



Beyond the frame: Creating a cinematic hub through a dynamic film city



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14 OCT 2024

Foreword in Thought Leadership - Beyond the frame: Creating a cinematic hub through a dynamic film city.

It brings me immense pride to present this comprehensive thought leadership, "Beyond the Frames: Creating a Cinematic Hub through a Dynamic Film City" developed by KPMG.

Our nation, with its rich tapestry of stories, cultures, and artistic heritage, has always been a beacon for the media ecosystems. It has been a nurturing ground for storytelling, from the ancient legends of the Mahabharata and Ramayana to contemporary Bollywood classics that resonate with global audiences.

The Indian film industry, a major player in terms of film production worldwide, illustrates our creativity and cultural vibrancy. However, to maintain our competitive edge and cater to the evolving demands of modern filmmaking, it is imperative to embrace cutting-edge technologies, innovative infrastructure, and conducive policies.

This document delves into the intricacies of establishing a state-of-the-art film city that not only meets the highest international standards but also establishes a robust platform that will attract filmmakers from across the globe, create employment opportunities, and make a significant impact on our economy. It also outlines the strategic approach towards creating and streamlining investment opportunities in the sector. This innovative blueprint underscores our commitment to elevating India's stature in the global cinematic landscape.

I commend KPMG for studying this segment contextually and express my deep appreciation to all the stakeholders, including industry professionals, policymakers, whose priceless perspectives have influenced this forward-thinking report. Together, we embark on a journey to transform India into a global cinematic powerhouse.

(Gajendra Singh Shekhawat)

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MESSAGE

Since the advent of film and television, media ecosystems have sprung up across the world. These ecosystems consist of hubs where media services and projects are created, developed, traded, and distributed in the local and international market. The cornerstone of these cinematic hubs is content production, supported by favorable regulations, incentives, robust facilities, cutting-edge infrastructure, technological advancements, and access to talent and capital.

As media production grows, it raises the need for incremental investment in production infrastructure and adequate talent creation to support it. India, with its unparalleled legacy of storytelling and cinematic excellence, is poised to take a giant leap forward in this domain. With its rich cultural heritage and diverse traditions, India is uniquely positioned to harness the potential of the industry, driving economic growth, job creation, and cultural diplomacy.

To initiate dialogue on this topic, KPMG has prepared this thought leadership document, "Beyond the Frames: Creating a Cinematic Hub through a Dynamic Film City." This document provides an outline for creating a regional cinematic hub through establishing a state-of-the-art film city in India, one that caters to the growing demand for high-quality content, reducing the need for filmmakers to seek production capabilities abroad. It will not only attract film makers but also become a tourist hub leading to the promotion of regional tourism.

I extend my appreciation to all the stakeholders involved in this project whose insights and contributions have been invaluable. This document stands as a commendable blueprint for the future, providing guidance towards building film cities that paves the way for a future of innovation and excellence in the film and tourism industry.


(V.Vidyavathi)
05.08.2024

सुमन बिल्ला, आई.ए.एस.
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MESSAGE

India's rich cultural heritage and vibrant storytelling tradition have long made it a natural hub for cinematic excellence. India is not only one of the leading nations in terms of film production but has also been able to garner representation and recognition at the international stage. As we stand at the cusp of this shift in entertainment dynamics, it is imperative that we harness the nation's strengths to create a dynamic film city that not only serves as a beacon for filmmakers worldwide but also drives Economic growth.

The thought leadership document, "Beyond the Frames: Creating a Cinematic Hub through a Dynamic Film City," developed by KPMG underscores the immense potential and transformative impact of establishing a world-class film city in India. It delves into the strategic, infrastructural, and policy frameworks necessary to build a film city that is not only technologically advanced but also sustainable and inclusive.

I am optimistic that this initiative will significantly bolster our nation's position as a premier destination for film production. It will also enhance our tourism appeal, drawing visitor's eager to experience the magic of Indian cinema firsthand.

I extend my gratitude to the team at KPMG for their meticulous research and dedication in crafting this document. I am optimistic that with collaborative efforts, we can turn this vision into reality, creating a cinematic hub that resonates with the ever-changing demand of the global cinema.

(Suman Billa)



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Foreword by KPMG in India

The global film and television industry is a vibrant and dynamic sector, continuously evolving with technological advancements and creative innovations. At KPMG, we recognize the immense potential this industry holds for cultural exchange, economic growth, and technological progress. It is with great enthusiasm that I present this thought leadership document, "Beyond the Frames: Creating a Cinematic Hub through a Dynamic Film City."

This comprehensive study outlines a blueprint for establishing a world-class film city in India. As a nation with a rich heritage in storytelling and filmmaking, India stands at the cusp of a transformative era in the cinematic landscape. Our analysis delves into the essential components required to create a cinematic hub that not only competes on a global scale but also preserves and celebrates the unique cultural essence of India.

The document explores the intricate facets of designing a film city, from advanced production and post-production facilities to cutting-edge technology adoption, such as virtual reality, artificial intelligence, and cloud-based solutions. By benchmarking against international standards and studying successful models worldwide, we provide actionable insights and recommendations tailored to India's unique context and strengths.

A crucial aspect of this vision is the integration of a robust educational framework through film schools that will equip future generations with the skills and

knowledge required to excel in the global film industry. Moreover, the inclusion of social and leisure components ensures that the film city will not only be a center of production but also a vibrant hub for tourism and cultural exchange.

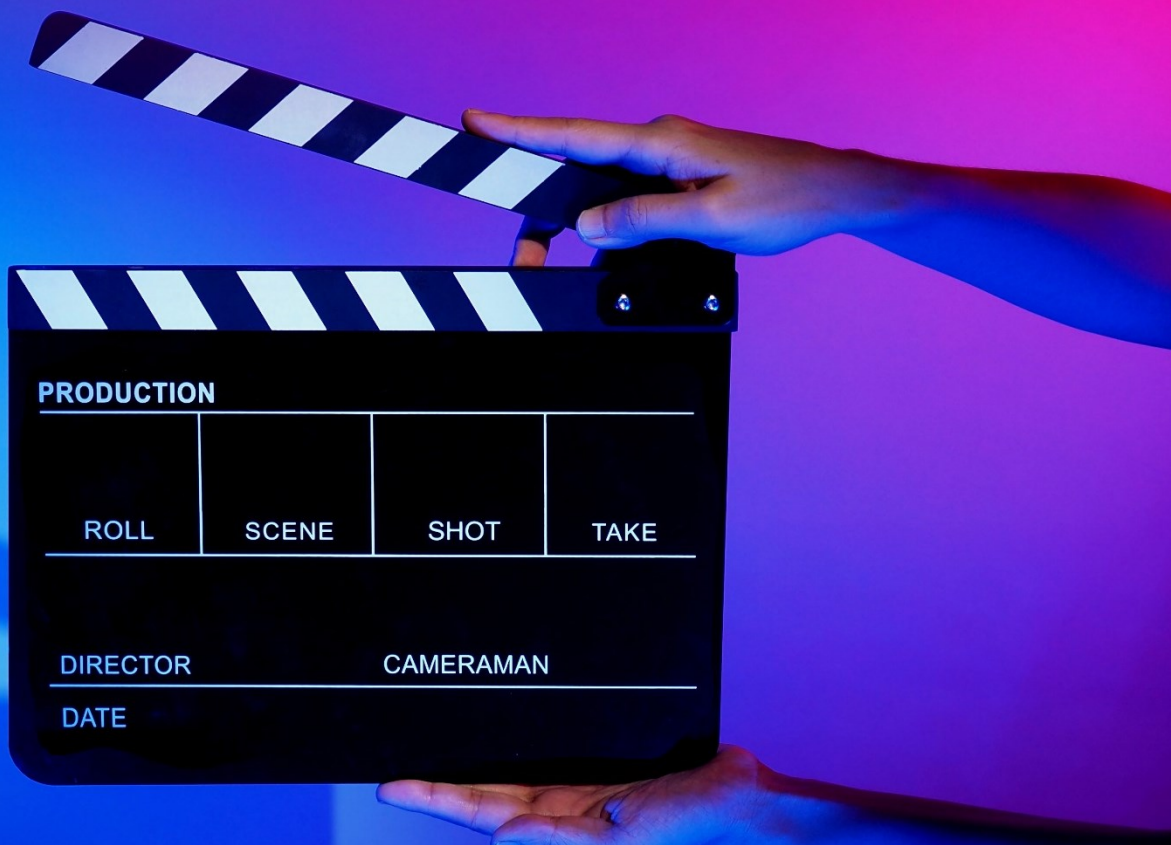
At KPMG, we are committed to driving excellence and fostering innovation. This document is a testament to our dedication to supporting India's ambition to become a global leader in the film industry. We believe that by harnessing the country's inherent strengths, coupled with strategic infrastructure and policy interventions, India can elevate its position on the global cinematic map.

This report aims to spark a dialogue, inspire action, and contribute to the realization of India's potential as a media hub. We look forward to collaborating with the Government of India, industry stakeholders, and the creative community to bring this visionary project to fruition.



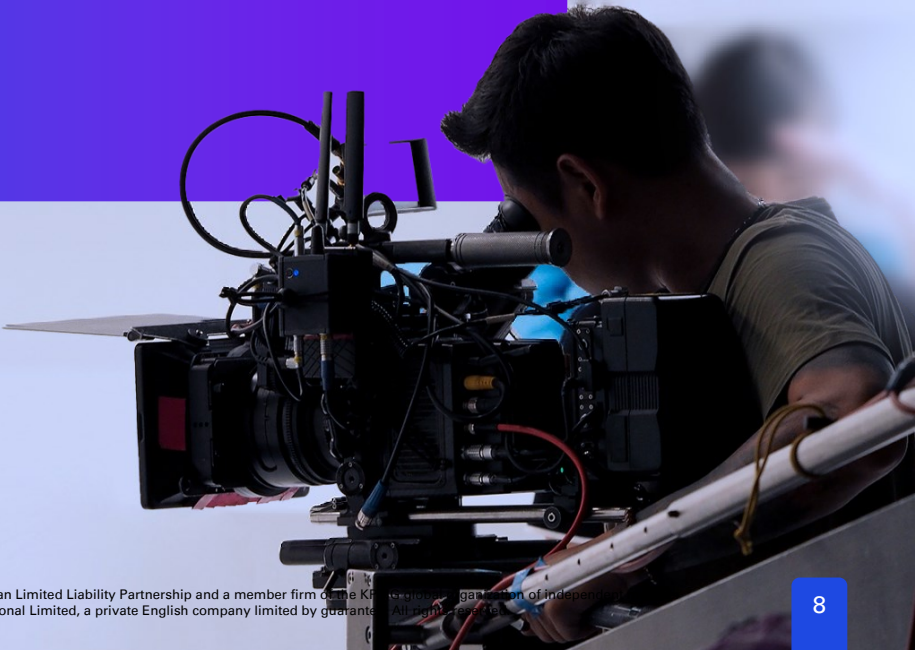
Vivek Agarwal

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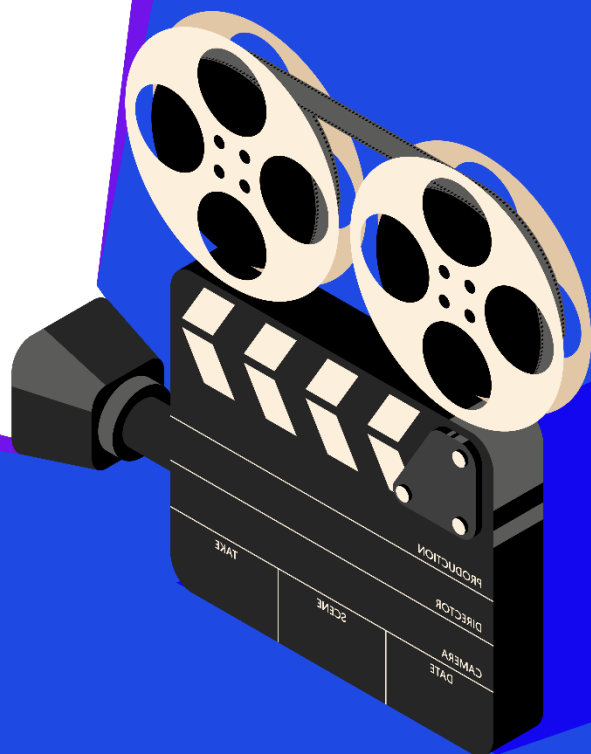
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01

