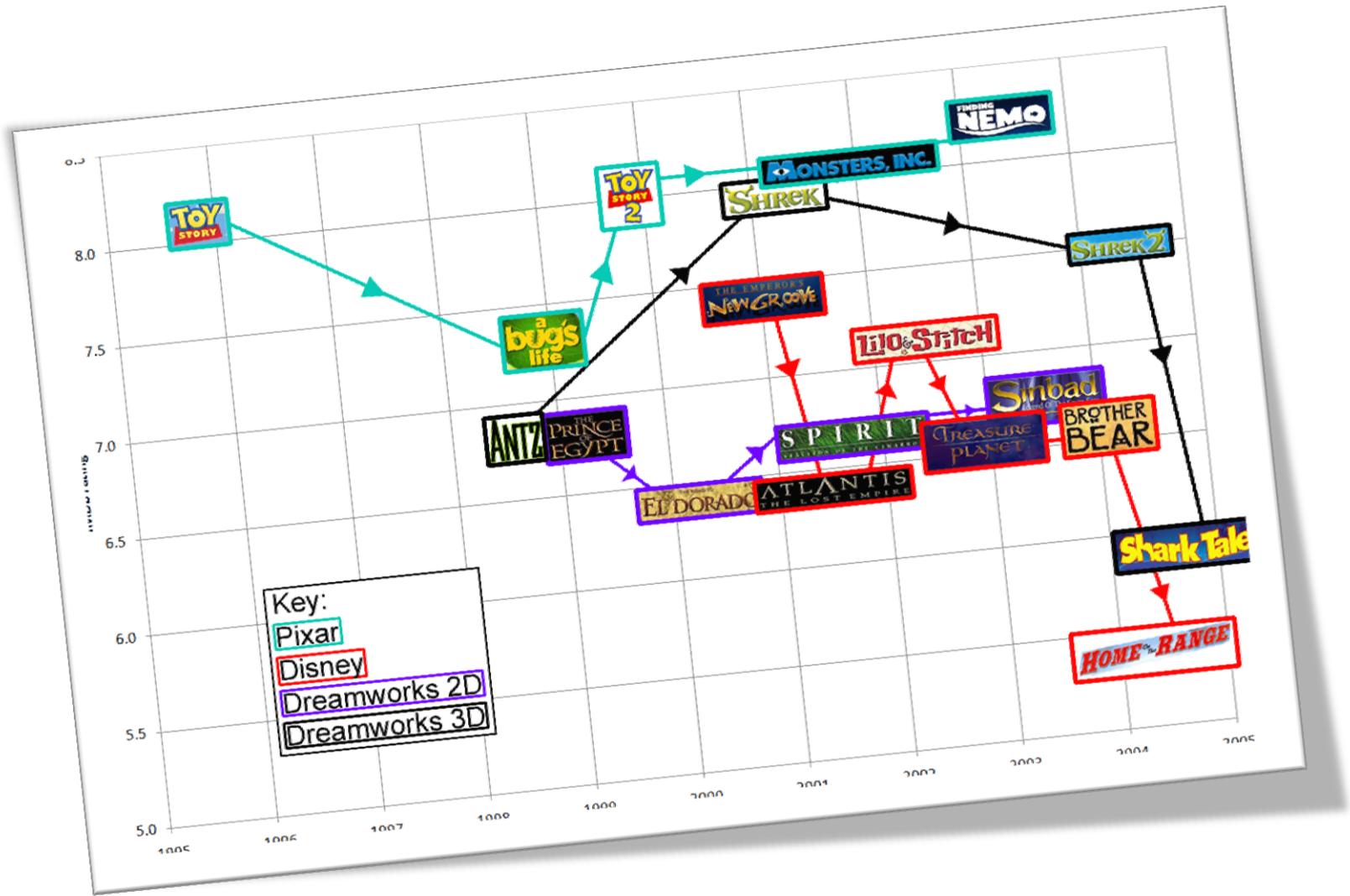


# VEGAH

STUDIOS



Animation — Market Analysis



Prepared by VegaH R & D Team

05 Jan 2011

# Animation Industry

## 2010 Analysis

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## Introduction

### What is Animation?

Animation is a process under which different drawings of imagined action (called frames) representing a slight shift in the positioning of content are recorded in such a way that it gives an illusion of motion when shown at a predetermined rate.

In a nutshell, it is a time sequencing of frames to create a simulation of continuous movement.





## Animation Market Analysis



### Executive Summary

*The Animation Industry in India has undergone a significant change in recent years.*

*Indian players have evolved by moving up the value chain and adopting new service / revenue models.*

*This report attempts to present an overview of the various segments of the industry (including the size, growth drivers, recent trends, challenges and future outlook) and profiles some of the leading players.*



## Animation Market Analysis

### Scope of the Industry

*Indian animation industry, comprising pre-dominantly small and mid-sized enterprises is not a well-researched or well-documented industry. We have analyzed information available from India's industry body NASSCOM (National Association of Software and Services Companies), recent developments of relevant organizations and used certain broad indicators (Domestic and Overseas) in this report to assess the industry*





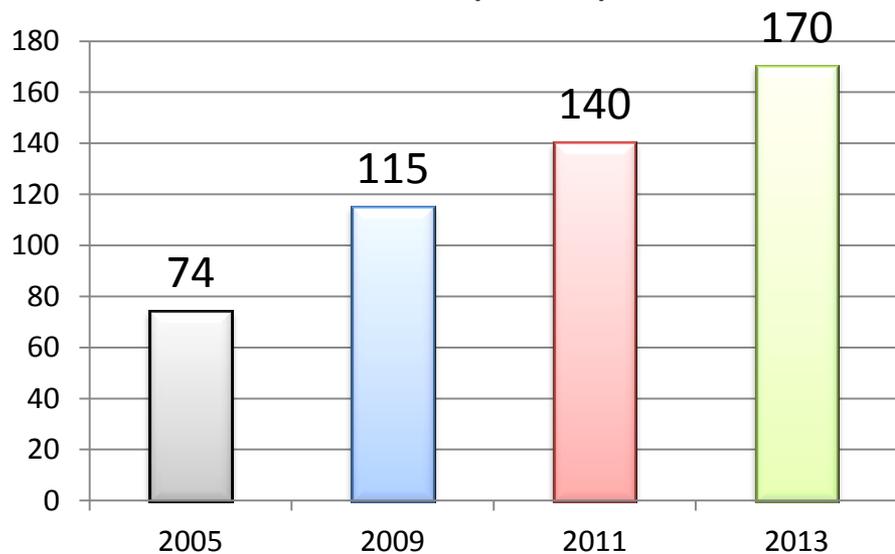
## Animation Market Analysis



*The market in India is estimated at USD 500 million in CY 2009 and is expected to grow at a rate of 23% p.a. to reach USD 1161 million by 2013.*



### Global Animation and Gaming Market Revenues (USD Bn)



*The global animation and gaming industry has grown from USD 74 billion in CY1 2005 to an estimated USD 115 billion in CY 2009, at a rate of 12% p.a. The industry is expected to continue its growth, at a rate of 10% p.a. to reach USD 170 billion by CY 2013.*



## Animation Market Analysis

### Key drivers expected to influence the growth of Animation Industry in India

#### Outsourcing

*Increased Outsourcing by Overseas Players. Indian players currently command only 8% of the outsourcing work. This is expected to increase, especially with increasing recognition of the Indian players in terms of providing timely and quality work.*

#### Evolution

*Significant evolution of Indian Players: Indian players have moved up the value chain by developing animation content end-to-end.*

#### Usage of VFX

*Increasing usage of Visual Effects in Bollywood is expected to give a boost to the industry.*

#### E-Learning

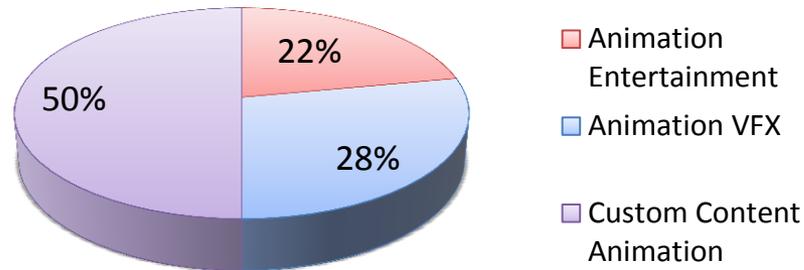
*Increasing adoption of e-Learning by corporate sector and higher education institutions in India is a significant opportunity for Indian players, offering 'Custom Content Development'.*



## Animation Market Analysis

Animation industry in India has three key segments:

### Animation Industry in India



Among these segments, Custom Content Development is the largest 50% followed by Animation Entertainment & Entertainment VFX.

Entertainment VFX segment is expected to grow fastest at 28% p.a.

Almost 70% of the revenues of the Indian Animation Industry are from the outsourcing work done for the overseas clients.



## Animation Market Analysis

# Animation Entertainment

Movies

TV Broadcasting

TV Advertising

Direct to DVD

83 YEARS  
CLASS: ARBOL  
IT'S GROWING UP!





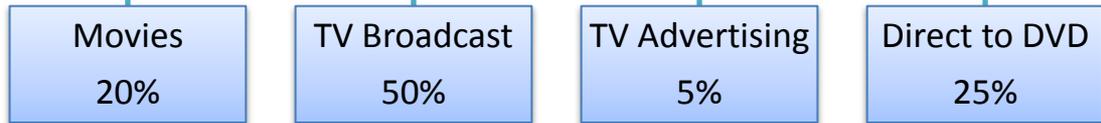
## Animation Market Analysis

# Animation - Entertainment

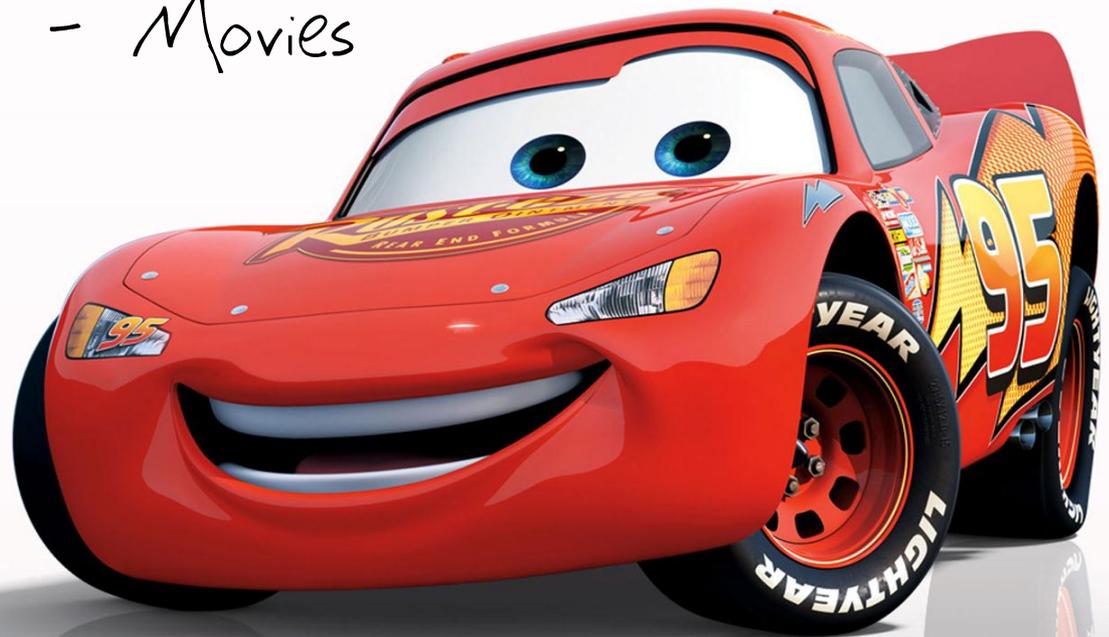
The Indian animation entertainment industry comprises four sub-segments and its revenue share is shown below for CY 2009



## Animation Entertainment

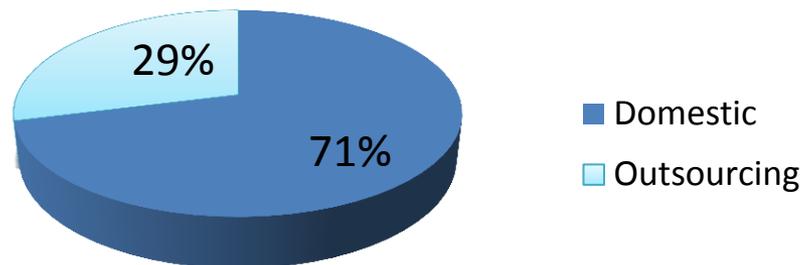


# Entertainment - Movies





### Animation Movies Domestic / Outsourcing Revenue Split (CY 2009E)



The Animation Entertainment movies segment is estimated at USD 24 million for 2009.

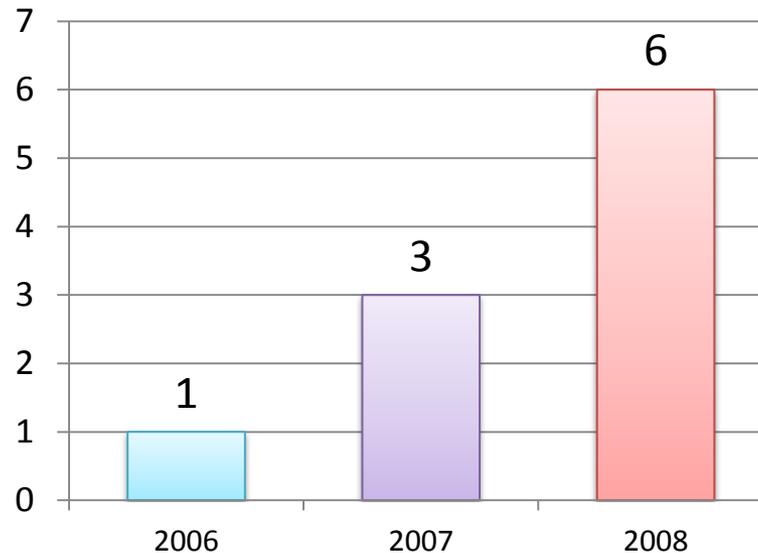
Domestic market contributes a significant USD 17 million (71%) to this USD 24 million.



