

Sports infrastructure: Transforming the Indian sports ecosystem

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From the President's desk



B. K. Goenka
President
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Infrastructure is the backbone of sports. Several empirical studies have established sports as a beneficial activity having a positive impact on the state of health, education and the economy. The United Nations Educational, Scientific, and Cultural Organisation (UNESCO) recognises the practice of sports and physical education as a fundamental right for any human being.

Realising the benefits of sports in general and sports infrastructure in particular, nations such as China, Australia, and the United States have invested heavily in related infrastructure. For instance, China, as part of its National Fitness Program, started investing in sports infrastructure in 1995. Australia has focused on grass-roots development by building community sports infrastructure. Sports Australia reports USD 16.2 billion worth of social, health and economic benefits each year through community sports infrastructure. The United States has tightly integrated sports infrastructure into its education system by providing athletics with facilities across schools, colleges and universities. This has helped these nations become global sporting powers.

India has witnessed a spurt of growth in sports infrastructure development in recent years, which will have a strong impact on the state of sports in the long run. Challenges such as availability of land bank and ineffective utilisation of existing infrastructure pose a hindrance to this growth. Sports infrastructure should be treated as an integral part of urban planning so that adequate resources are budgeted for development and sustenance. It should be designed keeping a large community in mind, which can increase utilisation and ensure steady revenue streams. Policy support from the government will also benefit investment into sports infrastructure via the public-private-partnership (PPP) model.

This ASSOCHAM-PwC publication titled '**Sports infrastructure: Transforming the Indian sports ecosystem**' is a step towards highlighting the importance of sports infrastructure in the Indian sports industry. It presents a view of the current scenario and offers recommendations that can help build strong infrastructure in the country.

We believe this publication will help multiple stakeholders take a fresh look at the challenges and opportunities to sports infrastructure development and enable them to take positive steps towards transforming this sector.

The passion for sports in India is unparalleled. While cricket continues to dominate the field, several other sports like football and basketball are gaining ground. Sports infrastructure is vital to the growth and expansion of sports in India as we aspire to host mega sporting events and world cups in the future. It is equally important to improve sports infrastructure in India in order to develop budding talent and empower competitive athletes in the country.

Presently, India has a growing population keen on witnessing and participating in sports and sporting events. It is therefore important to expand the capabilities and quality of sporting facilities and stadiums to accommodate and encourage this demand, keeping in mind the community, sports development, and economic impact.

This ASSOCHAM-PwC knowledge paper titled '**Sports infrastructure: Transforming the Indian sports ecosystem**' provides a holistic view of the status of sports infrastructure in the country. While there has been policy support from the government to enable the development of sporting facilities, we also look at private contributions and corporate partnerships in the sector. With the integration of 'everything digital' in this age, we consider the different kinds of research enabling the evolution of sports and the ways in which digital advancements have changed sports infrastructure. This publication focuses on the different economic, social and developmental benefits of improving sports infrastructure to the community. It also provides recommendations and suggests the way forward for sports infrastructure development in India.

It is our privilege to release this knowledge paper at ASSOCHAM's **National Summit & Awards for Sports Business – Infrastructure, Investment and Merchandising on 28 March 2019 at Shangri-La's Eros, New Delhi**, which aims to bring together a multitude stakeholders—from manufacturers and distributors to large sporting organisations and governing bodies—to create a platform for sportsmen and sports development.

We recognise and appreciate the efforts and contribution of ASSOCHAM team and PwC in publishing this report and organising the summit. We believe the outcomes of this conference as well as our knowledge paper will serve as an important reference point for the various stakeholders who are working towards improving the state of sports in the country and levelling up India in the competitive global sporting landscape.

Foreword



Uday Kumar Varma
Secretary General
ASSOCHAM

Message from PwC



Raman Kalra

Partner and Leader, Media, Entertainment
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Shivanshu Chauhan

Partner and Leader
Urban Infrastructure

Sports make up a global language understood across castes, creeds and races. Therefore, when the Brazilian football team scores, even a fan in Kolkata celebrates. A sport is the simplest form of expression, displaying the tenacity and persistence of the human spirit. Moreover, sports play a significant role in the transformation of communities, societies and nations. In fact, the United Nations has even identified sports as an important enabler for sustainable development.

The Indian sports industry is growing rapidly, presenting growth opportunities to all the stakeholders of the sports ecosystem. We are witnessing profound interest from the government and the private sector, which has helped strengthen the image of sports within the country. The success of our sportspersons in the international arena, increased investment in non-cricketing sports, and a competitive structure in the form of leagues have added to the popularity of sports. It is the right time to rally behind sports as a priority sector and consider the potential impact of quality infrastructure on their growth. Proper infrastructural support has an impact on the development of elite sports talent and sports participation at the grass-roots level. Having said that, development and maintenance are dependent on large investment, policy support and technical expertise. Although India has started investing aggressively in sports infrastructure, it has a long way to go. The designation of special sports zones across key parts of the nation can enable dedicated resources to be utilised for the development of sports in the country, taking it to newer heights. This desire to empower sports is reflected in India's global vision as well. NITI Aayog, in its action plan 'Let's Play- An Action Plan to achieve 50 Olympic Medals', has made multiple recommendations for sports infrastructure development, such as development of infrastructure through the private or PPP mode, hosting of international events at regular intervals, and devotion of a fixed portion of school expenditure towards maintaining and enhancing sporting infrastructure and equipment.