Lights, camera, synergy: The film and television industry



1. Lights, camera, synergy: The film and television industry

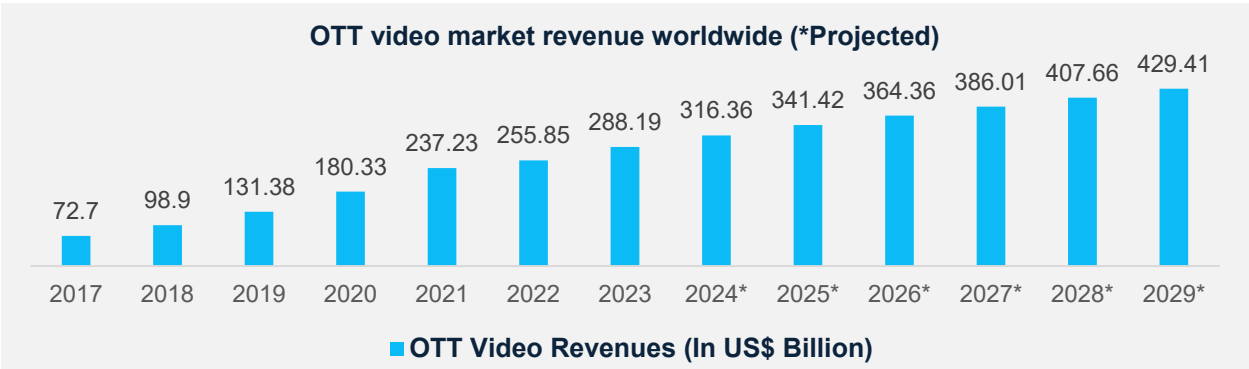
For humankind, storytelling continues to be one of the most popular sources of entertainment and information dissemination. Presently, storytelling retains its prevalence through films, animation, and TV shows while thriving in business. With a projected revenue of above USD46.4 billion in 2023¹, the global film industry is a testament of eminence and growth. Internationally, United

1.1. Global scenario

The global movies and entertainment market size was worth approximately USD94.451 billion in 2022. It is predicted to grow to around USD169.62 billion by 2030, with a compound annual growth rate (CAGR) of approximately 7.21 %³. In terms of revenues, the global cinema industry is expected to reach USD52.7 billion by 2026, with North America and Europe being the largest markets

States' film industry (Hollywood) with an annual revenue of USD24 billion in 2021 is the largest film industry followed by China². The world's best-equipped and technologically advanced production facilities owned by production houses in Hollywood offer end-to-end services from pre-production to distribution of films.

accounting for over 60 per cent of the global box office revenues. The Asia-Pacific region is also a significant contributor to the industry and is expected to register a high CAGR of 8.2 per cent from 2022 to 2030¹, with China being the largest market in the region. Alongside the film industry, the global television broadcasting market is rapidly growing and is expected to reach USD340.33 billion in 2026 at a CAGR of 6.2%.¹



Source: "OTT Video - Worldwide", Statista, February 2024

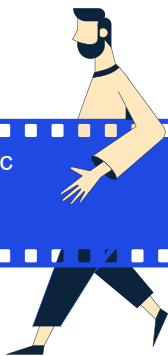
The film and television industry has undergone significant changes driven by advancements in technology and changing consumer preferences. **One key trend in the industry is the rise of streaming platforms. The global Over-the-Top (OTT) market was valued at USD350.6 billion in 2022 and is expected to grow at a CAGR of 28.19 per cent, reaching USD1555.6 billion by 2028.**⁴ The projected revenue in the OTT Video market for Worldwide is estimated to reach USD316.40 billion by 2024. This includes revenues generated from OTT video advertising, pay-per-view, video downloads and video streaming. The streaming services challenged the traditional content distribution and consumption model and are now in competition with established

studios for content creation and audiences⁵. **Another trend is the increasing importance of international markets.** Hollywood studios are now targeting audiences in emerging markets such as China, India, and Brazil.

In the past few years, the film and television industry faced several challenges including the COVID-19 pandemic, rising production costs, and the pressure to produce auxiliary content. These challenges indicate an absence of related infrastructure, equipment, and facilities to meet the global audiences' increasing demand for content. Despite such challenges, the industry presents opportunities for growth and scalability.

The use of VR and AR in film production and distribution presents new and immersive cinematic experiences, leading to a need for advanced, technologically equipped centralised production facilities.

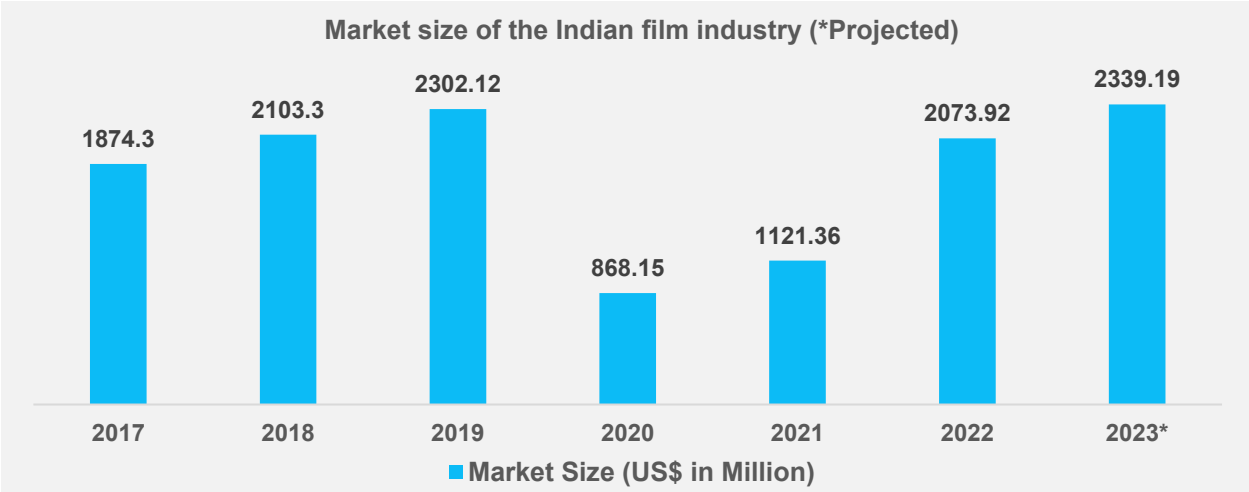
1. "Global cinema revenue forecast 2017-2026", Statista, June 2022
2. "Filmed entertainment revenue in selected countries worldwide in 2021", Statista, January 2024
3. "Global Movies and Entertainment Market Size", Zion Market Research, April 2023
4. "OTT Market - Over the Top Services - Industry, Share, Size & Growth", Mordorintelligence.com, July 2023
5. "Theme Report 2021", Motion Picture Association, August 2023



1.2. Indian scenario

Proving its resilience to the world, the Indian film and entertainment industry is on the cusp of a strong phase of growth backed by rising consumer demand and improved advertising revenue. Indian cinema is the largest film industry considering the number of films produced, with 2,446 feature films produced annually as of 2019⁶, and is expected to

grow at a faster rate than the global average. The Indian film segment grew 10 per cent in 2019 to reach INR191 billion, and domestic film revenues crossed INR115 billion.⁷ Moreover, the industry provided employment to over 2.6 million people directly and indirectly, significantly contributing towards the economic development of the country⁸.

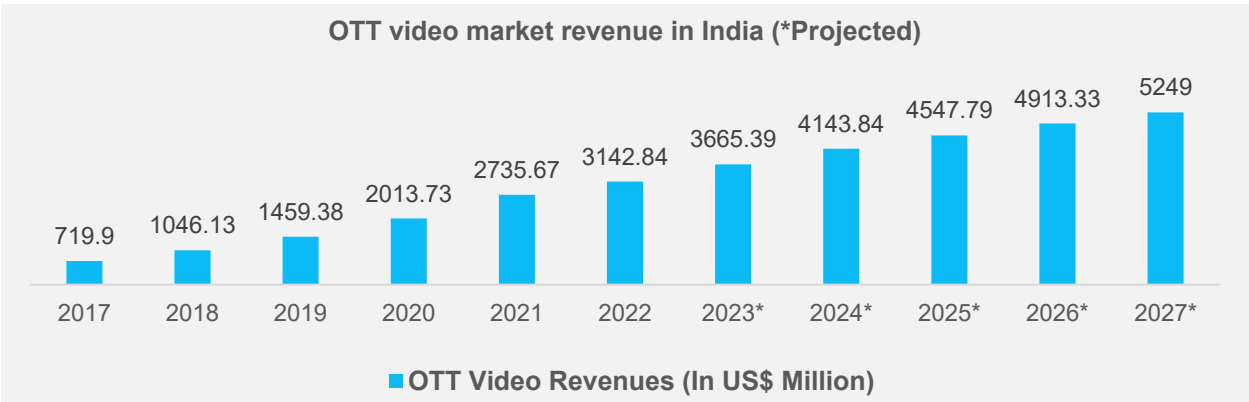


Source: “India: Market size of film industry 2025”, Statista, May 2023

The Indian television industry also forms a major portion of the Indian film and entertainment industry. The actual size of the Indian television market was INR308 billion in 2022.⁹ It is estimated that over two-hundred million Indian households rely on TV as their primary source of information and entertainment, forming a major portion of consumer market.

Involving over-the-top (OTT) platforms, the streaming market in India was estimated to be worth USD1.7 billion in 2020 and is predicted to be worth USD15 billion by 2030, with

USD12.5 billion from the video market and USD2.5 billion from the audio segment.^{10,11} The release of movies and series alongside sporting events such as IPL, ICC World Cup, and big-ticket reality shows on digital platforms, opened new avenues of revenue generation, and considerably increased the rate of content creation. With over forty streaming service providers in India, and freestanding content uploaded on social media sites, the demand for content has increased exponentially.

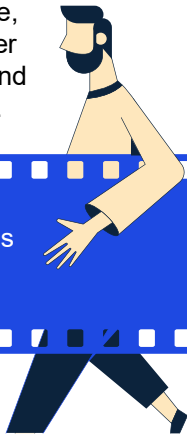


Source: “OTT Video-India”, Statista Market Forecast, September 2023

6. “Film Industry: Most Up-to-Date Encyclopedia, News & Reviews”, academic-accelerator.com, July 2023
7. “Media Coverage”, FICCI, March 2020
8. “India: film industry employment by impact 2019”, Statista, July 2020
9. “CII South India Media and Entertainment Report- 2023”, Confederation of Indian Industry, July 2023
10. “Streaming market in India to be worth \$15 billion by 2030”, Mint (livemint.com), July 2021
11. “Purchase and continuation intentions of over -the -top (OTT) video streaming platform subscriptions: a uses and gratification theory perspective”, ScienceDirect, March 2022

Since its inception in the 1910s, the film and television industry progressed notably with substantial increase in revenue, audience, and technology. Further, it witnessed a surge in the number of multiplexes, and growth of digital streaming platforms. Nonetheless, the industry relies heavily on traditional methods of filmmaking,

which are time-consuming and expensive. With the increase in demand for high-quality content, there is an urgent need for well-equipped modern facilities with up-to-date infrastructure, technologies, and equipment. Another issue is the limited availability of sound stages, essential for indoor shooting.