## Animation Market Analysis

## Entertainment - Movies

### Indian Animation Movies



The Indian film industry announced 85 animation movies in 2008, with almost all the major production houses trying to jump on the bandwagon

*Compared to 6 such movie releases in 2008, there are 28 movies in the pipeline and are in different stages of conceptualization / production. Out of these, 15 movies are expected to get released in the next two years.*

*Moreover, Comics' players' keen-ness to monetize their existing characters has resulted in their entering the animation movie market.*

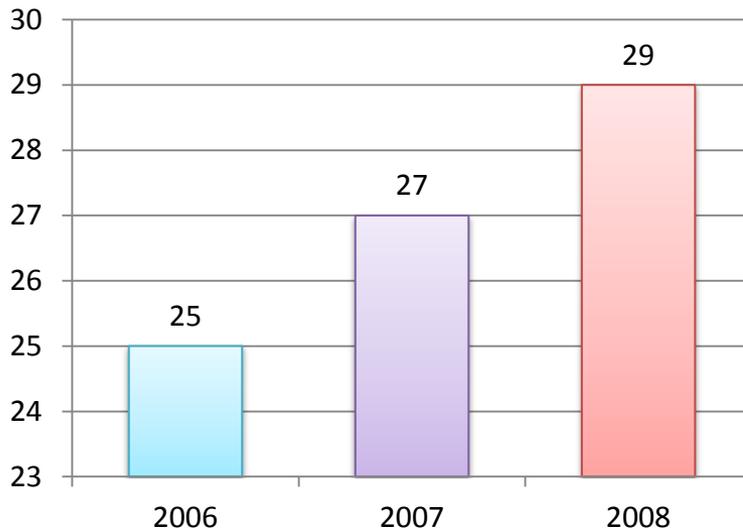




## Animation Market Analysis

## Entertainment - Movies

### US Animation Movies Released



### Increased animated content overseas

Animation movies released in US have increased at 8% CAGR from 2006 to 2008. This trend is expected to continue, considering the success of these animation movies. This success is reflected in the high worldwide box office earnings of these movies

This whopping success and profits of animation movies overseas are expected to propel production houses to produce more animated movies. Movies in the pipeline for the two biggest animation houses in the world – Disney Pixar and DreamWorks proves the inclination of production houses towards greater animation movies: Disney Pixar released 8 movies in the last two years. It plans to increase the number to 13 movies



# Entertainment – TV Broadcast

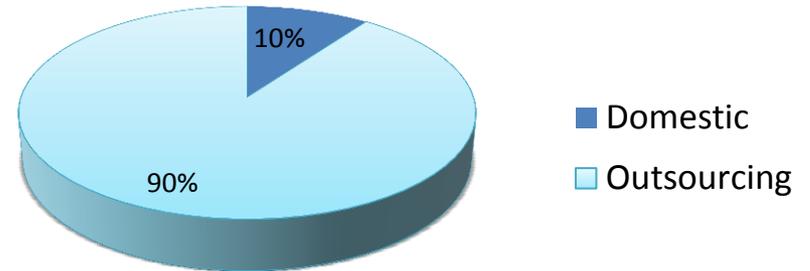


## Animation Market Analysis

## Entertainment - Broadcast



**Animation TV Broadcast Domestic / Outsourcing Revenue Split (CY 2009E)**



*The work done by animation companies for TV Broadcast is estimated at USD 61 million for 2009. More than 90% of the animation entertainment TV Broadcast accrues from outsourcing.*

### **Growth Indicators**

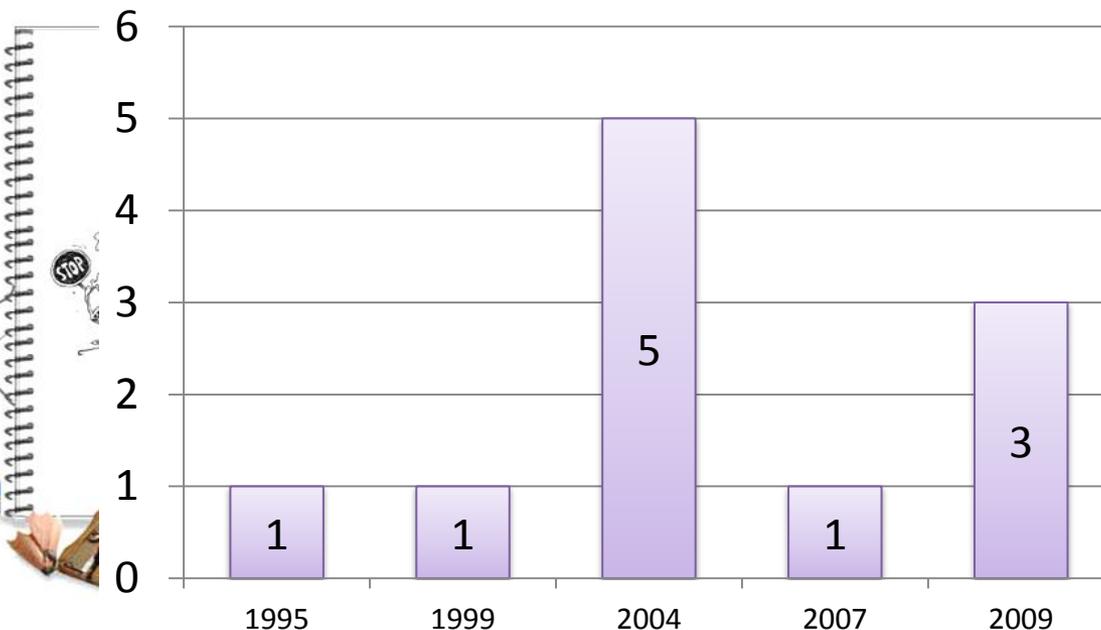
This segment is expected to grow on account of demand from both domestic and overseas markets.

# KIDS GENRE SHARE





### Cartoon / Kids Channels Launched (India)



1995 : Cartoon Network

1999 : Nick

2004 : Hungama

Pogo

Toon Disney (Jetix)

Disney Channel

Animax

2007 : Chutti TV

2009 : Spacetoon

Kushi TV

Chintu TV

#### Domestic Demand

The increase in number of kids' channels and the resulting increase in demand for local content are expected to drive the demand from the domestic market

- **Increasing No. of Kids Channels**

Cartoon Network was the first one to enter the Indian kids TV broadcast market in 1995.

Since then, there has been a significant increase in the number of kids channels launched in India

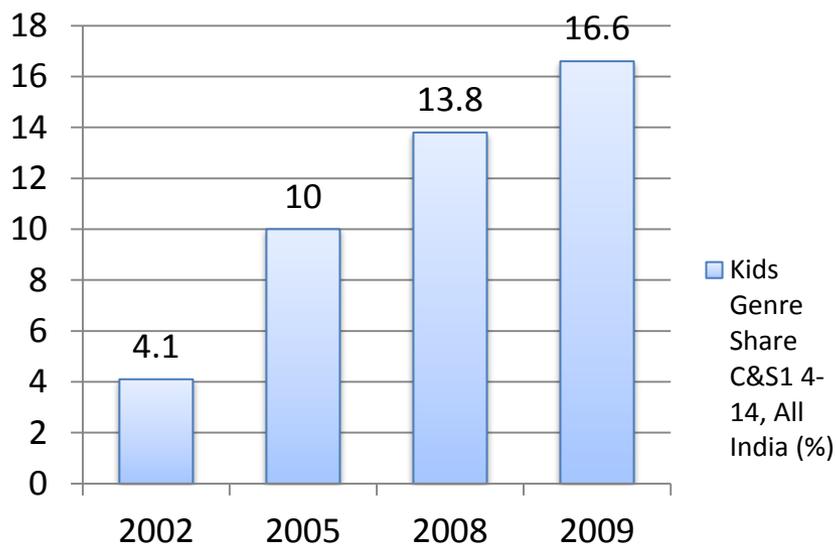


## Animation Market Analysis

## Entertainment - Broadcast



### Kids Genre Share C&S1 4-14, All India (%)

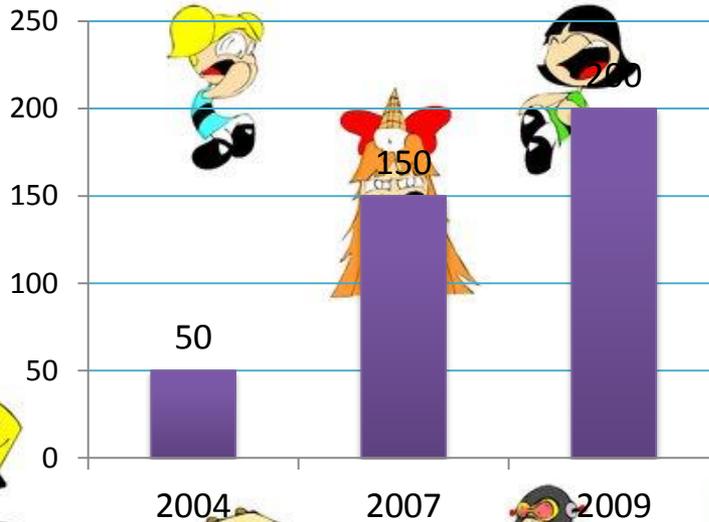


The share of kids' genre in overall viewer-ship has steadily increased from 4.1% in 2002 to reach 16.6% in 2009. Sustained increase in viewer-ship would drive demand for content for kids, especially animated content.

Moreover, Indian comics players are planning to launch their own cartoon / kids channels. For example, Diamond comics has already announced plans to launch a TV channel targeted at the 4 to 14 year age group with both animation and live action content.



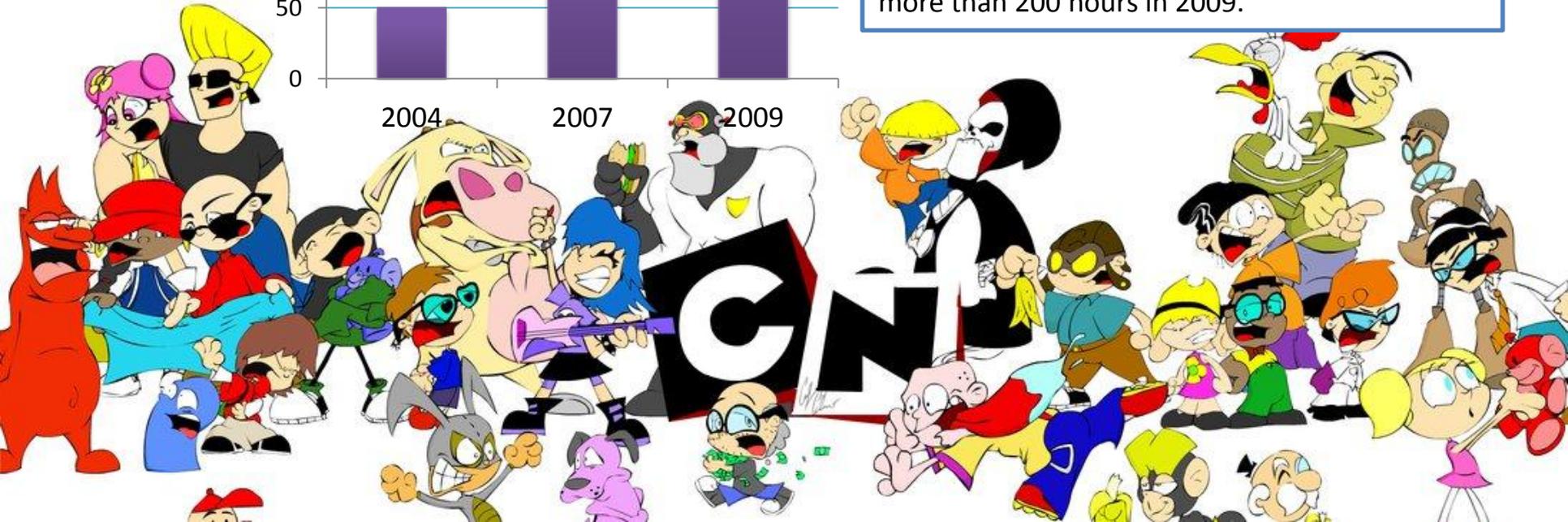
### Original Indian Content in hours Cartoon Network



#### Increased Demand for Original Indian Content

Demand for original Indian content by the cartoon / kids' channels has been increasing.

For example, Cartoon Network– the leader in the cartoon channels' space has increased its original Indian content from 50 hours in 2004 to more than 200 hours in 2009.





## Animation Market Analysis

## Entertainment - Broadcast

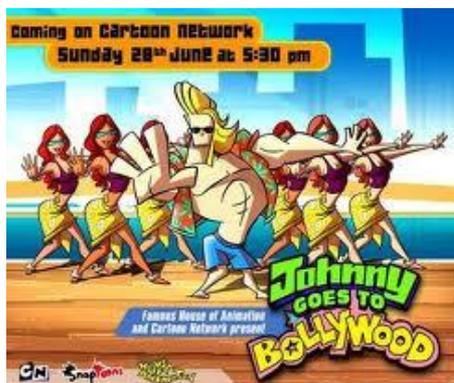


© BIG Animation (I) Pvt Ltd.

### Increased Demand for Original Indian Content

Nickelodeon, inspired by the success of the mythological serial 'Little Krishna', is looking to expand its local content. The same trend is expected to be followed by other channels as well. Growth in original local animation content is expected to get a further boost from Indian comics players like Diamond, Raj, Vimanika and Chandamama who are looking to monetize their content libraries by creating market presence in TV programs.