We are pleased to present this publication, which attempts to explore the state of sports infrastructure, its impact on sports development and the sports ecosystem from an Indian context. The report presents insights that will open channels for progressive discussions on this critical topic.

We would like to thank ASSOCHAM for providing us with the opportunity to serve as the knowledge partner for the National Summit & Awards for Sports Business – Infrastructure, Investment and Merchandising', a major platform for bringing together sports industry stakeholders.

Executive summary

Sports in any country are part of a complex ecosystem involving athletes, sports fans, leagues, private companies, government bodies and regulatory authorities. All of these stakeholders play an important role in the development of sports in the country.

When perfectly aligned, these different players have the potential to drive India's standing on the global sporting stage by offering high-quality facilities and resources that sustain the love for sports in the country and support the hosting of large sporting events. However, if these stakeholders do not work in synchronisation, there is potential for stagnation and decline in the quality of sports within the nation.

In this paper, the importance of improving and building sports infrastructure is discussed along with the various roles and contributions of the above-mentioned stakeholders. The paper also discusses the challenges that India may be confronted with in its quest to become a sporting superpower: lack of infrastructure planning, underutilisation of current infrastructure and poor maintenance of sporting facilities in major cities, as well as the complex guidelines for the allocation of sports funds and implementation of sports policies. Outdated technology and a dearth of smart stadiums have also hampered the development of sports in the country. Considering the widespread impact sports have on the economy and community of a nation and the integral role played by sports infrastructure in the growth of sports, a dedicated approach to infrastructure development is warranted.

India has a promising economy with a thriving middle class that has the capacity and desire to spend on, participate in and support sports. As the country looks to host more mega sporting events, having successfully hosted the U-17 FIFA World Cup, Men's Hockey World Cup, and the Commonwealth Games, it is necessary for all stakeholders to truly invest in the nation's relationship with sports. With better guidelines for PPPs, legislation that brings the various sports authorities under one roof and increased accessibility to quality sporting facilities at the local level, India has the potential to become a formidable sporting nation.



Sports infrastructure: Backbone of the sports ecosystem

Background

Sports is globally identified as a catalyst for economic development and a separate sector to be administered in various economies. The sector includes sporting events and infrastructure associated with sports, along with training facilities and sports retail. Manufacturing of sports goods also forms a major part of the sector. As it is closely linked with various other sectors like tourism, real estate and health education, the sports sector as a whole impacts the global economy significantly.

Sports infrastructure has been defined as “the primary physical and organisational construction needed to facilitate sport participation. From a functional point of view, sports infrastructure enables community members to participate in sports”.¹ It comprises facilities, systems, goods, and services that enable sports and is vital for any country to compete in the international sporting arena. Sports infrastructure assists in the development of world-class athletes and also provides impetus to the youth of the nation to actively take up sports and build a sports culture.²

Current state of sports infrastructure in India

In recent years, it has been acknowledged that the construction and refurbishment of sports infrastructure can stimulate economic development, whether it involves large facilities or small. Therefore, the development of such infrastructure plays a significant role in urban planning.

Currently, India houses approximately 100 sports facilities fulfilling international standards of sports infrastructure. In addition, there are government-owned college and university grounds, community centres, sporting facilities and grounds owned by urban local bodies, grounds owned by Resident Welfare Associations, and facilities owned by private entities. These facilities are largely neglected and ignored in terms of utilisation and maintenance. Also, a majority of the Indian sports infrastructure facilities are mainly used for hosting international, national, state-, and district-level games


and competitions only. As a result, the occupancy rates of the facilities remain low and they are financially dependent on the regulatory authorities for operations and maintenance. This also has an adverse effect on sports enthusiasts, who could have made efficient use of such facilities.

Recently, India witnessed massive growth of franchise-based sporting leagues, with 10 leagues existing in the country. Government initiatives like Khelo India have inspired many potential individuals to take up sports. To sustain this growth momentum in sports, there is a need to increase the number of sporting facilities with world-class infrastructure, which will enable the government to achieve its vision of 50 Olympic gold medals soon.³ As a first step, identification and consolidation of information on existing sporting facilities need to be undertaken to help upgrade and refurbishment. These facilities can then be promoted to ensure better utilisation of facilities and sporting and training infrastructure by potential sportspersons.