Presently, the lack of contemporary production facilities hinders the industry’s growth. Indian filmmakers opt to shoot films abroad due to the unavailability of adequately equipped facilities within the country. This adds to the production cost and results in a loss of revenue for the Indian film industry.

1.3. Policies adopted to promote the film and TV industry

1.3.1.Global policies

Policies adopted across countries for the promotion of the film and TV industry are diverse and multi-faceted. Some countries offer financial incentives such as tax credits and rebates to attract productions, while others establish cultural support-funds to nurture local talent and content. Co-production agreements facilitate international collaboration, content quotas ensure the representation of domestic culture, and copyright protection encourages investment. Film festivals, education programmes, and export support, further boost the industry. Embracing digital media

and championing diversity and inclusion are also prevalent themes, demonstrating a commitment to both creative innovation, and social equity. Such policies collectively contribute to a dynamic and flourishing global film and TV industry, highlighting cultural landscapes, and stimulating economic growth. Examples of incentives offered by some countries to promote their film and television industry are displayed in the following figure. These incentives are based on Qualified Production Expenditure in the host country. A detailed comparison on incentives provided by different countries is in Annexure I.

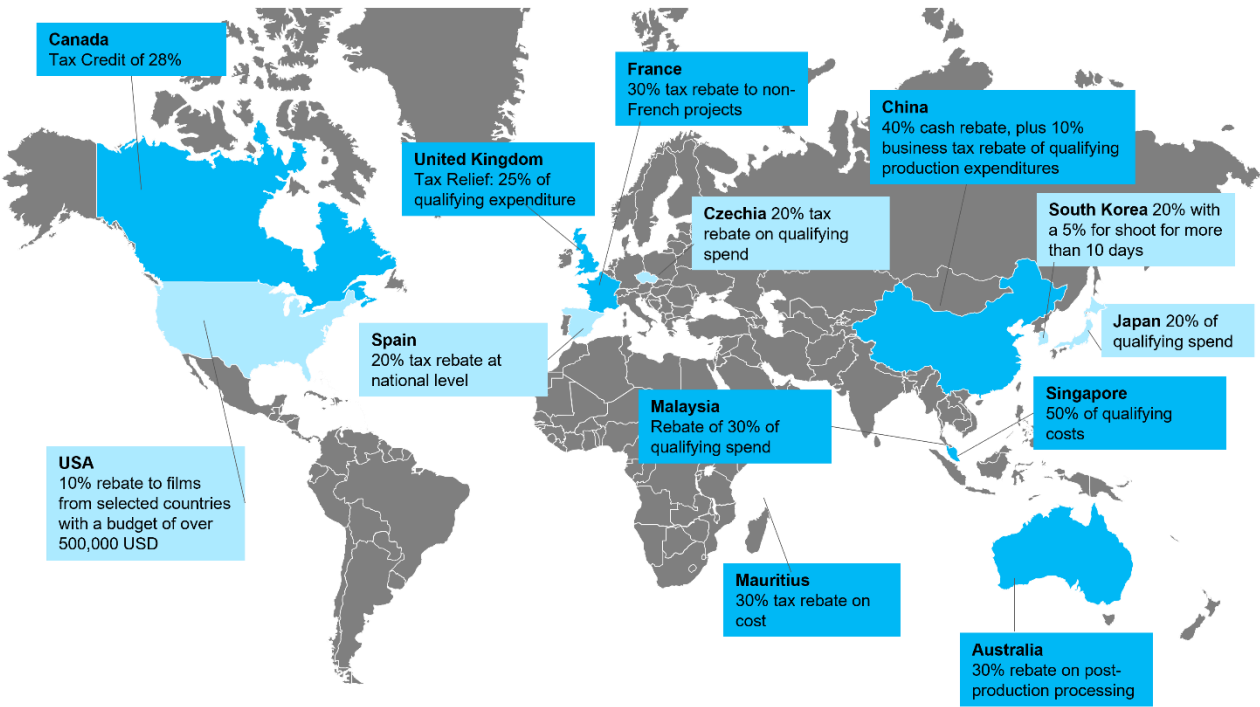


Figure : Incentives offered under film policies of other countries
Source: KPMG in India analysis

1.3.2. Indian policies

The Government of India has taken various measures to promote its film industry, including providing incentives such as tax rebates and subsidies to attract filmmakers to shoot in the country. To streamline the process of obtaining permits and permissions, the government has established a Film Facilitation Office (FFO), which acts as a one-stop shop for international filmmakers to obtain a single-window clearance for film shoots¹².

Furthermore, state governments in India have made significant efforts to promote film tourism in their respective states, contributing to the growth of the industry. Madhya Pradesh, for instance, won the Most Film Friendly State award at the 68th National Film Awards¹¹. Policies adopted to promote the film and TV industry vary across respective states, reflecting on the existing and desired film ecosystem, and the unique challenges faced by different regions. Most states offer financial incentives based on:

- a) Number of feature films shot in the state and expenditure incurred on film shoots.
- b) Number of days, number of actors hired from the host state, and screen time.

States, such as Maharashtra popularly known for Bollywood, established film development

corporations and offers tax incentives to attract filmmakers. Tamil Nadu with policies favouring the regional film industry historically focused supporting Tamil regional cinema. Its state government implemented content quotas and subsidies to ensure the prominence of local language cinema, alongside incentives for Tamil film productions.

Moreover, states such as Rajasthan, Kerala, Uttar Pradesh, and Uttarakhand actively contributed to the development of film tourism. Rajasthan offers subsidies of up to INR2 crore for filming within the state, and waives all taxes and charges related to filming at any government-owned landmarks, locations, and assets. Uttar Pradesh, which has played a significant role in the history of the Indian cine industry, focuses on holistic growth through its latest film tourism policy. Its policy emphasises infrastructural development, subsidies and rebates on location fees, and access to government properties. Additionally, state tourism policies also promote film tourism through the organisation of film festivals, road shows, cultural events, and other promotional activities¹¹. A comparison on incentives provided by states' is in Annexure II.



12. "Exploring the Potential of Film Tourism in India: A Catalyst for Economic Growth and Cultural Preservation", Invest India, April 2023

02

Visionary canvas: Establishing the need for a cinematic hub



2. Visionary canvas: Establishing the need for a cinematic hub

Factors driving the growth witnessed by the film and TV industry are, the rising consumption across distribution platforms, increasing penetration among the Indian diaspora worldwide, growing importance of digital media, increasing advertising revenues, and reforms in regulation and industry practices. While digitisation brings about a paradigm shift within the TV and film sectors, the rise in population, literacy rate, and disposable income provides the much-needed

boost to domestic media. The combined role of digital evolution and digitisation paves new avenues for film makers. Business analytics, better consumer intelligence, and content innovation are explored by players across the value-chain to gain a competitive edge in the market¹³. The below figure compares the benefits South-East Asian (SEA) nations witnessed due to their respective film and entertainment ecosystems.

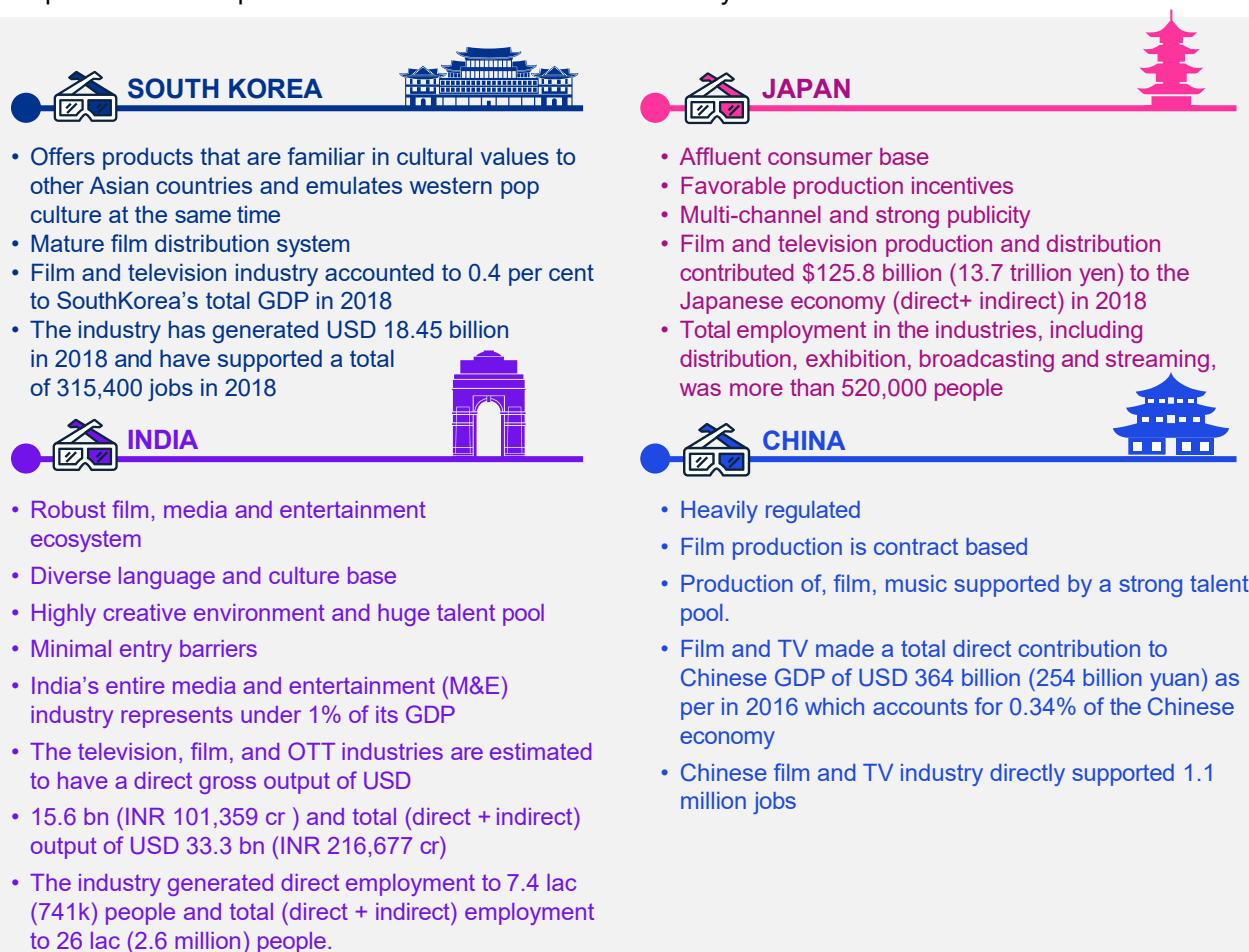


Figure : Benefits of the film and entertainment ecosystem in SEA countries

Source: KPMG in India analysis

Currently, India has four to five film cities housing production and post-production facilities. Given the ticket size of the industry, the gap between the demand and supply of world-class production facilities catering to both large-scale production houses and independent producers needs addressing.

The establishment of a film city will lead to economic development. A network of supply chains will form due to large production houses selling directly to production companies, who in turn purchase from small-scale suppliers. The

direct, indirect, and induced impacts arising out of such a supply chain can increase both the financial and creative economy of a nation. One of the most prominent indirect impacts of establishing a film city is film tourism.