Large production houses are also buying rights from these publishers to produce animated TV series: Big Animation Pvt. Ltd has bought rights from publishers of Chandamama to produce an animated TV series. Moreover, a significant number of nontheatrical movies are in pipeline for TV broadcast, some of the key examples being Kul Veera, Sulochana etc.



### Non-Theatrical Movies Produced / Under Production (India)

| Film                     | Production House          | Broadcast   |
|--------------------------|---------------------------|-------------|
| Kul Veera                | Graphiti Multimedia       | Turner – CN |
| Sulochana                | Miditech                  | Turner – CN |
| Johnny goes to Bollywood | Famous House of Animation | Turner – CN |
| The Firebirds            | Splash Communications     | Turner – CN |
| Guide to the only planet | Shoot at Sight            | Turner – CN |
| Bakland and Ravan        | DQ Entertainment          | Turner – CN |



## Animation Market Analysis

## Entertainment - Broadcast

### Percentage of work outsourced to India



The proven capabilities of Indian players, with on-time delivery, excellent quality work have brought them at par with other Asian outsourcing hubs. The Indian players are now slowly moving towards the higher end of the animation TV broadcast value chain as well. Capability of the Indian players is also being increasingly recognized, as is evident from the increasing 'Co-production' deals:



DQ Entertainment has been involved in over 30 global Co-Production deals with many leading companies like BBC UK, American Greetings Properties, USA, M6, and France and alike.



Toonz Animation's co-production deal with Spectra Animation of Canada to coproduce 52 episodes of a Malayalam animated TV serial 'Paddy's Pages'.



Sanra Media's deal with UK based Endemol for the co-production of animated series – The 99.

Improved perception of the Indian animation players' capability is expected to lead to greater percentage of outsourcing to India.



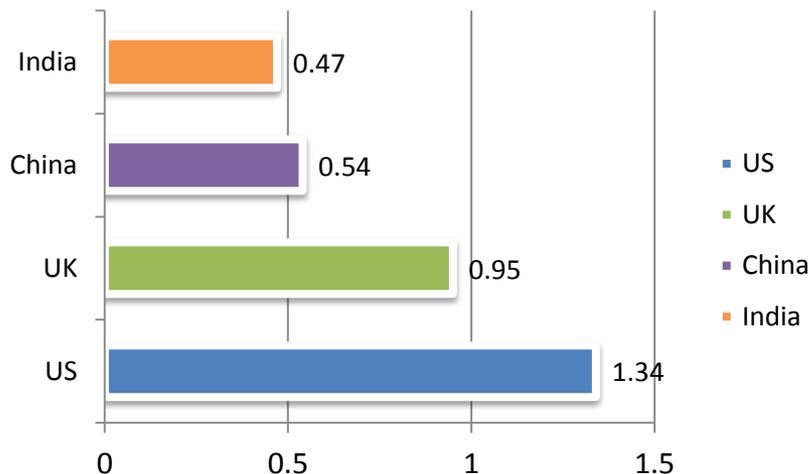


## Animation Market Analysis

## Entertainment – TV Advertising



Advertisement Industry as a Percentage of GDP (2008-09)



### TV Advertising

Animation Players are projected to have earned revenues of USD 6 million through work done for TV Advertisers for 2009. Most of these revenues accrued from the domestic market.

### Growth Indicators

Increasing advertising spend of the Indian companies coupled with growing popularity of animated characters is expected to drive the domestic market. Demand from overseas is also expected to start picking pace as the Indian animation players gain experience at animation for commercials.

### Domestic Demand

Indian TV advertising spend is minuscule (0.47% of the GDP) as compared to the US(1.34%) or UK (0.95%), thus holding large potential for growth.

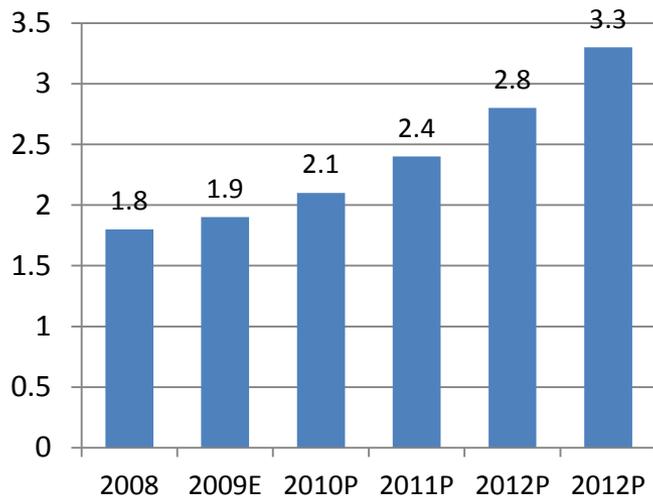


## Animation Market Analysis

## Entertainment – TV Advertising

The Indian TV advertisement industry size is expected to increase from USD 1.9 billion in 2009 to USD 3.3 billion in 2013 at a CAGR of 15%. As the advertising industry grows, it is expected that the share of animation driven advertisements will also grow.

**Advertisement Industry as a Percentage of GDP (2008-09)**



Growing popularity of animated characters in Indian advertising illustrates the point: Animated advertisements strike a better chord with the target group of children and young adults, can be easily understood and related to by audiences irrespective of language and cultural barriers.

Some of the recent advertisements in India that have used animated characters – “Daddu” (Mentos), “Chinta Mani” (ICICI prudential), “Sukhi and Dukhi” (Tata AIG), have been quite popular. Moreover, the animation commercials also result in significant cost savings compared to advertisements with celebrities, making another point for their increased usage.



### Demand from Overseas

Increasing usage of animation in TV advertising in India is providing the Indian players with the required experience and capabilities. As the overseas production houses and advertising agencies face cost pressures and recognize the capabilities of Indian players, advertising outsourcing deals for India are expected to happen over a period of time.

Direct to DVD

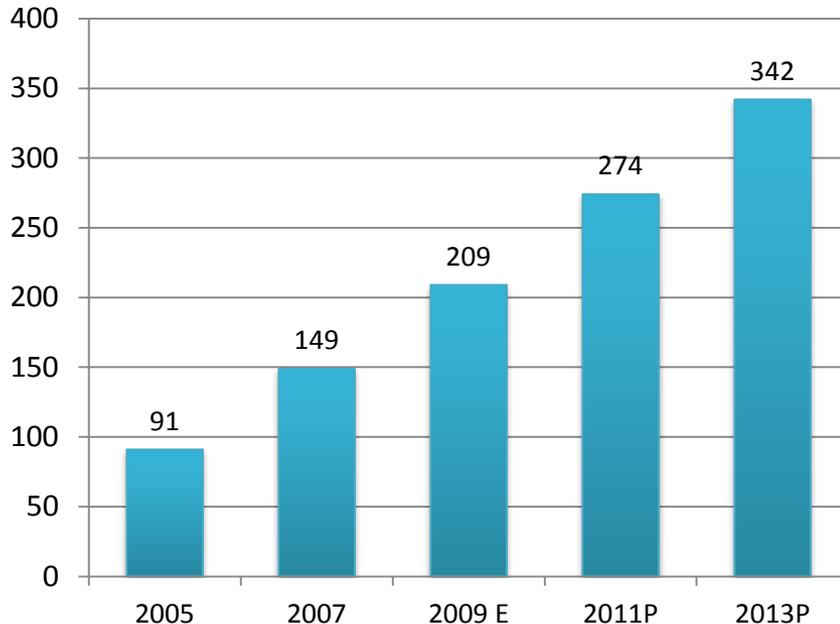




## Animation Market Analysis

Direct to DVD

Indian Home Video Market1 (USD Mn)



Animation Entertainment Direct to DVD is estimated at USD 31 million for 2009. Domestic market contributes a miniscule 10% (USD 3 million) to this USD 31 million.

### Direct to DVD

Animation Entertainment Direct to DVD is estimated at USD 31 million for 2009. Domestic market contributes a miniscule 10% (USD 3 million) to this USD 31 million.

### Growth indicators | Domestic Demand

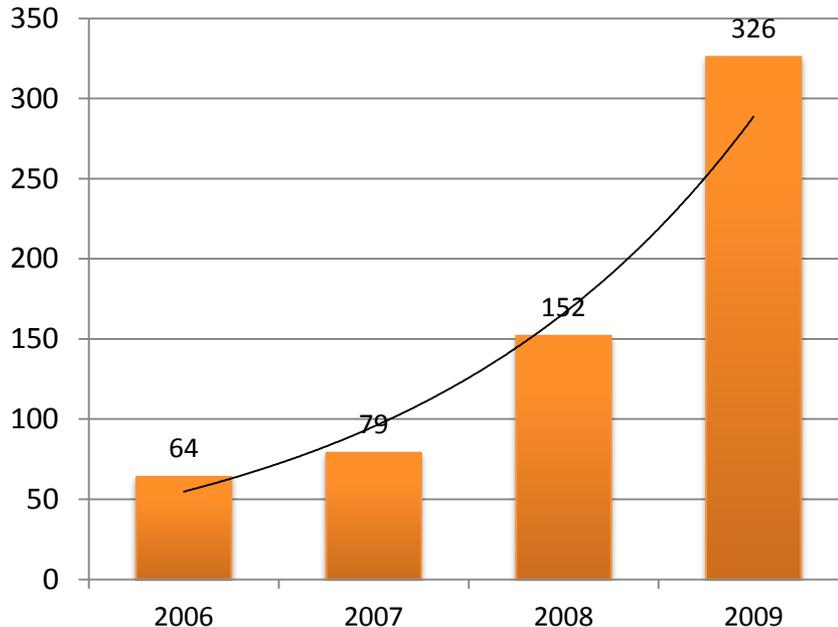
The Indian home video market has grown at 23% p.a. for 2005-2009. The increase is expected to impact demand for animated content also. There is increase in retail reach of DVDs in India. Moreover, falling prices of CDs / DVDs is leading to increased affordability. Improved penetration and affordability are expected to drive the growth of the Indian home video market at 13% p.a. from 2009-2013. This trend is expected to encourage greater production of direct-to-DVD content in India.



## Animation Market Analysis

## Direct to DVD

US DVD Premieres (No.)



### Demand from Overseas

Direct-to-DVD animation content in overseas markets and the extent of outsourcing primarily determine the demand for animation services for Direct to DVD in India.

**Lower Direct-to-DVD (DVD Premieres) Overseas** Direct-to-DVD (DVD Premieres) in the US has seen a very high growth of 72% from 2006 to 2009. However, the DVD sales / rentals market has stagnated and is showing a downward trend from its highs of 2005-06. However, the advent of new channels like on demand television and online distribution is expected to keep up the demand for DVD Premiere.

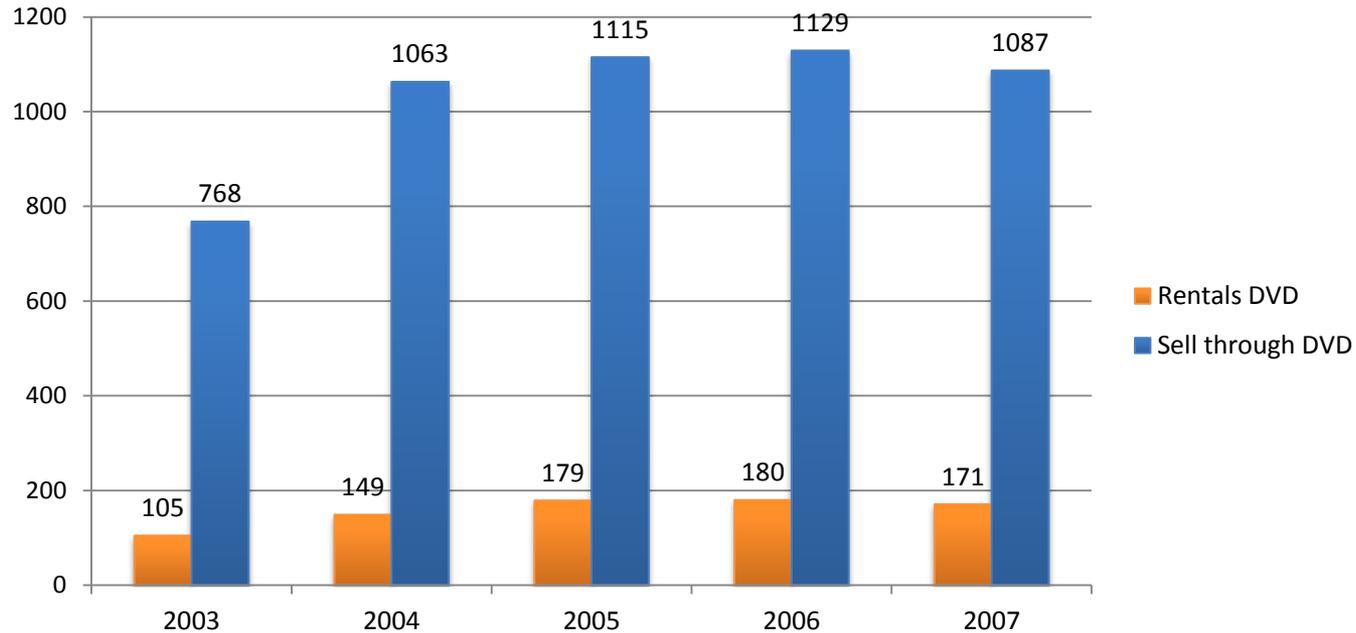
### Growth indicators | Domestic Demand

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## Animation Market Analysis

Direct to DVD



### Growth indicators | Domestic Demand

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Animation Entertainment - Service Models | Revenue Models | Key Players