1. <https://www.tandfonline.com/doi/abs/10.1080/16184742.2012.687756?src=recsys&journalCode=resm20>

2. <https://sportsvenuebusiness.com/index.php/2018/01/29/present-status-sports-infrastructure-india-necessary-recommendations-development/>


3. http://niti.gov.in/writereaddata/files/document_publication/Olympics%20Action%20Plan%20Booklet%20Final.pdf



Approximately **100** sports facilities fulfilling international standards



Growth rate of **22.1%** by **2023** for franchise-based leagues




19 Special Area Games
11 Centres of Excellence



56 SAI training centres
12 SAI regional centres/ educational institutes

Upcoming sporting facilities in the country⁴

High-performance centres and academies for athletes across the country



Large integrated convertible multi-sports facilities to be set up




More than 10 international standard stadiums to be developed



E-sports and online sports arenas with digital infrastructure



Potential to generate revenue of about INR 100 billion by FY23



The three factors that play a vital role in the development of sports infrastructure in India are government policies, smart city development and the contribution of the private sector. The subsequent sections discuss the current status of each of these factors in India.

Government involvement: Policy support

Institutional framework

Recently, increased capital investments and successful large-scale hosting of events have boosted the development of sports infrastructure in India, also opening up various commercial opportunities in the industry. However, regulation of the Indian sports industry regulation is still highly decentralised and fragmented.

National or state legislation for sports regulation does not exist in India. The Ministry of Youth and Sports (MYAS) has been established by the Government of India to create infrastructure, achieve excellence in national and international sporting events, and build capacity for broad-based sports. In addition, the Sports Authority of India (SAI) has been set up by the ministry as an apex body. It develops and looks after stadiums and fields on behalf of the ministry. However, sports being largely a state subject, the bulk of the infrastructure is under the purview of state governments. As a result, states fund



4. http://niti.gov.in/writereaddata/files/document_publication/Olympics%20Action%20Plan%20Booklet%20Final.pdf

the development of sports and related infrastructure according to their priorities. A comprehensive and uniform approach towards the development of sporting infrastructure across the country is lacking.

While the government has launched initiatives such as introducing one-hour health and physical training every day as part of the CBSE high school curriculum, many

schools lack the requisite infrastructure for the successful implementation of these initiatives.

A snapshot of the schemes and policies associated with sports infrastructure in the country is provided below:⁵

Policies and schemes	Objectives of the scheme
National Sports Policy, 2014	<ul style="list-style-type: none"> Raising the standard of sports in the country. Promoting the development of adequate sports infrastructure across the country.
Revised Khelo India - National Programme for Development of Sports Scheme, 2016	<ul style="list-style-type: none"> The Urban Sports Infrastructure Scheme (USIS) has been merged under 'Khelo India - Sports Infrastructure' as a central sector scheme. In the recently launched Khelo India app, a user can search an exhaustive database for sporting facilities across the nation. The database includes SAI facilities, SAI-supported facilities, and private facilities.⁶
SAI Training Centre Scheme (STC)	<ul style="list-style-type: none"> Providing in-house training and coaching, along with nutritional assistance to sportspersons.
Come and Play Scheme	<ul style="list-style-type: none"> Ensuring optimum utilisation of five stadiums in Delhi. Opening designated areas in SAI stadiums for community sports.
Panchayati Yuva Krida Aur Khel Abhiyan (PYKKA) Scheme	<ul style="list-style-type: none"> Providing funds for sports infrastructure development and maintenance in villages and block panchayats.
National Playing Fields Association of India (NPFAl)	<ul style="list-style-type: none"> Spreading awareness on fitness and encouraging Indian children to play sports by building more playing fields and spaces in the country. Establishing playing fields associations at the state level so that NPFAl can sanction funds to these states for the development of playing grounds and parks.

Estonia: Development of Adventure Tourism Centre in Kiviõli

The Kiviõli Adventure Tourism Centre and, more generally, the development of the tourism sector have played an important role in the redevelopment of the Ida-Viru County, which borders Russia. The area previously focused on a narrow range of industrial activities and was beset with problems such as high unemployment. The project has already enhanced both Ida-Virumaa's and Estonia's appeal as a travel destination through the setting up of cultural/sporting and tourist facilities that are of international standards. Annually 30,000–50,000 additional tourists have visited the centre and area. The project has also been successful in generating private investment. Over EUR 2 million have already been invested to develop facilities for visitors in the neighbourhood.

Source: http://ec.europa.eu/assets/eac/sport/library/studies/structural-funds-annex-1_en.pdf

5. <https://yas.nic.in/sports/schemes>

6. <https://economictimes.indiatimes.com/news/politics-and-nation/pm-narendra-modi-launches-khelo-india-app/articleshow/68185454.cms>

Sports infrastructure in smart cities

Sports infrastructure is a vital component of smart city planning and development. Community sports infrastructure will have a positive impact on the community. It can affect different areas of urban infrastructure in the following ways:

Impact of sports on urban infrastructure⁷



Transportation

The transportation system changes with the entry of improved infrastructure and new concepts of public transportation. Modern means of connectivity are set up in a city to prepare it for the hosting of a mega event. If we take the Olympics as an example, in Munich, the subway was expanded in 1972; in Seoul, many major roads were improved in 1988; and in Barcelona, ring roads were built in 1992.