Assembling multiple facilities within a film city will attract filmmakers, while supporting the film industry's production capacity. Appropriate interventions can help reduce the cost of crew, equipment rentals, and increase collaboration opportunities between productions.

13. "Media and Entertainment", KPMG, August 2023

03

Exploring the cinematic landscape: Benchmarking studies



3. Exploring the cinematic landscape: Benchmarking studies

Benchmarking studies of film cities in India and abroad serve as a valuable knowledge-sharing tool, enabling existing Indian film cities to enhance their infrastructure, operations, and policies to compete on a global scale, and contribute immensely to the country’s cultural and economic landscape.

3.1 International production studios

To understand the requirements of a contemporary media and entertainment ecosystem, top global production studios in respect to their services and offerings were analysed. The key features of global film studios and their respective facilities is outlined in Table 1.

Table 1: Benchmarking study of international film studios

Production Phase	Facilities	Warner Bros, Burbank ¹⁴	Universal Studios ¹⁵	Warner Bros, Leavesden ¹⁶	Pinewood Studios, UK ¹⁷	Shinfield Studios, UK ¹⁸	Paramount Studios ¹⁹	Dubai Studio City ²⁰	twofour54, Abu Dhabi ²¹	Steiner Studios ²²
Production Facilities	Studios/ Stages	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Backlots	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Ready to use sets	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Hair/Makeup Rooms, Green Rooms	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Store Departments	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Support Facilities: Camera, Lighting & Sound Equipment	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Production Offices	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Workshops	✓	✗	✓	✓	✓	✓	✓	✗	✓
	Accommodation	✓	✓	✓	✓	✗	✗	✗	✗	✗
	Tourist Facilities	✓	✓	✓	✗	✗	✓	✗	✗	✗
	Restaurants and Utilities	✓	✓	✓	✓	✗	✓	✓	✓	✓
Post-Production	Editing Facility	✓	✓	✓	✓	✗	✓	✓	✓	✓
	Screening Facility	✓	✓	✓	✓	✗	✓	✓	✓	✓
	Sound Stages	✓	✓	✗	✓	✗	✓	✓	✗	✗

14. "Warner Bros. Studio Operations", Warner Bros., July 2023
15. "Universal Studios Hollywood - Los Angeles, California - Official Site", Universal Studios, July 2023
16. "Built by Filmmakers for Filmmakers", Warner Bros Studios Leavesden. July 2023
17. "Pinewood Studios, home to stages, facilities, and services. | Pinewood Studios", December 2023
18. "UK Film and TV Studio | Shinfield Studios", December 2023
19. "The Studios at Paramount", Paramount Studios, July 2023
20. "Global Production & Broadcasting Hub", Dubai Studio City, September 2023
21. "twofour54 Abu Dhabi free zone", twofour54, August 2023
22. "Steiner Studios", August 2023

Production Phase	Facilities	Warner Bros, Burbank ¹⁴	Universal Studios ¹⁵	Warner Bros, Leavesden ¹⁶	Pinewood Studios, UK ¹⁷	Shinfield Studios, UK ¹⁸	Paramount Studios ¹⁹	Dubai Studio City ²⁰	twofour54 ,Abu Dhabi ²¹	Steiner Studios ²²
Post-Production	Mixing Theatres	✓	✓	✓	✓	✗	✓	✓	✓	✓
	Animation and VFX	✓	✓	✓	✗	✗	✓	✗	✓	✗
	Broadcast Studio	✗	✓	✗	✓	✗	✗	✓	✓	✗
	Recording Studio	✓	✓	✓	✓	✗	✓	✓	✓	✓
Special Events		✓	✓	✓	✗	✗	✗	✓	✓	✓
Film School		✗	✗	✗	✗	✗	✗	✗	✓	✗
Theme Park/Tour Facilities		✓	✓	✓	✗	✗	✓	✗	✗	✗



The analysis concluded that major world-renowned studios included theme parks/tourist facilities that promoted and generated tourism revenue. Theme parks, museums, exhibitions and set pieces dedicated to popular movies or TV series successfully garnered interest among tourists, becoming major tourist attractions. Universal Studios with a separate division, Universal Theme Parks, operates theme parks and resort properties around the world and is best known for attractions based on famous classic and modern pop culture media. The division reported

3.2. International film schools

A benchmarking study of the top global film schools was undertaken to understand the requisite skillsets relevant in the film industry. The following outlines the offerings in Table 2

Table 2: Benchmarking study of international film schools

Programme	Courses	American Film Institute, USA ²⁵	Beijing Film Academy, China ²⁶	NFTS, London ²⁷	La Femis, France ²⁸	Tokyo University of the Arts, Japan ²⁹
Bachelor's Programme	Screenwriting and Film Studies	✗	✓	✗	✓	✗
	Directing	✗	✓	✗	✓	✗
	Performing Arts	✗	✓	✗	✗	✗
	Cinematography	✗	✓	✗	✓	✗
	Sound	✗	✓	✗	✓	✗
	Fine Arts	✗	✓	✗	✗	✗
	Film Production and Marketing	✗	✓	✗	✓	✗
	Filmology	✗	✓	✗	✗	✗
	Photography	✗	✓	✗	✗	✗
	Editing	✗	✗	✗	✓	✗
	Production Design	✗	✗	✗	✓	✗
Master's Programme	Cinematography	✓	✓	✗	✗	✓
	Directing	✓	✓	✓	✗	✓
	Editing	✓	✗	✓	✗	✓

23. "Disney Has 7 Of World's 10 Most Popular Theme Parks, Universal Nabs 3", Forbes, June 2023

24. "Dubai Studio City supports MFA's film production programme", Arabian Business, November 2007

25. "American Film Institute", August 2023

26. "Beijing Film Academy", August 2023

27. "Homepage", NFTS, August 2023

28. "La Femis- Official Website", La Femis, August 2023

29. "Tokyo University of the Arts", August 2023

revenues of USD7.5 billion in 2022.²³ This indicates towards the popularity of film and TV content among a wider audience and the potential it holds.

Additionally, it was observed that none of the film studios had film schools, either in campus or aligned to them in the region; however, the Dubai Studio City offers two programmes initiated by the Manhattan Film Academy.²⁴ All the film studios showcased in Table 1 include production and post-production facilities, making them a centralised hub for film and TV content production.

Programme	Courses	American Film Institute, USA ²⁵	Beijing Film Academy, China ²⁶	NFTS, London ²⁷	La Femis, France ²⁸	Tokyo University of the Arts, Japan ²⁹
Master's Programme	Producing	✓	✓	✓	✗	✓
	Production Design	✓	✗	✓	✗	✗
	Screen Writing	✓	✓	✓	✗	✓
	Sound	✗	✓	✓	✗	✓
	Film & Television Technology	✗	✓	✗	✗	✗
	Film Studies	✗	✓	✓	✗	✗
	Animation	✗	✗	✓	✗	✗
	Cinematography	✓	✓	✗	✗	✓
	Audience Engagement	✗	✗	✓	✗	✗
	Camera	✗	✗	✓	✗	✗
	Composing	✗	✗	✓	✗	✗
	Creative Business	✗	✗	✓	✗	✗
	Digital Effects	✗	✗	✓	✗	✗
	Games	✗	✗	✓	✗	✓
	Design	✗	✗	✓	✗	✓
	Art Direction	✗	✗	✗	✗	✓
	Postproduction	✗	✗	✓	✗	✗
	VFX	✗	✗	✓	✗	✗
Doctoral Degree Programme		✗	✗	✓	✗	✓
Workshops/Short-term programmes		✓	✓	✓	✓	✓
Seats (per year)		148	189	700 across 4 campuses	50	32
Fees		USD38,416 for first year; USD37,112 for second year (plus USD8,033 for thesis)	USD1,240 to USD1,550 for locals, USD6,665 to USD7,905 for international students	USD14,300 for residents; USD32,000 for overseas students	USD517 for French citizens; USD15,334 for foreigners	USD8400 for foreigners USD4900 for locals

Based on the study, the following was observed:

- Mainly, there were four types of programmes offered by film schools globally: a 4-years Bachelor's programme, a 2 to 3 years Master's programme, a 3 to 4 years Doctoral Degree programme, and workshops.
- Also, available were 1-year diploma and certification courses and additional short-term courses, enabling a greater number of students to pursue their specific interests.
- The schools either offered a Bachelor's degree or Master's degree or both. The seats in these schools were limited, ranging from 32 seats to 189 seats per year, while the fees, especially for international students, was high.
- With VFX and special effects increasingly used in films, technologically driven courses such as digital effects, VFX and animation design were included in the curriculum.

3.3. Domestic film cities

To understand the requirements of a world-class film city and the existing gaps that need to be addressed, top Indian production studios/film cities were analysed in relation to their focused services and offerings. The analysis presented in Table 3.

Table 3: Domestic film city Benchmarking

Production Phase	Facilities	Dadasaheb Phalke Chitranagari ³⁰	YashRaj Studios ³¹	Ramoji Film City ³²	Marwah Studios Film City Noida ³³	Prayag Film City, Midnapore ^{34,35}
Production Facilities	Studios/ Stages	✓	✓	✓	✓	✓
	Backlots	✓	✗	✓	✓	✓
	Ready to use Sets	✓	✗	✓	✓	✓
	Makeup Rooms	✓	✓	✓	✓	✓
	Store Departments	✓	✗	✓	✗	✗
	Support Facilities: Camera, Lighting & Sound Equipment	✓	✗	✓	✓	✗
	Accommodation	✓	✗	✓	✗	✓
	Tourist Facilities	✓	✗	✓	✗	✓
	Restaurants and Utilities	✓	✓	✓	✓	✓
Production Facilities	Editing Facility	✗	✓	✓	✓	✗
	Screening Facility	✗	✓	✓	✓	✗
	Sound Stages	✗	✓	✓	✓	✗
	Mixing Theatres	✗	✓	✓	✓	✗
	Animation and VFX	✗	✓	✓	✓	✗
Film School		✓	✗	✗	✓	✗
Theme Park/ Entertainment Zone/Studio Tour		✓	✗	✓	✗	✓

30. "Filmcity - Dadasaheb Phalke Chitranagari", Film City Mumbai, July 2023

31. "One of the Leading Film Production and Distribution Companies", Yash Raj Films, July 2023

32. "Largest Theme Park & Amusement Park in Hyderabad", Ramoji Film City, July 2023

33. "Film Studio & Production", Marwah Studios, July 2023

34. "Prayag Group embarks on their venture Prayag Film City", The Economic Times, April 2012

35. "Oxygen", Sabyasachi - A Progressive Thought, October 2018

The analysis highlighted that while existing production studios provided basic production and post-production facilities, adequate, technologically advanced, centralised-production facilities catering to filmmakers’ end-to-end requirements was missing. Apart from the Ramoji Film City, there were no other holistic entertainment hubs attracting tourists/visitors to release new revenue-generating avenues.

3.4. Domestic film schools

A benchmarking analysis was conducted between top Indian production studios/film cities regarding their services and offerings to understand the curriculum and skillset required to enter the film industry in India. The following in Table 4 displays the details of courses offered by top Indian film schools.

