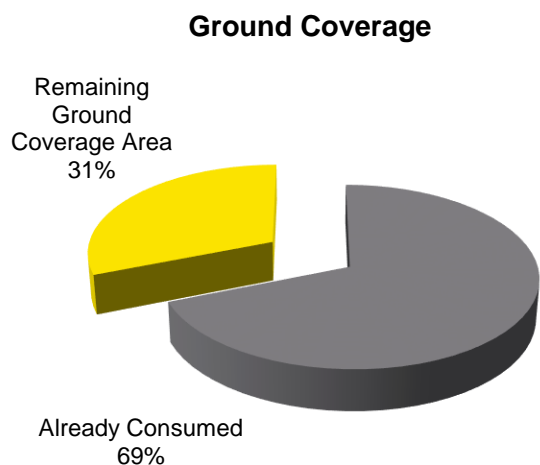


Figure 7: Only 30 % Utilizable ground coverage remaining as per existing norms

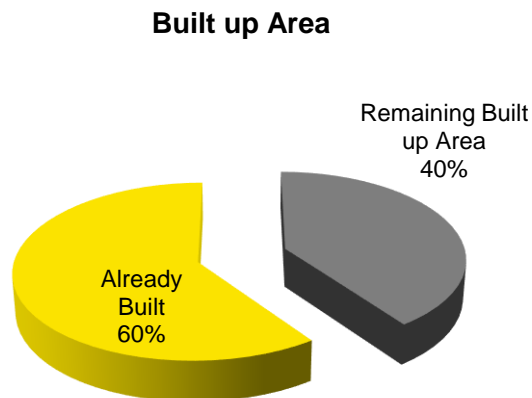


Figure 8: Only 40 % of total built up area remaining as per existing norms

Table 9: JLN stadium area statement

Description	Area (Sq. M)	Acre	Hectare
Total site area	3,87,302	95.7	38.7
Total Built up area allowed	1,54,921		
FAR	40		
Total Ground Coverage (20% allowed)	77,460	19.14	7.74
Built up area			
No.	Existing function	Total Built-up (Sq. M)	Ground Coverage (Sq. M)
1	Main stadium	67,400	42,177
2	Weight lifting stadium	11,530	7,632
3	Hostels	13,900	3,608
	Total	92,830	53,417
Balance areas			
Description	Area (Sq. M)	Acre	Hectare
Remaining Built up area	62,091		
Remaining Ground Coverage	24,043	5.94	2.40
Allowable Commercial Built up (5%)	7,746		

As per MPD -2021 under PS-3 following activities are permitted presently, including 5 % Sports related commercial, Multi use stadium for exhibitions, trade shows, Banquets, Multiple sports related events, Extreme Sports, Academies, Sports Medicine, Water slides, wave pools, hydrotherapy, Akhara, Residential accommodation like hostels, Ward residences etc. keeping the usage Sports relevant.

Table 10: Activities permitted under divisional sports infrastructure

No.	Description
1	Sports related commercial @ 5%
2	Multi use stadium
3	Aquatic Centre
4	Outdoor sports/ extreme sports
5	Sports academy

No.	Description
6	Sports medicine
7	Residential accommodation
8	Playground

3.3 TRANSIT ORIENTED DEVELOPMENT (TOD) POLICY

As per the National Transit oriented development policy, TOD needs to integrate land use and transport planning and aims to develop planned sustainable urban growth centers, having walk able and livable communes with high density mixed land-use. Citizens have access to open green and public spaces and at the same time transit facilities are efficiently utilized.

It focuses on creation of high density mixed land use development in the influence zone of transit stations, i.e. within the walking distance of (500-800 m) transit station or along the corridor in case the station spacing is about 1km and advocates pedestrian trips to access various facilities such as shopping, entertainment and work. Literature study for TOD is attached as Annexure A5.

In case of JLN stadium, Jangpura Stadium open to the East Gate of the stadium and more than 50 % of the area falls under the 500 Meter radius from the Metro station. From the JLN Metro station on the same Violet line, the Zone of influence covers more than 50 % of the complex area under the 800 Meter radius zone. Since there are no protected monuments amongst the 52 A.S.I enlisted monuments in the vicinity of the stadium complex, full utilization of TOD norms should be applicable to JLN stadium complex. The TOD policy in Delhi is under review presently and is presently being scrutinized on project basis as well.

BOX-2: TOD Policy

TOD focuses on creation of high density mixed land use development in the influence zone of transit stations, i.e. within the walking distance of (500-800 m) transit station or along the corridor in case the station spacing is about 1km

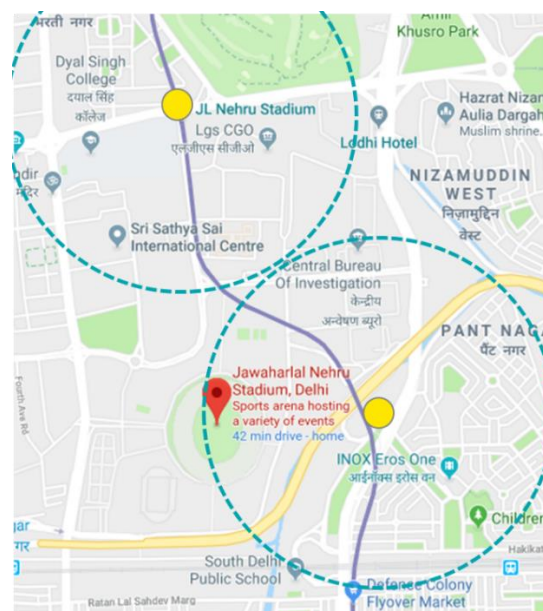


Figure 9: JLN Stadium Complex–Metro station distance

3.4 POTENTIAL FOR UP-GRADATION/ OPTIMIZING OF THE EXISTING INFRASTRUCTURE

Apart from the existing sports facilities scattered across the 95 Acre campus, to make the campus a holistic fitness cum sports center for training and come and play basis, following components have been identified for come and play and general fitness purposes.



Figure 10: Plan of the proposed Multi-Purpose/ Multi Sports Hall

An additional multi use indoor sports hall without seating capacity to accommodate one 1 indoor Basketball ball court or 2 Badminton Courts or 4 Table Tennis Court has been proposed to ensure National / International level indoor training venue for the said sports. A 10 m shooting academy is also proposed as along with Archery that is one sport which is picked up by amateurs across the age groups. A 50 m Olympic size pool for fitness and recreational purposes has also been identified.

A state of the art fitness center/ gymnasium specially made available for the elite athletes as well as for come and play on differential timing is also a part of the programme. A cafeteria with an attached nutritionist to monitor the diet intake for the athletes is tabled under up gradation of facilities. The total investment totals up to 73 crores including contingencies and taxes.

Table 11: JLN stadium upgradation, renovation, relocation

No.	Description	Built up (Sq. M)	Cost (INR Cr.)	%age
1	Cycle track	3.5 km	2	3%
2	Jogging track	2.8 km	1	2%
3	10 m shooting range	30 lanes	5	8%
4	Indoor Badminton + Basketball + Table Tennis + Gymnastics	6,591	14	23%
5	Tennis Court	2 Synthetic	0.5	1%
6	50 m swimming pool	50x25	4	7%
7	Canteen/ cafeteria	400	0.14	-
8	Fitness centre	1,000	0.35	1%
9	Toilets/ change room	On ground	0.2	-
10	Renovation costs	67,400	33.7	55%
Total			60.89	100%

3.5 ANALYZING BEST PRACTICE SPORTS STADIUMS/ COMPLEXES

Sports stadiums and infrastructure remains the pride of the nation and is a much needed symbol of constructive young India. These stadiums not only provide match playing venues but also become centers of training and excellence in sports. Already with the training programme and come and play schemes, most of the Sports India Stadiums extensively support sports culture in the country. Being the kind of large infrastructure needed to host international events, maintaining these stadiums/ venues after the events are over or in between events remains a challenge across the world.

Best practices in stadiums via-a-vis Olympic & world cup requirements to host a match were considered in this study. For Olympic venues, Athletics and football stadiums were studied. World cup venues for football, the redevelopment plans after the events, the viability plans for maintaining sports with an added product mix and stadiums fallen to disrepair & disuse due to lack of foresight across many venues were also considered to understand the life cycle of a stadium, the international match holding capability and the much needed sustainability of the project via supporting functions. A list of major sports international events which could be held in the stadium have also been identified along with their requirements. Details on best practices sports stadium with allied facilities and support infrastructure as enclosed in Annexure A.

In case of 400 FAR, the areas under the stands which have been identified for sports retail can also be completely left vacant for international matches and set up as the built up area available is sufficient to accommodate the component of retail and sports related commercial.

3.6 CREATING A VIABLE SPORTS ECO-SYSTEM

As a first step towards creation of a sports ecosystem Identification and utilization of the unused spaces within the stadium complex was done for Sports related retail, commercial and relevant functions to ensure footfall and generate revenues.

The floor area available under the stands is a potential area which is presently not being optimally utilized. The entire premise of getting in maximum footfall also needs to include sports supporting activities like sports retail with Decathlon, Nike, Adidas, local sports equipment & sports fitness retailers, fine dining and health & nutrition based restaurants, food court, health cafes, workshops, sports club, Library, Museum, fitness Centre and work offices and sports media offices.

BOX-3: Approach adopted to create a viable sports eco-system

- Benchmarking and analysing best practice in sports stadiums/complexes with commercially viable programs and components.
- Identifying & utilizing the unused spaces within the stadium complex for Sports related retail, commercial and relevant functions to ensure footfall and generate revenues.
- Analysing and identifying the sports retail, commercial, quasi-commercial sports mix viability applicable to the stadium.

Of the total floor plates available on each floor under the stands, the following table shows the area which has been identified as areas which may be used for Sports retail and sports commercial purposes. The maximum floor areas are available on the ground and first floor of the stadium.

Table 12: JLN stadium area breakup floor wise

Area Statement under the Stadium (In Sq. M)		
Floors	Built up Area (Sq.)	Available Area (Sq.)
Ground Floor	25,000	11,830
Part A		4,875
Part B		5,890
Part C		295
Part D		770
First Floor	16,900	10,620
Second Floor	11,660	7,630
Concourse	12,570	9,220

Total Floor wise Area (Stadium)

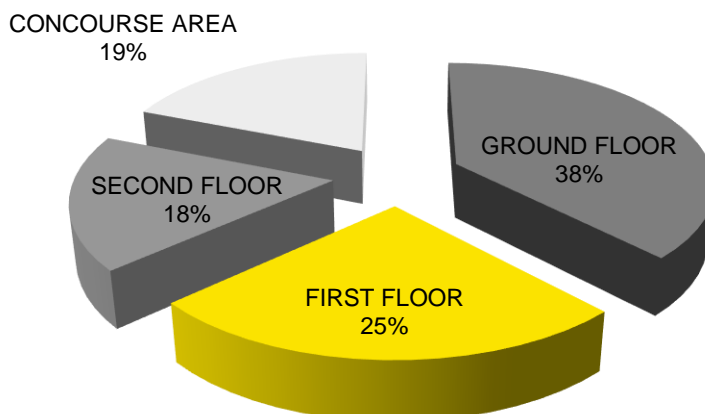


Figure 11: Floor wise utilizable area and total floor area

Due to the geometry & layout of the Stadium, the concourse has presently not been utilized for commercial purposes. The ground, first and second has been utilized for various functions as detailed below. The list of areas that are getting utilized for commercial/ retail purposes on various floors have been segregated & listed below with the original functions as used during the common wealth games 2010.

Table 13: Existing functions in JLN stadium to be used for Retail & Commercial

Ground floor		First floor	
Part A	Equipment storage		Games family
	Look of the games storage		VIP lounges
	Lobby		Sponsors
Part B	Sports light		Merchandise
	PA system		Food + beverages outlet
	Enclosed store		Lobby
	Logistic lobby		Second floor
	Equipment storage'	VIP lounges	
	Logistic office	Multipurpose room/hall	
	Contractor office area	Technical committee	
	Site manager office	Organizing committee office	
	Site manager lobby	National federation office	
	Contractors' workshop and storage	Commonwealth federation office	
	Cold storage	National federation secretariat	
	Catering office	TV -studio area	
	Kitchen	Lobby	
	Dry storage area	Athletes lounge	
	Service corridor	Passage	
	Cleaning and waste office	Third floor	
	Entrance lobby	Upper concourse	
Equipment storage	Food+ beverages outlet		
Waste disposal	Food storage area		
Liquid and detergents	Shop		
Building service	Reception		
Entrance lobby	First aid		
	Treatment		

Table 14: Programme Under the Stadium stands

Activities		Area Required per Function		
Areas	Activities	Area Required per function	No of Units	Total Area
Ground Floor				11,830
Sports Retail (Part A)				
Anchor Shop	Decathlon	1,000	1	1,000
Large Shop	Nike, Adidas	200	10	2,000
Medium Shop	Reebok	100	20	2,000
Small Shop	Local Sports Retail	50	15	750
Total Area Required (Part A)			5,750	
Food (Part B)				
Food Court		75	15	1,125
Coffee Shops		50	4	200
Cafes		500	6	3,000
Workshop		500	2	1,000
Total Area Required (Part B)			5,325	
Total Area Required on Ground Floor			11,075	



Figure 12: Ground floor of JLN stadium

Table 15: First floor proposed plan

First Floor				10,620
Corporate boxes	Start-ups, Small Cafes, Food Courts,	100	15	1,500
Conference / Multi -purpose Halls	Rentals/ Events	200	5	1,000
Clubs & Cafes	Sports Lounge, Lounge, Small Dining's ,Juice Bar	300	6	1,800
Museum / Library	Sports Related, History, Achievements, Medals, and Trophies.	100	4	400
Fine dining		350	10	3,500
Salon & Spa	Ozone	250	6	1,500
Bowling Alley		200	1	200
Fitness Centre	Cross fit / Kick Boxing/ Yoga Centre	700	1	700
Total Area Required			10,600	

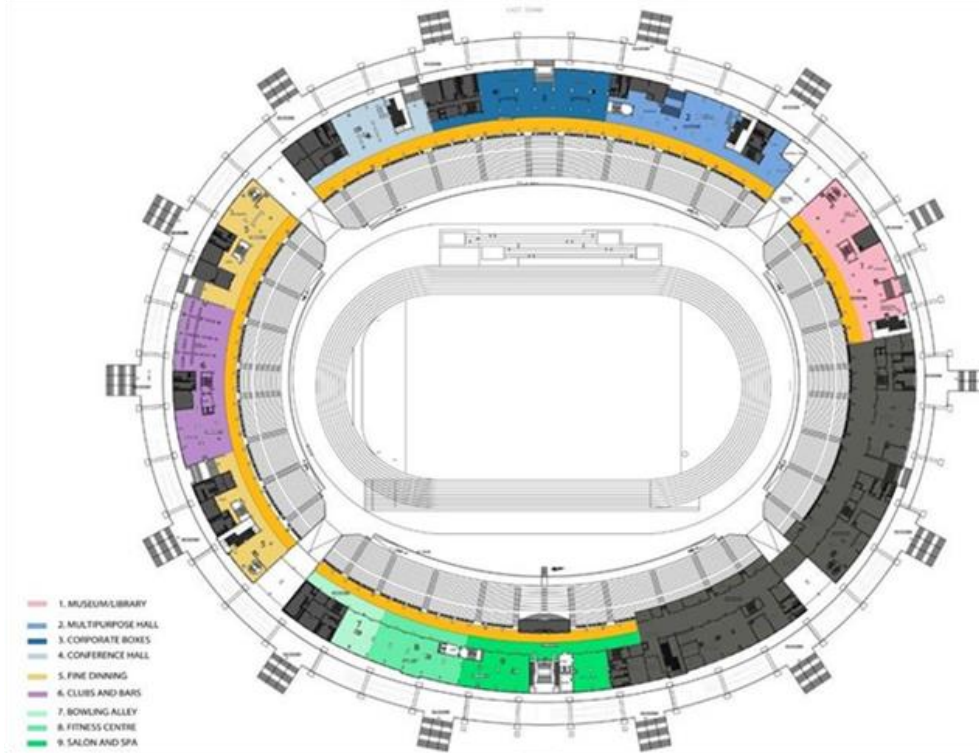


Figure 13: First floor plan of the stadium

Second Floor Activities - Offices (I.T Department)

7,630

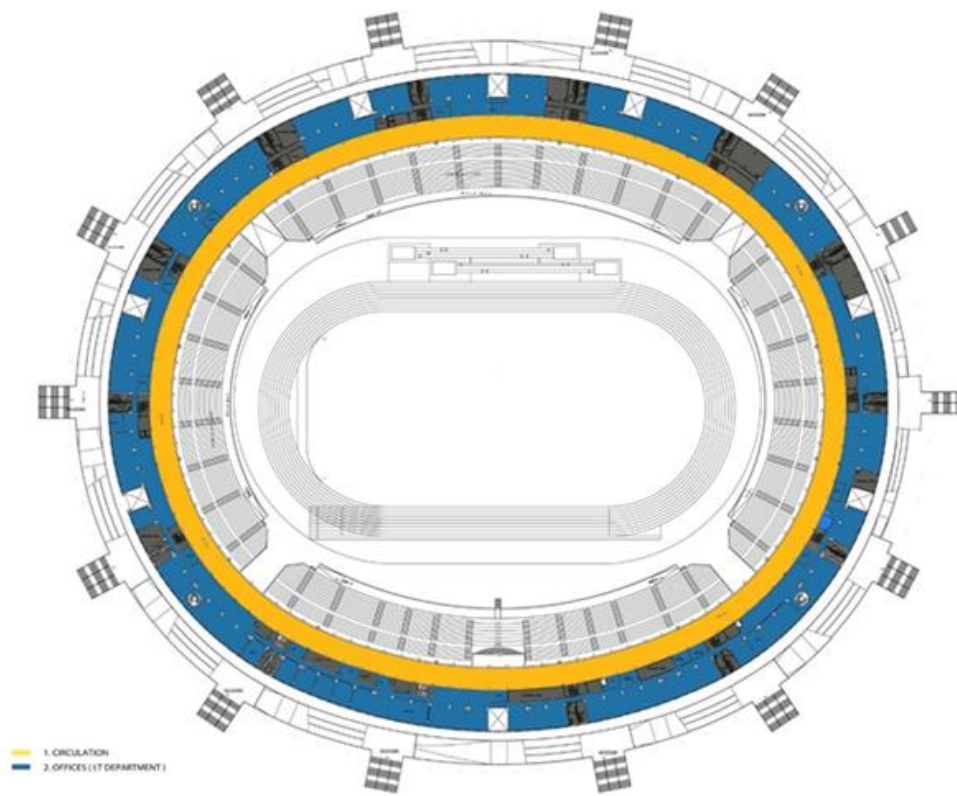


Figure 14: Second floor plan of JLN stadium

A total of 29,000 Sq. Meters of Area under the stands has been identified as potentially leasable areas for various sports related activities.