Telecommunication system

A mega sporting event brings the latest technology into the city to satisfy the demand for telecommunications services. High-speed communication technologies continue to be developed and provided to citizens after the event has ended.



Sports facilities

Mega sporting events like the Olympics or the Commonwealth Games have the strongest impact on the sports infrastructure in a city. Adequate sports and training facilities of internationally acceptable standards have to be made available for all sports. After the event, these facilities can be used for leisure sporting activities and for recreational events like music concerts.



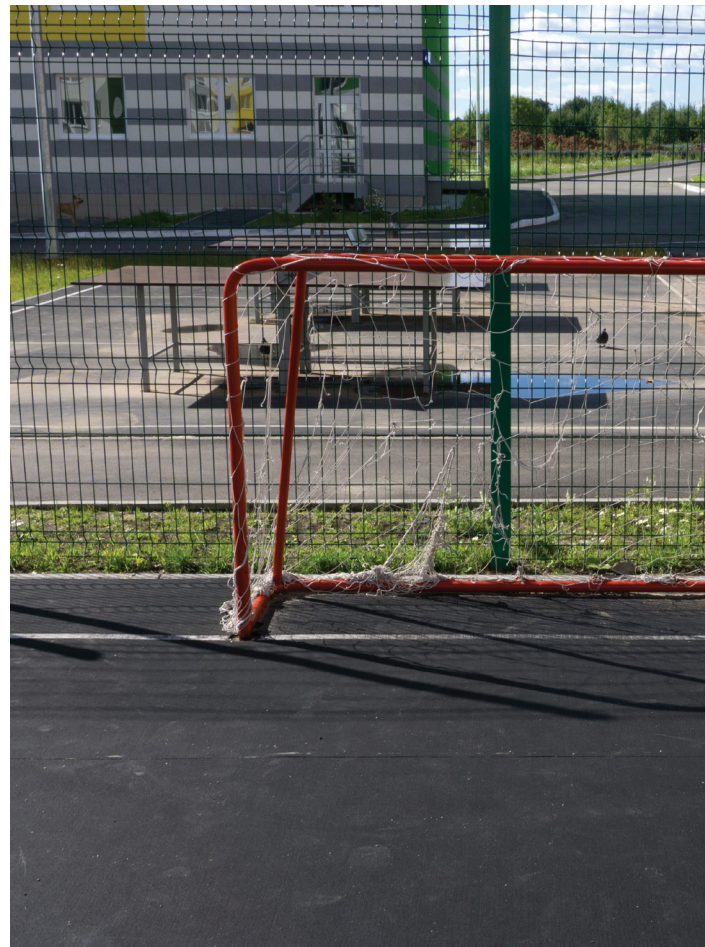
Housing

In most cities, sporting villages are constructed for the event. This opens up new housing facilities. For example, in Munich, the Olympic Village was constructed in 1972 for future use by socially deprived groups of society. In other cities, the Olympic Villages have been sold to middle and lower-middle classes. In the case of Los Angeles and Atlanta, the villages were used as student accommodation after the Olympic Games.



Urban culture

The general development of a city in terms of an improved transportation system, additional leisure facilities and numerous ecological projects frequently enhance the overall 'city atmosphere'.



7. Pruss, H. (1998). Problemizing arguments of the opponents of Olympic Games. Unpublished paper.

In line with the above impacts, many Indian smart cities have identified potential opportunities and are coming up with world-class sporting infrastructure facilities. For instance, the Odisha state government recently announced the establishment of 'Kalinga International Sports City' in Bhubaneswar, which is also being developed as a smart city. There are also plans of developing four world-class satellite stadiums for hosting international sporting events in Cuttack, Sambalpur, Berhampur, and Rourkela. Moreover, integrated sports complexes will also be established in other major cities of the state.

In November 2017, a memorandum of understanding (MOU) was signed between Chennai City FC (CCFC) and Coimbatore Smart City Limited (CSCL) for the redevelopment and maintenance of the Jawaharlal Nehru Stadium in Coimbatore over the next five years. A special purpose vehicle (SPV) will also be formed for the construction of a world-class multi-sport residential Smart Sport City by 2022 near Coimbatore.⁸

For sports infrastructure development, the government has undertaken initiatives like a grant scheme with funding worth INR 942.5 million for infrastructure creation and setting up of synthetic turfs and surfaces worth INR 201.3 million have been undertaken. Also, INR 328 million has been allocated for the promotion of sports at the grass-roots level and in colleges and universities.⁹

Private sector participation in sports infrastructure development

The private sector is a key stakeholder in the Indian sporting ecosystem. In particular, for sports infrastructure development, private entities contribute towards areas such as development and maintenance of sports facilities and talent development.

Significant investments are required for various purposes such as redevelopment and maintenance of existing sports infrastructure, establishment of new stadiums and training centres, and setting up of sports universities. The government is exploring and encouraging investments through the public private partnership (PPP) model in order to develop training and high-performance centres across the country and to build modern sporting infrastructure suitable for the future. In India's Sports Revitalization Action Plan, emphasis has been laid by NITI Aayog on encouraging private sector participation in the development of sporting infrastructure.