Table 4: Benchmarking study of Indian film schools

Facilities	Courses	Whistling Woods International , Mumbai ³⁶	MGR Government Film and Television Institute, Chennai ³⁷	Film & Television Institute of India, Pune ³⁸	Satyajit Ray Film & Television Institute, Kolkata ³⁹	L V Prasad Film and TV Academy, Chennai ⁴⁰	Loyola College Chennai ⁴¹	M.O.P. Vaishnav College, Chennai ⁴²
Under graduate Programmes	Screenwriting and Film Studies	✓	✓	✗	✗	✓	✓	✗
	Directing	✓	✓	✗	✗	✓	✓	✓
	Acting	✓	✓	✗	✗	✓	✗	✓
	Cinematography	✓	✓	✗	✗	✓	✓	✓
	Sound	✓	✓	✗	✗	✓	✗	✓
	Graphics and Visualization	✓	✗	✗	✗	✓	✓	✓
	Film Production and Marketing	✓	✗	✗	✗	✓	✓	✓
	Photography	✗	✗	✗	✗	✓	✓	✓
	Editing	✓	✓	✗	✗	✓	✓	✓
	Production Design	✓	✗	✗	✗	✗	✗	✓
	Animation	✓	✓	✓	✗	✓	✓	✓
	Visual Effects	✓	✓	✓	✗	✓	✓	✓
	Game Design	✓	✗	✗	✗	✗	✗	✗
	Filmmaking	✗	✗	✗	✗	✓	✓	✓

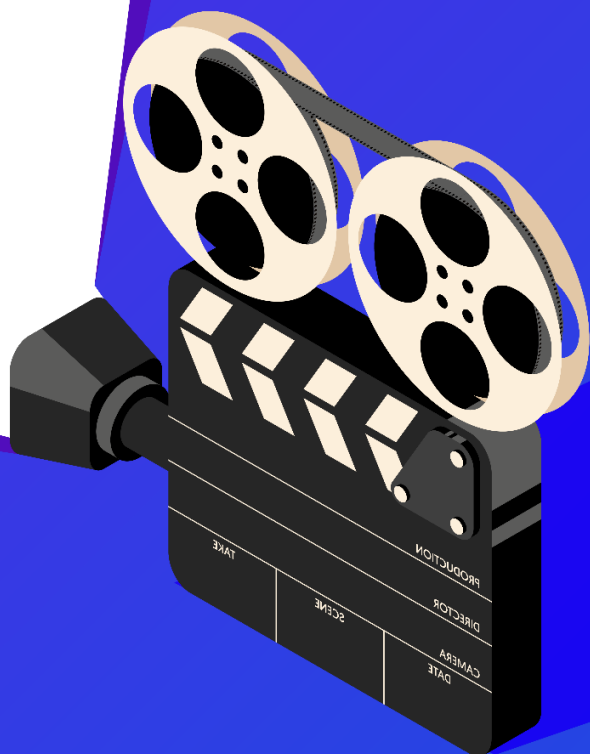
36. “#1 School for Filmmaking, Acting, Communication & Creative Arts”, Whistling Woods International, July 2023
37. “Prospectus- MGR Government Film and Television Institute”, Government of Tamil Nadu, June 2015
38. “Film and Television Institute of India- Official Website”, July 2023
39. “Satyajit Ray Film & Television Institute- Official Website”, July 2023
40. “L V Prasad College of Media Studies- Top Film College in India”, July 2023
41. “Loyola College- Official Website”, July 2023
42. “Home – MOP”, M.O.P. Vaishnav College for Women, July 2023

Facilities	Courses	Whistling Woods International, Mumbai ³⁶	MGR Government Film and Television Institute, Chennai ³⁷	Film & Television Institute of India, Pune ³⁸	Satyajit Ray Film & Television Institute, Kolkata ³⁹	L V Prasad Film and TV Academy, Chennai ⁴⁰	Loyola College Chennai ⁴¹	M.O.P. Vaishnav College, Chennai ⁴²
Post graduate Programmes	Cinematography	✓	✗	✓	✓	✓	✓	✓
	Directing	✓	✗	✓	✓	✓	✓	✗
	Editing	✓	✗	✓	✓	✓	✓	✓
	Producing	✓	✗	✗	✓	✓	✓	✓
	Production Design	✓	✗	✓	✗	✗	✗	✗
	Screen Writing	✓	✗	✓	✓	✗	✗	✓
	Sound	✓	✗	✓	✓	✓	✗	✓
	Film & Television Technology	✗	✗	✗	✓	✗	✓	✗
	Acting	✓	✗	✓	✗	✓	✗	✗
	Film Studies	✓	✗	✗	✓	✓	✓	✓
	Animation	✗	✗	✗	✓	✗	✓	✗
	Camera	✗	✗	✗	✗	✓	✓	✓
	Composing	✗	✗	✗	✗	✓	✗	✗
	Creative Business	✓	✓	✗	✗	✗	✗	✗
	Art Direction	✗	✗	✓	✗	✗	✗	✓
	VFX	✓	✗	✗	✗	✗	✓	✓
	Digital Film Making	✗	✗	✗	✗	✓	✗	✗
Doctoral Degree Programme		✗	✗	✗	✓	✗	✗	✗
Workshops/ Short-term Programmes		✓	✗	✗	✓	✓	✗	✓
Seats (per year)		560	84	135	60	-	350	-
Fees		INR 6,50,000 - INR 23,00,000	INR 78,980, INR 18,980 for SC/ST students	INR 1,83,424 - INR 3,38,520	INR 1,82,000	INR 90,000 – INR 5,60,000	INR 70,000 – INR 2,25,000	INR 13,500 – INR 19,900

As per the analysis, most Indian film schools did not offer courses in upcoming technologies such as VFX, algorithmic video editing, digital film making, animation, and other such learnings important for the Indian film fraternity to compete in the international markets. The establishment of new film schools offering such courses will effectively fill the gap to relevantly upskill resources and fulfill the growing film industry requirements.

04

Trendsetting: Upcoming technology in the film and TV industry



4. Trendsetting: Upcoming technology in the film and TV industry

The film industry is at the forefront of technological innovation, pushing boundaries of storytelling and visual artistry. Upcoming progressive technologies are at the forefront to revolutionise how movies are produced, experienced, and even distributed. From advancements in virtual production and augmented reality to integration of AI and deep learning, these technologies promise to reshape the landscape of the film industry in the coming years. Such emerging technologies promise to elevate filmmaking to new heights, offering filmmakers innovative tools to tell captivating stories and provide audiences with highly immersive and engaging cinematic experiences.

4.1. Upcoming technologies in the film industry and its markets

Technology	USA	UK / Europe	China	India
Drone cameras: Captures footage and scenes requiring aerial shots	<ul style="list-style-type: none"> Commercial drones used in the filming and photography segment While filming outdoors, drones supplement and replace cranes, jib arms, and u-cranes E.g., The greatest Showman, Top Gun: Maverick, Jurassic World Dominion⁴³ 	<ul style="list-style-type: none"> Drones primarily used to include aerial dimensional shots Drones used in television shows E.g., The Crown, Skyfall, Ted Lasso 	<ul style="list-style-type: none"> China, a world leader in drone manufacturing, primarily uses drones for military purposes, but also for cinematography / civilian usage⁴⁴ 	<ul style="list-style-type: none"> Indian films did not adopt drones as quickly as their counterparts primarily due to the uncertainty in the legality of their use E.g., Films like Baby, Kick, used drones, although the filming locations were abroad^{45,46}
Algorithmic video editing: Automates the editing process	<ul style="list-style-type: none"> Leading the algorithmic video editing space Since 2014 large companies like Disney invested money to perfect this technology E.g., We Own the Night, Fast and Furious^{47,48} 	<ul style="list-style-type: none"> Emergence of multiple start-ups in the video editing sector Among these are Virtual Post, Forbidden Technologies and Noah 	<ul style="list-style-type: none"> There are no major companies that specialise in algorithmic video editing 	<ul style="list-style-type: none"> There are no major companies that specialise in algorithmic video editing
3D printing: Produces realistic costumes, props, and other set pieces	<ul style="list-style-type: none"> 3D printing is common in Hollywood for its flexibility of manufacturing one-off props, costumes, quickly and affordably E.g., Iron Man's entire armour was produced using 3D printing^{49,50} 	<ul style="list-style-type: none"> 3D printing is common in European cinema E.g., Prop Shop, the UK based firm, created the Guardians of the Galaxy props⁵¹ 	<ul style="list-style-type: none"> China has amongst the largest 3D printing industries E.g., Box Man, an animated film, was created using 3D printing⁵² 	<ul style="list-style-type: none"> 3D printing is not used in Indian cinemas

43. "Drones in Hollywood: How Drones Changed the Film & Movie Industry", Adorama, August 2023

44. "New Chinese spy drone 'will make combat scenes in the movies a reality', state media claims", South China Morning Post, October 2021

45. "Drones give an edge to action scenes in Salman Khan's Kick", Times of India, July 2014

46. "Baby" action sequences shot with Octocopter drone", Times of India, January 2015

47. "Disney Research algorithm automatically edits footage captured by multiple cameras" News Atlas, August 2014

48. "A Brief History of Algorithmic Editing", Medium, November 2018

49. "The Use of 3D Printing in Films and Movie Production in Hollywood", Zortrax.com, December 2017

50. "3DPrint.com's Visit to LAIKA Studios: Stratays J750 3D Printer Put to Work for New Stop Motion Animation Film", 3DPrint.com, March 2019.

51. "The Top Applications of 3D Printing in the Movie Industry", 3Dnatives, June 2023

52. "Box man, China's first 3D printed stop-motion animation short film released", 3ders.org, October 2014.

Technology	USA	UK / Europe	China	India
Cloud-based solutions: Stores files, allowing video editing remotely ⁵³	<ul style="list-style-type: none"> Cloud-based solutions for film production got a boost during the Covid-19 pandemic Cloud solutions allow visual artists and animators to remotely work, and provide storage solutions E.g., Used to produce The Crown 	<ul style="list-style-type: none"> UK film companies shifted quickly to cloud-based solutions during the Covid-19 pandemic There is consistent focus on the development of new virtual production technology in the UK E.g. The Rings of Power^{54,55} 	<ul style="list-style-type: none"> Research into cloud-based solutions for films is underway in China The Arts and Humanities Research Council (AHRC) has explored cloud-based production for a UK-China collaboration in the film industry⁵⁶ A challenge faced is the lack of widely accepted standards to make cross-country collaborations possible (example: standards in real-time rendering) 	<ul style="list-style-type: none"> Cloud-based solutions for the film industry are in a nascent stage Cloud-based solutions are used to manage cost and timelines through start-ups like Filmboard, but not for storage solutions or collaborative work⁵⁷
Volume technology: Involves tall HD LED video walls for filming that respond to movement and adapt, adjusting perspective, lighting, and such factors, within the panels ⁵⁸	<ul style="list-style-type: none"> The entire Mandalorian set was created using LED “walls” or The Volume Technology – the first of its kind for any film Industrial Light & Magic is the leader of The Volume, which replaces traditional green screen with live, photorealistic backgrounds⁵⁹ 	<ul style="list-style-type: none"> The UK is a global hub for virtual production and a world-class VFX supply chain Bild Studios, Warner Bros, Leavesden, and MARS Volume have established stages for the Volume Technology^{60,61,62} 	<ul style="list-style-type: none"> Chinese production firms are promoting the technology to reduce visual effects costs Chinese studios such as Versatile Media, Surreal and Xiangshan Film are experimenting with this, with tie-ups from abroad such as Disguise from London⁶⁴ 	<ul style="list-style-type: none"> The technology is at a very nascent stage in India. After the success of “The Mandalorian” few firms experimented with the technology in India Cineom, Centroid Motion Capture India, and Green Rain joined hands to create India’ first LED wall⁶⁵

53. “Transforming Movie and TV Production with the Cloud” The Wall Street Journal, October 2023

54. “The future of filmmaking is cloud-based production”, TVBEurope, November 2022

55. “UFA adopts full-cloud workflow in film production” T-systems, September 2023