3.7 ANALYSING SPORTS MIX VIABILITY

The Non-Sports of the programme has been designed as non-professional sports to ensure a sports centric ambience, spirit and fitness as a lifestyle. To ensure that the Stadium complex gets in a wider pool of players, come and play members, coaches, professional sports players, Elite Amateur athletes are relevant.

3.7.1 Adventure / Extreme Sports Hub

Delhi as a city lacks any avenues for Adventure sports or Endurance /Obstacle courses kind of training or recreational facilities which are much in demand and people often travel to nearby states during weekends and otherwise to avail the same experience. We have identified a set of 8 Sports Adventure zones which are recreational in nature but still remain competitive in spirit.

The idea is to generate the JLNS Adventure hub as a weekend get away with Virtual Reality games, Go Karting tracks, Yoga- Zumba /Meditation, Zip lining, Climb Central kind of activities which require more open areas and very little built infrastructure. In the background of the stadium, surrounded by Elite Athletes, it is an ambience one cannot match. Getting the footfalls for this and the sports clubs too may eventually lead to a wider pool of sports players, Athletes to choose from.

Table 16: Tentative activities under sports adventure hub

Sports Adventure Hub	
S. No.	Activities
1	Climb Central / Rappelling, rock climbing Abe sailing
2	Zip lining
3	Endurance / obstacle courses/ Paintball
4	Bowling Alley
5	Virtual Reality Arcade
6	Go Karting
7	Yoga, Zumba, Meditation,
8	Varied Martial arts like Krav Maga, Kickboxing,

3.7.2 Sports Club

To be designed/ planned as a support activity to the Sports Club or as an independent activity could be left to the discretion of the developer. The prime purpose of introducing Sports retail/ food court within the entire planning matrix is to charge and activate the sporting areas during the non-sports event days which tend to go passive otherwise. Also a revenue generation and support to the maintenance of the sports infrastructure could be looked at, based on the financial feasibility of the project. Chess club, Snooker, pool, Squash courts, Tennis etc. could easily become a part of the program and lead to indirect increase of foot falls.

3.7.3 Sports Academies & Sports University

Studying some of the top sports Academies and Sports Universities across the world, a career in Sports Journalism, coaching, sports medicine, sports Sciences, Research in the same field, nutrition, bio mechanics, performance analysis etc. lacks in the country on a holistic level. Also to be included in the University curriculum is a basic graduation/post-graduation course with highest applicable sports Quota in the country.

A compilation of top sports courses and Universities across the world and India is compiled below. Such a program not just brings in revenues but also provides the much needed base resource for training coaches, indigenous research, performance management, nutrition rehabilitation etc. both as career options in sports as well as trained skillset in the sports sector of India

3.7.4 Retail, Malls, Restaurant/ Sports Retail/ food court

The Retail zone would be designed as per the commercial viability of the project and anticipating the recreational and entertainment need of the residents, the zone could also include a shopping plaza/ arcade, spa, salon, health and fitness equipment stores , and other recreation facilities which are sports centric or relevant.

The retail sector could also could have a supermarket or hyper-mart, large grocery shops, shops selling sports branded goods, consumer durable outlets, postal services, retail banks, fine dining restaurants or popular food chains, Sports club, clinics, medical stores etc.

3.7.5 Government offices/ Semi government offices

Being centrally located, there already exist many government / semi government offices in and around JLN stadium. Scope Complex, IHC, NBCC and many other government and semi government departments have been the area for decades and there is demand for more. Presently Income tax department already occupies the 2nd floor of the JLN stadium. Similar Government department are expected to occupy the office sector with substantial revenue generation.

3.7.6 Commercial offices

To infuse young India, young energy and sports into the DNA of the system, there are also collaborative offices spaces like 'We work' set ups identified for the area. Also sports related media, publication, talent hunt agencies, Sports events, studios are expected to be set up in the premises.

3.7.7 Residential zone

The residential zone is envisaged as one which is relevant to the activities taking place in the stadium complex. A combination of Hostels, Service apartments and Hotels makes up the residential zone as compared to typical housing of the government / private sector.

3.7.8 Hostels

Hostels are already a requirement due to the presence of sports academies, university, training camps and coaching which takes place round the year. Elite Amateur Sports players in various disciplines could be accommodated here during the training period. A 500-600 capacity hostel can be planned.

3.7.9 Service Apartments

1 BHK or 2 BHK service apartments could be constructed to accommodate athletes and coaches from outside the country.

3.7.10 Hotel with convention facilities

The stadium complex is envisaged as a hub of international sports events and also sports training. Apart from local sports players and the elite athletes already training and staying in sports hostels, we anticipate sports conferences and conventions taking place here apart from Sports performance and management training.

Players, coaches, sports officials, sports & fitness enthusiasts from across the country and world are expected to travel here for recreational, matches and sports medicine, injury, rehabilitation and training purposes. To accommodate the same, the component of Hotels, Hostels and Service apartments as components add more to the program than a conventional housing set up. 1, 4 star hotel with 250 keys and 1, 3 star hotel with approximately 200 keys can be proposed.

3.7.11 Support infrastructure

Apart from the allied infrastructure such as parking ECS accommodation, waste and water management, this section lists out the other support infrastructure for the sports component. To start with the road sections; the main road leading up to the stadium complex and the parking should cater to the influx of spectators in

their numbers calculated individually as vehicular and pedestrians. For this the road sections should be in adherence to the National building codes and the local byelaws, should be appropriately marked with signage and markings that should be clearly visible in the night and day.

A clear and appropriate designing of the wide pavements meant to cater to the large number of spectators during the sporting events is a must should be adhered to. A clear division of service lines such as power, storm water and sewer should be planned as per NBC and the local byelaws with appropriate provisions for easy maintenance time to time.

Apart from the above, easy access for old and handicapped, benches, dustbins, ticket vending shelters should be equally and appropriately distributed for a hassle free and smooth operations during any large sporting event within the stadium complex.

The entire development is interspersed with large tracts of green spaces distinguished as green belts, visual greens, and recreational greens. The zone is planned with amenities and utilities designed to conform to internationally accepted standards, integrating latest technology, and addressing environmental concerns to ensure quality sports facilities and quality of life.

3.8 PROPOSED PRODUCT MIX & MASTER PLAN

The Mandala: The concept plan of the stadium complex development is derived from the symbol of Sri Chakra or the primordial energy source out of which all creation emanates. A trinity of Gyan Shakti (Knowledge), Ichcha Shakti (Will) and Kriya Shakti (Action) pertaining to sports , knowledge, education, sciences, sports academies, sports university, competitions, training, performance management, coaching, sporting events and excellence in sports is what this complete Mandala intends to complete in the sports life cycle. The 8 petalled Mandala with its Centre being the source of energy represents the stadium at the Centre with its 8 hubs created around the stadium supporting & augmenting the energy of Young India energy and sports excellence.

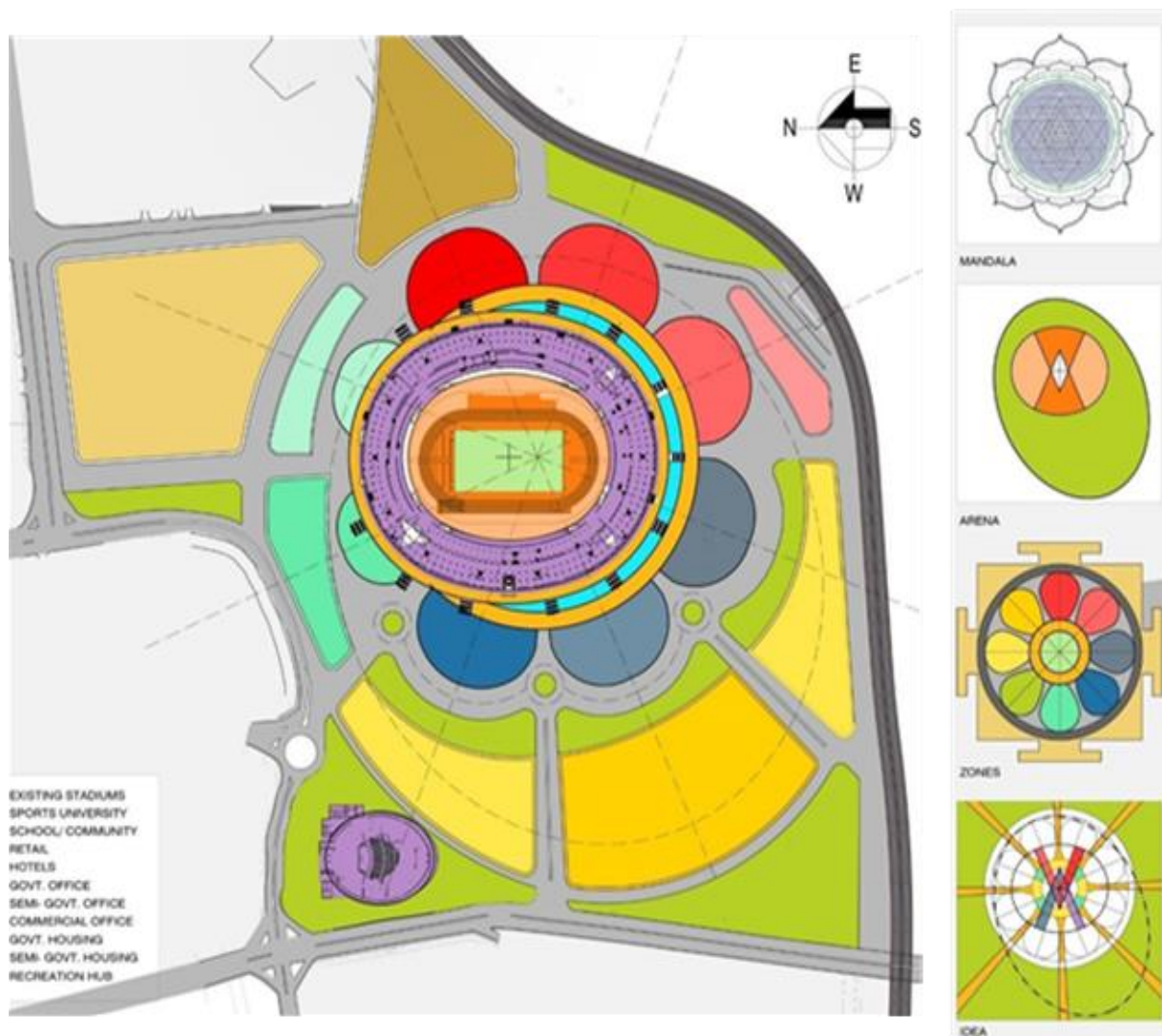


Figure 15: Design concept: Mandala

Best of the facilities are built around human beings at the core. To generate a sports culture which pulls in a wider pool of athletes, a wider pool of access as well as relevant activities need to be curated. After all, talent does not differentiate between classes. To ensure the same, the programme of the non-professional sports has been designed to bring in people across the strata of the society. It caters to low income group as well as high income group without differentiating. These hubs create environments which even through recreational sports keep the spirit of competition and excellence alive.

The Observing how parents of these future athletes in both IG & JLN stadium complexes spend time while their wards train and practice, it makes sense to in some ways include them in the process as they remain highly invested. It could be on the lines of skill based certification courses or workshops of short duration run by National Institute of Sports.

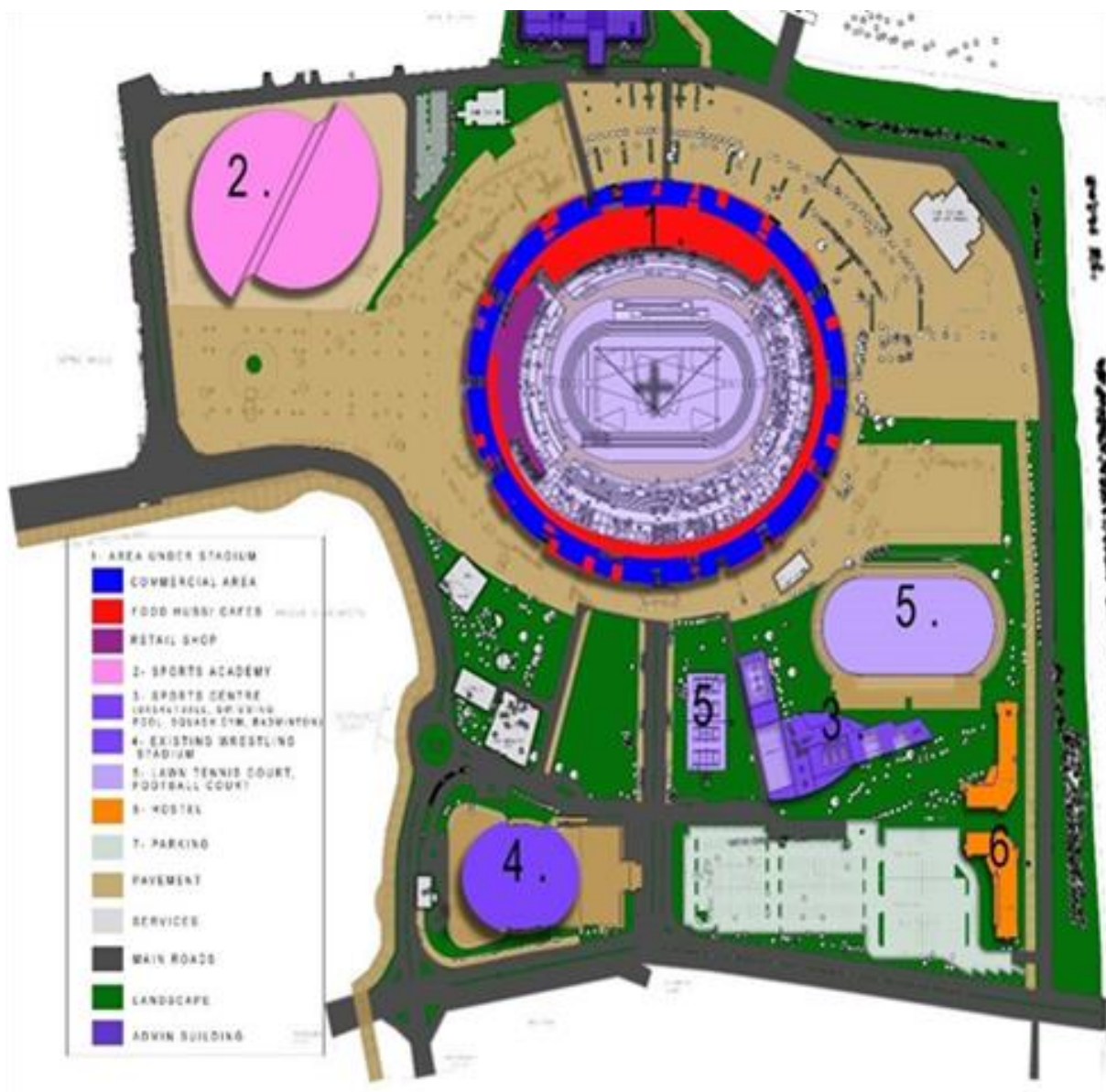


Figure 16: Available land parcels in JLN stadium

Table 17: Product mix at 40 FAR

Product Mix at 40 FAR			
S. No.	Programme	Built up (Sq.)	Cost (INR Cr)
1	Existing Infrastructure Sports	67,400	34
2	Commercial (Under the stadium)	29,015	145
3	Professional Sports Facilities + Up gradation	6,591	40
4	Sports Hubs	500	33
5	Sports University with highest sports quota in the country	51,000	140
6	Utilities and Amenities	4,500	10
	Total	1,59,006	401

In the existing FAR byelaws of the MPD 2021, the built up or the programme includes, Adventure sports hub and sports university apart from the up gradation, utilization and optimization of the existing sports facilities.