Modern forms of PPP like Refurbish, Operate, Maintain and Transfer (ROMT), along with traditional forms like Renovate, Modernise and Operate (RMO) and Build, Operate Transfer (BOT) facilitate the participation of the private sector in the development, maintenance and operation of multi-purpose sporting facilities. These forms also enable adequate risk sharing amongst the involved stakeholders and ensure mitigation by parties who have expertise in it.

Several conglomerates fund large-scale, holistic sport programmes to support talent development as part of their corporate social responsibility (CSR) activities. Conglomerates have been investing in the establishment of academies and training centres for a wide range of sports disciplines, including hockey, football, tennis and athletics. High-performance training centres have been established in various parts of the country with facilities such as international coaches, nutritionists, and mental and physical trainers. The Khelo India scheme supports the development of sports academies by the private sector to identify sporting talent in the country, and an increase in the share of sports investment from CSR budgets by the private sector will be a positive step in this direction.

Given the rising popularity of sports, international leagues and clubs have set up academies in major cities like Delhi-NCR and Mumbai to support grass-roots development.

Start-ups in the field of sports technology are trying to address issues such as underutilisation of sports facilities. Various start-ups are providing online services for finding and booking playgrounds and training academies for football, badminton, tennis, cricket, volleyball, and even yoga.

Collaborative efforts by the private and public sector can promote overall infrastructure development in the sports industry in India.

8. <https://timesofindia.indiatimes.com/sports/football/i-league/chennai-city-set-to-build-smart-sports-city-in-coimbatore-by-2022/articleshow/63053725.cms>

9. <https://sportsvenuebusiness.com/index.php/2018/01/29/present-status-sports-infrastructure-india-necessary-recommendations-development/>

Opportunities and challenges

Opportunities	Challenges
Economic and community benefits	Underutilisation and poor maintenance
Integration of sports infrastructure in urban planning	Availability of land
Hosting of mega sporting events	Complex guidelines
Improved standing as a sporting nation on the global stage	Aging technology
Optimised and efficient usage of facilities	Unsustainable business models and limited PPP models

Bengaluru's M Chinnaswamy Stadium – India's first solar-powered stadium

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Karnataka State Cricket Association (KSCA) signed a cooperation agreement with the aim of jointly promoting sustainable development and resource efficiency (including water resources) and supporting measures that contribute to reducing emission of greenhouse gases such as CO₂. Under the ComSolar project, both organisations agreed to explore the possibility of developing a solar photovoltaic plant on the roof of Bengaluru's M. Chinnaswamy Stadium.

In 2017, a 40-kW rooftop photovoltaic solar power system was installed at the stadium. The plant consists of 1,422 modules that will generate approximately 1,700 units/day, to be consumed on the premises. Surplus electricity generated will be exported to the Bangalore Electricity Supply Company Ltd. (BESCOM) at a price of INR 9.56/kWh under the state-promoted Net Metering Scheme.

Source: <http://www.comsolar.in/what-we-do/demonstration-projects/rooftop-photovoltaic-sports-stadiums>

Impact of quality sports infrastructure

India has the potential to transform itself into a global sporting powerhouse with far-reaching impact on health, education and tourism. This would require a dedicated approach towards building quality sports infrastructure. Robust sports infrastructure has a positive impact on not only the development of a sport ecosystem for a country but also the community and the economy at large. This section highlights the benefits of sports infrastructure in terms of development of sports, regeneration of communities and revitalisation of economies.

Sports development

The state of sports infrastructure within a nation largely determines the state of sports in that nation. According to the 2006 Sports policy factors leading to international sporting success (SPLISS) study, nine pillars influence the state of sports within a nation and its success in the global sporting arena:¹⁰ financial support, an integrated approach to policy development, participation in sports, a talent identification and development system, training facilities, coaching provision and coach development, international competition, athletic and post-career support, and scientific research.

A close look highlights the critical role sports infrastructure plays, both directly and indirectly, on **participation in sports, training facilities, and international competition.**

Participation in sports

Adequate sports infrastructure is necessary to improve sports participation, which in turn can have a lasting impact on the sporting ecosystem of a country. Sports infrastructure provides people avenues and tools to pursue sports or lead an active life. For instance, the Chinese Government, having realised the vital role of sports infrastructure in improving the fitness levels of its citizens, implemented a nationwide policy to increase spending in this area as far back as 1995. A significant portion of the China's National Fitness Program budget was spent on building sport facilities with a focus on

urban areas.¹¹ Providing access to sports infrastructure in India's urban and rural areas in India can significantly improve participation by citizens. The focus should be on strengthening the infrastructure at the grass-roots level, as this will enable better talent identification and development. Moreover, it will provide access to a larger community, thus improving the overall public involvement in sports.