56. “UK-China Research and Innovation Collaboration in Cloud-based Virtual Film Production (UCCVP)”, Bournemouth University, August 2023

57. “Behind the scenes of the startup that is aiming to streamline India’s \$2.28B filmmaking business”, Yourstory.com, March 2020

58. “Understanding ‘The Volume,’ The Technology That’s Changing VFX Production”, Cartoon Brew, November 2020

59. “Virtual Production & Volume Technology: How The Mandalorian is Opening a New Frontier in Film”, Wrapbook, September 2021

60. “Bild Studios & Lux Machina Team On Virtual Production Joint Venture”, Deadline, May 2021

61. “The Future of Filmmaking: Virtual Productions Shot on MARS”, LBBOnline, August 2021

62. “Brompton Technology helps Bild Studios’ MARS Volume make virtual production accessible”, British Cinematographer, May 2022

63. “New Virtual Production Stage Announced, Warner Bros Studios, June 2021

64. “China eyes ‘virtual production’ technique used in The Mandalorian to help local film industry catch up to Hollywood in visual effects” South China Morning Post, February 2021

65. “India’s 1st Virtual Production Pop-up Lab demonstrates the ecosystem”, Animationxpress.com, January 2021

Technology	USA	UK / Europe	China	India
Artificial Intelligence: Aids in script writing, assists pre-production processes, helps edit movies or create trailers. It can be used to predict the success of films. ⁶⁶	<ul style="list-style-type: none"> Extensively used, particularly in decision-making In 2020, Warner Bros signed a deal with Cinelytics to use its AI driven project management system to help guide decision-making⁶⁷ 	<ul style="list-style-type: none"> Swiss-based AI assisted film platform, Largo.ai, announced that twenty film production companies were using its platform Leading UK-based film financier Ingenious signed a deal with Cinelytics⁶⁴ 	<ul style="list-style-type: none"> Chinese films have not adopted AI or virtual production AI not used in film decision-making, script fine-tuning or in editing AI in Chinese films is used to create movie posters.⁶⁸ 	<ul style="list-style-type: none"> The Indian film industry has not yet adopted the use of AI in script writing, production, postproduction, assessing the potential success of a film at the box office or to make critical decisions such as film release dates Tech Mahindra launched AI-First for the media industry but is not used in films⁶⁹
3D visualisation The process of imagining and planning scenes and sequences before filming	<ul style="list-style-type: none"> A relatively modern technology in the US Extensively used in architecture. Its benefits in filmmaking were explored, although its use is not widespread 	<ul style="list-style-type: none"> 3D visualisation technology is new in the UK / European film markets 	<ul style="list-style-type: none"> 3D visualisation not used extensively in Chinese film production 	<ul style="list-style-type: none"> 3D visualisation not used extensively in Indian film production
Real-time rendering: Graphics calculated at exceedingly high speeds make scenes occur in real time	<ul style="list-style-type: none"> Real-time rendering as a technology is new in the US Famously used in The Mandalorian, where filmmakers rendered a scene in real-time and then projected it onto massive LED screens that encompassed the acting space. 	<ul style="list-style-type: none"> The technology is new in British and European cinema, although some movies experimented with it. 	<ul style="list-style-type: none"> Real-time rendering is gaining popularity in China, although it is in a nascent stage⁷⁰ Few short films and animations experimented with this, using technology from the US such as Unreal Engine⁷¹ 	<ul style="list-style-type: none"> Like world film markets, real-time rendering is new and at an experimental stage in Indian cinema Baahubali is an example that successfully used real-time rendering

66. "How Artificial Intelligence Is Used in the Film Industry", SmartClick, August 2023

67. "Is the film industry turning on to artificial intelligence?", IBC, August 2020

68. "AI Tools Are Shaking Up Content Creation in China's Film, TV Industry", YICAI, June 2023

69. "AI Media and Entertainment", Tech Mahindra, August 2023

70. "GPU-based rendering and animation for Chinese painting cartoon", ACM Digital Library, May 2007

71. "UE5 Realistic Real-time Rendering of Short films", Artstation, August 2023

05

Reimagining infrastructure: Designing the film city



5. Reimagining infrastructure: Designing the film city

To understand the requirements of a film city, it is important to discuss the distinct phases involved in the production of a film or television show⁷². Film production undergoes five phases: development, pre-production, production, post-production, and distribution. Each phase has a set purpose, with the overarching goal to get to the next one, and finally to distribution. Based on contemporary requirements, the proposed film city will have three zones: Film City, Film School, and Social and Leisure Zone

Film and TV Series Production	Development	Pre-production	Production	Post-production	Distribution
	<ul style="list-style-type: none">• Script writing• Story boarding• Setting budget• Casting audition• Location Selection• Film Financing• Obtaining film/series rights• Contract with OTT platforms/TV channels• Identification of Sponsors	<ul style="list-style-type: none">• Location and Cast Finalization• Sets Construction• Costumes finalization• Planning filming• Shooting dates and schedule• Equipment procurement• Permits initiation	<ul style="list-style-type: none">• Shooting and Rehearsals• Lighting and Designing• Photography• Travel and Logistics	<ul style="list-style-type: none">• Film and Sound Editing• Dialogues recording• Visual and Sound Effects• Song composition and Recording	<ul style="list-style-type: none">• Film Promotion• Marketing• Sales and Distribution• Screening• Sale of rights to OTT and other platforms• Advertisement slots selling• TRP monitoring

Figure : Phases involved in the production of a film or TV
Source: KPMG in India analysis

5.1. Film city

A film city is a large complex used for film and television production. Per the study concerning global and national film cities and film studios, the components of a film city can vary depending on its size and location, but typically include most indicated in the above figure.

A typical facility comprises sound stages, post-production facilities, editing suites, production offices, multiple studios/sets, backlots, VFX room, screening rooms, classrooms, and other film industry services/facilities to

accommodate multiple film and television productions simultaneously



Film Production



- Backlot and outdoor sets
- Sound Stages and lighting facilities
- Production Offices
- Props and wardrobe departments
- Set construction workshops
- Equipment rental facilities

Special Effects and Post-production Studios



These studios are used for creating visual and special effects, as well as editing and post-production work.

- Linear/non-linear editing rooms
- Online/offline editing rooms
- VTR rooms
- VFX production room
- Color Grading studios
- Recording theatres
- Audio Editing studios (Foley studios, Dubbing studios, Re-Recording studios)
- Screening theatres
- Archival and Restoration facility
- Media Transfer facility

Figure : Components of a film city
Source: KPMG in India analysis

72. "What are the Phases of Film Production", IPR College of Creative Arts, April 2020

5.2. Film school

An advanced film school must have arrangements such as classrooms and lecture halls, faculty rooms, production facilities (equipment and resources needed for film production, including cameras, lighting equipment, sound recording, and editing software), studios (screening rooms, shooting area, acting studios, dubbing studio, photography studio, dance/music studios),

networking area, multimedia laboratory, library, an auditorium/theatre, equipment laboratory, cafeteria, workshop rooms, reception and conference area, etc.

Film schools typically offer a range of courses designed to provide students with a comprehensive education in film production and theory.

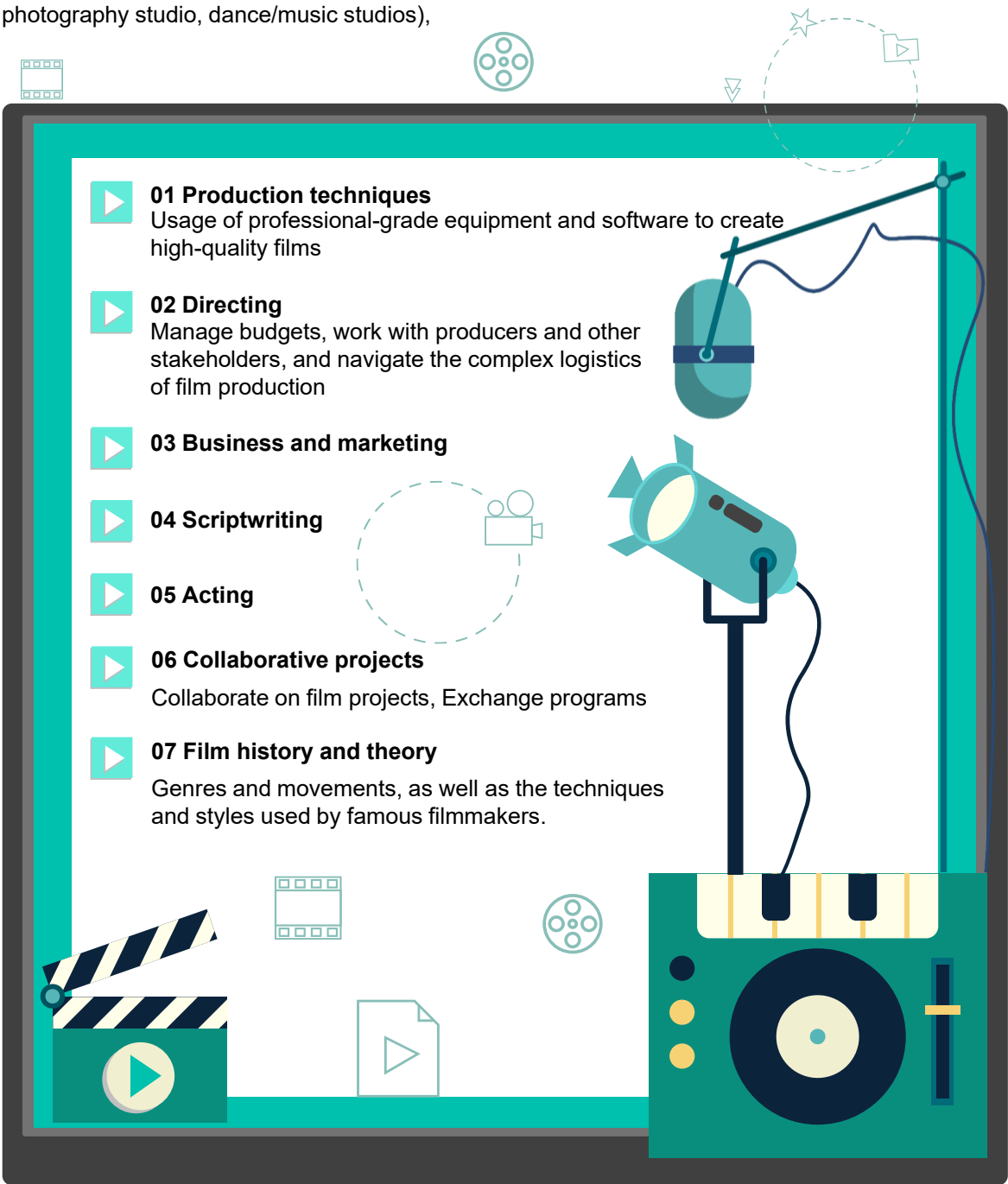


Figure : General courses offered at film schools
Source: KPMG in India analysis

Based on the observations noted during the comparison analysis of global and Indian film schools, it is suggested that beside the regular curriculum, there should be a focus on courses detailing upcoming technologies and trends such as AI, 3D visualisation, volume technology, VR and AR to build a strong skillset and match pace with the global film industry.