As per TOD norms by Delhi Development Authority, “the overall development mix shall include 30% of available FAR is mandatory for residential development in every new/redevelopment project within influence zone.” Based on interactions with officials at SI and NITI Aayog, and in the light of the objectives set for this project, to develop JLN stadium as a “hub for promotion of sports for all”, the residential development shall be restricted and SI or the private developer shall seek approval from the competent authority in this regard. In the case of 400 FAR as per TOD Zone a mix of Sports Adventure hub, University, Academies, Retail, Commercial offices, Government offices.

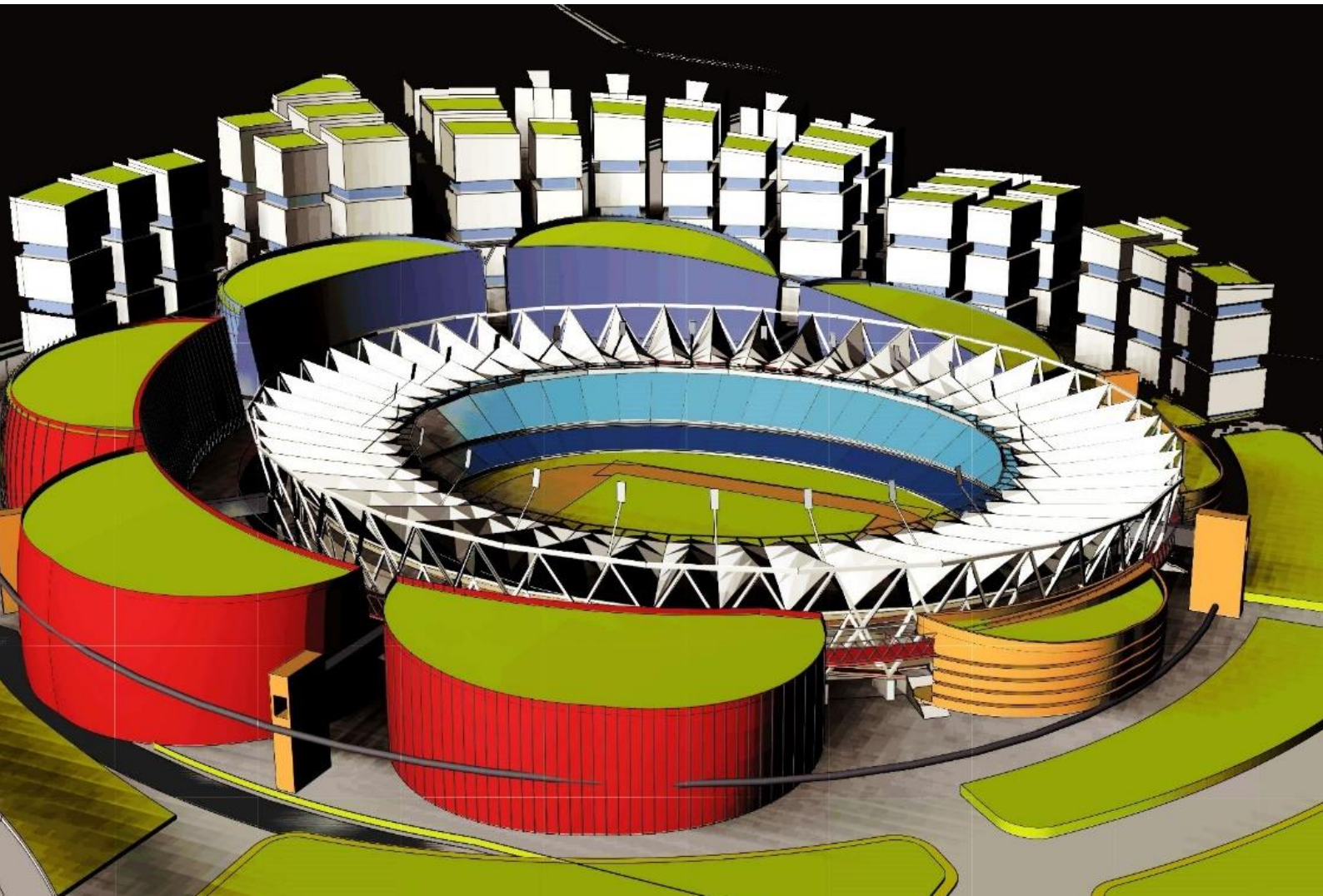
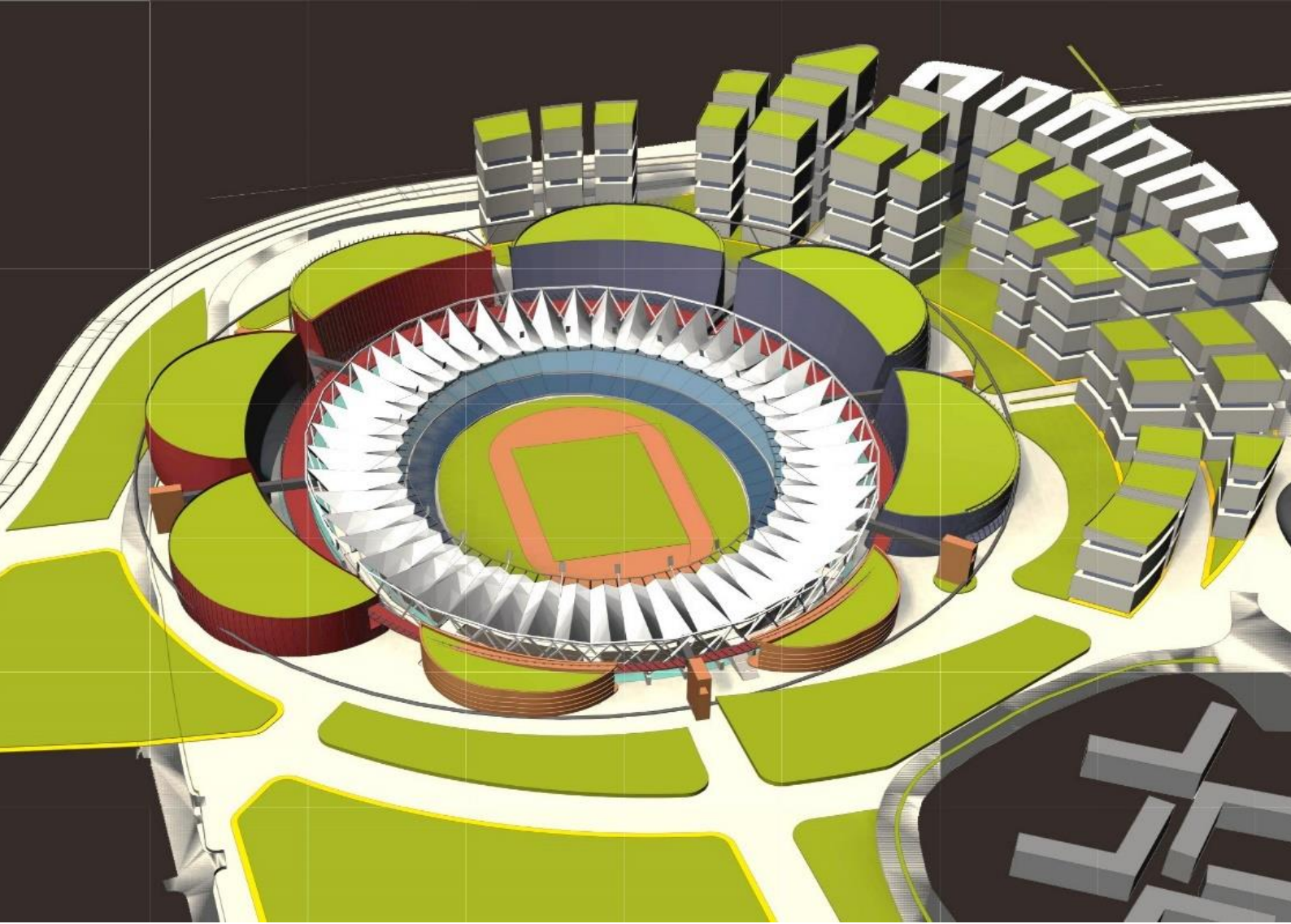
Table 18: Product mix at 400 FAR

Product Mix at 400 FAR			
S. No	Programme	Built up (Sq. m)	Cost (INR Cr)
1	Existing Infrastructure Sports renovation	63,815	34
2	Professional Sports Facilities + up gradation	6,591	27
3	Sports Hub	500	20
4	Commercial (Under the stadium)	29,015	73
5	Sports University	51,000	109
6	Sports Academies + School + Community use	1,58,921	342
7	Retail/Commercial/Hotel	3,09,842	1,336
8	Government offices	3,09,842	667
9	Semi Government offices		
10	Commercial Offices	1,54,921	583
	Total	11,00,372	3,221

3.9 REGULATORY COMPLIANCES

This section highlights the regulatory compliances required for the re-development of JLN stadium. This includes details regarding the concerned regulatory bodies as well as the critical approvals that need to be obtained for the successful implementation of the recommended project.

JLNS	
South Delhi Municipal Corporation	☑
Delhi Urban Arts Commission	☑
Sports India	☑
Delhi Fire Services	☑
Airport Authority Of India	☑
Delhi Jal Board.	☑
Electricity	☑
Department Of Forest.	☑
Delhi Pollution Control Committee	☑



FINANCIAL ANALYSIS



4 FINANCIAL ANALYSIS

4.1 PROJECT STRUCTURE

A wide spectrum of models have emerged in development and management of infrastructure facilities which enable private sector participation through guided risk sharing mechanism in providing efficient level of services. As per World Bank report on models in PPP, the project structuring vary from short-term simple management contracts (with or without investment requirements), long-term and very complex BOT form, to divestiture. These models vary mainly by:

- Ownership of capital assets
- Responsibilities for investment
- Assumption of risk and
- Duration of contract

PPPs can help the government fast track infrastructure development and therefore it is imperative to create favourable policies and guidelines in order to attract private investments for a sustainable development goal. PPPs can be explored for creating infrastructure through Built – Operate Transfer (BOT) models by contracting construction companies specializing in building multi-purpose centers and allowing professional private sector entities to manage and control the existing sports infrastructure with the objective of building commercial models and converting the same into revenue centers. Higher asset utilization and revenue generation could in turn incentivize sports infrastructure creation.

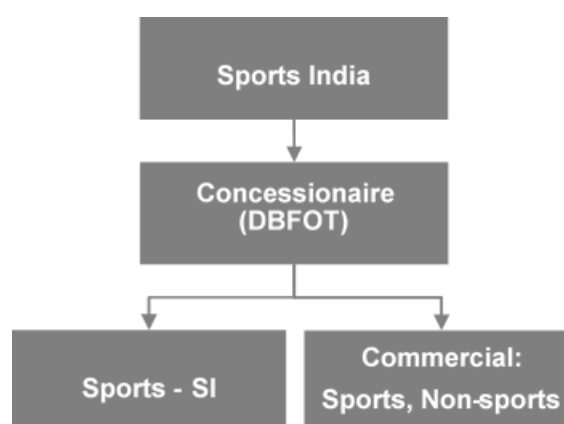
Various states in India such as Gujarat and Rajasthan, have delineated the role of PPP in their sports policy while other states such as Madhya Pradesh have already started development of sports cities via the PPP mode. The sports policy of Haryana, a leading sporting state, defines in depth the need for development of sports facilities when developing new commercial/ residential spaces. Keeping in mind the need of developing places for development and promotion of sports. Such provisions can have a long term impact on improving the sports culture in every state. Timely planning and development of sports infrastructure seems to be the current problem. PPP as an enabler in sports infrastructure has been further discussed in Annexure A.6.

4.2 PROJECT DEVELOPMENT CONCEPT

Sustainable Sports Ecosystem – Only Sports, Nothing but Sports

The development concept for this project envisages that the selected PPP concessionaire shall be given rights wherein the responsibility of developing and commercialization of the project facility shall be undertaken. The overall objective is to provide and improve the quality of service experienced by users with potential revenue based developments at JLN stadium.

The project structure envisages participation of private developer on DBFOT basis where the private operator would have the flexibility to design, construct additional sports facility and commercialization of the project commercial space.



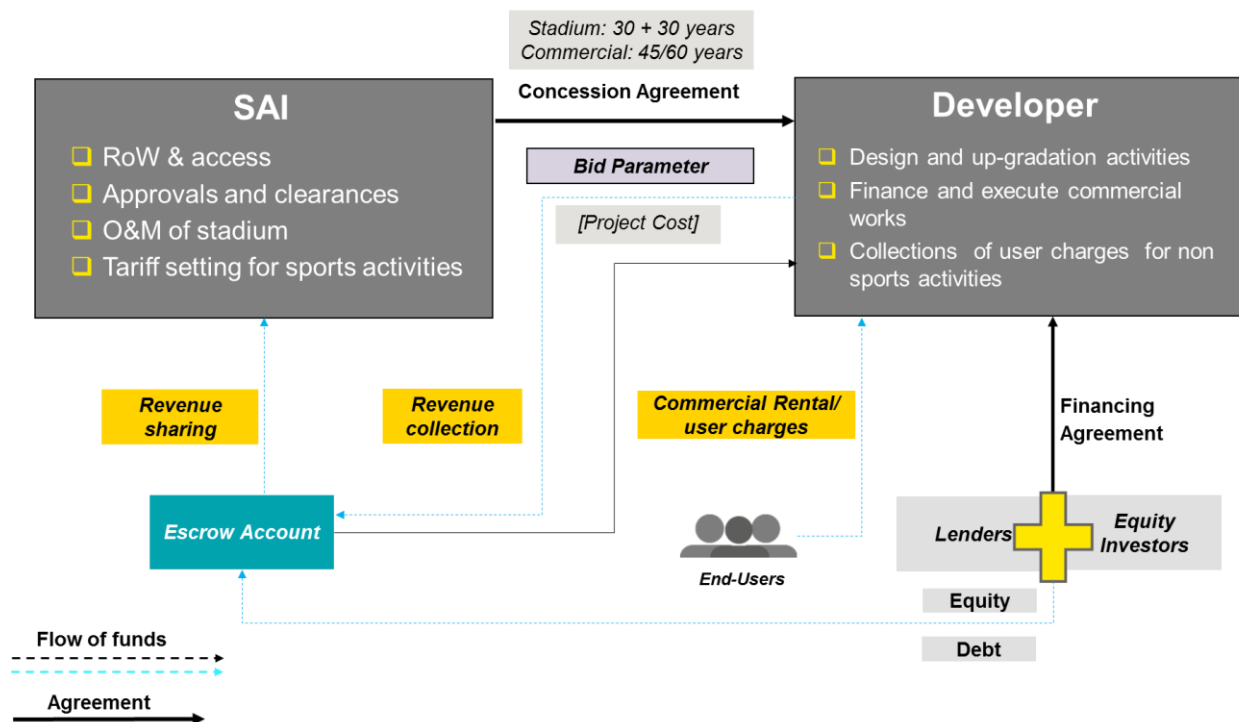


Figure 17: DBFOT Model

Given the current investment climate in India, the project structure has been widely used across various infrastructure sector such as roads, power & transmission and airports wherein it provides the developer the opportunity by entering into financing agreements with lenders and equity investors in the form of support during the construction and operation phases.

The supporting revenue returns realized from commercial development shall be well accepted by developers/Investors. Hence it is recommended to adopt a similar project structure for JLN stadium. The consultant further analysed best international practices for evaluating different project structures followed under PPP to implement and manage such infrastructure facilities. The best international practices are covered in Annexure A.7.

BOX-4: Objectives of the Proposed Model

- To upgrade current sports facilities and operate and maintain the facilities for 30 years as per specified performance standards.
- Further additionally develop additional sporting facilities and operate and maintain these facilities for 30 years
- Develop, operate and maintain commercial areas as per applicable laws for [45 (30+15) - 60 (30+30) yrs.].
- Sports SI facilities to be regulated by SI but operated and maintained by private sector

4.3 RISK ALLOCATION

Contractual structure are influenced by a number of factors. If the fundamentals of a PPP transaction are well thought through, particularly in relation to risk allocation, it is possible to finance and execute such transactions that represent value despite current challenges in funding and execution.

Cost and time overruns will largely be driven by the type of contract used and by the experience and competency of the contractor. It is important that the contractual structure protects the public sector from the financial consequence of delays in the delivery of proposed infrastructure. The various risks associated with the different phases of the project life cycle and the mitigation strategies have been tabulated in table 32 below.