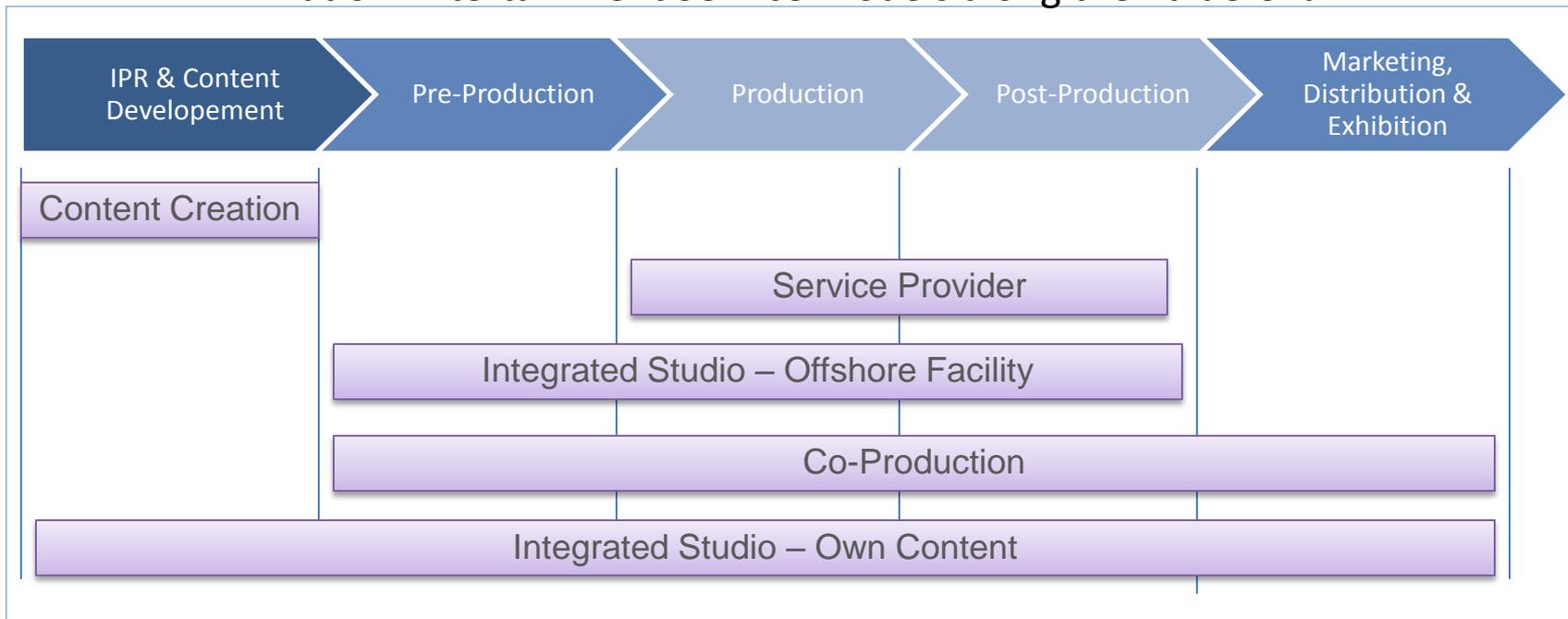
## Animation Market Analysis

## Entertainment - Service Models

### Service Models

Players in the animation entertainment industry in India follow various service models. Every player in the industry follows one or more of these service models.

### Animation Entertainment Service Models along the Value Chain





## Animation Entertainment Service Models

The animation entertainment service models lie along different parts of the value chain. Depending upon the service model that a player adopts, he can be present across the value chain or in certain specific parts of it. Players also adopt multiple service models: for e.g. the same player may operate on 'service delivery model' and 'co-production' model, varying from one deal to the other.

| Service Model                        | Description   |
|--------------------------------------|---|
| Integrated Studio – Own Content      | State of the art units that enable production and development of all aspects of an animation film, from conceptualization to post-production stage.<br>Indian Producer: Content / IP belongs to the Indian producer<br>Foreign Producer: Content / IP belongs to the foreign producer   |
| Integrated Studio -Offshore Facility |   |
| Service Provider                     | Indian entities provide services for the labour intensive activities which are outsourced to them.  |
| Co-Production                        | Animation companies in India are moving up the value chain, from providing piece-meal outsourcing services to exploring the co-production model. Typically, the Indian studios bring the manpower and infrastructure to develop the animated content and the international producer will finance the marketing, distribution etc. |
| Content Creation (IP)                | Full ownership of content, share in collections, royalty for all licensing and merchandizing  |



## Animation Market Analysis

## Entertainment - Revenue Models

### Revenue Models

The players in the animation entertainment industry can realize revenues from different sources depending upon the model that they adopt. The different revenue models for the entertainment industry are:

| Service Model                         | Description  |
|---------------------------------------|--|
| Co-Production<br><br>Content Creation | <p>Revenue Sharing</p> <p>Co-production Model: Changes have been witnessed over a period of time. Initially the revenue share was based on territorial rights with Indian studios getting continental rights which generally generate less revenue. Currently, coproduction deals are being struck on a global revenue sharing model.</p>                    |
| Service Provider                      | <p>Work for Hire</p> <p>Specific activities along the value chain, for example, production, and post production are outsourced to Indian players. Revenues for these activities are generally realized on a per hour basis. As majority of the outsourcing happens in the production part most of the Indian players realize revenue on this model only.</p> |
| Integrated Studio – Offshore Facility | <p>An integrated studio offshore facility Refers to a captive of a foreign producer.</p>   |
| Integrated Studio – Own Content       | <p>Revenues from Multiple Streams</p> <p>The integrated studios who own the IP and produce local content can realize revenues through various streams. These revenues can be from box office sales, TV and DVD/home video, merchandizing, and music rights.</p>  |



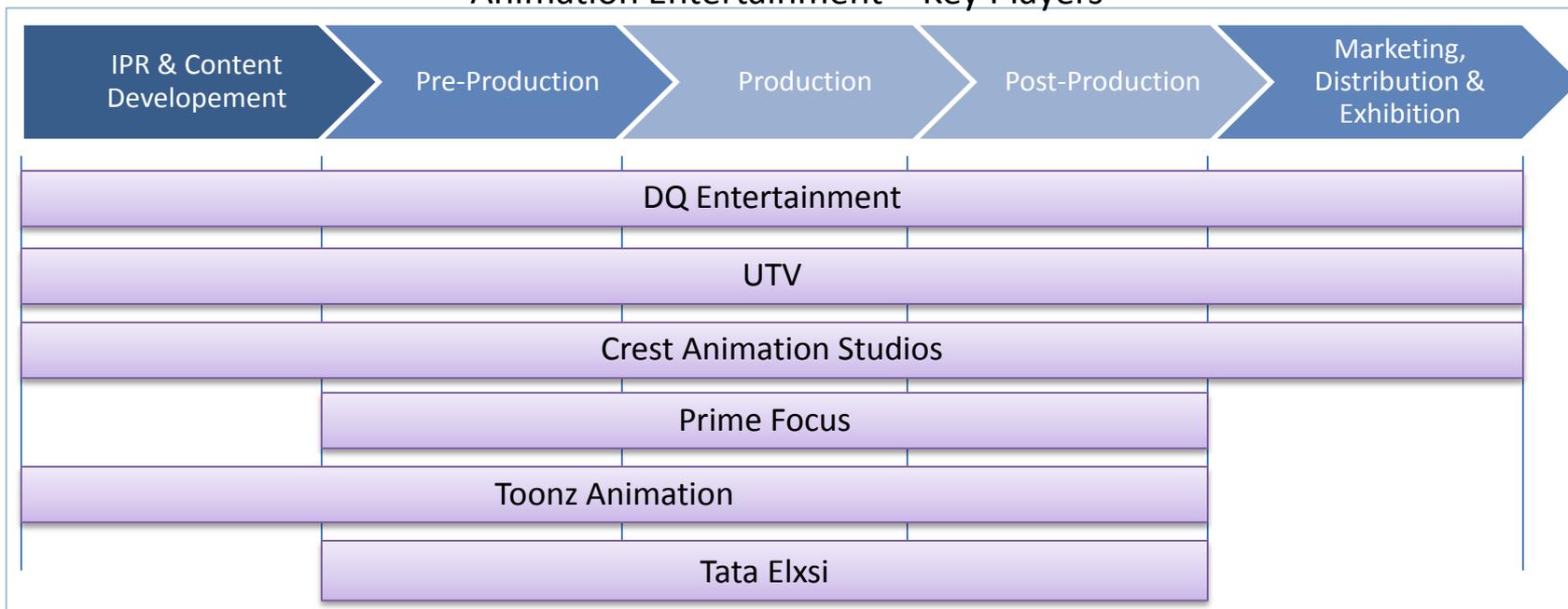
## Animation Market Analysis

## Entertainment – Key Players

### Animation Entertainment – Key Players

The Indian animation entertainment industry is a fragmented industry, with the top 10 players contributing less than 20% of the industry revenues. Moreover, they compete along the different stages of the value chain. There are players who are present across all the stages of the value chain and there are others who provide services during specific stages of the value chain only. Some of the key players have been listed below, along with their presence in the value chain:

### Animation Entertainment – Key Players





## Animation Market Analysis



### **Animation Entertainment Challenges**

While the Indian animation industry holds a large potential in terms of both domestic and overseas demand, the industry needs to overcome significant challenges to realize this potential:

**Lack of Skilled Manpower**

**Lack of Funding**

**IP Protection**

**Cultural Constraint**

**Lack of Government Support**



## Animation Market Analysis

## Entertainment - Challenges

- **Lack of Skilled Manpower**

Skilled man-power is the key for producing animated content. The Indian animation industry is constrained on the talent supply side. As per Nasscom Industry Report 2009, manpower requirement for animation in India is expected to grow from 17,500 in 2009 to 29,500 by 2012. However, there are not enough resources available in this industry, and those who are available are not readily employable. This is primarily due to the following reasons:

Low awareness of animation as a career option: This is especially true of Tier-2 and Tier-3 cities in India.

Existence of only a handful of institutes that provide relevant courses / degrees in animation and gaming, the leading institutes in this domain being National Institute of Design, Toonz Academy, Maya Academy, Arena Animation. Lack of standardized and quality curriculum: Post-graduate / Degree / diploma courses in animation are few in no. in India. Curriculum is not up to the international standards, thus decreasing the employability of students in India.

- **Lack of Funding**

Animation Entertainment industry in India pre-dominantly comprises small and medium sized players operating across similar / different parts of the value chain. Currently, only 1 out of 5 movies in India are successful, making the production of Animation films very risky. Players are not able to raise the required finance.

- **IP Protection**

Rampant piracy of DVD-Based videos within the distribution channel eats into a major share of revenues for the producers and distributors. This along with slack IP laws and weak enforcement discourage animation players in India to produce their own IP. Moreover, it also discourages International Players, who are generally very protective of their IPs, to outsource to India.



- **Cultural Constraint**

Unlike mature markets abroad, where animation is seen by everyone, Indians still have the animation-is-for-kids mindset. This impedes the growth of domestic market in India.

- **Lack of Government Support**

Competing outsourcing destinations e.g. Canada, UK have signed tax treaties with the US. This encourages growth of animation in the country. Indian animation players lack any such Government support either through tax rebates or grants.



Animation VFX



## Animation Market Analysis

Animation VFX

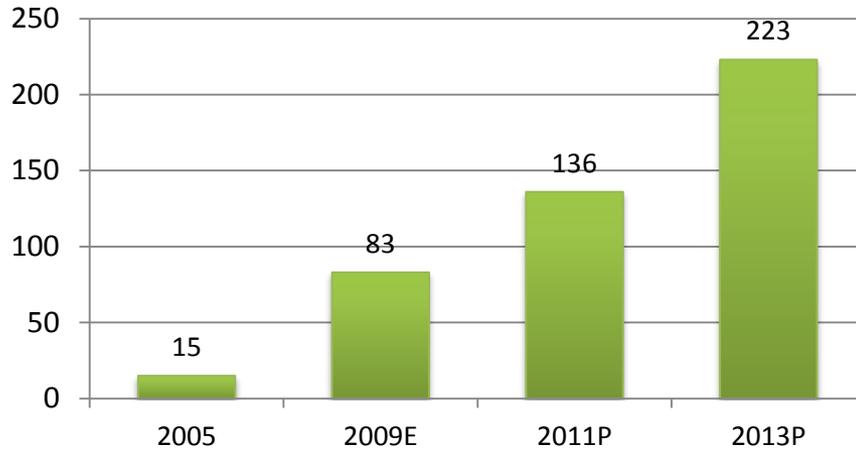
growing up



## Animation Market Analysis

VFX

### Animation Entertainment VFX Market Revenues (USD Mn)



The Entertainment Visual Effects (VFX) industry has registered an unprecedented growth of 53% over 2005-2009 and is estimated at USD 83 million in 2009.

This segment is further expected to grow at 28% p.a. to reach USD 223 million by 2013.

40% of revenues of VFX Players accrue from work done for domestic market.

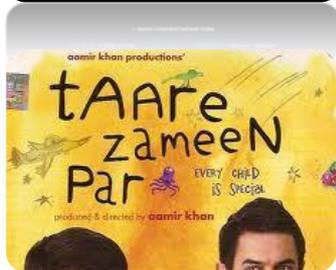
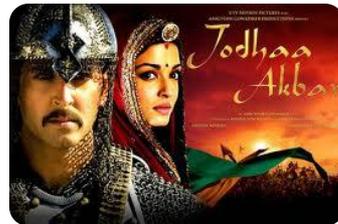
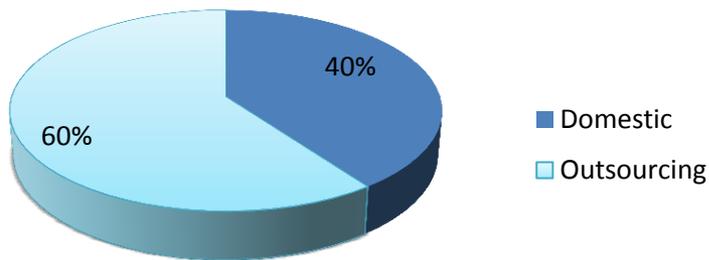




## Animation Market Analysis

VFX

### Animation Movies Domestic / Outsourcing Revenue Split (CY 2009E)



### Growth Indicators

VFX growth is expected to be propelled by demand from both the domestic market and the overseas market.