5.3. Social and leisure components

Drawing in visitors/tourists will benefit the film city’s locale, as it will open other sources of revenue generation in addition to renting/leasing studio spaces. It is equally important to invest in tourism infrastructure development alongside, to enhance a film city’s attractiveness and

competitiveness. Per MDPI’s published research, investing in tourism infrastructure, specifically transport and communications infrastructure, hotel and restaurant industry, and recreation facilities, has a positive and strong long-term impact on attracting tourists⁷³. Some components that can be developed in the film city to make it an entertainment hub are:



Figure 7: Potential social and leisure components of a film city
Source: KPMG in India analysis

73. “Impact of Investment in Tourism Infrastructure Development on Attracting International Visitors”, MDPI, September 2021

06

Creating a cinematic hub - Suggestions and recommendations



6. Creating a cinematic hub - Suggestions and recommendations

While a comprehensive film city is one of the important components when developing a cinematic hub, the hub is more than a physical space. It is the nexus where art meets technology, and where the global cinematic community converges to create magic on screen. Harnessing India's inherent strengths in filmmaking to pair with world-class infrastructure and policy support, the film city aspiration is to elevate India's position on the global filmmaking map.

The following elaborates on interventions for India to consider from the perspective of developing a dynamic cinematic hub:

i. Incentive schemes:

- a) Offer tax breaks or subsidies to production houses choosing to shoot in the hub. For example, U.S. states such as Georgia (20 per cent transferable tax credit, plus 10 per cent uplift), Louisiana (30-40 per cent transferable tax credit), and New York (30 per cent refundable tax credit for below-the-line and post-production) offer bracketed incentives to production houses shooting in their respective states.⁷⁴
- b) Offer tax credits to supplement the local creative industry, and reduce film production companies' allocated taxation, or the payable tax credit for claim. To relieve the financial burden of production⁷⁵, for example, the UK Government offers tax credit worth up to 20 per cent of the total core expenditure. The US state of Virginia offers 15-20 per cent of all qualifying expenses as tax credit to productions shot in the state.⁷⁶ The province of Québec in Canada offers tax credits to film production services for up to 42.60 per cent%, additionally a 16 per cent tax credit bonus for labour costs related to visual effects and green-screen filming, supporting the industry's technological development.⁷⁷
- c) Provide reduced rates or subsidies when using local talent, e.g., actors, technicians, or craftsmen. For example, in Thailand, there is an additional 3 per cent tax rebate, if the foreign film production hires a Thai crew, and an additional 2 per cent rebate if the film promotes Thailand and Thai culture.⁷⁸
- d) Consider extending financial assistance for mega film events in the film city to promote it as an ideal film shooting destination.
- e) Provide support and discounts for accommodation booking along with a

detailed list of recognised hotels, homestays, and facilities to the film crew.

ii. Financial support:

- a) Allocate funds or grants, especially for indie filmmakers or those exploring unconventional narratives or methods. For example, The Global Film Initiative was established to promote the cross-cultural exchange of ideas through films and provides grant worth USD10,000 to each of the selected feature filmmakers biannually.⁷⁹ Additionally, several US states like Virginia set up opportunity funds to support production companies to meet local employment goals.
- b) Partner with banks or financial institutions to provide soft loans or special packages for film-related projects.
- c) Offer discounts or staggered payment options to young filmmakers and/or indie projects.

iii. Infrastructure development:

- a) The central and state governments can consider providing incentives, e.g., tax credits, exemptions, or subsidies to film production houses investing in related infrastructure.
- b) For certain high-investment projects, the government may consider providing land parcels on lease.
- c) Introduce 100 per cent reimbursement on registration and stamp duty to companies investing more than a certain sum in the film city.
- d) Encourage PPP models in which the government provides regulatory and policy support, with private players investing in infrastructure and technical knowledge.

74. "Japan's Production Incentives Are A Win For Both The Local And International Production Sectors", Motion Pictures Association, May 2020

75. "UK Film Tax Credits Explained - How Do They Work", December 2023

76. "Film Incentive Guidelines – Virginia Film Office", December 2023

77. "Filming in Quebec - Bureau du cinéma et de la télévision du Québec", December 2023

78. "Film Incentives Adopted by India Other Countries-Blaise Fernandes", Businessworld, February 2022

79. "List of Top 17 Grants For Indian Filmmakers", Filmmakers Fans, March 2016

iv. Training and skill development:

- a) Establish film schools and training centres in collaboration with global film institutes or production houses to train local talent. For example, Amazon Studios partnered with Latino Film Institute and LA Collab to increase U.S. Latino representation in the entertainment industry.⁸⁰
- b) Conduct workshops and training programmes for various film-related skills. For example, Dubai Studio City partnered with the Manhattan Film Academy (MFA) to conduct a series of film production workshops to encourage its region's cinema industry's growth.⁸¹
- c) Structure exchange programmes in partnership with reputed global film institutions.

v. Streamline permission processes:

- a) Simplify the filming permits process. While the Government of India established a Film Facilitation Office (FFO) as a single-window facilitation and clearance portal, including separate portals/cells introduced by various state governments, the processes can be lengthy and complicated especially at the

local level. Special assistance with obtaining permits may be extended to film makers opting to shoot in the film city.

- b) Establish a single-window clearance system for all permissions related to film shoots in the film city. This should include permissions from various authorities such as the Ministry of Information and Broadcasting, Ministry of External Affairs, Ministry of Civil Aviation, state and local authorities such as municipal, traffic, and police.
- c) Identify new locations to expand the existing film locations database in the Film Facilitation Office (FFO) portal and state government portals.

vi. Dedicated governance body:

- a) Create autonomous bodies at centralised and decentralised levels to oversee the management, maintenance, and marketing of the film city with representation of both public and private parties in the respective state.
- b) Autonomous bodies must also address disputes, grievances, and ensure the smooth operation of the ecosystem.



80. "Amazon Studios Partners with Latino Film Institute, LA Collab", The Hollywood Reporter, October 2022

81. "Dubai Studio City supports MFA's film production programme", Arabian Business, November 2007

vii. Collaboration and partnerships:

- a) Encourage partnerships between Indian production houses and international studios for co-productions, knowledge transfer, and cross-promotion. While the Film Facilitation Office's (FFO) website includes a database of producers and their past co-productions with international production houses, it is limited and needs expansion.
- b) Liaison to support/hire interpreters and consultants to assist with obtaining excise permission for international production houses.
- c) Institute platforms or events where filmmakers, producers, technicians, and artists can network to foster collaborations and innovations. For example, Dubai Studio City offers community programmes for media business owners, freelancers, technicians, and experts to network and build a global media community.
- d) Explore partnerships with Over-The-Top (OTT) platforms, TV shows, and digital content producers, for shooting their in-house content.

viii. Promotion and marketing:

- a) Regularly host film festivals, award functions, and other industry-related events to attract international attention. For example, one of the big five film festivals in the world, the Sundance Film Festival, started in Salt Lake City, Utah, in August 1978 to attract more filmmakers to Utah.⁸²
- b) Develop a unique brand identity for the film city and promote it at international events and film festivals.
- c) Organise familiarisation trips, also known as FAM trips for filmmakers to the film city and surrounding locations ideal for shooting films/TV shows.

ix. Technological advancement:

- a) Encourage investment in the latest film-world technology, VR studios, and CGI facilities. The global virtual production market is projected to grow from USD2.86 billion in 2022 to USD7.19 billion by 2029, at a CAGR of 14.1%.⁸³ These technologies will advance the pace of work and decrease the cost of the post-production processes,

allowing filmmakers to plan their shoots efficiently.

- b) Support R&D and partnerships in modern film technologies such as AI and other newfound technologies. For example, Mo-Sys Engineering Ltd., partnered with GMS International to make virtual production and augmented reality solutions available for South Korean cinematographers and broadcasters⁵¹.
- c) Create a dedicated hub for tech-companies focused on entertainment technologies

x. Tourism and film tourism integration:

- a) Develop a national-level model film policy to encourage film shoots and promote film tourism with additional incentives from the state government for filmmakers opting to shoot in the film city.
- b) Develop dedicated film tourism packages featuring famous film-shooting spots along with a tour of the studio facilities/film city.
- c) Create thematic parks or attractions based on popular films like the Baahubali set in Ramoji Film City, following Universal and Disney theme parks, the making of Harry Potter at Warner Bros studios, London, and such.



82. "Sundance Film Festival - A Brief History", BBC, September 2014

83. "Virtual Production Market Size, Share & Growth Report", Fortune Business Insights, September 2023

xi. Safety and security:

- a) Ensure active security measures for film crews, especially foreign, to ensure their safety during shoots. A special assistance cell at the film city can provide the information regarding shooting schedules to the respective police office to ensure required security is available.
- b) Frame guidelines that ensure the well-being and fair treatment of everyone involved in a production.

xii.Environmental sustainability:

- a) Develop eco-friendly film production guidelines, especially in environmentally sensitive areas.
- b) Encourage film productions to adopt sustainable practices, such as use of solar-powered generators, hybrid vehicles, and minimal plastic use. For example, the Jurassic World: Fallen Kingdom, used hybrid vehicles, had 75 per cent LED light use, eliminated all disposable plastic bottles, and followed a food donation programme, and set an example of green filming.⁸⁴

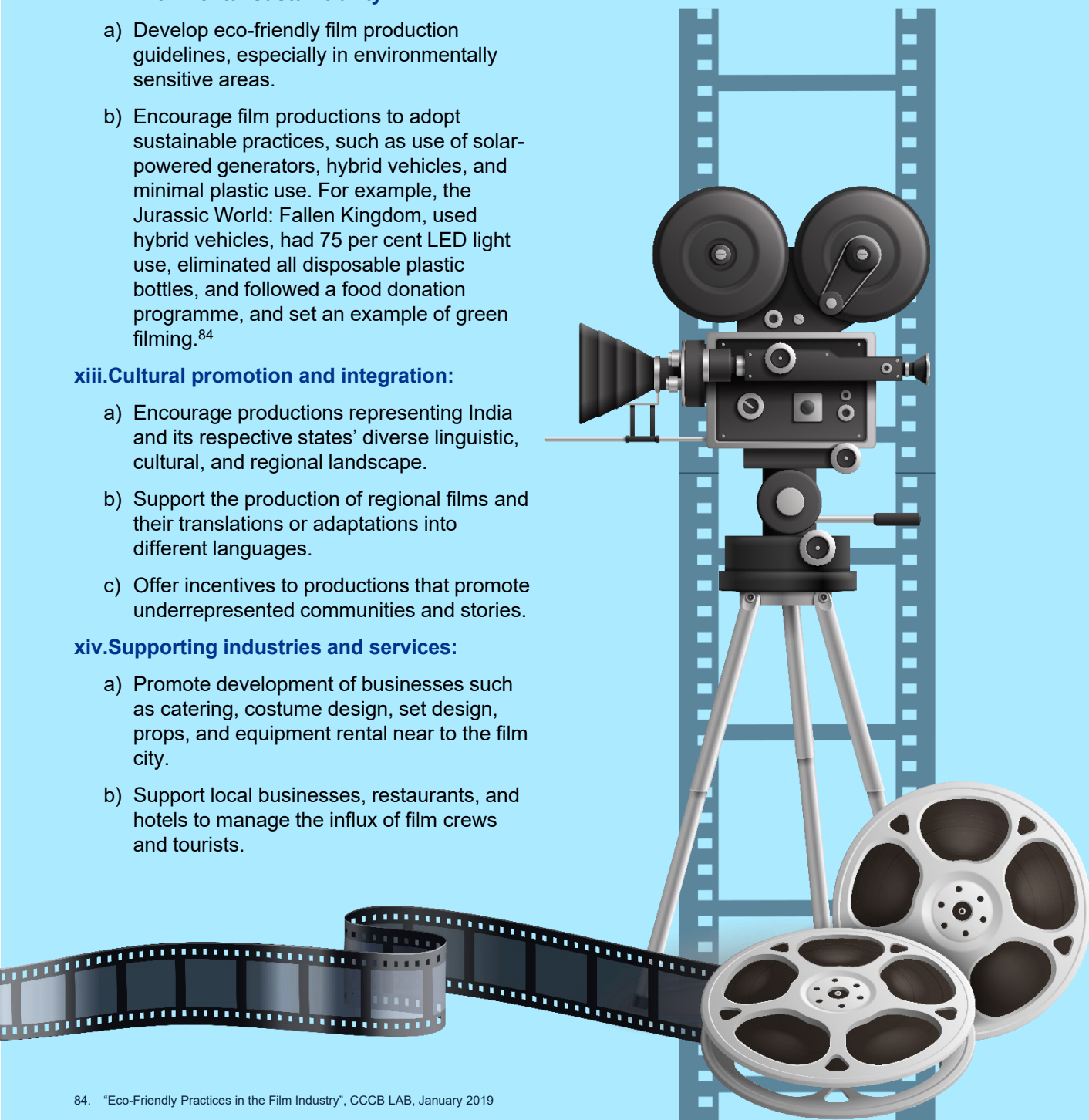
xiii.Cultural promotion and integration:

- a) Encourage productions representing India and its respective states' diverse linguistic, cultural, and regional landscape.
- b) Support the production of regional films and their translations or adaptations into different languages.
- c) Offer incentives to productions that promote underrepresented communities and stories.

xiv.Supporting industries and services:

- a) Promote development of businesses such as catering, costume design, set design, props, and equipment rental near to the film city.
- b) Support local businesses, restaurants, and hotels to manage the influx of film crews and tourists.