Table 19: Risk matrix

Risk description	Risk mitigation
Project Development Phase	
Delay in land acquisition	The land parcels identified for commercial development in JLN stadium to be provided by authority to the concessionaire as per agreed timelines.
Over runs 1. Cost 2. Time	1. Fixed cost contract with contractor with adequate predefined penalties 2. Fixed time contract with adequate pre-defined penalties The risk lies with the Concessionaire
Delays in project development	<ul style="list-style-type: none"> ▶ The Project contracts should provide for significant penalties for such delay ▶ SI may assist the developer in obtaining necessary consents and clearances from governmental agencies.
Project Construction Phase	
Funding risk	<ul style="list-style-type: none"> ▶ Depending on the project development option, funding risk has to be borne by the private developer. With SI providing some form of support, this risk is mitigated to a very large extent.
Project completion risk	<ul style="list-style-type: none"> ▶ Concession Agreement should address the issues related to Concessionaire's default in this case. ▶ Strict project monitoring by the Authority/Independent Consultant is required. ▶ Contracts for mandatory works may be structured as a fixed-price and fixed-schedule contract, with stiff liquidated damages for non-compliance. Performance guarantees may also be stipulated. ▶ Insurance package involving Contractors All Risk, and Third Party Liability
Latent defect risk	<ul style="list-style-type: none"> ▶ The possibility of loss or damage arising from latent defects in the Facilities included in the Project Assets is also a big risk. ▶ Wherever possible, the design and construction of the facilities required for a Project must be performed or procured by the Concessionaire.
Design risk	<p>The possibility that the Concessionaire's designs may not achieve the required output specifications.</p> <ul style="list-style-type: none"> ▶ Output specifications to be detailed out in Concession Agreement. ▶ Design warranty. ▶ Patent and latent defect liability. ▶ Consultation with and review by Authority (but review must not lead to input specifications by Institution). ▶ Independent Engineer appointment to resolve disputes.
Market, demand or volume risk	The possibility that the demand for commercial services generated by the Project may be less than projected. Concessionaire needs to do his own due diligence for the same and the risk will be borne by itself.
Project Operation Phase	
Interest rate risk	These are factors affecting the availability and cost of funds. To mitigate this risk, hedging instruments or fixed rate loans to be used.
Inflation risk	<ul style="list-style-type: none"> ▶ The possibility that the actual inflation rate will exceed the projected inflation rate. ▶ Risk to be borne by the Concessionaire.
Residual value risk	<ul style="list-style-type: none"> ▶ The risk that the Project Assets at termination or expiry of the Agreement will not be in the prescribed condition for hand back to the Authority. ▶ Obligation on Concessionaire to maintain and repair/upgrade the JLN facilities and such transfer parameters to be specified in the Concession Agreement. ▶ Audit towards the end of Project Term.

4.4 KEY STAKEHOLDERS

As mentioned earlier, the proposed project structure clearly defines relationships between key project stakeholders. The key stakeholders relevant to the project will be:

- Sports India: Implementing authority, currently possess the project land
- Private sector/developer: to be selected for the project development through competitive bidding process
- Project SPV: company formed for development and commercialization of the project formed by single entity or consortium (selected private partner)

For the purpose of this analysis, it is assumed that the selected private partner (and therefore the project SPV) will act as a main developer, i.e. the SPV will engage in development of the entire facility i.e. sports facility and commercial establishments. Since a PPP project always entails that the private entity is best suited to undertake the project; hereafter mentioned are the roles and responsibilities between SI and the developer.

Table 20: Responsibility matrix

No.	Project Components	SI	Private Developer
1	Provide land ownership details and land free of all encumbrances	√	
2	Definition of the bidding procedure and bidding criteria	√	
3	Approve the overall design of the facility	√	
4	Monitor and reporting mechanism for evaluating performance of concessionaire	√	
4	Collection of revenues		√
5	Bearing the construction and equipment cost		√
6	Operation and maintenance of the entire facility		√
7	Payment of Annual Revenue Share to SI		√

4.5 METHOD OF FINANCIAL ANALYSIS

The financial analysis has been carried out by most widely used Discounted Cash Flow (DCF) method on the above proposed project structure for assessing the value for money analysis. DCF is a valuation method used to estimate the attractiveness of an investment opportunity and used future free cash flow projections and discounts them. The analysis uses a required annual rate, to arrive at present value estimates. A present value estimate is then used to evaluate the potential for investment. If the value arrived at through DCF analysis is higher than the current cost of the investment, the opportunity may be a good one.

Accordingly, financial analysis has been carried out to arrive at range of realizable premium after factoring in the project cost and other applicable terms of the project. The principle followed in assessing the premium/ amount to be realized to SI is how much selected developer would be required from the project after meeting all capital and operating expenses including debt service cost and after retaining an equity return of approximately 18% from the project.

The financial analysis has been undertaken for proposed development plan options of 40 FAR and 400 FAR as discussed in Section 4: Development options.

4.6 AREA STATEMENT

In order to suggest a suitable product mix, it has been kept in mind that the revenue potential for the development should be maximum. On the basis of Master Plan for Delhi 2021, the following area statement has been considered for analysis.

Table 21: Proposed area statement for JLN stadium

Particulars	Area (Sq. M)
Site Area	3,87,302
Allowed Ground Coverage @20%	77,460
Consumed Ground coverage	53,417
Remaining utilizable Ground Coverage	24,043
Allowed built up @40 FAR	1,54,921
Consumed built up	92,830
Remaining built up area	62,091
On TOD @400 FAR additional built-up	14,56,378

Probable loss on built-up area due to TOD influence zone & ASI norms @up to 50%	-
Net available Built-up on TOD (probable)	14,56,378

4.7 KEY COST ASSUMPTIONS

The financial analysis is based on set of assumptions and inputs from our analysis. These set of assumptions are based on the secondary researches, industry benchmarks and EY's experience of sector knowledge. These sets of assumptions & inputs are given below:

4.7.1 Concession period

The concession period considered is 45 years for commercial development and 30 years for stadium's operation and maintenance which is inclusive of 24 months of construction period.

4.7.2 Cost inputs

The construction cost has been assumed on the basis of discussion and inputs as per the prevailing market condition. Annual escalation rate is based on last ten years long term WPI index as published by GOI.

The below table summarizes cost estimates at 40 FAR.

Table 22: Cost inputs at 40 FAR

#	Programme	Built up (Sq. M)	(% age)	Cost (Rs. Cr.)
1	Existing Infrastructure Sports	67,400	42	34
2	Commercial (Under the stadium)	29,015	18	145
3	Professional Sports Facilities + Up-gradation	6,591	4	400
4	Sports Hubs	500	0.31	33
5	Sports University	51,000	32	140
6	Utilities & Amenities	4,500	3	10
Total EPC Cost		1,59,006		401
Escalation during construction			5%	20
Contingencies @ 5% of construction cost			5%	21
Consultancy @ 1% of construction cost			1%	4
Preliminary expenses @ 5% of construction cost			5%	9
Interest During Construction				34
Total Project Cost				490

The below table summarizes cost estimates at 400 FAR.

Table 23: Cost inputs at 400 FAR

#	Programme	Built up (Sq.)	(% age)	Cost (Rs. Cr.)
1	Existing Infrastructure Sports	67,400	4.27	34
2	Professional Sports Facilities + Up-gradation	6,591	0.42	27
3	Sports Hubs	500	0.31	20
4	Commercial (Under the stadium)	29,015	2	73
5	Sports University	51,000	3	109
6	Sports Academies + School + Community use (Amenities, Utilities)	1,59,006	10	342
7	Retail/ Commercial/ Hotel	3,09,842	20	1,336
8	Government/ Semi-Government offices	3,18,012	20	684
9	Commercial offices	1,59,002	10	599
Total EPC Cost		15,77,390		3,221
Escalation during construction			5%	161
Contingencies @ 5% of construction cost			5%	169
Consultancy @ 1% of construction cost			1%	34
Preliminary expenses @ 5% of construction cost			5%	72
Interest During Construction				272

#	Programme	Built up (Sq.)	(% age)	Cost (Rs. Cr.)
Total Project Cost				3,929

4.7.3 Project Phasing

The project construction phasing schedule is given below:

Table 24: Project phasing

No.	Phasing (in Years)	1	2	3	4	5
1	Phasing of area leased	0%	60%	40%	0%	0%
2	Construction	50%	50%	0%	0%	0%
3	Other areas	60%	40%	0%	0%	0%
4	Phasing of revenue from membership	0%	0%	30%	30%	40%

4.7.4 Financial Cost Assumptions

Major financing assumptions including debt-equity ratio, cost of debt and equity etc. are considered on the basis of other infrastructure development sectors like roads, ports, railways as well as inputs from financial institutions such World Bank during consultation for financial appraisal of similar projects.

Table 25: Financial cost assumptions

Terms of Debt		
1	Interest Rate (per annum)	10%
2	Principal Moratorium (yrs.)	2
3	Repayment period	10
Equity		
1	Cost of Equity	18%
2	Debt to Equity Ratio	65:35
3	Weighted Average Cost of Capital (WACC)	10.5%
Taxation		
1	Income Tax Rate	34.90%
2	MAT Rate	21.30%
3	Carry forward of losses (yrs.)	8
4	Carry forward of MAT (yrs.)	15

4.7.5 Operation and Maintenance Cost Assumptions

Considering long term concession period, it has been assumed that developer would be able to enter into arrangement with end users on long term lease/ sale basis of retail asset class. Therefore Operation & Maintenance (O&M) expenses have not been considered for the same. Major components of O&M cost estimates considering first year of operations are illustrated in the table below:

Table 26: Operation and maintenance cost assumptions⁹

No.	Assumptions	Remarks
1	O&M for stadium operations ¹	INR 15 Crore
2	Marketing and brokerage	5% of commercial lease revenue
3	Fixed O&M expenses for sports club and commercial	10% of capex on sport club and commercial)
4	Variable and general expenses	5% of Total revenue

O&M for stadium operations

No.	Heads	Cost (INR Cr.)
1	Civil Maintenance	0.1
2	Electrical Maintenance	0.6
3	Horticulture Maintenance	0.2
4	security	0.33
5	House Keeping	1.2
6	Electricity charges	0.51

⁹ Information from Sports India and EY Analysis

No.	Heads	Cost (INR Cr.)
Total		1.50

4.8 REVENUE ASSUMPTIONS

The proposed development options involves exploring various opportunities which complement in the revenue generation. Such development formats may include commercial, office space, retail space, hotels and residential including service apartments.

Table 27: Revenue Assumptions¹⁰

No.	Parameter	Unit	Value
Revenue form clubhouse			
1	Lifetime Member Capacity	#	5,000
2	Lifetime Membership Fee	INR	6,00,000
Revenue from Lifetime Membership			
3	Annual Member Capacity	#	1,000
4	Monthly Membership fees	INR	18000
Revenue from commercial space leasing			
5	BUA for commercial block	Sq. ft.	1,61,82,436
6	Average Lease rate	INR/Sq.ft./month	300
7	Average occupancy in 1 st year	%	40
8	Annual increase in occupancy	%	5
Revenue from Nonsporting events			
9	No. of event days available with operator	#	45
10	No. of non-sporting event days	#	45
11	Avg. Facility rent charges	INR per day	10,00,000
Revenue from Sporting events			
12	No. of event days available with operator	#	30
13	No. of sporting event days	#	30
14	Avg. Facility rent charges	INR per day	2,50,000
15	Swimming pool: number of monthly walk-ins	Nos. min	100
16	Average monthly swimming charge	INR per month per user	2500
17	Tennis no. of daily walk-ins	#	25
18	Tennis fees	INR per day	200
19	Other facilities(hockey, TT, Badminton etc.) walk-ins per month	#	100
20	Other facility charges	INR per month per user	100
21	Fitness centre walk-in per month	#	200
22	Fitness Centre charges	INR per month per user	2,000
23	Coaching footfall	#	100
24	Coaching Charges	INR per month per user	500
Revenue from parking			
25	Parking bays	#	600
26	Parking charges	INR per day	60
27	Average occupancy in 1 st year	%	45
In-stadium lease			
28	Area leased	Sq. ft.	80,000
29	Price per sq ft	INR	413

4.8.1 Project Revenues

Snapshot of the project revenues for development at 40 and 400 FAR is elucidated in table below:

¹⁰ EY Analysis

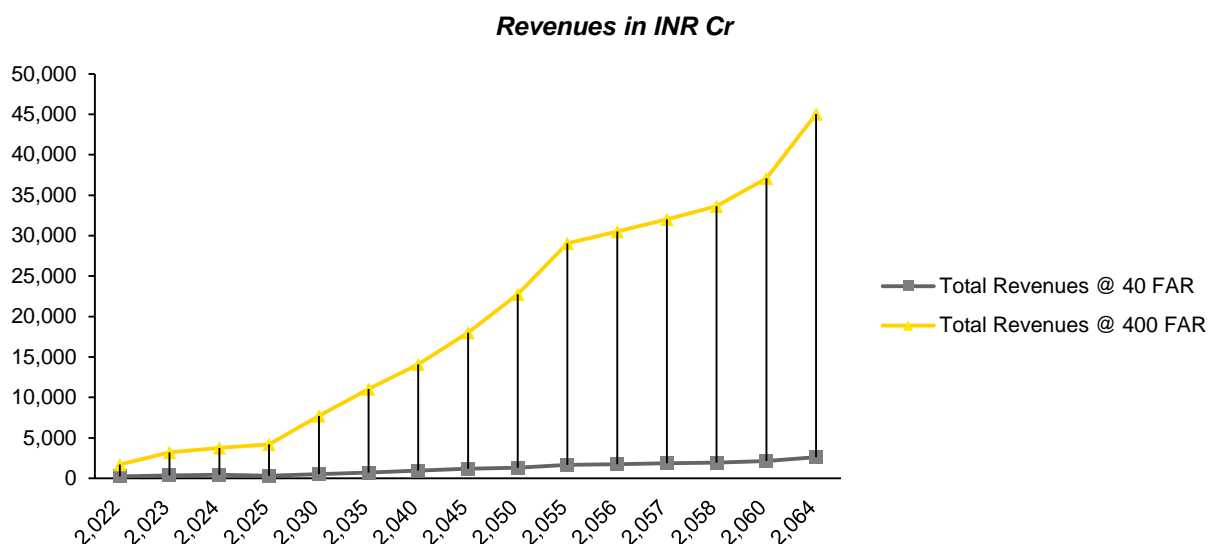


Figure 18: Revenue snapshot @ 40 FAR vs 400 FAR

4.8.2 Financing Structure

Table 28: Financing structure Assumptions

Particulars	Units	Value
Debt	%	65.0 %
Equity	%	35.0 %
Interest Rate	%	10.0 %
Ke – cost of equity	%	18.0 %
Loan Repayment Period	Years	10
Moratorium	Years	2
Loan Repayment Start	Date	01-Apr-23
Loan Repayment End	date	31-Mar-33
Weighted average cost of capital	%	10.5%

4.8.3 Depreciation and Tax Rates

For the purpose of building the financial model we have assumed the tax and depreciation rates as provided in the Income Tax Act and the Companies Act 2013.

4.8.4 Outputs

Key financial indicators have been summarized in the table below:

Table 29: Key financial indicators

Particulars	Unit	@40 FAR	@400 FAR
		Value	Value
Total project cost	INR Cr	490	3,929
Annual revenues (stabilized operations)	INR Cr	305.5	2,878
Equity IRR	%	18%	18%
Annual concession fee (escalated by 5% year-on-year)	INR crore	100	750
Revenue share – bidding parameter	% of total revenues (from sports and non-sports/ commercial)	26%	34%
Concession period			
c. For stadium	years		c. 30 years
d. For commercial			d. 45 years

4.9 CONCLUSION

Jawaharlal Nehru Stadium is developed over a land parcel of 100 acres with a seating capacity of ~60,000. SI has sought guidance from NITI Ayog to assess development activity at JLN Stadium with an objective to improve and upgrade existing sports infrastructure to world class standards and to assess the potential of developing other sports, allied and supporting commercial activities at the stadium on Public Private Partnership (PPP) basis.

Based on preliminary assessment of the existing facilities at JLN Stadium and proposed objective for overall development of the stadium, two options were evaluated for undertaking financial viability:

- ✓ 40 FAR as per Master Plan Delhi – 2021
- ✓ 400 FAR as per Transit Oriented Development (TOD) policy

Based on the above conceptual development options for 40 and 400 FAR, financial analysis was carried out by the consultant providing following results:

- the total area available in case of 40 and 400 FAR is ~62,000 sq.m, and ~15 lakh sq.m respectively
- the total project cost is INR ~ 490 Cr for 40 FAR and INR ~ 3929 Cr for 400 FAR
- annual concessions fees is 100 Cr for 40 FAR and 740 Cr for 400 FAR when escalated by 5% year-on-year
- the revenue share for 40 and 400 FAR is 26% and 34% respectively

The total base cost as per current prices is estimated to be INR 268 crores (in case of 40 FAR as per MPD-2021) and INR 3,213 crores (in case of 400 FAR as per TOD policy) which includes cost towards renovation/refurbishment/relocation of existing sports infrastructure, sports university, sports academies, hotels and development of area for commercial exploitation. Such commercial area shall be restricted to sports related activities only and may include, sports shops, retail units, virtual gaming, adventure zones or any other allied activities.