Training facilities

The presence of quality training systems positively enhances the elite sports system. Sports infrastructure in the form of high-performance academies and centres of excellence, which provide access to world-class equipment and facilities, is highly beneficial to athletes and coaches. The Indian government and the private sector have begun to support the growth of these systems, with many state governments actively investing in the development of training facilities dedicated to multiple sports. Disciplines such as sports psychology, nutrition, medicine and biomechanics help develop focused player development pathways, which in turn help an athlete reach higher performance levels.

International competition

Several studies have shown that the organisation of international events in a particular country has a positive effect on the international success of its athletes.¹² To host international events, nations invest significantly in building stadiums and supporting infrastructure. Post the event, the infrastructure legacy can have a lasting impact on sports development, provided it is properly utilised and embedded within urban planning. Building robust infrastructure helps a nation strengthen its candidature as a host for international events.

Community

Sports form an important thread in the fabric of the Indian community. As a country known for its love of cricket and other sports, Indians are clearly invested in sports. In a symbiotic relationship, communities feed the spirit of sports, while sports build a stronger sense of community. Improving or building on the current sports infrastructure contributes to this relationship both directly and indirectly.

10. 2006 SPLISS – An International Comparative Study (https://www.researchgate.net/publication/46712299_The_global_sporting_arms_race)

11. <https://www.tandfonline.com/doi/abs/10.1080/16184742.2012.687756?src=recsys&journalCode=resm20>

12. 2006 SPLISS – An International Comparative Study (https://www.researchgate.net/publication/46712299_The_global_sporting_arms_race)

Better investment in sports infrastructure leads to increased employment in the locality, as more workers are hired to improve or build stadiums, local residences, changing rooms, and other auxiliary structures for hosting a sporting event. This improvement in the locality might in turn benefit local stores and businesses on game days as sports fans flock to the area. It also provides better access to community members and facilitates interest in participating in competitive sports, serving as a valuable means to shape future talent in the country. While the focus on sports infrastructure is largely concentrated on large-scale stadiums, it is also worthwhile to consider the utilisation and community impact of smaller, mobile facilities.

With the development and improvement of stadiums and other sports facilities in an area, it significantly benefits from a boost to tourism and consideration as a venue for mega sporting events, besides encourages a participation in physical activities and sports.

During the off season when there are no games, community residents and students can use the sporting centres for recreational sporting activities such as school events and games. These facilities can also be utilised for music shows and events related to the creative arts—another sector that lacks quality infrastructure in India.

For example, the Emirates Stadium in Holloway, England, has led to ‘stadium-led regeneration’.¹³ Home to the popular football club Arsenal, the Emirates Stadium was constructed with the aim of revitalising one of London’s more neglected areas by utilising vacant land. With local socioeconomic improvement in mind, Arsenal and the Islington Council put forward a plan for the construction of a new stadium, 3,000 new homes (of which 50% were affordable housing), and a GBP 60 million recycling facility. The construction of the new stadium also saw public transport lines being extended to reach areas near the stadium and improved access for local residents. Apart from the development of the area, Arsenal also employed nearly 3,000 people on match days at the stadium in addition to the staff working in the stadium during the year.

Economic impact

Community impact and economic impact are two sides of the same coin. Better sports infrastructure and construction of stadiums lead to increased business for local shops in the area, employment, and income for construction workers and skilled labourers, income for hotels and restaurants, and increased revenue for stadiums and teams as updated facilities and expanded capacity bring in more ticket sales. In addition, the economic costs of health care may also be reduced as

United Kingdom: National Football Museum (infra utilisation)

In July 2012, a National Football Museum was opened in Manchester with the support of the Heritage Lottery Fund, the Manchester City Council and the European Regional Development Fund ERDF. The National Football Museum has made a significant contribution to the city’s Millennium Quarter, attracting sports fans and visitors who may not have otherwise visited museums. As part of Manchester’s urban development strategy, the museum has begun to play a central role in the city’s cultural economy.

United Kingdom: Sportcity

Sportcity has played an important role in the regeneration of East Manchester and has made a major contribution to the city’s broader development strategy. As part of this strategy, iconic buildings and sites have been promoted to revive interest and attract tourists (e.g. the Imperial War Museum North). Since 2002, Sportcity has enabled Manchester to host 216 major sporting events, bringing in revenues of GBP 92 million for the city and investments worth GBP 37 million. The total investment since 2008 has been GBP 300 million, creating 250 new jobs.

Source : http://ec.europa.eu/assets/eac/sport/library/studies/structural-funds-annex-1_en.pdf

more people utilise these facilities and lead a healthier life. The construction or redevelopment of stadiums and sporting facilities opens huge opportunities for revitalising the surrounding local economy.