### Domestic Demand

Increased adoption of VFX and an increase in VFX budgets in movies are expected to drive the domestic demand.

### Increasing no. of movies with greater VFX Usage

Success of movies with VFX Usage and entry of comics players in the movie space are expected to drive the usage of VFX in movies in India. Indian film industry produces maximum number of movies in a year globally. 1325 movies were released in 2008, this no. having grown from 1016 releases in 2006

Usage of VFX in Indian films has considerably increased: VFX has been used in a lot of recent releases

e.g. New York, Taare Zameen Par, Rab Ne Bana Dee Jodi, Jodhaa Akbar.

Moreover, the movies which have used VFX extensively have been amongst the top grossers of their respective launch years. The success of these movies at box office is expected to be a strong driver for production houses to have significant VFX content in their upcoming movies.



## Animation Market Analysis

### VFX Extensive Movies (India) – Report Card

| Movie        | Year of Release | Top Grossing Movies Ranking | Production Budget (USD Mn) | Box Office Collections India (USD Mn) | IIFA VFX Winner |
|--------------|-----------------|-----------------------------|----------------------------|---------------------------------------|-----------------|
| Main Hoon Na | 2004            | 2                           | 5.3                        | 10.1                                  | Yes             |
| Dus          | 2005            | 11                          | 4.3                        | 6.2                                   | Yes             |
| Krrish       | 2006            | 2                           | 9.6                        | 24.7                                  | N/A             |
| Om Shanti Om | 2007            | 2                           | 7.4                        | 23.2                                  | Yes             |
| Ghajini      | 2008            | 1                           | 10.6                       | 36.2                                  | Yes             |

Source: Business Press, Analysis by Tata Strategic

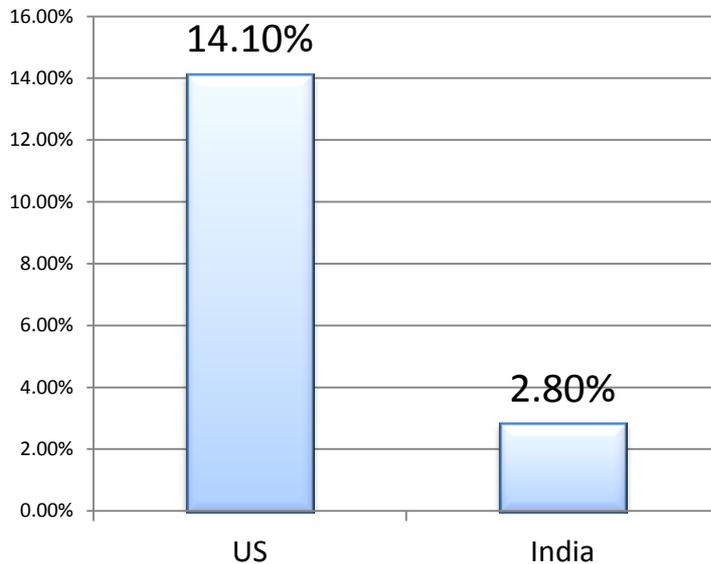




### Increase in VFX budgets

The Indian movies have very low budgets for visual / special effects. On a VFX budget index, India is way below the US levels. The VFX budget in Hollywood ranges from 3.5 million to 8.8 million, whereas the Indian film industry is typically spending a maximum of USD 0.20 million only for Visual Effects. Increase in VFX Budgets for the Indian movie is expected to boost the Entertainment VFX segment in India.

Average VFX Budget(Percentage of Movie Budget - 2008)





## Endhiran ( ROBOT) - INDIA CHASING HOLLYWOOD



With biggest budget and high technical values, Endhiran dubbed as Robot releasing all over world in various languages and succeeded at box-offices as a super hit movie.

Endhiran is the first Indian movie with a high budget of approx 70 crores spent for visual effects. After the success of Endhiran there's good scope in the Indian industry for high budget visual effects movies.

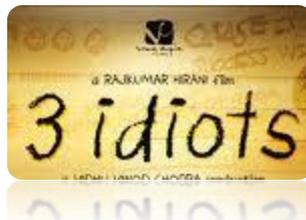
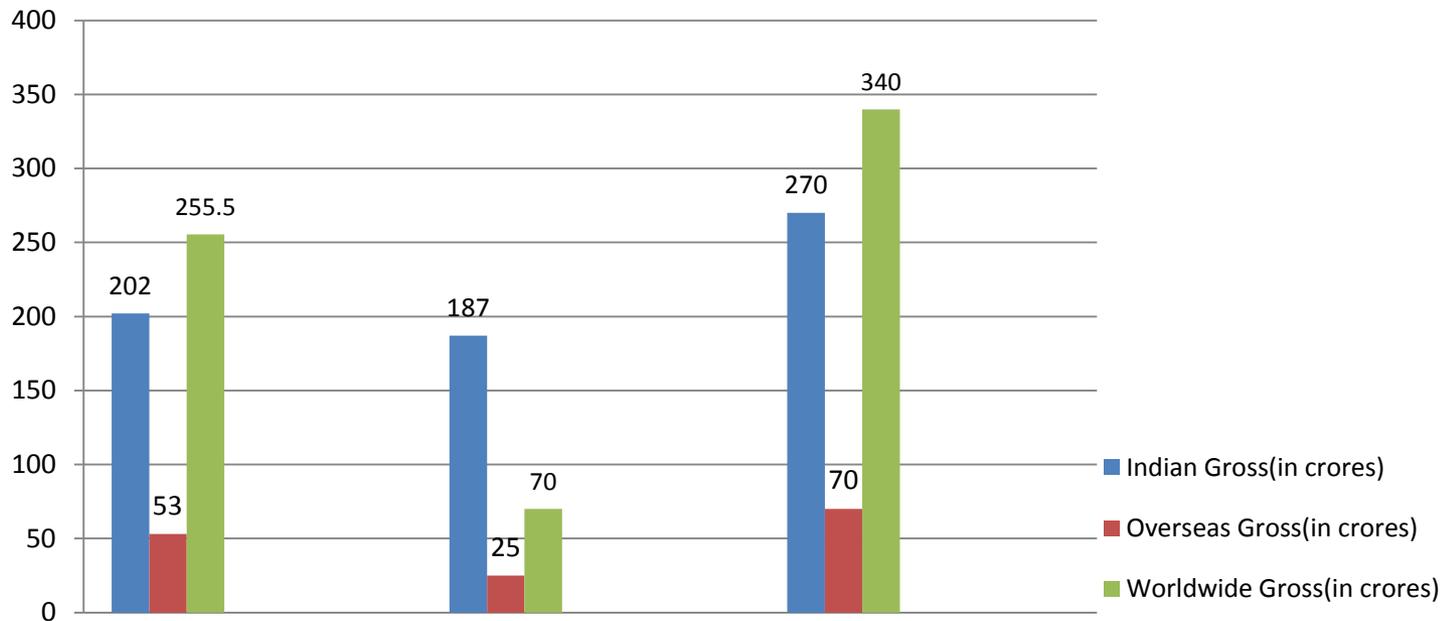




# Animation Market Analysis

VFX

## 3 Highest Grossing of Indian Cinema – Endhiran, Dabaang, 3 Idiots





## Animation Market Analysis

VFX

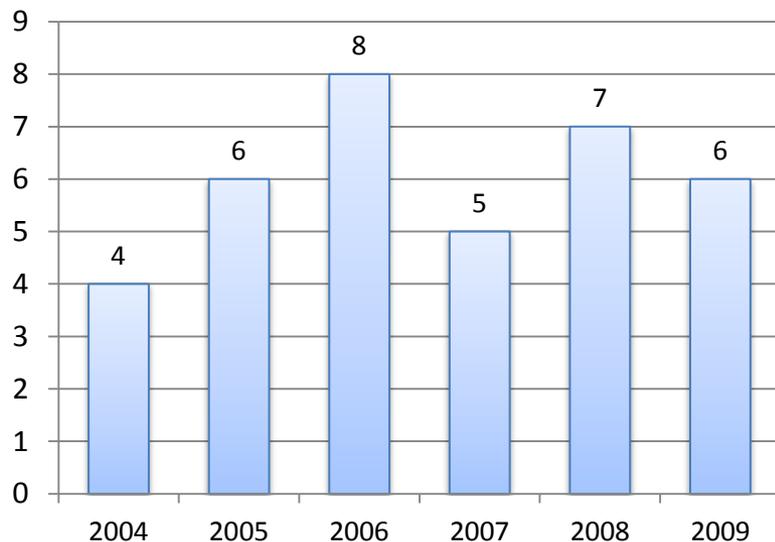
### Entry of comics players in the movie space:

In the US, on an average (2004-2009), six movies have been produced every year, which are based on comics or graphic novels.

This trend could catch up in India as well, as some players are already planning to make movies based on comic characters.



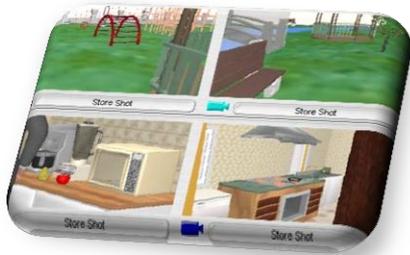
**Movies Based on The Comic / Graphic Novel  
(US)**





## Animation Market Analysis

VFX



### Pre-Visualization Trend

Pre-Visualization trend is a technique where-in the shots can be visualized on computers before they are actually shot. This increases the efficiency of production and reduces cost of production. Growth of this trend would contribute to increased overall usage of visual effects.



### Increased usage in broadcast and advertising

Usage of VFX in broadcast helps in significant reduction of costs. Its usage brings down the set creation costs for a broadcast by almost 60-65%, particularly for mythological shows. It also helps in costs savings of 30-40% for commercials.



### Demand from Overseas

Increased usage of VFX and increased outsourcing are expected to drive higher demand from overseas markets:

### Increased VFX Usage

The VFX extensive movies overseas have done exceptionally well at box office. Most of the movies which had significant VFX were amongst the top five grosser for that year. Whopping success of the VFX extensive movies is expected to drive the VFX usage in other movies as well.



# Animation Market Analysis

VFX



## VFX Extensive Movies (US) – Report Card

| Movie  | Year of Release | Top Grossing Movie Ranking (Top 5) | Production Budget (USD Mn) | Box Office Collection (USD Mn) | VFX Oscars Nominee |
|--|-----------------|------------------------------------|----------------------------|--------------------------------|--------------------|
| Transformers                                       | 2007            | 3                                  | 151                        | 319                            | YES                |
| Pirates of the Caribbean                           | 2007            | 4                                  | 300                        | 309                            | YES                |
| The Dark Knight                                    | 2008            | 1                                  | 185                        | 533                            | YES                |
| Iron Man   | 2008            | 2                                  | 186                        | 318                            | YES                |
| Indiana Jones and the Kingdom of the Crystal Skull | 2008            | 3                                  | 185                        | 317                            | YES                |
| Hancock  | 2008            | 4                                  | 150                        | 227                            | YES                |
| Transformers: Revenge of the Fallen                | 2009            | 1                                  | 210                        | 402                            | YES                |
| Avatar   | 2009            | 2                                  | 237                        | 450                            | YES                |
| Harry Potter and the half blood prince             | 2009            | 3                                  | 250                        | 301                            | YES                |



# Animation Market Analysis

VFX

## Increased outsourcing

Increasing cost pressures on production studios overseas, coupled with the 'cost savings' offered by Indian players and growing capability of Indian players in VFX is set to increase the outsourcing of VFX work to India. The Indian players are also increasing their presence overseas to tap the international market and build an outsourcing pipeline for their Indian studios: Century Communications Limited (CCL) promoted Pixion has acquired two London based studios, Men-From-Mars and Molinare Pixion also plans to acquire a studio in Los Angeles.

The Tata Group promoted Tata Elxsi has launched a new facility of Visual Computing Labs (VCL) in Los Angeles, aiming to expand its footprint in the overseas markets.

## Revenue Model

The revenue model used for Animation VFX is 'Work for Hire' model, where revenues are generally realized on a per hour basis.