ANNEXURES

ANNEXURE A1 – INSTITUTIONAL FRAMEWORK OF SI

Sports ecosystem in India comprises of four types of stakeholders (government bodies, private entities, autonomous bodies, public private partnerships) across eight major segments. These stakeholders form the basis of sports industry in India and are involved in various activities spread over from governance of events of sports activities. Major stakeholders are:

- Ministry of Youth Affairs of Sports (MYAS)** - The Ministry of Youth Affairs and Sports acts as the apex government body for sports in India. It is primarily responsible for formulation of sports development programmes, development of sports infrastructure in the country.
- Sports India (SI)** – SI is responsible to implement the objectives laid out by the MYAS. It releases funds sanctioned by MYAS to NSFs and manage sports training and institution centers.
- Indian Olympic Association (IOA)** – it is the representative of International Olympic Association. It is an autonomous body that enforces the Olympic charter over NSFs of Olympic Sports. It also organizes the National game sand liaises with Government for financial assistance.
- National Sports Federations (NSFs)** – these are autonomous bodies responsible for promoting their respective sports and organizing tournaments. These organizations are assisted by state and district sports associations to meet the required goals and objectives. NSFs play at pivotal role in developing a sport with their close association with base level authorities that promotes a sports right from school and village levels up to the national level. The below figure illustrates sports ecosystem along with roles and responsibilities of stakeholders.

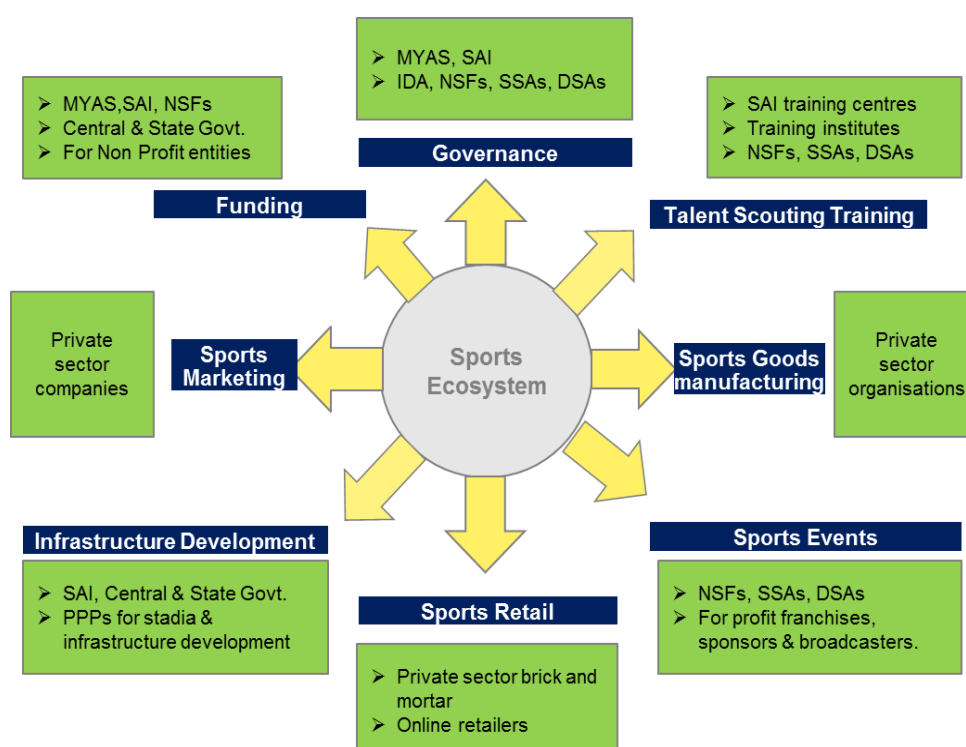


Figure 19: Sports ecosystem of India

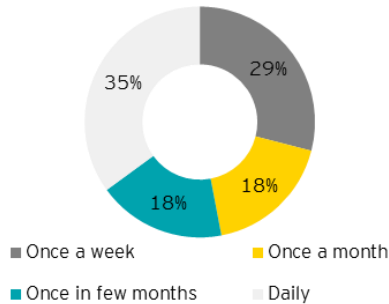
In order to promote sports centric activities in India, the Gol has undertaken key initiatives for use by public. The below table illustrates schemes currently being undertaken by SI to promote sports in India.

Scheme	Objective	Age Group	No. of center
NSTC	To scout sports talent by adopting schools having good sports infrastructure and record of sports performances	8 – 14	24 adopted schools and 32 Akhara with 1,060 trainees (805 boys, 255 girls)
STC	To establish SI training centers at the state level; support state governments providing training infrastructure with SI sponsored boarding, lodging, scientific training and equipment support	12 – 18	56 centers, 5,394 trainees (3,807 boys, 1,587 girls)
SAG	To build SI sponsored sports infrastructure for training	12 – 18	19 centers, 1,676 trainees (961 boys, 715 girls)
ABSC	Collaboration with Indian Army to leverage sports infrastructure	8 – 16	18 center, 1,049 trainees (all boys)
Extension Centers of STC/ SAG Schemes	Develop schools and colleges having adequate infrastructure	12 – 18	70 centers, 1183 trainees (775 boys, 408 girls)
Center of Excellence (COE)	Providing advanced training to elite athletes	12 – 25	15 centers, 556 trainees (288 boys, 268 girls)
Come and Play Scheme	Optimize utilization of SI sports facilities, scout talent and provide training under SI coaches	8 – 17	53 centers, 18,195 trainees

ANNEXURE A2 – STAKEHOLDER INTERACTION

Key findings of the survey at Jawaharlal Nehru stadium is illustrated in the following section.

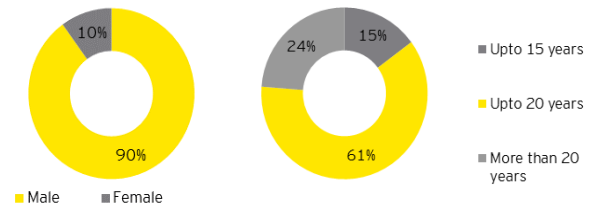
1. User frequency



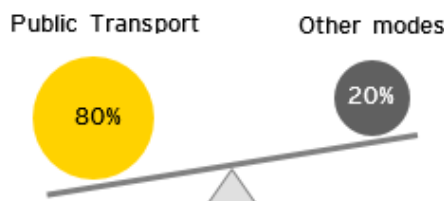
Most of the users present during the survey were registered users under the come and play scheme, who seek training for specific sports. On account of summer holidays the number of come and play users present at the stadium was estimated to be over 600 during the evening hours. The above figure depicts the user frequency at JLNS. Most of the users of the sports facility come daily. The second highest category is of the users who come once a week.

2. Gender and age profile

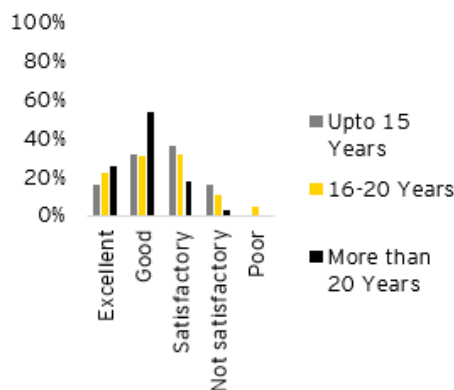
The Figure depicts the gender profile at JLNS. Due to higher male population and patriarchal view of our society the percentage of females participating in sport activities is low. The major proportion of the user group fall in the age category of “up to 20 years”. People in this category are mix of come and play users and elite athletes.



3. Mode of transport

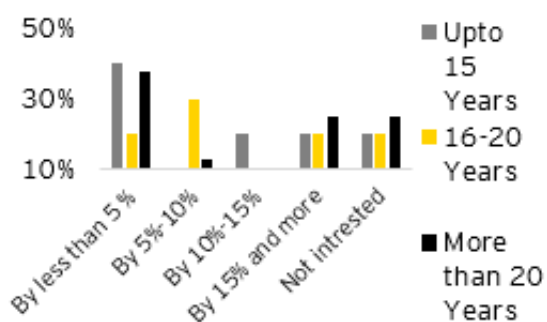
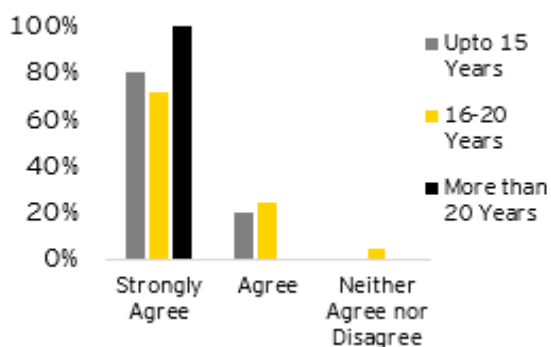
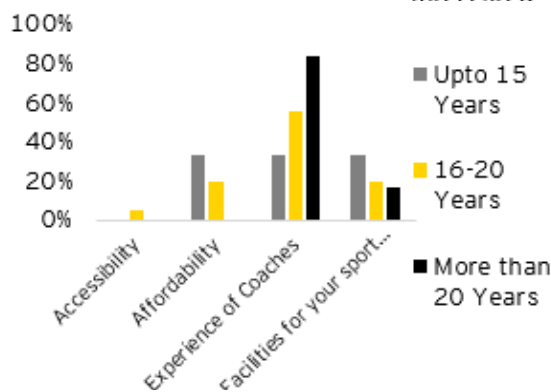
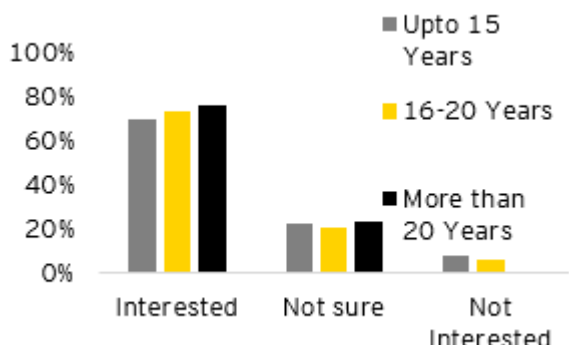


Majority of the people use public transport (80%) to reach JLNS primarily on account of dedicated bus and metro stations located in the vicinity have played an important role in facilitating public transport at JLNS.



4. Experience of Infrastructure

The analysis depicts the experience of current infrastructure at JLNS. Since all the infrastructure was revamped during Common Wealth games 2010, fair amount of the users think the current facility is good in terms of infrastructure.



5. Interest in additional facilities

In order to gauge current user's interest of using facilities other than what they use daily, we sought their opinion on development of additional facilities like 24x7 gyms and swimming pool etc. on come and use basis. Most of the users were interested in using these additional facilities.

6. Factors determining choice of stadium

Majority of the users choose JLNS for the expertise of the coaches. All the coaches at JLNS are affiliated to SI, hence they bring the best coaching techniques to the table. About one fourth of the users choose JLNS for its affordable prices and the facilities that JLNS has to offer.

7. Experience with coaches

Almost all the users at JLNS agree that the coaches are experienced and they have a fruitful experience while being coached.

8. Willingness to pay

When asked about the increment in tariff of the facilities majority of the users were comfortable in an increase less than 5%. This points to fact that many users currently coming to JLNS are price sensitive. While some of the users were not concerned by the tariff increase, they would still continue to use the facilities offered by JLNS.

ANNEXURE A3 – COMPETITIVE SPORTS FACILITY

SIRI FORT SPORTS COMPLEX



The complex was developed for the 1982 Asian Games, next to the Asian Games village by the Delhi Development Authority (DDA), which is also currently managing the facility. With its strategic location in the heart of South Delhi and it is well equipped facilities in 27 sporting disciplines, the complex is recognized for its sheer aesthetic value.

Facilities available: Tennis, Badminton, Table tennis, Basketball, Squash, Cricket, Football, Hockey, Swimming, Taekwondo, Shooting, Skating, Krav Maga, Billiards/Snooker, Aerobics, Dance, Western Dance, Yoga, Fitness Centre/Multi-gym, Jogging Track, Reiki,

Naturopathy Centre, Pro shop, Snack Bar, Pitch and Putt Course, children's Park, Multipurpose stadium.

Uses: The stadium is mainly abode to pay and play users, but apart from that it also hosts badminton and squash games. It hosted 2014 Thomas and Uber cup for Badminton.

Saket Sports Complex

The Saket Sports Complex was developed by the DDA in 1990. It is spread over 18.5 acres in the area between varying land use pattern.

Facilities Available: Aerobics, Badminton, Billiards/Snooker, Children's park, Cricket, Dance, Fitness Centre/Multi-Gym, Football, Jogging Track , Skating, Snack Bar, Squash, Swimming, Table Tennis, taekwondo, Tennis, Western Dance, Yoga.

THYAGRAJ SPORTS COMPLEX



Thyagraj sports complex was reconstructed especially for CWG 2010 Netball competition. Constructed over an area of 16.5 acres, the stadium has a seating capacity of 5,883 persons. It is developed as India's first-ever model Green Venue and is owned by the Government of National Capital Territory of Delhi.

Sports Facilities: Football, Badminton, Basketball, Table Tennis, Netball.

Uses: The Thyagraj Sports Complex hosted the netball event of the Commonwealth Games, Delhi 2010. The netball contests were held between 4th and 14th October 2010. At present, the education department of the Govt. of Delhi & NCT is located in the complex. Other events such as the 4th Comic Con India, an annual event, was held here in February 2014. The Pro Kabaddi League was also hosted here in 2014. For Dabangg Delhi, the team from Delhi in the Kabaddi League, Thyagraj stadium was the home ground.

ANNEXURE A4 – RETAIL MARKET IN VICINITY

KHAN MARKET



Nestled in one of the most affluent and expensive residential neighborhoods of Delhi, Khan Market is a small yet highly sought after retail destination in Delhi. Surrounded by Aurangzeb Road, Prithviraj Road, Amrita Shergill Marg, Golf Links, Jor Bagh, the government housing accommodation in Lodhi Road, bureaucrats' houses and the diplomatic areas of Chanakyapuri, Khan Market is a major attraction of niche footfalls of premium shoppers as also young, urbane couples and families from the neighboring residential areas. It has a U-shaped matrix, which allows shoppers to move

from the outer side to its middle and inner lanes and explore its various retailer offerings. From small local stores, the market over the past one and a half decade has now emerged into a more vibrant hub as its address and surroundings have contributed to its upgrade and re-invention.

MEHERCHAND MARKET



This market is located on Lodhi road, just behind Indian Habitat Centre, the Market is divided into 2 parts by a four way road running through it. Originally this market consisted of grocery shops, vegetable vendors, tailor shops, barber shops and other such utility shops to serve the local area residents in and around Lodhi Road. The growth & transformation of Meherchand Market is directly related to the transformation of Lodhi Road. With time, Lodhi Road became the residence of bureaucrats, artists and political heavyweights. Also a number of international and national organizations came to have their offices at India Habitat Centre and Lodhi Estate. The nearby Khan Market became

the most sought after shopping hangout in Delhi and rental prices increased exorbitantly on account of which several business which could not afford to pay up rent in Khan Market slowly started moving to Meherchand Market. Presently this market boasts of high end designer stores, lifestyle & furniture stores, restaurants, grocery shops and three temples.

ANSAL PLAZA



Ansal Plaza is a shopping mall located at Andrews Ganj on Khel Gaon Marg in south Delhi, the mall also consists of an amphitheater enclaved within the circular shaped plaza. Ansal plaza mostly caters to restaurants and retail stores. Decathlon is a major attraction at Ansal Plaza.

DEFENCE COLONY



Defence colony is an affluent locality located in central South Delhi. Defence colony market is home to around twenty restaurants and coffee shops besides high-end shops. A few exclusive boutiques for Indo Western attire were all that were found in this rather quiet market. Now it is a high street luxury shopping center. Premium designers such as Rohit Bal, Rohit Gandhi etc. have their outlets in this market. This market is also well known for its range of restaurants catering to different cuisines.

SOUTH EXTENSION



South Extension is a shopping area located in South Delhi. By virtue of it being located right on the Ring Road – the main arterial road running around Delhi, it enjoys excellent connectivity and easy accessibility. Further, its proximity to upscale residential areas such as South Extension, Defence Colony, Green Park, Hauz Khas and Greater Kailash make it one of the most sought-after shopping streets in this part of town. It houses large jewelry showrooms, flagship apparel stores, restaurants, home and fashion accessories, cafes and pubs, which offer a varied and complete shopping experience.

LAJPAT NAGAR



Lajpat Nagar Central Market is situated near Ashram Chowk in South Delhi. It is located close to the Srinivaspuri flyover and Moolchand flyover. This market houses a blend of branded showrooms, exclusive garment shops as well as roadside kiosks. One can find everything in this market place ranging from clothes, accessories, footwear, bags and other products whereas the Road side kiosks retail affordable garments and items. This market place is also fringed with a number of International Standard Restaurants and Indian Restaurants that serve a variety of delectable continental and Indian Cuisines.

JOR BAGH



Jor Bagh market is located close to Lodhi road post office and is also within walking distance from Jor Bagh metro station. The market houses a blend of regular shops such as convenience stores, grocery shops and high end retail stores in terms of clothes, accessories and electronics. This market is mostly frequented by the nearby residents of INA, AIIMS and Jor Bagh. The market also consists of banks and a bookstore.