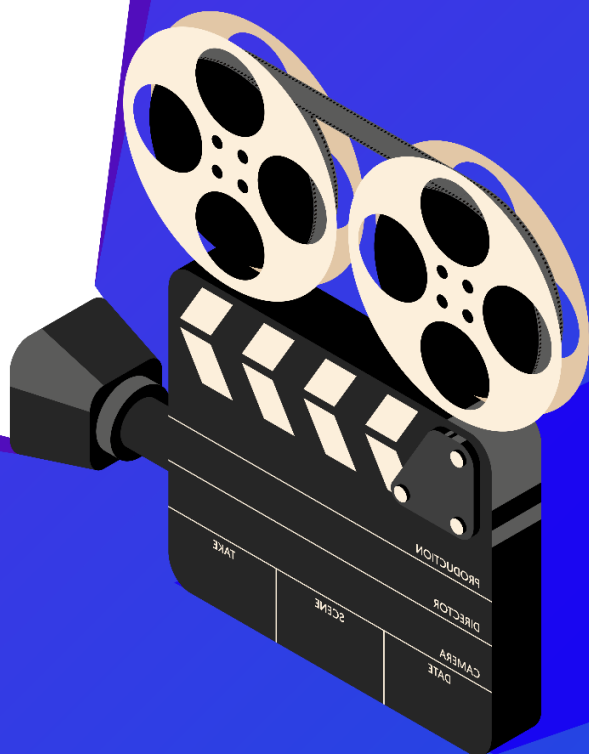
While some initiatives are in existence or underway, the need to create holistic cinematic hubs catering to the comprehensive needs of a successful film production in India remains prevalent. Currently, a few state governments are pursuing the opportunity to develop a film city in their respective states. However, as the scale of investment required to develop a full-fledged modern film city is exceedingly high, it is recommended that development of avant-garde film schools/training institutes, along with smaller production and postproduction facilities be considered first.



84. "Eco-Friendly Practices in the Film Industry", CCCB LAB, January 2019

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Annexures



7. Annexures

Annexure I: Benchmarking study: International film policies

Country	Tax rebate	Subsidy	Grants	Permissions	Infrastructure development	Marketing & promotion	Other initiatives
Australia⁸⁵	30%		Screen Australia offers funds to support development and production.	No permit is necessary for filming in public places.		Filmmakers receive \$20,000 from Screen Australia to support the marketing phase	
Canada⁸⁶	25%		Alberta Media Fund – 25% of eligible production costs	Advance permissions required from the province/territory		The Canadian Media Producers Association (CMPA) provides incentives to stimulate a demand for Canadian content	
Czechia⁸⁷	25%		EUR70 million is allocated to the Czech Film Fund	Permits are issued by municipal authorities and local administrative bodies	The government is investing EUR23 million into industry for further improvisations to attract international production companies		The film commission provides consultation, guidance, and contacts to filmmakers.
France⁸⁸	30-40%		EUR1 million grants given to forty-five feature films and short films	Prior consent from managers of public institutions and the police is required	EUR800,000 granted to the CNC to increase their budget to improve facilities		
Japan⁸⁹	20%	International co-production subsidy supports production costs					Certain schemes offer up to 50% reimbursement on expenses.

85. "Policies", Government of Australia, September 2023

86. "Film and video policies", Government of Canada, August 2017

87. "Czech Film Commission" Government of the Czech Republic, September 2023

88. "Terms and Conditions for Filming in France", Government of France, September 2023

89. "Purpose- Japan Film Commission" Government of Japan, September 2017

Country	Tax rebate	Subsidy	Grants	Film facilitation cell	Infrastructure development	Marketing & promotion	Other initiatives
Mauritius ⁹⁰	40%			For any filming purposes, prior permission is required from local authorities	National policies ensure the promotion of production, distribution, and easy access to the country and its local services to promote mobility.		
Malaysia ⁹¹	30%		The filmmakers of FINALS gained funding that improved the quality of production	Permission is essential from the Information Ministry through a local sponsor		Certain filmmakers received marketing funds of RM 300,000 to help increase demand.	
Singapore ⁹²	40%		S\$10 million fund to support films and TV series that portray the city globally	No permit required unless obstructions are expected			
South Korea ⁹³	20%		USD 460,000 provided per domestic film to assist in all phases	Permission from local authorities not required except for drone filming.		Films supported through the Korean Film Council promotes and supports movies internationally, with funding, training, and education.	Cinemas must screen domestic films for 73 days
Spain ⁹⁴	30%		Grants available in multiple phases	No permissions required when occupying public space	Proposed to invest USD1.75 billion to improve the audio-visual sector by 2025		

90. "Mauritius Film Development Corporation" Government of Mauritius, September 2023

91. "Government Policies" Government of Malaysia, September 2023

92. "Film - Infocomm Media Development Authority" Government of Singapore, September 2023

93. "Korean Film Council", ASEF culture360, June 2011

94. Government of Spain presents the future Law on Cinema and Audiovisual Culture" Government of Spain, February 2022

Country	Tax rebate	Subsidy	Grants	Film facilitation cell	Infrastructure development	Marketing & promotion	Other initiatives
United Kingdom ⁹⁵	25%		Multiple funds available based on eligibility	Permissions required from local authority and the police		Eighteen film productions received GBP1 million from the government for the Global Screen Fund.	
USA ⁹⁶	5% of the qualified expenses in certain states	Varies with the states	Fifty unrestricted USD50,000 grants given to artistic creators in certain states	Federal law required permit for all filming activities.	In certain states, the government helps improve their infrastructure for film or digital media production		

Annexure II: Benchmarking study: Indian film policies

State	Tax rebate	Subsidy	Grants	Film facilitation cell	Infrastructure development	Marketing & promotion	Other initiatives
Delhi ⁹⁷		25% to 10% subsidy based on a score system with a max. cap of INR3 crore	Delhi Film Fund	<ul style="list-style-type: none"> •Online single-window clearance mechanism (e – Film Clearance) •Film Shooting Promotion Cell •Film Facilitation Committee, Film Development Cell 		<ul style="list-style-type: none"> •Organise Delhi International Film Festival •Promotion on website and social media •Participation in various national and international events 	<ul style="list-style-type: none"> •Delhi Film Card to offer exclusive deals and packages to film makers •Delhi Film Excellence Awards (DFEA) to honour contributors in the Delhi film industry.
Gujarat ⁹⁸	<ul style="list-style-type: none"> •Exemption from luxury and entertainment tax for a period of 5-7 years •Exemption in electricity duty 	25% of eligible expenses of production		<ul style="list-style-type: none"> •Online single-window system portal •Establishment of a Film Facilitation Cell 	<ul style="list-style-type: none"> •Financial incentive up to 20% of eligible investments •100% reimbursement of registration fee, and Stamp duty, maximum up to 100 acres land on lease for a min. investment of INR 500 crore 	Financial assistance of 20% of the eligible expenditure for organizing mega film events	

95. "Film & Digital Media Studio Infrastructure Program", NJEDA, September 2023
96. "Government announces film policy review" Government of the UK, May 2011
97. "Delhi Film Policy 2022", Government of NCT of Delhi, September 2023
98. "Cinematic Tourism Policy 2022 (2022-2027)", Government of Gujarat, September 2023

State	Tax rebate	Subsidy	Grants	Film facilitation cell	Infrastructure development	Marketing & promotion	Other initiatives
Haryana⁹⁹		INR2 crore		Single-window permit	Set-up film and television studios. Upgrade film and television institutes to expand existing capacities.	<ul style="list-style-type: none"> •Solo credits in movies to promote Haryana as a top destination for film shoots. •Development of shoot locations and catalogues. 	
Himachal Pradesh¹⁰⁰	•75% on SGST	Up to INR 50 lakh if 75% of the movie shot is in the state		•Single-window mechanism	•Government is offering land to set up new film cities to improve infrastructure		
Jammu and Kashmir¹⁰¹		INR1 crore or 25% of COP		Single-window cell for film shoots within 2-4 weeks	Developing infrastructure for film screening, revival of closed cinemas and improvisation of existing cinema halls and multiplexes		
Jharkhand¹⁰²		Up to INR 3 crore; however, only films with a budget of INR 8 crore or more can apply	INR 50 lakh to films promoting Jharkhand	•Single-window film facilitation	•Restoration of existing infrastructures and upgrade existing facilities		
Madhya Pradesh¹⁰³		INR1 crore or 25% of COP		Single-window facilitation and clearance	Improve basic infrastructure (roads, transportation, accommodation)	Film festivals, film awards, selfie points and theme parks are to be developed	

99. "Haryana Film Policy", Government of Haryana, September 2023

100. Himachal Pradesh film Policy -2019", Government of Himachal Pradesh, September 2023

101. "Jammu and Kashmir Film Policy 2021", Government of Jammu and Kashmir, September 2023

102. "Jharkhand Film Policy 2015", Government of Jharkhand, September 2023

103. "Madhya Pradesh Film Tourism Policy 2020", Government of Madhya Pradesh, September 2023

State	Tax rebate	Subsidy	Grants	Film facilitation cell	Infrastructure development	Marketing & promotion	Other initiatives
Odisha 104	100% reimbursement of SGST			Single-window approvals	Upgrading screening infrastructure and development of film cities and multiplexes		
Rajasthan 105	100% refund on SGST	INR2 crore or 15% of total qualified cost of production		Single window for all approvals and facilitation for film shoots.			Other fees are waived
Sikkim ¹⁰⁶		Up to INR 1 crore to films shot 75% in Sikkim		•Single-window systems	•The state supports setting up of new film and TV studios with enhanced production and post-production facilities		Administrative support available to ease film shooting in Sikkim
Uttar Pradesh 107		50% for local languages and 25% for other			The government is encouraging development of multiplex cinemas and renovation of existing facilities		Accommodation offered to crew at state houses and guest houses.

104. "Odisha State Film Policy 2019", Government of Odisha, March 2019

105. "Rajasthan Film Tourism Promotion Policy – 2022", Government of Rajasthan, September 2023

106. "Sikkim Film Policy 2021", Government of Sikkim, September 2023

107. "Uttar Pradesh Film Policy 2023", Government of Uttar Pradesh, September 2023

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