## India - Key Players

Indian VFX is a fragmented industry, with the top 5 players commanding ~ 20% of the overall industry. They key players in Animation VFX in India are:

Tata Elxsi

| Prime Focus

| DQ Entertainment

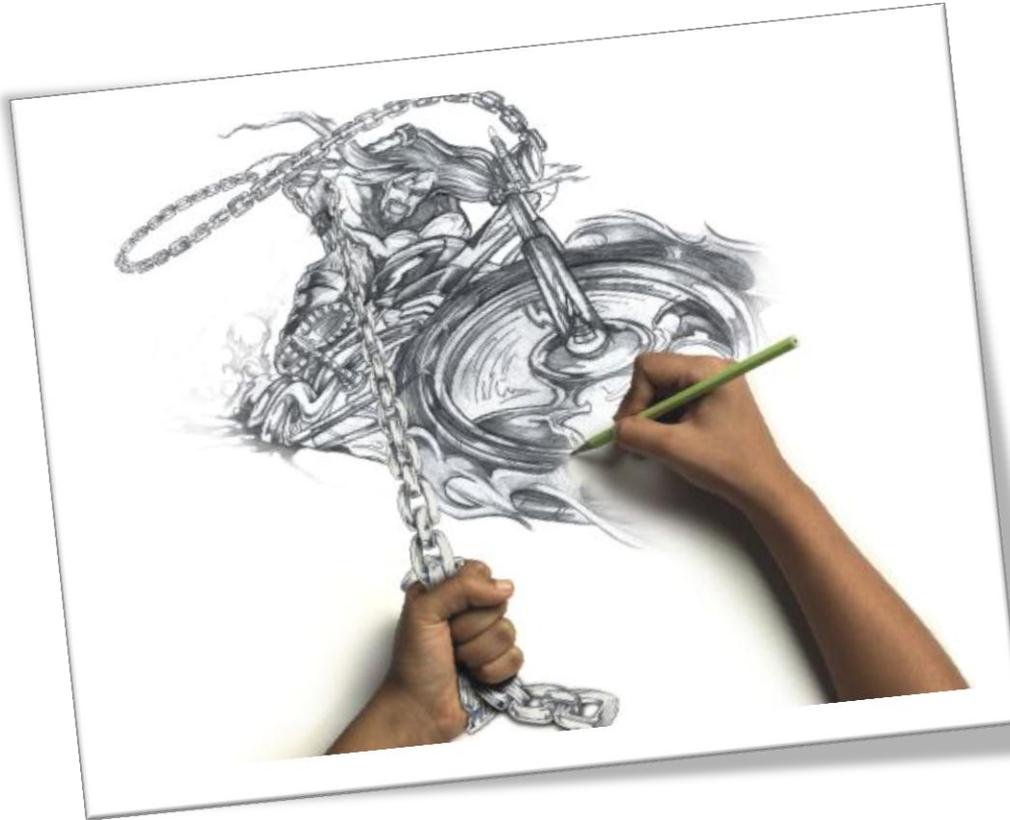
| Pixion

| Prana





## Animation Market Analysis



### **Animation VFX Challenges**

Major challenges faced currently by the VFX industry are

**Lack of Skilled Manpower**

**Lower Budgets for VFX in India**

**Categorization of VFX in India as a post production activity**

**Lack of Government Support**



## Animation Market Analysis

## VFX - Challenges

### **Lack of Skilled Manpower**

Similar to animation entertainment, there is a considerable shortage of skilled manpower for VFX in India. There are very few institutes that provide formal courses on VFX. The studios therefore have to employ people with inadequate skills, which lead to an inferior quality of work.

### **Lower budgets for VFX in India**

The average budget for VFX in Indian movies is almost one fifth of that in a Hollywood movie. The average budget of a Hollywood movie ranges from USD 3.5 million to USD 8.8 million, whereas, the Indian movies have an average VFX budget of USD 70,000 to USD 150,000. This limits the quality of VFX in the movie.

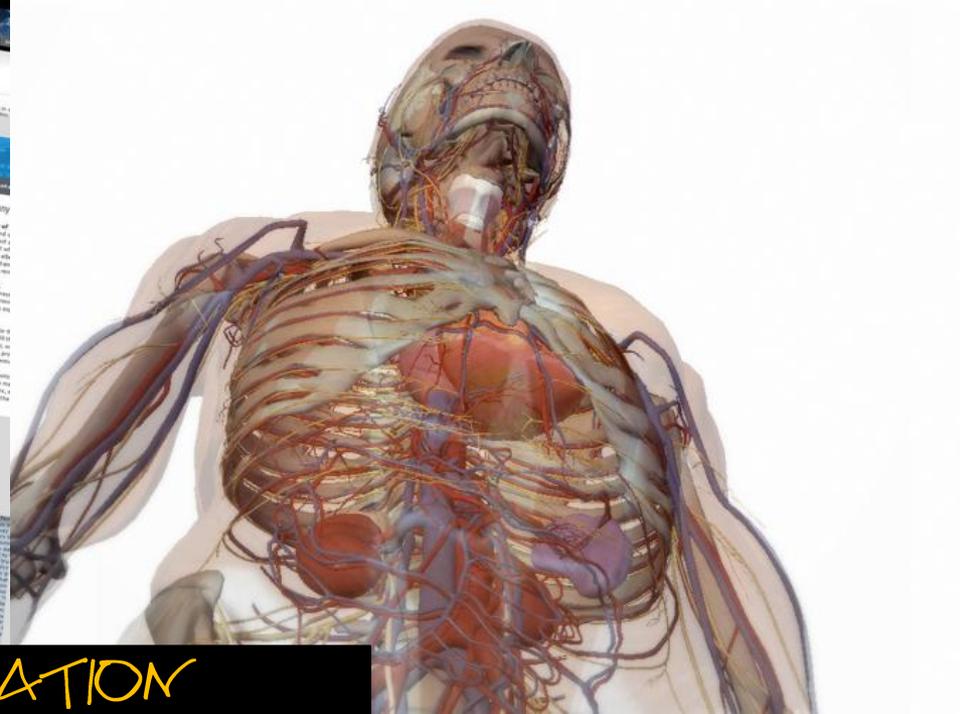
### **Categorization of VFX in India as a post production activity**

VFX is used at all stages in Hollywood, whereas, it's still considered as a 'postproduction' activity in India. The quality difference between a Hollywood movie and an Indian movie can be attributed to some extent to the limited usage of VFX in Indian movies. The limited usage of VFX results in limiting its scope and ability to deliver high quality.

### **Lack of Government Support**

Similar to Animation Entertainment, the Entertainment VFX segment may be boosted by Government support in the form of tax rebates or grants.





# ANIMATION Custom Content Development





## Animation Market Analysis

## Custom Content Development

### Custom Content Development



Corporate



E-Learning



Architectural



Medical



Aviation

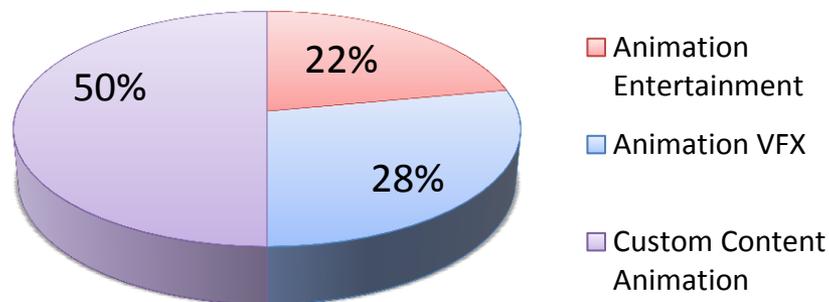


Web-designing



Interactive Content

### Animation Industry in India



*Custom Content Development holds the highest revenue share (51%) among all segments of Indian Animation Industry.*

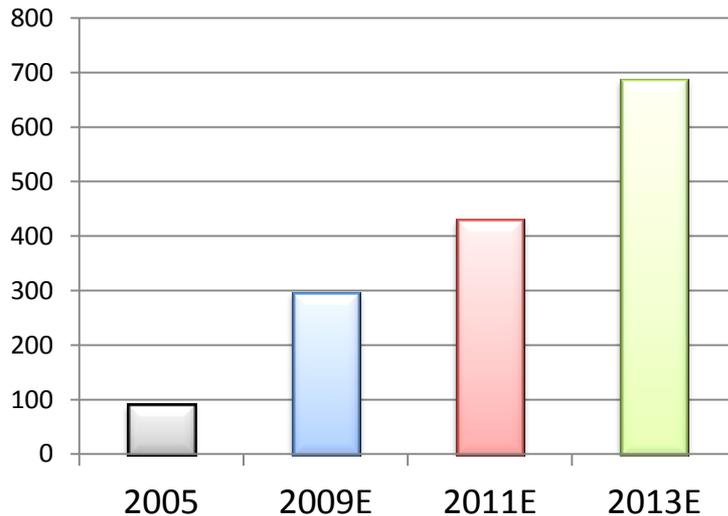
*Custom Content Development caters to the mentioned categories*



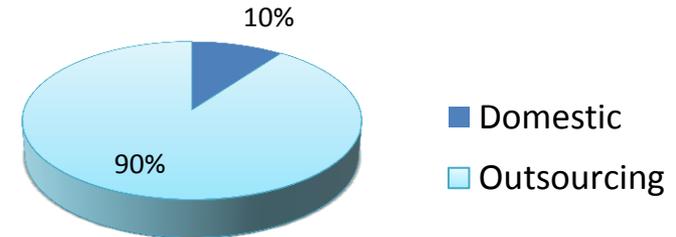
## Animation Market Analysis

## Custom Content Development

### Indian Custom Content Development Market Revenues (USD Mn)



### Custom Content Development Domestic / Outsourcing Revenue Split (CY 2009E)



Custom Content Development, estimated at ~ 295 USD Million (2009) has grown at 35% p.a. (2005-09) and is expected to continue its growth at a healthy rate of 23% p.a. (2009- 13) to reach USD 685 Million by 2013.

As per leading players in the industry, >90% of custom content development in India is outsourcing work.

Custom Content Development initiates with sourcing of the content and preparation of the script / storyboard followed by creation of the content and migration of the same on the required platform. The platform on which the content finally resides may be a CD / DVD, website, or a Learning management System depending upon the customer's requirements.



## Animation Market Analysis

## Custom Content Development



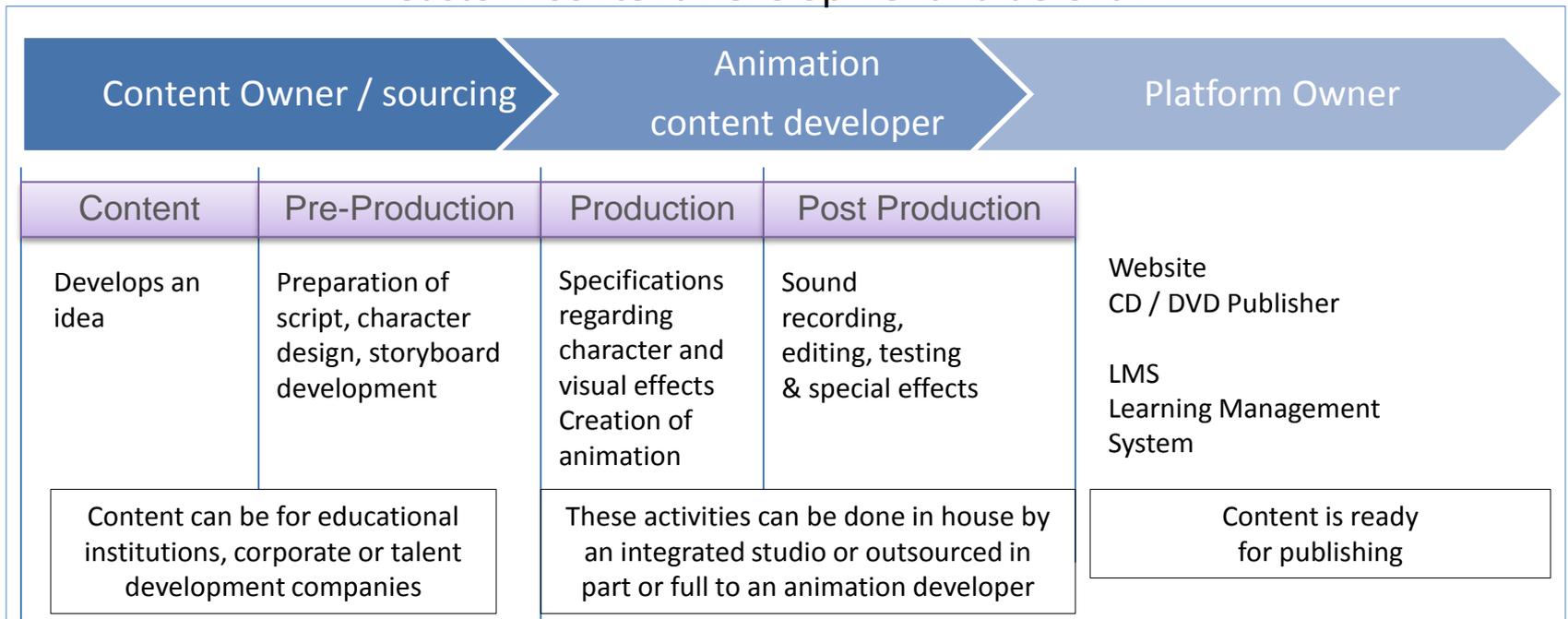
**Educational institutes:** Schools (K-12), Higher Education Institutes for their e-Learning requirements, Corporate for their employee training / internal communication / web-site designing services / marketing collateral and industries such as Aviation, Defense for special training requirements are customers of this segment.