HAUZ KHAS VILLAGE



Hauz Khas village is located close to Green Park and Safdarjung Development Area. This market houses trendy designer buildings, home décor & furnishing outlets as well as fashion boutiques. Along with these retail outlets, this Village also offers a grand view of the 13th Century Monuments situated along an ancient water body also known as the Hauz-i-Shamsi. Hauz Khas village is also home to numerous outlets that retail a variety of antiques, arts and crafts, consumer durable goods, fashionable garments, furniture, shoes, accessories and even multi cuisine food joints.

INDIA HABITAT CENTER



The India Habitat Centre is a multipurpose building in New Delhi, India. Mixing work, commercial and social spaces, the Indian Habitat Centre is one of India's most comprehensive convention centers. Indian Habitat Center has also leased out office spaces to many companies.

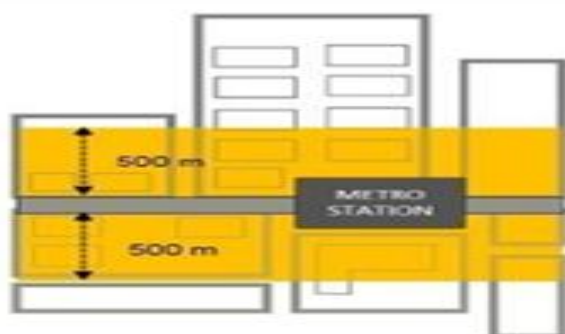
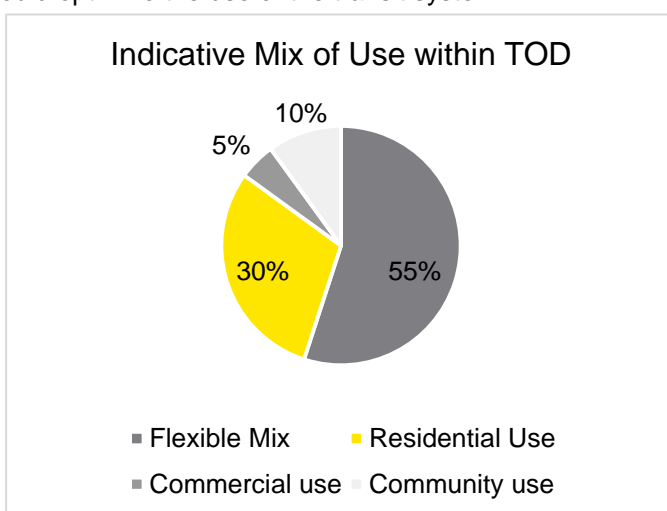
ANNEXURE A5 – TRANSIT ORIENTED DEVELOPMENT

As per the National Transit oriented development policy, TOD needs to integrate land use and transport planning and aims to develop planned sustainable urban growth centres, having walk able and liveable communes with high density mixed land-use. Citizens have access to open green and public spaces and at the same time transit facilities are efficiently utilized.

It focuses on creation of high density mixed land use development in the influence zone of transit stations, i.e. within the walking distance of (500-800 m) transit station or along the corridor in case the station spacing is about 1km and advocates pedestrian trips to access various facilities such as shopping, entertainment and work.

It also increases the accessibility of the transit stations by creating pedestrian and Non-Motorized Transport (NMT) friendly infrastructure that benefits large number of people, thereby increasing the ridership of the transit facility and improving the economic and financial viability of the system. Since the transit corridor has mixed land-use, where the transit stations are either origin (housing) or destination (work), the corridor experiencing peak hour traffic in both directions would optimize the use of the transit system

- i) About 500 m. wide belt on both sides of Centre line of the existing and planned/approved MRTS Corridors is designated as Influence Zone which has been identified in the respective Zonal Development Plans, along with stations. The same will be updated by DDA from time to time.
- ii) Entire approved plan of a TOD integrated scheme will be included in the zone if more that 50% of the plan area falls inside the influence zone. The TOD integrated scheme to be submitted by DE will be of the area under his ownership/ entitlement and not of the adjoining area





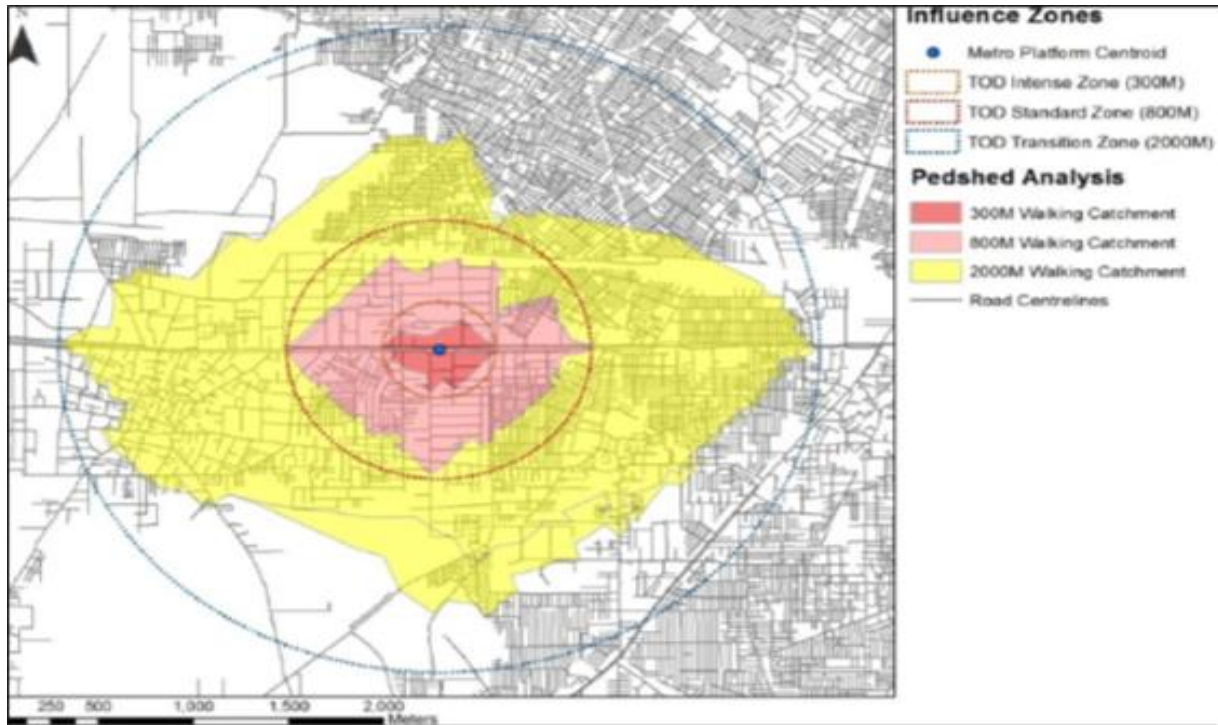
TOD IN THE CONTEXT OF DELHI

Delhi's recent investments in Public Transport Systems which include a world class Metro System and a planned BRT Network, Delhi has been unable to deliver efficient, comfortable and affordable mobility options to its citizens. The current lack of connectivity, subsidized parking options as well as a lack of safety for walkers, cyclists and women in the city has resulted in ever increasing number of private vehicles in the city. Total vehicular emissions contribute to 70% of the air pollution in Delhi multiple respiratory ailments and deaths. The objective of TOD is to restructure and redefine how a city works, lives and finds means of recreation.

TOD Zones of Influence		
Zone 1 : Intense Zone	Zone 2: Standard TOD Zone	Zone 3: TOD Transition Zone
<ul style="list-style-type: none"> • 300 M influence zone of all MRTS Stations 	<ul style="list-style-type: none"> • 800m* (10-min walking) influence zone of all MRTS Stations. 	<ul style="list-style-type: none"> • 2000m** (10-minute cycling distance) influence zone of all MRTS Stations. • 300 M influence zone of BRT corridors.
<ul style="list-style-type: none"> • 800m* (10-min walking) influence zone of Regional Interchange Station (i.e. Rail-MRTS, or two MRTS lines.) 		<ul style="list-style-type: none"> • Zones within Intense or Standard TOD Zones which are not permitted for redevelopment but need enhancements in public realm and network connectivity.

TOD ZONE OF INFLUENCE

The development in TOD is categorized under 3 Zones namely intense, standard and transition zones within 300 M, 800 M and 2000 Meter radius from the Metro Stations



case of JLN stadium, Jangpura stadium open to the East Gate of the stadium and more than 50 % of the area falls under the 500 Meter radius from the Metro station. From the JLN Metro station on the same Violet line, the Zone of influence covers more than 50 % of the complex area under the 800 Meter radius zone. Since there are no protected monuments amongst the 52 A.S.I enlisted monuments in the vicinity of the stadium complex, full utilization of TOD norms should be applicable to JLN Stadium Complex. The TOD policy in Delhi is under review presently and is presently being scrutinized on project basis as well.



BENCHMARKING AND ANALYZING BEST PRACTICE

Sports stadiums and infrastructure remains the pride of the nation and become the much needed symbol of constructive young India. These stadiums not only provide match playing venues but also becomes centers of training and excellence in sports. Already with the training programme and come and play schemes, most of the Sports India Stadiums extensively support sports in the country. Being the kind of large infrastructure needed to host international events, maintaining these stadiums/ venues after the events are over or in between events remains a challenge across the world. We have studied best practices in stadiums Vis-a – Vis Olympic & world cup requirements to host a match. For Olympic venues, Athletics and football stadiums have been studied. World cup venues for football, the redevelopment plans after the events, the viability plans for maintaining sports with an added product mix and stadiums fallen to disrepair & disuse due to lack of foresight across many venues have all been studied to understand the life cycle of a stadium, the international match holding capability and the much needed sustainability of the project via supporting functions.

The existing stadiums in Delhi NCR have also been studied with their facilities to understand in case of a major international sports event, how JLN stadium could be placed.

A list of major sports international events which could be held in the stadium have also been identified along with their requirements.

In case of 400 FAR, the areas under the stands which have been identified for sports retail can also be completely left vacant for international matches and set up as the built up area available is sufficient to accommodate the component of retail and sports related commercial.

Major sports disciplines and facilities have been identified which can be upgraded to bring sports training courts like the Basketball, badminton, Table Tennis, Handball etc. can be played under international match playing conditions.

Table below is a snapshot of the stadiums in Delhi-NCR and their capacities.

Stadiums in National Capital Region						
S. No	Name	Location	Capacity	Owner	Discipline	Event
1	Jawaharlal Nehru Sports Complex	Delhi	60,000	SAI	Athletics/ Football/ Weightlifting.	Common Wealth games
2	Indira Gandhi Sports Complex	Delhi	14,348	SAI	Cycling, gymnastics, Wrestling.	Common Wealth games
3	Thyagraj Sports Complex	Delhi	4,494	Govt of NCT	Netball	Common Wealth games
4	Talkatora Sports Complex	Delhi	3,035	NDMC	Boxing	Common Wealth games
5	R.K. Khanna Tennis Stadium	Delhi	5,015	DLTA	Tennis	Common Wealth games, Fed Cup, Davis cup, Indian open
6	Ambedkar Stadium	Delhi	35,000	MCD	Football	Nehru Cup, FIFA World cup Qualifier
7	Netaji Subhash Sports Complex	Delhi		DDA	Tennis, Badminton, Table Tennis, Billiards / Snooker / Pool, Basket Ball, Cricket, Football, Squash	Training
8	Shivaji Stadium	Delhi	7,000	NDMC	Hockey	Common Wealth games Practice venue

Stadiums in National Capital Region						
S. No	Name	Location	Capacity	Owner	Discipline	Event
9	Nawab Mansur Ali Khan Pataudi Sports Complex	Delhi		Jamia University	Badminton/ Basketball/ Table Tennis	Training
10	Yamuna Sports Complex	Delhi	4,297	DDA	Archery, Table Tennis	Common Wealth games
11	Jawaharlal Nehru University Stadium	Delhi	2,500	JNU	Cricket, Football, Hockey	Training
12	Karnail Singh Stadium	Delhi	5,000	Railways	Athletics/ Football/ Cricket/ Hockey/ Badminton.	National Kabaddi Championship, National Weightlifting Championship, Women's Cricket world cup, ODI cricket match
13	Siri Fort Swimming Pool	Delhi		DDA	Swimming'	Training
14	CWG Village Sports Complex	Delhi		DDA	Aerobics/ Badminton/ Billiards / Snooker/ Football/ Swimming/ Table Tennis/ Taekwondo/ Yoga	Commonwealth Games Training Centre
15	Surjit Singh Badminton Academy	Delhi	200		Badminton	Training
16	Siri Fort Sports Complex	Delhi	5,000	DDA	Squash, Badminton	Common Wealth games, Thomas cup
17	Central Reserve Police Force (CRPF) Shooting Range	Khardarpur	345	CRPF	Shooting	Common Wealth games
18	Dr. S.P. Mukherjee Swimming Stadium	Delhi	5,178	SAI	Swimming, Diving, Water polo	Common Wealth games
19	Dr. Karni Singh Shooting Range	Delhi	2,000	SAI	Shooting	Common Wealth games
20	Major Dhyan Chand National Stadium	Delhi	19,118	SAI	Hockey	Common Wealth games
21	Delhi University Stadium	Delhi	10,132		Rugby Seven	Common Wealth games

Table below is a description of international best practices in terms of sports viability.

Brief List of Sports Cities & sports supporting infrastructure				
Sr. No.	Name and Location	Sports Infrastructure		Sports/ Non-Sports/ Real Estate Components
		Sports Components	Capacity	
1	Singapore Sports Hub	National Stadium	55,000	<ul style="list-style-type: none"> Sports Retail Sports Museum
		Indoor Aquatic Centre	6,000	
		Multipurpose Arena	3,000	
		Water Sports Centre	Temporary Seating	
		Indoor Stadium	12,000	

2	Dubai Sports City	Multipurpose Sports Stadiums (Cricket, Athletics, Football)	60,000	<ul style="list-style-type: none"> Residential 18Hole Golf Course Malls/Retail Offices Clubs Retail Commercial Office Towers Schools Other Public Amenities and Utilities
		Cricket Stadium	25,000	
		Indoor Arena	10,000	
		Hockey Stadium	5,000	
		Sports Academies and Excellence centres	-	
		Sports Clinic	-	
3	Tunis Sports City	Football/Athletic Stadium	10,000	<ul style="list-style-type: none"> Residential Hotel Spa Clubs Retail Commercial Office Towers Schools Other Public Amenities and Utilities
		Aquatic Stadium	4,000	
		Indoor Stadium	5,000	
		18 Hole Golf Course	-	
		Sports Academies	-	
		Sports Clinic	-	
4	Barra Olympic Park, Rio	Carioca Arena 1 (basketball, wheelchair basketball and wheelchair rugby)	16,000	<ul style="list-style-type: none"> After the conclusion of the games, the site was intended to be repurposed to become the Olympic Training Centre, a sports training facility operated by the Brazilian Ministry of Sports however due to poor foresight and planning the site now remains unused and in a state of disrepair. The open tennis courts have recently been opened to the public and is making steps in making the park more accessible to the public.
		Carioca Arena 2 (wrestling, judo and boccia)	10,000	
		Carioca Arena 3 (fencing, taekwondo, Paralympic judo and Paralympic fencing)	10,000	
		Future Arena (handball and goalball)	12,000	
		Maria Lenk Aquatics Center (diving, synchronised swimming, water polo)	5,000	
		Olympic Aquatics Stadium (swimming, water polo play-offs and Paralympic swimming)	15,000	
		Olympic Tennis Centre (tennis, wheelchair tennis and football 5-a-side)	10,000	
		Rio Olympic Arena (gymnastics and wheelchair basketball)	12,000	
		Rio Olympic Velodrome (track cycling)	5,000	
		5	Queen Elizabeth Olympic Park, London	
London Aquatics Centre	17,500			
Lee Valley VeloPark	6,000			
The Copper Box	7,500			
Basketball Arena	12,000			
The O2 Arena (North Greenwich Arena)	20,000			
The Ricoh Arena (City of Coventry Stadium)	32,600			
Elton manor	10,500			
Riverbank Arena	16,000			
Water Polo Arena	5,000			

6	Wembley Park	Wembley Stadium	90,000	<ul style="list-style-type: none"> • 4,000 new high quality homes of different sizes for a mix of tenures • A new 7-acre park, 1.5m sq. ft. of commercial space, including new offices and high street shopping • Hotels, Student accommodation • Primary school and nursery • Meeting places ,3,400 public car parking spaces
7	Olympic Green, Beijing	Beijing National Stadium	91,000	<ul style="list-style-type: none"> • Pop concert venue • Public pool • Soccer • Luxury apartments • Retail
		Beijing National Indoor Stadium	19,000	
		Beijing National Aquatic Center	17,000	
		Olympic Green Tennis Center	32,400	
		Olympic Green Archery Field	5,000	
		Olympic Green Convention Center	5,695	
		Olympic Green Hockey Field	17,000	
Sr. No.	Name and Location	Sports Infrastructure		Sports/ Non-Sports/ Real Estate Components
		Sports Components	Capacity	
8	Khalifa International Stadium	Khalifa International Stadium	40,000	<ul style="list-style-type: none"> • High end Malls • Hotels
		Aquatics centre		
		Indoor hall		
9	Al Wakhra Sports Complex	Al Wakhra Stadium	40,000	<ul style="list-style-type: none"> • Restaurants • Offices • Retail • High End housing
		Aquatic Centre		
		Multipurpose hall		
10	Optus Stadium Complex, Perth	Optus Stadium	70,000	<ul style="list-style-type: none"> • The stadium is serviced by over 50 food and beverage outlets. • Premium facilities available on event and non-event days for conferences, functions and meetings.
11	Amsterdam Area Complex, Amsterdam	Amsterdam Arena	54,033	<ul style="list-style-type: none"> • IMAX Multiplex • Nightclubs • Sports Retail (Decathlon, etc.) • Kiosks • 15+ Eateries, Fine dine restaurants, Pubs, etc. • Malls • Hotels • Functions both as a stadium and entertainment venue.
12	Old Trafford	Old Trafford Football Ground	75,000	<ul style="list-style-type: none"> • Stadium Tours • Pubs/Bars • Sports Retail(Manchester United Megastore, Adidas) • Kiosks(Temporary) • 15+ Eateries, Fine dine restaurants, Pubs, etc. • Conference Halls • Exhibition Pavilions • Banquets Halls • Functions both as a stadium and entertainment venue.
13	Athens Olympic	Spyros Louis Athens Olympic Stadium	72,000	Home pitch for AEK F.C., Greek national football team

Sports Complex	Nikos Galis Olympic Indoor Hall	19,250	Home court for Panathinaikos B.C., Greek National Basketball Team Large areas of the site remains in a state of ruin and disregard however a there are plans to develop this plot with Homes, Malls, Hotels and Parks.
	Athens Olympic Aquatic Centre	11,500	
	Athens Olympic Tennis Centre (The Main Court)	8,600	
	Athens Olympic Velodrome	5,250	

SPORTS ACADEMIES & SPORTS UNIVERSITY

Studying some of the top sports Academies and Sports Universities across the world, a career in Sports Journalism, coaching, sports medicine, sports Sciences, Research in the same field, nutrition, bio mechanics, performance analysis etc. lacks in the country on a holistic level. Also to be included in the University curriculum is a basic graduation/post-graduation course with highest applicable sports Quota in the country.