Many new stadiums are built with their tourism potential in mind and are therefore designed to be architecturally impressive. The Bird’s Nest Stadium in Beijing is known for its unusual facade, with China reporting more than 30 million visitors since its opening in 2008.¹⁴ These visitors bring income to the region as they spend on travel, food, and lodging in addition to ticket sales for stadium tours. In 2015, the BBC reported that over 800,000 overseas football fans visited Britain, bringing in GBP 684 million in spends.¹⁵

13. http://www.chinadaily.com.cn/china/2017-10/26/content_33738010.htm

14. http://www.chinadaily.com.cn/china/2017-10/26/content_33738010.htm

15. <https://www.bbc.com/sport/football/34197370>

The Tottenham Hotspur's new stadium in Tottenham is expected to create 3,500 jobs and lead to spending worth GBP 166 million in the local economy each year. Keeping the community impact in mind, the redevelopment project roped in businesses to operate in and around the new stadium, thus creating additional jobs and apprenticeships.¹⁶

India has also taken steps in the right direction. Currently, the Sardar Patel Stadium in Gujarat is undergoing redevelopment and with a capacity to host 110,000 fans, it is set to become the largest sporting arena in the world, overtaking Melbourne Cricket Ground.¹⁷ Development is not just restricted to the stadium, with management planning to integrate the metro rail and Sabarmati Riverfront Road in its schema. The new stadium is expected to attract more tourists to the area, bringing in contribution from indirect spends. Maintenance and upgrade of existing facilities like these is key to the long-term economic revitalisation of neighbourhoods and evolving the sporting capabilities of nations.

PwC anticipated Super Bowl LIII to generate approximately USD 190 million in direct spending for the Atlanta metro area

PwC estimated that Super Bowl LIII would generate approximately USD 190 million for the Atlanta metro area through direct spending by teams, businesses, visitors, and the media.¹⁸ This figure took into account spending on lodging, transportation, food and beverages, entertainment, business services, and other ancillary industries.

Events like the Super Bowl are a staple of American culture. In the past, cities like Santa Clara, Houston and Minneapolis in the US have generated upwards of USD 150 million in direct spends by hosting such sporting events. This has been achievable in part due to the cities' efforts to build on their infrastructure and promote themselves as sporting destinations capable of hosting large-scale sports events and catering to the millions of fans who participate year on year. In Atlanta, the development of Mercedes-Benz stadium and SunTrust Park as well as the renovation to the State Farm Arena positioned the city as one primed to host high-profile sporting events. Socioeconomic opportunities have improved in the region and many of the city's neighbourhoods have been revitalised with the development of sports infrastructure.



16. <https://i.tottenhamhotspur.com/hc/en-us/articles/209848305-Benefits-to-local-people>

17. <https://www.businessstoday.in/current/economy-politics/world-largest-cricket-stadium-getting-built-in-ahmedabad-all-you-need-to-know/story/307667.html>

18. <https://www.pwc.com/us/en/industries/tmt/assets/super-bowl-53-pr-sheet.pdf>

Key challenges for developing sports infrastructure



Policy implementation and complex regulations

- Complex implementation guidelines and policy regulations make it difficult to avail the grants under Khelo India and other schemes.
- The Khelo India Fund Allocation Guidelines provide financial assistance only to government agencies. As a result, infrastructure projects are delayed due to the complex mechanisms at these agencies.



Unsustainable business models

- Many sporting infrastructure facilities in the country have occupancy rates below 50% throughout the year due to an improper monetisation strategy.
- This leads to inadequate finances for operating and maintaining such facilities.



Restricted private sector participation

- Private sector participation has been very limited due to a number of factors such as the lack of an optimum regulatory framework for governing PPP commitments.
- Appropriate guidelines for project bidding, selection, negotiation and implementation need to be specified by the government.



Ageing technology

- New facilities have to invest in expensive technology, ranging from retractable roofs to LED scoreboards and from ribbon boards to expensive Wi-Fi network capabilities.
- Investment in such technology should also be financially feasible in a scenario where most of this sports infrastructure is underutilised.



Availability of land

- There is a shortage of land for the construction of sports infrastructure in urban areas.
- In addition, not much initiative has been taken to promote sports through specific infrastructure development by provision of land parcels outside of urban areas.

Key recommendations

There are exciting opportunities for sports infrastructure to be uniquely developed and supported in India. Some of these opportunities can be realised through the introduction of special sports zones (SSZs), optimal utilisation of existing sporting facilities at educational institutions, and supporting the use of emerging technology.

To address certain challenges of sports infrastructure in India, the concept of 'Sports Cities' can be extended to the introduction of SSZs, providing a focused approach towards infrastructure development. This concept can be further combined with smart city development, ensuring better integration with urban planning and development. These zones will house either newly developed (greenfield development) or upgraded existing sporting facility (brownfield development) infrastructure. The benefits of SSZs are as follows:

- Single window clearance for approvals on development of projects
- Tax relaxations
- Duty free import and export of sports goods
- Recreational benefits for the community
- Access to world-class training facilities
- Revenue generation opportunities for the government and private entities

SSZs can be broadly categorised into greenfield and brownfield development models; each has its own advantages and is governed separately.