Animation Market Analysis

Custom Content Development

Custom Content Development Value Chain





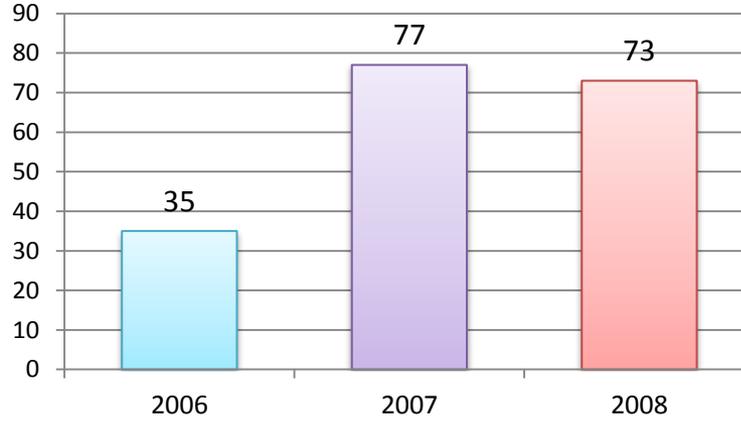
# Animation Market Analysis

## Custom Content Development



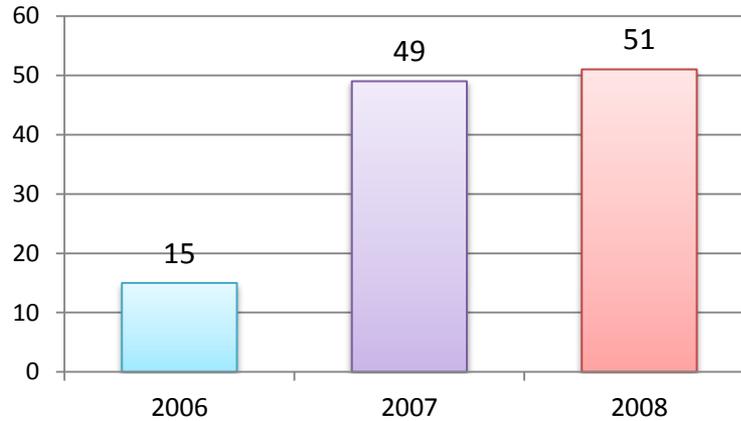
Telecommunications

Custom Content Development Outsourcing by Corporate US Telecommunications (%)



Technology

Custom Content Development Outsourcing by Corporate US Technology (%)





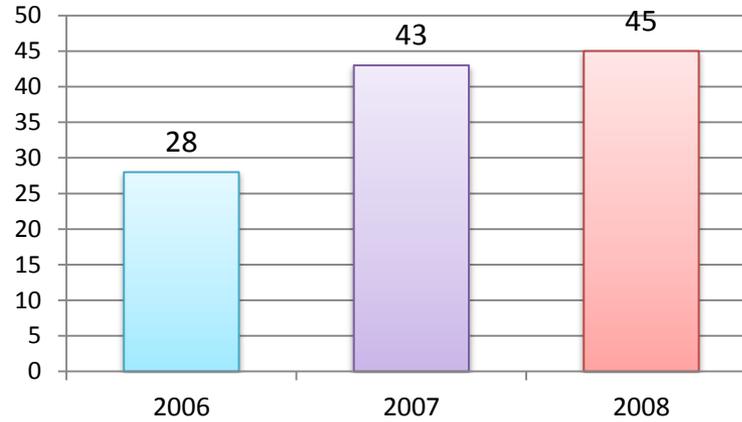
# Animation Market Analysis

## Custom Content Development



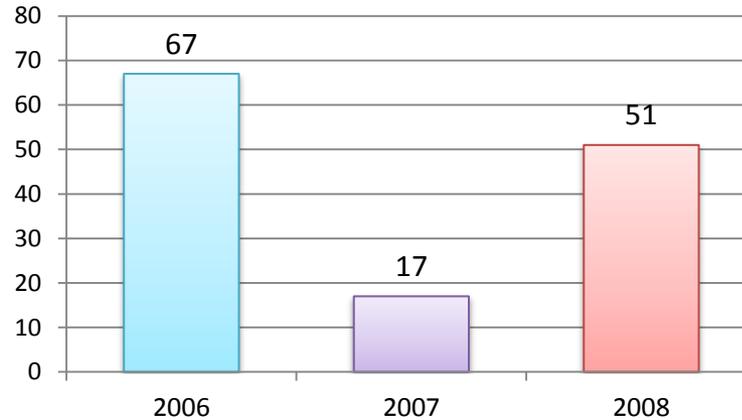
**Manufacturing**

**Custom Content Development Outsourcing by Corporate US Manufacturing (%)**



**Retail**

**Custom Content Development Outsourcing by Corporate US Retail (%)**





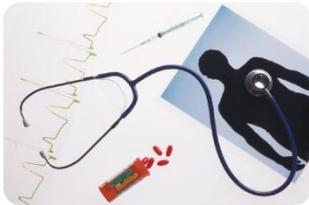
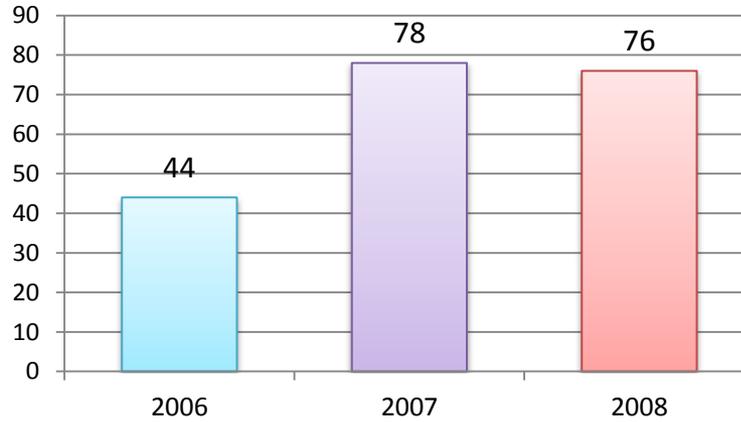
# Animation Market Analysis

## Custom Content Development



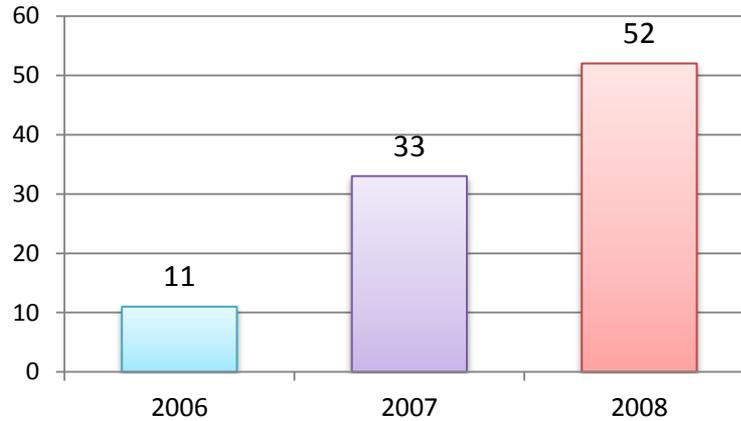
**Pharmaceuticals**

**Custom Content Development Outsourcing by Corporate US Pharmaceuticals (%)**



**Health Care/Medical**

**Custom Content Development Outsourcing by Corporate US Health Care/Medical (%)**





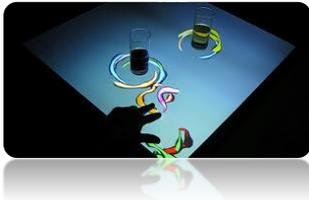
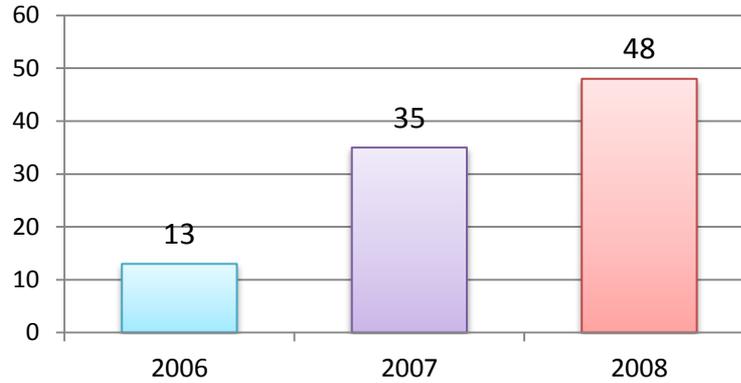
# Animation Market Analysis

## Custom Content Development



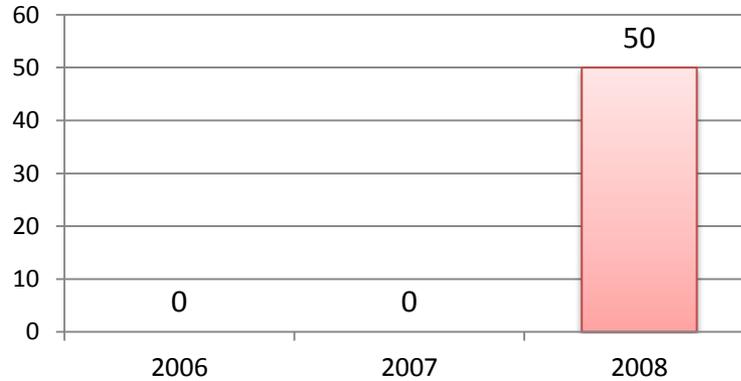
**Banking/Financial/Insurance Services**

**Custom Content Development Outsourcing by Corporate US Banking/Financial Services & Insurance (%)**



**Business Services/Consulting**

**Custom Content Development Outsourcing by Corporate US Business Services/Consulting (%)**



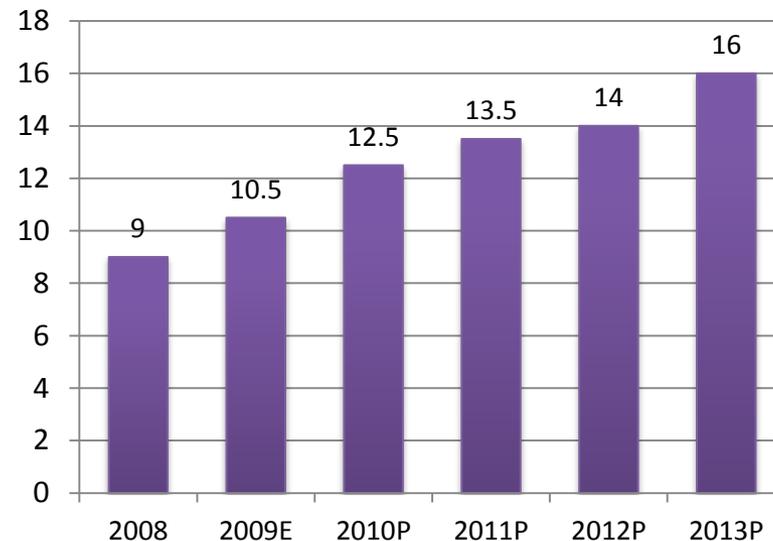


## Animation Market Analysis

### Increased requirement for content



**Worldwide Corporate e-Learning Content Revenue (USD Bn)**



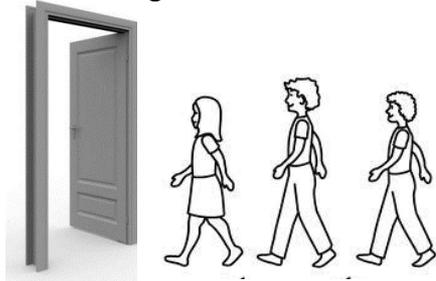
Content requirement for corporate e-Learning is expected to grow at 11% p.a. (2009-13)

This increased requirement for content, along with greater propensity of corporate in the US to outsource custom content development promises a large opportunity for custom content development companies in India.



## Animation Market Analysis

E-Learning

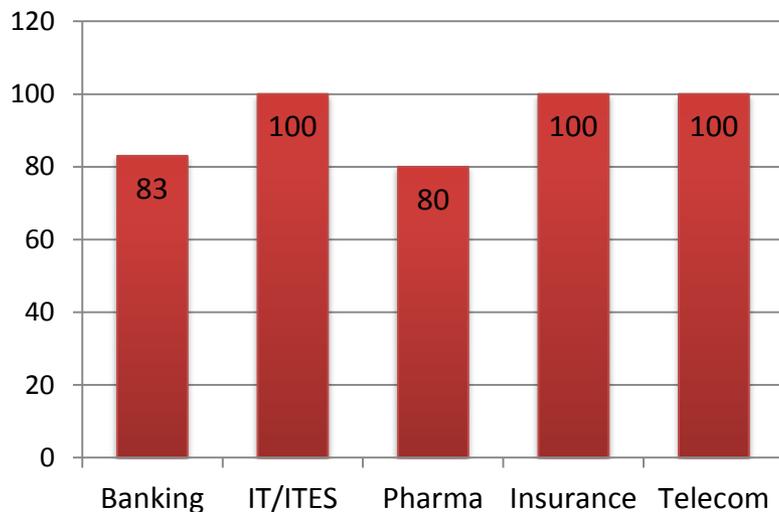


### Domestic Demand

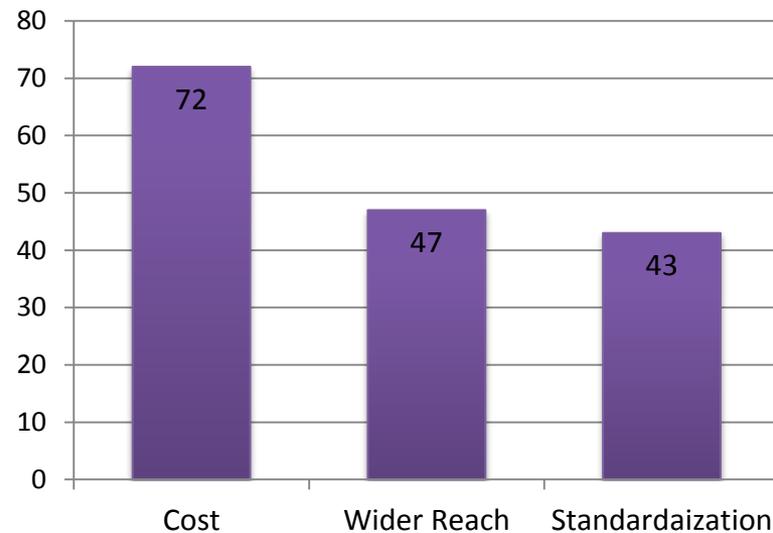
#### E-Learning Demand from the Corporate Sector

As per a survey conducted by Tata Strategic Management Group for specific industry verticals, adoption of e-Learning among small and mid-sized organizations in India is very low. However, most of these small and mid sized companies have shown willingness to adopt e-learning, the main drivers being cost savings and wider reach.