A compilation of top sports courses and Universities across the world and India is compiled below. Such a program not just brings in revenues but also provides the much needed base resource for training coaches, indigenous research, performance management, nutrition rehabilitation etc. both as career options in sports as well as trained skillset in the sports sector of India.

Loughborough University	
School of sports , Science and Health Science	
Courses	Description
Bachelors	sports, exercise and health sciences
	sport coaching and physical education
	sports management
Foundation courses	for athletes sport science, statistical mathematics, applicable mathematics, geography, chemistry, Psychology with sociology, materials with engineering science, biology, business
Master Courses	Exercise As Medicine
	Exercise Physiology
	Sports And Exercise Psychology
	Musculoskeletal Sport Science And Health
	Sport Biomechanics
	Sport And Exercise Nutrition
Research	Sports Management
	Dietary modification of gut function and role in human metabolic disease
	Extreme heat policies in sport
	Impart performance of sports balls
	Mechanics of advanced materials
	Sport events and health promotion
	Understanding links between coach leadership and coach athlete relationship
	Stunning, short stature and cardiovascular health
	Mechanics of biochemical
Motivation and health behaviours	
School of Sports Business	
Masters	Sport business
	Sport business and leadership
	Sport digital and media technology
	Sport business and innovation
	Sport marketing
Deutsche Sportochshule Koln (German sport university, cologne)	
Courses	
Bachelors	sports management and communication
6 months	sports journalism
	sport and health in prevention and therapy
	physical education
	sport, adventure and expressive movement
	sport and performance

Masters	sport, media and communication
4 semester	Rehabilitation , prevention and health management
	international sport development and politics
M.Sc.	sport and movement Gerontology
	Exercise science and coaching
	Sport tourism and recreation management
	Sport management
	Human technology in sport and medicine
	Psychology in sport and exercise
M.Ed.	Physical education
PhD	Exercise science and coaching
	Natural science
	Social science
Chicago Sport Institute	
Area: 14,000 sq. feet	
30 yard indoor track for conditioning, strength, agility and speed training	
Performance training, sports medicine and integrative health centre	
Programs	
	Satellite Coaching Program
12 week program	Satellite personal training is perfect for accountable and highly motivated long distance clients that are serious about reaching their performance and transformation goals.
	Fat Loss Transformation Program
12 week program	Training, nutritional plan, supplement plan, conditioning,
Athletic development Program	Training, nutritional plan, supplement plan, sport specific conditioning,

ANNEXURE A6 – PPP AS AN ENABLER IN SPORTS INFRASTRUCTURE

SPORTS INFRASTRUCTURE CREATION

While evaluating proposal for redevelopment, improvement or expansion of any existing sports facility through PPP, it is imperative to understand the dynamic stakeholders involved and define a vision for undertaking such development. The process of proposing even small changes in the operations of any existing sports structure shall be backed up by defined purpose and need of such change. Moving forward promoting sports does not essentially mean developing more infrastructure, such vision would result in adding up of inventories of sports stadiums. Without analyzing the requirement and identifying the users for such infrastructure facilities, the problem of sufficient utilization for existing purposes shall remain unanswered. Therefore, the concept of development of sports facility should enable the objective of determining the operational efficiency of current facilities and upgrading the existing stadiums with advanced and sustainable solutions.

Establishing a vision for redevelopment of any existing sports infrastructure shall typically address three key questions.

WHAT DO WE WANT?

This question deals with understanding the preliminary thoughts and ideas that lead to emergence of this project concept. The thoughts at this stage are more focused towards building a “dream project” and analyzing the international best practices to be brought into the current scenario. The stage brings in an idealistic scenario which possible options. However it is important to study the operative environment by adding realistic approach to the thought process, which leads us to our next question.

WHAT DO WE NEED?

It is important to align our thought process of an “ideal stadium” with the current environment in which the stadium operates. Development of a stadium or expanding the scope of an existing facility is related to many factors like regulatory policies, political stability, market dynamics, usage patterns and many others. Thinking of creating infrastructure in isolation or skipping any such factor may lead to ambiguity in successful results.

WHAT CAN WE AFFORD?

The final question relates to the extent we would want to explore the possible options. Every project faces multiple constraints while structuring the options. These constraints could be financial, political, fundamental, operational etc. in nature. Analysis of all the options considered at stage I, while creating our idea of an ideal scenario should now be restricted to realistic and attainable options.

Addressing these questions will help us form a vision for this project and form a pragmatic approach towards structuring of this report. The objective of this feasibility study is to outline the potential options for increasing the utilization of this expansive and world-class infrastructure on a PPP mode. Methodology proposed involves a combination of options including providing more facilities to the existing user groups and/or targeting potential user groups for this facility.

Another purpose of entering into a PPP to maximizing both sustainable revenue, and ensuring access to citizens at large. However. It is a predetermined condition for any options, to ensure that training and coaching for sportspersons with potential to contend for medals at all levels shall continue unhindered. The prime motive is to unify sports with non-sports activities and provide splendid experience to the sportspersons and other user groups involved.

SPORTS INFRASTRUCTURE IN INDIA

Sports in India is primarily a state and central government subject, and as huge portion of the sports infrastructure is owned and managed by respective governments. Since the investments made by most states in sports has been negligible, for most part, India has not succeeded in providing universal and barrier free access to sports or creating a sports culture. Another major reason is related to low level role of private sector involvement in sports development in India except in cricket which have been majorly concentrated on for-profit academies and CSR/ non-profit initiatives. Many federations are highly dependent on government funding for carrying out their key objectives, such as organizing championships, procuring equipment and training sportspersons. The current model of sports governance not only breeds inefficiencies; issues around irregular activities have also been reported in the past.

The sports policy of most states is formed with the same objectives of 'sports for all' and achieving 'excellence in sports'. However, the micro aspects under various categories contribute towards the diversity in performance by different states. However, over the last few years, sports industry has witnessed a transformation at the back of factors like growing sophistication in infrastructure needs, increased visibility of competitive sports, emergence of sports as a business proposition and proactive efforts of India to host numerous mega sporting events.

The launch of Khelo India initiative by the Government focusses on developing sports infrastructure, encouraging a sporting culture through competitions and identifying and nurturing young talent. However, there is a need for greater involvement of the private sector in sports infrastructure development in India due to limitation of funds to develop and maintain the sports facilities as well as lack of technical and management proficiency. There is a need for private funding, management, skills and subsidies to further the national sports goals, as well as to develop a high potential and robust domain with immense opportunities in the short and long term.

ROLE OF PRIVATE SECTOR IN SPORTS

PPPs can help the government fast track infrastructure development and therefore it is imperative to create favorable policies and guidelines in order to attract private investments for a sustainable development goal. PPPs can be explored for creating infrastructure through Built – Operate Transfer (BOT) models by contracting construction companies specializing in building multi-purpose centers and allowing professional private sector entities to manage and control the existing sports infrastructure with the objective of building commercial models and converting the same into revenue centers. Higher asset utilization and revenue generation could in turn incentivize sports infrastructure creation.

In developed economies, stadiums have been designed as multi-functional facilities which are capable of hosting various sporting events, concerts and other types of entertainment as well. Such development have resulted not only in effective utilization of facility, but also act as a catalyst for urban growth in the region. Various states in India such as Gujarat and Rajasthan, have delineated the role of PPP in their sports policy while other states such as Madhya Pradesh have already started development of sports cities via the PPP mode. The sports policy of Haryana, a leading sporting state, defines in depth the need for development of sports facilities when developing new commercial/residential spaces.¹¹ Keeping in mind the need of developing places for development and promotion of sports. Such provisions can have a long term impact on improving the sports culture in every state. Timely planning and development of sports infrastructure seems to be the current problem.

Favorable PPP policy and direction/incentive for PPP in sports from the central government: The Union Budget 2016 focused on reviving PPP for infrastructure creation through action for ensuring improved liquidity, easier credit rating mechanism, and boosting (Real Estate Investment Trusts (REITs) and Infrastructure Investment Trusts (InvITs), further easing fund flows. In addition, the central government may

¹¹ Development of Sports & Sports Infrastructure: A Roadmap – ASSOCHAM - YES BANK, February 2014

develop guidelines for PPP in sports policy for states to adopt and make available case studies of successful implementation of PPP by states in India. The center may incentivize states to adopt PPP to spur infrastructure creation by using the same as a criteria for allotment of national games.

CASE STUDY:

Envisaging and defining the role of PPPs for sports infrastructure development in Andhra Pradesh

On account of Andhra Pradesh being selected to host the national games 2018-19, the State Government has enhanced the budget for development of sports infrastructure. The Government of Andhra Pradesh expects to make an allocation of almost INR1,000 crore for developing stadium in different districts. The objective of using PPP for sports infrastructure development stems from the flexibility it allows the government to focus entirely on recruiting top physical education trainers and coaches to train youth in different sports activities while the private players focus on the revenue aspect.

Source: Andhra Pradesh to allocate 1,000 crore for sports infrastructure, The Hindu

The State Government believes taking up the PPP mode would allow for the incorporation of a provision for setting up shopping complexes and other infrastructure in the stadium. This would not only help in effective maintenance of the stadium but would also make the stadium self-sufficient in terms of revenue. PPP initiative, private players would be allowed to open these facilities for the citizens on payment of fees and the stadium can be put to use all year round, driving sporting culture. Once built, the stadium could also double as a venue for business activities, annual general meeting, school games, sports functions, regional games, music concerts, live performances, etc.

Source: Sports infrastructure to get a taste of PPP. Financial Express

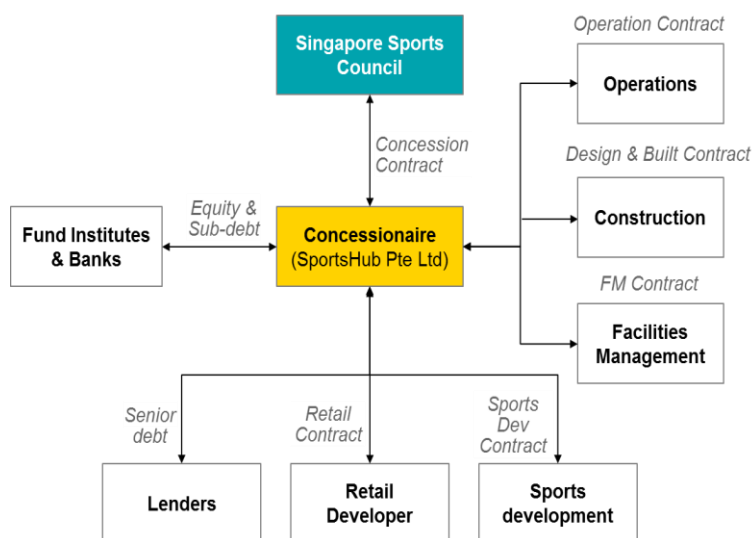
BENEFITS OF HAVING PPP STRUCTURE IN SPORTS:

- ▶ Provides support and resources to achieving the ultimate aim of government
- ▶ Reduces the initial capital investment for the government
- ▶ Risk Sharing among different parties which are best equipped to handle it
- ▶ Improved expertise and reduced operational cost
- ▶ Increased revenue sources due to increased capabilities
- ▶ Increased sustainability of the project
- ▶ More focus on supporting efficient resource development
- ▶ Offers a more holistic approach towards appropriate collaboration of sustained 'Public Interest' and provides an attractive commercial option to Private Sector Developer for meeting the social needs of today.

It is the viability of infrastructure that, to a large extent, affects the sustainability of the projects that can bring about meaningful private participation. Sports development needs to be monitored by the Centre and at the same time, the states should develop meaningful sports policies that critically address the ways and means to overcome the gaps in sports infrastructure and promote sports development in all respects.

ANNEXURE A7 – INTERNATIONAL BEST PRACTICES

SINGAPORE SPORTS HUB



The Singapore Sports Hub is a state-of-the-art, fully integrated sports, entertainment and lifestyle hub that was built in 2014 and hosts sporting and entertainment events. The project cost of the Sports Hub was c.S\$1.8billion, making it the largest sports PPP project in the world. PPP agreement between Sport Singapore and Sports Hub Pte Ltd is responsible for the design, construction, financing, operations and maintenance of the Singapore Sports Hub for concession length of 25 years. The hub is created with a vision to host various multi-purpose sports, become a recreation and lifestyle location to attract internationally

renowned sports events and performances from all over the world.

In a typical PPP structure, the project company may engage a subcontractor to operate and maintain those facilities to enable the procuring authority to carry out its business at the facilities. However, this project is unusual as the project company is also charged with running the day to day activities at the facilities in a way that complements the procuring authority broader objective of facilitating and encouraging sport in Singapore.

Another unique element of the project relates to the fact that the project company not only receives a monthly tariff in respect of the basic steady-state operation but is also incentivized to maximize the usage of the facilities and ensure a vibrant calendar of events. These incentives come in the form of a sharing mechanism with the authority in respect of third party revenues generated at the venues, whether through ticket sales, venue hiring income, commercial rights income, car park charges or retail rental fees.

Key Learnings

- ▶ Engaging multi-faceted participation of PPP Co. with global experience in operating and maintaining the facility
- ▶ Freedom to PPP for design of facility
- ▶ Performance based revenue mechanism on construction and O&M activities
- ▶ Defect liability and deduction on payment mechanism for non-performance on O&M works
- ▶ Incentivize the PPP Co for maximizing the usage of the facility
- ▶ Promoting participation in sports activities through marketing major marquee events
- ▶ Exploiting commercial rights to maximize project revenue

AMSTERDAM ARENA

In the case of Amsterdam Arena, due to the significant investment costs and the willingness of the City of Amsterdam to delegate operational tasks to other parties, a public-private partnership was structured. The vision of the Amsterdam Arena's stakeholders was to create a venue capable of hosting world class sporting and non-sporting events, open seven days a week and with the potential to become like a second city center of Amsterdam. AFC Ajax the football Club invested only in football-related development (its core business) as it is the main tenant and the most important user of the Arena. The stadium was leased to Ajax as an off-balance way of financing with zero cash transactions. Eight major private companies, the so called "founders", invested in the project in exchange for sponsorship and exclusive hospitality rights for a ten year period. The commercial partners became the first choice suppliers of different goods and services and they all received the rights to a private sky lounge. However, they do not have any stake in the stadium ownership.



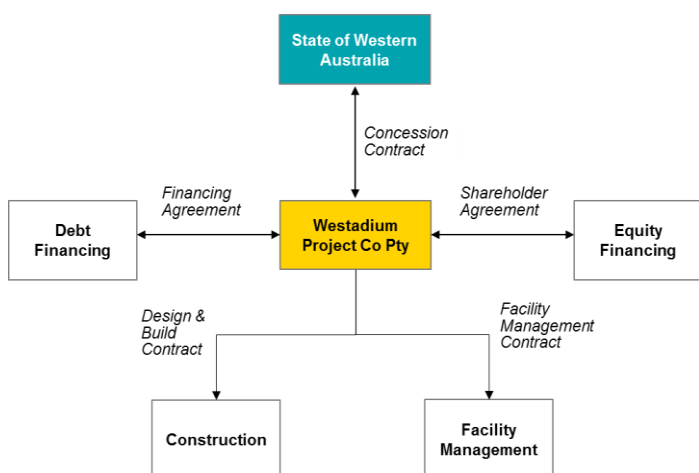
The owners of the Amsterdam Arena are exclusively the City of Amsterdam and Stadion Amsterdam N.V., a public limited company. Stadion Amsterdam N.V. rents the stadium to another company called Stadion Amsterdam C.V., a limited partnership fully in charge of the operations.