Greenfield model:

In accordance with the concept of PPP-based Sports Cities, this model will focus on the development of new sports infrastructure on the outskirts of a city. This model can typically be on BOT basis, with the government leasing out the facility to the private sector entity for a period of 99 years. The private sector entity will in turn develop the facility, maintain and operate it, and then hand it back to the government on expiry of the lease. The salient features of this model are as follows:

- It will house state-of-the-art sports facilities (stadiums, training facilities, academies), educational institutions, residential complexes, commercial spaces, manufacturing zones for micro, small and medium enterprises (MSMEs) operating in the sports industry, restaurants, and other recreational facilities.

- The government will lease out the land parcel and in turn have a right to use the sporting facility, and have a share in revenues generated from the sporting events, recreational facilities, leasing of commercial spaces and sale of housing units.
- The private entity will be incentivised in terms of fast approvals on project development through single window clearances, tax relaxations, sale/lease of commercial spaces and housing units, and revenues generated through recreational facilities.
- The community will benefit from the availability of world-class sporting facilities and educational institutions, and improved connectivity.
- The concept of a multipurpose sporting facility that serves as a training academy and tourist attraction (through stadium tours) will enhance the occupancy rate of the facility by ensuring increased utilisation.

Brownfield model:

This model will typically focus on the development of existing infrastructure by adopting an RMO approach. The government will lease out an existing underutilised infrastructure facility for a fixed period of 30 years and the private entity will renovate the facility and account for its maintenance and operation. The salient features of this model are as follows:

- Availability of land parcel would not be an issue as the facility has already been developed.
- The facility will have existing connectivity, thus saving the private entity expenditure on developing it.
- The private entity will first have to identify the existing infrastructure facilities and then consolidate information on the availability of various facilities within a specified periphery by creating a database.
- The facility can then be upgraded according to requirements and the entity can ensure sustainability by maintaining and operating the facility for the given tenure.
- The benefits to the government, community and private entity will be similar to those of the greenfield model, with the additional benefits of available land to the government and lower expenditure on developing the facility for the private entity.

In addition to the above SSZ models, optimum utilisation of existing sports facilities can be supported by adopting the following approaches:

- A private entity approaches the government to ensure utilisation and avail SSZ status for an existing and owned facility. It can profit by getting partial SSZ benefits and revenues from the sports events held. The government, in turn, can benefit from the right to use a facility without investment and through a share of the revenue generated from the event.
- Existing sporting facilities like public mini stadiums, training facilities and grounds of government-owned schools/colleges/universities can be leased out to private entities to ensure optimum utilisation. The private entity can in turn benefit from revenue generation by utilising the facility during non-operational hours of the institution.

Optimum utilisation of existing sporting facilities in educational institutions

Avenues to increase the usage of sports infrastructure in educational institutions must be explored. Larger communities should be encouraged to use these facilities during non-working hours of the institutes. Integration of these facilities with the community sports infrastructure within cities and towns will be of benefit and will also help in tackling the issue of underutilisation.

However, the following considerations noted by the Department of Sport and Recreation, Government of Western Australia, must be taken into account while planning for shared use of sports infrastructure.¹⁹



Public and government collaboration

- Close collaboration between local government bodies, educational institutes and community bodies



Location and facilities

- Minimum level of sports facilities has to be maintained
- Must be easily accessible to public



Infrastructure needs assessment

- Assessment must be done at the block, town and district level
- Depending on the infrastructure available in each institute, reach of community size has to be determined



Operation and utilisation

- A suitable delivery model has to be designed, i.e. institute-led delivery or third-party led delivery
- Booking protocols and regimes must be defined for both educational institutes and the public



Strong governance

- Strong governance with shared responsibilities between schools, local bodies and other concerned stakeholders



Maintenance and improvements

- Essential to maintain sports facilities used by school students and the public
- Strong facility maintenance standard developed and adhered.

Considerations for using educational sports infrastructure for the community

Proposed approach to deliver educational infrastructure to the public

Approach	Details
Managed by educational institute	Institutes can allow communities within a certain area to use the sports facilities based on a 'Pay and Play' model.
Managed by third party	Institutes can tie up with third parties such as local sports clubs and NGOs. Third parties can in turn provide sports facilities to the public for nominal charges.

Technology:

MYAS and SAI can provide incentives and encouragement to start-ups in the field of sports infrastructure through incubation centres within the proposed SSZ areas and any other sports institutions.

19. <https://www.dsr.wa.gov.au/docs/default-source/file-support-and-advice/file-facility-management/shared-use-guide.pdf?sfvrsn=2>

Conclusion

Sports form an important pillar of India's holistic growth. Hence, the foundations of this integral sector cannot be subpar. In order to place India firmly on the path to sports supremacy, due consideration must be given by ecosystem stakeholders to the state of sports infrastructure in India and the different hurdles that hinder its development. The designation and usage of SSZs will go a long way towards ensuring a dedicated

approach to infrastructure development by addressing some of the key challenges facing the industry today. By incorporating infrastructure planning in sports initiatives, encouraging and easing the path to PPPs, and investing in technological upgrades to sports facilities, the sports sector in India can be equipped with the capacity and resources needed to achieve national long-term objectives.



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