The legal differentiation between the ownership company and the operating company has been structured in order to reduce the owners' exposure to operating risks. Therefore, if Stadion Amsterdam C.V. makes losses, the owner is generally not affected. Daily operation decisions of the Arena are entirely in the hands of Stadion Amsterdam C.V. as the direct involvement of the owners is only periodical or indirect.

Key Learnings

- ▶ The Government investment in the Arena act as an catalyst to encourage urban renewal and growth in the region
- ▶ Concession of the site was granted for a fairly low minimal price in order to lower the financial burden
- ▶ Government income generated through real estate project developed in the region in the subsequent years
- ▶ AFC Ajax invested only in football related development as its main tenant and user of Arena
- ▶ Investment of commercial partners in exchange for sponsorship and exclusive hospitality rights for a ten year period
- ▶ The earlier sale of the depositary receipts, or "certificates of share"
- ▶ Stadium tour and museum serving as an important revenue sources for the operator.
- ▶ The parking complex under the stadium, the Transferium, is owned and operated directly by the Municipal Authority.

PERTH ARENA



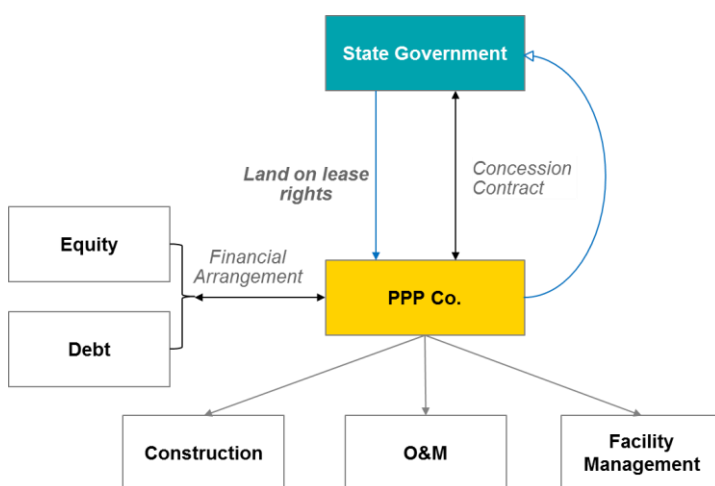
The keystone event behind the decision to build the Arena was the Hopman Cup tennis tournament. However, to be successful, the Arena hosts a range of other events. The procurement options analyzed and identified that for the stadium and sports precinct works in package, a Design, Build, Finance and Maintain (DBFM) model was undertaken to best balance the control of project cost and risk with the achievement of the project objectives, and most likely to maximize value-for-money (VFM) outcomes for the state. The state also selected to make a capital contribution of 60% of the construction cost. Whereas, payment

during the operating phase is in the form of a Monthly Service Payment (MSP) calculated in accordance with the Project Agreement and paid in arrears. The MSP covers the remainder of the construction costs, financing costs and maintenance costs including lifecycle replacement. The MSP is subject to abatement in accordance with the abatement regime set out in the Project Agreement. The state retains the responsibility, through the appointment of a stadium operator, for the day-to-day operation of the stadium and sports precinct. The state also retains ownership of the stadium and sports precinct.

Key Learnings

- ▶ Design of facility was carried out by the state
- ▶ The model injects significant intellectual, operational and commercial focus of the consortium entities such as the FM Subcontractor and the Financiers into the procurement process resulting in whole-of-life benefits;
- ▶ Excellent track record of achieving on time and on budget outcomes when compared with traditional procurement models.
- ▶ Robust maintenance regime is delivered over a 25-year operating period to minimize asset deterioration and a focus on preventative maintenance rather than reactive maintenance

TRANSSTADIA



The stadium has been developed with a project cost ~INR 540 Cr on a land area of ~ 10 acre. The stadium consists of development of 16 sports & entertainment, hospitality, retail etc. with an objective based on "utilization model". The emphasis was on to create a facility wherein each part will contribute to the revenue. But this model requires that the facility be situated within the city. It is being developed on PPP model land lease model with a concession period of 35 years, extendable for a further 35 years, with two percent revenue sharing for sports development in the country. The Arena

boasts of a FIFA standard natural turf with a seating capacity of 20,000, including patented expertise that enables the conversion of a section of the stadium into a 4,000 capacity pillar-less multi-purpose indoor venue, creating an optimum spectator experience. Not only can the latter can be utilized for 12 indoor sports, it can further increase the revenue by hosting exhibitions, social functions, conventions and corporate events.

The facility also house a 'members only' Eka Club, which will become a fitness and entertainment hub for the city.

Key Learning

- ▶ Use of technology for effective utilization of land which can be transformed in activity hub
- ▶ Use of space in non-sports activities are essential as they contribute to large scale revenue expectations
- ▶ Longer land lease concession period enable the PPP Co. to develop stable cash flow
- ▶ Membership program for non-sport activities such as club, fitness and entertainment hub to support revenue potential for PPP Co.
- ▶ Marketing initiative such as leasing branding rights, major marquee events can promote sports facility

Commercial sports activities through such as Pro-Kabaddi, sports retail brands are other potential avenue of revenues.

ANNEXURE A8 – FINANCIAL STATEMENT

OPTION 1: 40 FAR – BALANCE SHEET

	Year	2020	2021	2022	2023	2024	2029	2034	2039	2044	2049	2054	2059	2064
	Operations flag	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Balance Sheet														
Equity	INR Mn	969	1,713	1,881	1,881	1,881	1,881	1,713	1,713	1,713	1,713	1,713	1,713	1,713
Debt	INR Mn	1,800	3,181	3,181	3,181	2,863	1,273	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Retained earnings	INR Mn	-	-	(354)	(169)	369	1,478	6,381	13,067	21,608	32,536	43,956	58,587	77,324
Accrued opex	INR Mn	-	-	63	74	81	107	145	185	236	302	297	379	483
Deferred tax Asset / Liability	INR Mn													
Outstanding Tax														
Total	INR Mn	2,770	4,895	4,771	4,966	5,195	4,738	8,238	14,965	23,557	34,550	45,965	60,678	79,519
Net Assets	INR Mn	2,770	4,895	4,731	4,567	4,403	3,865	3,515	3,166	2,816	2,467	2,117	1,768	1,418
WIP	INR Mn													
Debtors	INR Mn	-	-	40	79	92	177	271	346	441	563	718	917	1,170
Cash and Cash equivalent	INR Mn	-	-	-	321	700	697	4,452	11,453	20,300	31,520	43,130	57,993	76,931
Total	INR Mn	2,770	4,895	4,771	4,966	5,195	4,738	8,238	14,965	23,557	34,550	45,965	60,678	79,519
check		-	-	-	-	-	-	-	-	-	-	-	-	-

OPTION 1: 40 FAR – PROFIT & LOSS ACCOUNT

		Year	2020	2021	2022	2023	2024	2029	2034	2039	2044	2049	2054	2059	2064
		Operations flag	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Profit and loss account															
Revenue	INR Mn	4,47,981	-	-	2,396	3,352	4,179	4,682	6,902	8,809	11,243	14,349	15,912	20,308	25,919
Cost	INR Mn	91,839	-	-	644	755	836	1,095	1,490	1,901	2,426	3,097	3,046	3,888	4,962
Revenue share			-	-	1,625	1,924	2,192	2,628	3,596	4,589	5,857	7,475	8,914	11,377	14,520
Upfront premium			-	-	-	-	-	-	-	-	-	-	-	-	-
Annual concession fee		1,000	-	-	1,000	1,050	1,103	1,407	1,796	2,292	2,925	3,733	4,765	6,081	7,762
% of gross revenues			-	-	625	874	1,090	1,221	1,800	2,297	2,931	3,741	4,149	5,295	6,758
EBITDA Margin			0%	0%	5%	20%	28%	20%	26%	26%	26%	26%	25%	25%	25%
EBITDA	INR Mn	1,11,491	-	-	128	672	1,151	959	1,817	2,319	2,959	3,777	3,952	5,044	6,437
Depreciation	INR Mn	(3,336)	-	-	(164)	(164)	(164)	(70)	(70)	(70)	(70)	(70)	(70)	(70)	(70)
EBIT	INR Mn		-	-	(36)	508	987	890	1,747	2,249	2,890	3,707	3,882	4,974	6,367
Interest cost	INR Mn		-	-	318	318	302	143	-	-	-	-	-	-	-
EBT	INR Mn		-	-	(354)	190	685	746	1,747	2,249	2,890	3,707	3,882	4,974	6,367
Tax	INR Mn		-	-	-	(6)	(146)	(159)	(593)	(778)	(1,009)	(1,301)	(1,366)	(1,751)	(2,240)
PAT	INR Mn		-	-	(354)	185	539	587	1,154	1,471	1,880	2,407	2,516	3,223	4,127

OPTION 1: 40 FAR – CASH FLOW STATEMENT

		Year	2020	2021	2022	2023	2024	2029	2034	2039	2044	2049	2054	2059	2064
		Operations flag	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Cash Flow Statement															
Net income	INR Mn		-	-	(354)	185	539	587	1,154	1,471	1,880	2,407	2,516	3,223	4,127
Depreciation	INR Mn		-	-	164	164	164	70	70	70	70	70	70	70	70
Change in working capital	INR Mn		-	-	22	(28)	(5)	(12)	(6)	(8)	(10)	(12)	(20)	(26)	(33)
Cash flow from operations	INR Mn		-	-	(168)	321	697	645	1,218	1,533	1,940	2,464	2,566	3,267	4,164
Capital expenditure	INR Mn		2,770	2,125	-	-	-	-	-	-	-	-	-	-	-
Cash flow from investing activit	INR Mn		(2,770)	(2,125)	-	-	-	-	-	-	-	-	-	-	-
Equity drawdown	INR Mn		969	744	168	-	-	-	(168)	-	-	-	-	-	-
Lumpsum payment (grant)	INR Mn		-	-	-	-	-	-	-	-	-	-	-	-	-
Senior debt drawdown	INR Mn		1,800	1,381	-	-	-	-	-	-	-	-	-	-	-
Senior debt repayments	INR Mn		-	-	-	-	(318)	(318)	-	-	-	-	-	-	-
Cash flow from financing activit	INR Mn		2,770	2,125	168	-	(318)	(318)	(168)	-	-	-	-	-	-
Net increase/ (decrease) in cash	INR Mn		-	-	-	321	379	326	1,050	1,533	1,940	2,464	2,566	3,267	4,164
Opening balance of cash	INR Mn		-	-	-	-	321	370	3,402	9,920	18,359	29,056	40,564	54,726	72,767
Cash and bank balance	INR Mn		-	-	-	321	700	697	4,452	11,453	20,300	31,520	43,130	57,993	76,931

OPTION 2: 400 FAR – BALANCE SHEET

		Year	2020	2021	2022	2023	2024	2029	2034	2039	2044	2049	2054	2059	2064
		Operations flag	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Cash Flow Statement															
Balance Sheet															
Equity	INR Mn		7,782	13,753	20,377	22,057	24,199	25,472	13,753	13,753	13,753	13,753	13,753	13,753	13,753
Debt	INR Mn		14,453	25,540	25,540	25,540	22,986	10,216	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Retained earnings	INR Mn		-	-	(7,863)	(10,479)	(11,269)	8,685	66,798	1,44,525	2,43,780	3,70,677	5,30,980	7,36,013	9,98,210
Accrued opex	INR Mn		-	-	434	550	604	912	1,279	1,632	2,083	2,658	3,304	4,217	5,382
Deferred tax Asset / Liability	INR Mn														
Outstanding Tax	INR Mn														
Total	INR Mn		22,235	39,293	38,489	37,669	36,520	45,285	81,829	1,59,908	2,59,615	3,87,086	5,48,035	7,53,981	10,17,344
Net Assets	INR Mn		22,235	39,293	37,976	36,660	35,343	31,026	28,220	25,415	22,609	19,803	16,998	14,192	11,386
WIP	INR Mn														
Debtors	INR Mn		-	-	513	1,009	1,177	2,254	3,452	4,405	5,622	7,176	9,158	11,688	14,917
Cash and Cash equivalent	INR Mn		-	-	-	-	-	12,005	50,157	1,30,088	2,31,383	3,60,107	5,21,880	7,28,101	9,91,040
Total	INR Mn		22,235	39,293	38,489	37,669	36,520	45,285	81,829	1,59,908	2,59,615	3,87,086	5,48,035	7,53,981	10,17,344
check			-	-	-	-	-	-	-	-	-	-	-	-	-

OPTION 2: 400 FAR – PROFIT & LOSS ACCOUNT

		Year	2020	2021	2022	2023	2024	2029	2034	2039	2044	2049	2054	2059	2064
		Operations flag	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Profit and loss account															
Revenue	INR Mn	49,61,245	-	-	12,095	22,445	26,454	47,327	72,214	92,166	1,17,629	1,50,128	1,89,205	2,41,479	3,08,195
Cost	INR Mn	9,06,599	-	-	4,456	5,650	6,198	9,359	13,126	16,753	21,381	27,288	33,922	43,294	55,255
Revenue share			-	-	11,631	15,541	17,304	26,716	38,132	48,667	62,113	79,273	1,00,355	1,28,081	1,63,468
Upfront premium			-	-	-	-	-	-	-	-	-	-	-	-	-
Annual concession fee		7,500	-	-	7,500	7,875	8,269	10,553	13,469	17,190	21,939	28,001	35,737	45,611	58,212
% of gross revenues			-	-	4,131	7,666	9,035	16,163	24,663	31,477	40,173	51,272	64,618	82,471	1,05,256
EBITDA Margin			0%	0%	-33%	6%	11%	24%	29%	29%	29%	29%	29%	29%	29%
EBITDA	INR Mn	14,01,463	-	-	-3,992	1,255	2,953	11,251	20,956	26,746	34,135	43,566	54,928	70,104	89,472
Depreciation	INR Mn	(26,785)	-	-	(1,317)	(1,317)	(1,317)	(561)	(561)	(561)	(561)	(561)	(561)	(561)	(561)
EBIT	INR Mn		-	-	(5,309)	(62)	1,637	10,690	20,395	26,185	33,574	43,005	54,367	69,542	88,911
Interest cost	INR Mn		-	-	2,554	2,554	2,426	1,149	-	-	-	-	-	-	-
EBT	INR Mn		-	-	(7,863)	(2,616)	(790)	9,540	20,395	26,185	33,574	43,005	54,367	69,542	88,911
Tax	INR Mn		-	-	-	-	-	(2,036)	(6,989)	(9,088)	(11,729)	(15,069)	(19,075)	(24,405)	(31,193)
PAT	INR Mn		-	-	(7,863)	(2,616)	(790)	7,504	13,406	17,097	21,846	27,936	35,292	45,138	57,717

OPTION 2: 400 FAR – CASH FLOW STATEMENT

		Year	2020	2021	2022	2023	2024	2029	2034	2039	2044	2049	2054	2059	2064
		Operations flag	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Cash Flow Statement															
Net income	INR Mn		-	-	(7,863)	(2,616)	(790)	7,504	13,406	17,097	21,846	27,936	35,292	45,138	57,717
Depreciation	INR Mn		-	-	1,317	1,317	1,317	561	561	561	561	561	561	561	561
Change in working capital	INR Mn		-	-	(78)	(380)	(115)	(178)	(103)	(132)	(169)	(215)	(279)	(356)	(454)
Cash flow from operations	INR Mn		-	-	(6,625)	(1,679)	412	7,887	13,863	17,526	22,238	28,282	35,575	45,343	57,824
Capital expenditure	INR Mn		22,235	17,058	-	-	-	-	-	-	-	-	-	-	-
Cash flow from investing activit	INR Mn		(22,235)	(17,058)	-	-	-	-	-	-	-	-	-	-	-
Equity drawdown	INR Mn		7,782	5,970	6,625	1,679	2,142	-	(11,720)	-	-	-	-	-	-
Lumpsum payment (grant)	INR Mn		-	-	-	-	-	-	-	-	-	-	-	-	-
Senior debt drawdown	INR Mn		14,453	11,088	-	-	-	-	-	-	-	-	-	-	-
Senior debt repayments	INR Mn		-	-	-	-	(2,554)	(2,554)	-	-	-	-	-	-	-
Cash flow from financing activit	INR Mn		22,235	17,058	6,625	1,679	(412)	(2,554)	(11,720)	-	-	-	-	-	-
Net increase/ (decrease) in cash	INR Mn		-	-	-	-	-	5,333	2,143	17,526	22,238	28,282	35,575	45,343	57,824
Opening balance of cash	INR Mn		-	-	-	-	-	6,672	48,013	1,12,562	2,09,145	3,31,825	4,86,305	6,82,758	9,33,216
Cash and bank balance	INR Mn		-	-	-	-	-	12,005	50,157	1,30,088	2,31,383	3,60,107	5,21,880	7,28,101	9,91,040

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