#### Willingness to adopt e-Learning(%)



#### Drivers for Adoption (% of Companies)

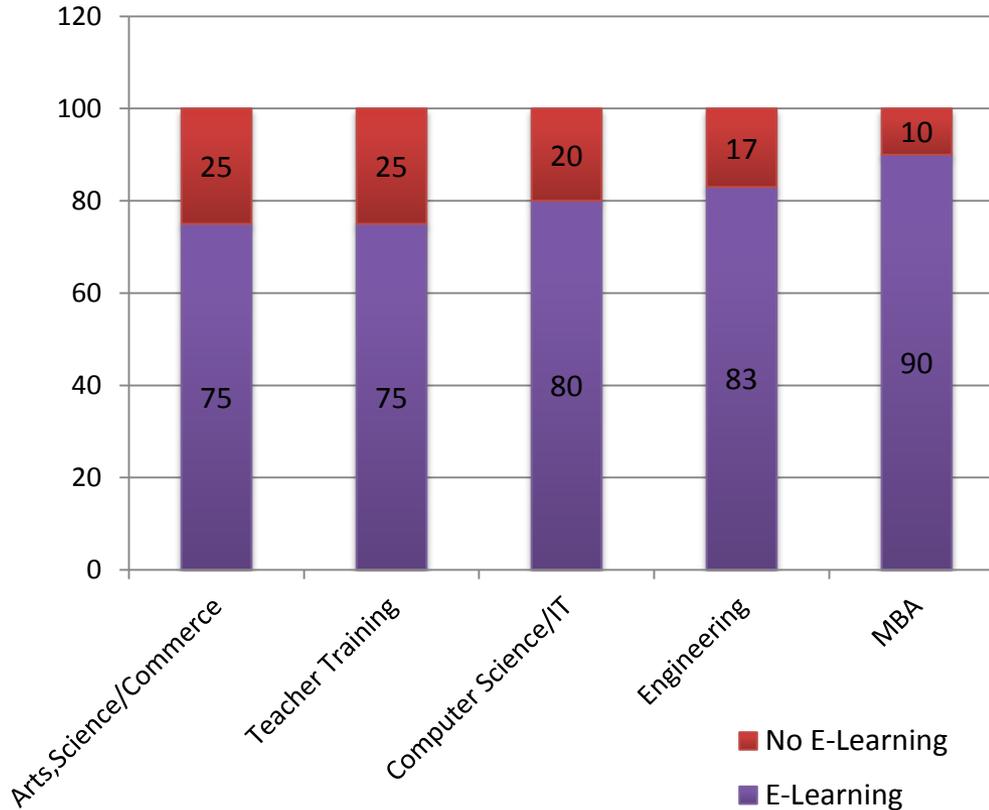


*This clearly shows the immense potential that e-learning holds in India among corporate.*



## Animation Market Analysis

Current E-learning Usage by Indian Institutes (% of Institutes)



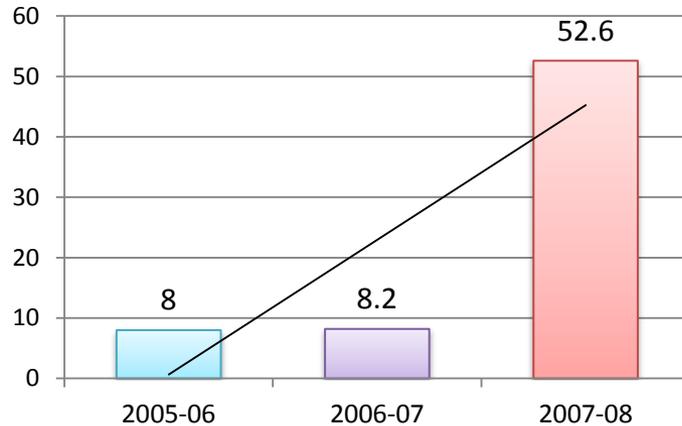
## Adoption of e-Learning by Higher Education Institutes

Current adoption of e-Learning by higher education institutes in India is abysmally low. Compared to the US where close to 95% of the higher education institutes have adopted e-learning solutions, a sample survey across a Tier 1 city in India reveals the adoption of e-Learning to be less than 15% by Indian institutes. With increasing awareness of the eLearning models and its associated advantages, adoption of e-learning is expected to increase in Indian higher education institutes. In fact, a large percentage of Institutes offering professional courses showed high willingness towards adoption of e-learning solutions. These e-Learning solutions are expected to improve quality of learning and differentiate the Institute from the others.

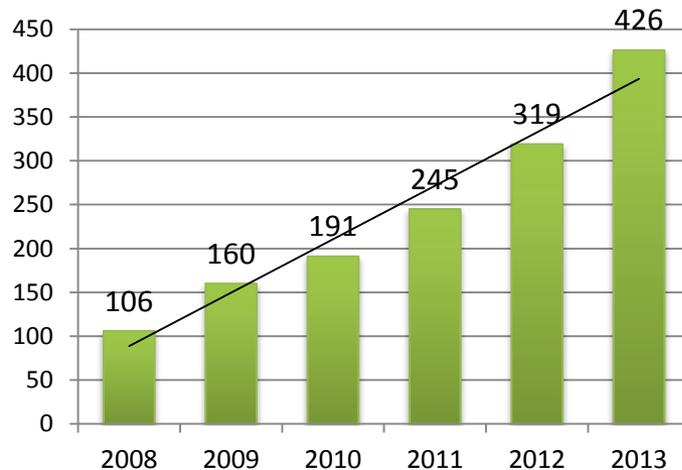


## Animation Market Analysis

**Government Spend on ICT1 for K-12  
- India (USD Mn)**



**Internet Advertising – India (USD Mn)**



### **Increased Government focus on Information, Communication, Technology (ICT)**

The Indian Government has been focusing on ICT in schools, which is seen in their increasing spends. This spend is expected to move up even further, thus presenting an increased business opportunity for the e-learning players and content providers.

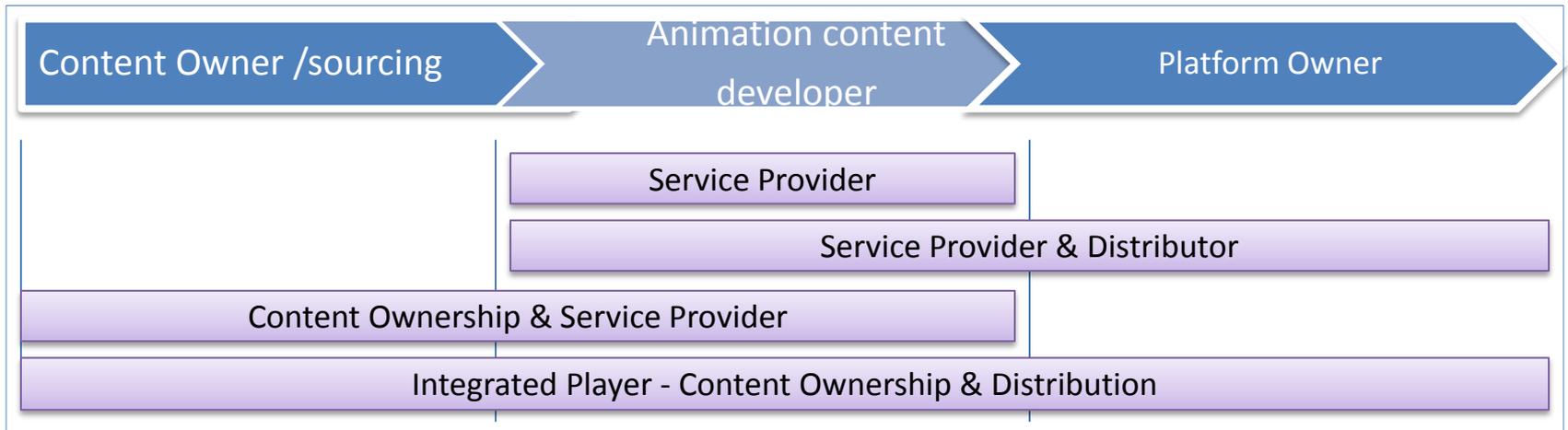
### **Increased Online Advertising**

Online advertising in India is expected to show a growth of 28% p.a. (2009-2013). This is expected to lead to greater demand for web-design services. Animation players providing such web-design services would find this a positive development.



## Animation Market Analysis

### Custom Content Development Service Models



### Custom Content Development Service Models

|  |  |
|--|--|
| Service Provider                                       | Pure service delivery : Content is sourced from the Client. Custom content developer player creates content in the customized format and migrates the same to the required platform.   |
| Service Provider & Distributor                         | Content is sourced from the Client. Custom content developer, in addition to creation and migration of custom content, also provides the platform for content e.g. Learning Management System.   |
| Content Co-ownership, Service Provider                 | In this model, the custom content developer, in addition to creation and migration of custom content, sources relevant content for the Client. The service provider typically enters into a tie-up with an institution, university or publisher for sourcing this content. |
| Integrated Player – Content Ownership and Distribution | In this model, the player plays an end-to-end role across the value chain – right from sourcing the content, creating and migrating the custom content, to providing the self-developed platform   |



## Animation Market Analysis

VFX

### Custom Content Development Key Players

| Key Players              | Target Segment                         | Presence in Geography  |
|--------------------------|--|--|
| Tata Interactive Systems | Corporate, Higher Education Institutes | US, UK, Europe, Mainland Europe, Australia, Middle East, Japan |
| Educomp                  | K-12                                   | India, Canada, US, SriLanka, Singapore                         |
| Everonn                  | K-12                                   | India  |
| Learning Mate            | Corporate, Higher Education Institutes | US, UK   |
| NIIT Ltd.                | K-12, Corporate                        | India  |



**TATA INTERACTIVE SYSTEMS**

Changing the way the world learns



LearningMate™





## Animation Market Analysis

### **Custom Content Development - Challenges**

While custom content development holds a large potential in India, there are numerous challenges which need to be overcome for it to realize its potential

#### **Lack of subject matter experts**

Engagements for custom content development may be specific to a particular subject /course. To make the content / instructional design relevant and interesting, the e-Learning custom content developer ropes in subject matter experts. It becomes challenging for the service provider to recruit or empanel subject matter experts for niche courses. In addition, growth of the domestic sector faces the following challenges:

#### **Cultural Constraint**

The Indian mindset lays significant importance on human interface for teaching or training. Therefore, they find it difficult to accept an e-learning product replacing face-to-face interaction, partially or fully.

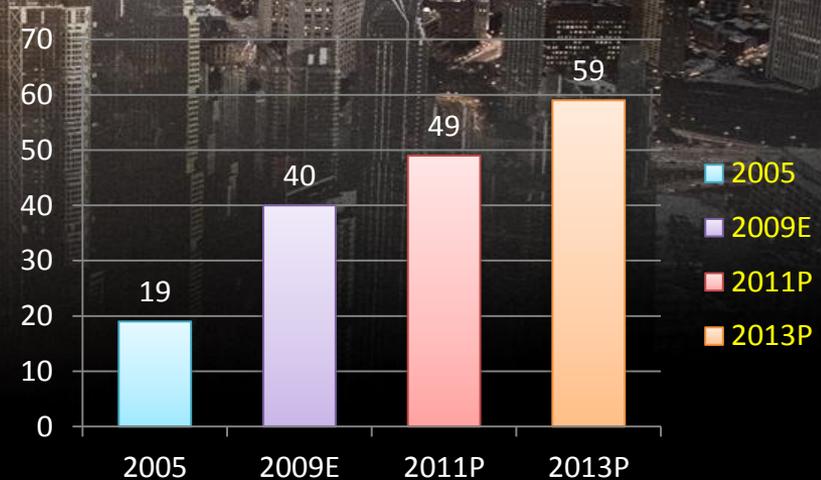
#### **Lack of Government Thrust**

Most of the institutes that are government aided do not have enough budgets to afford e-learning. As there is a cap on the maximum fee that may be charged by these institutes, this extra cost of e-learning cannot be passed on to the students. Such institutes shall be able to adopt e-Learning only if there is enough thrust from the Government towards the same.

# ANIMATION - Gaming

The global gaming industry is estimated at USD 40 billion (CY 2009E) and is expected to grow at 10% p.a. to reach USD 59 billion by 2013. Key segments for gaming are Console Gaming, PC Gaming, Online Gaming and Mobile Gaming. North America, Western Europe and Japan lead the gaming market. However, China is the fastest growing market especially for online gaming.

Global Gaming Market (USD Bn)

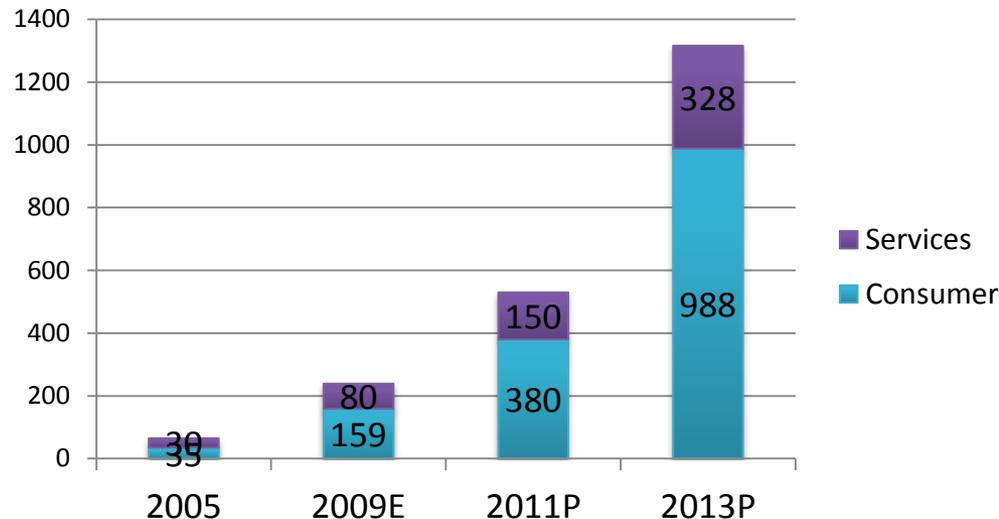




## Animation Market Analysis

Gaming

### Indian Gaming Consumer and Services Market (USD Mn)



#### Indian Gaming Industry

The Indian gaming market is estimated at ~ USD 239 million (CY 2009) and expected to show a CAGR of 53% to reach USD 1.3 billion by 2013.

This includes the work done by the Indian operations of the Gaming Players. This represents revenues from both the consumer market and gaming services.

#### Gaming consumer market in India comprises:

**PC Gaming:** Revenues from the gaming software sold through CDs (including legitimate, grey and pirated markets)

#### **Mobile Gaming:** Software revenues through mobile downloads

**Console Gaming:** Revenues from sale of hardware such as gaming consoles (legitimate and grey markets)

**Online Gaming:** Advertising and subscription revenues from online games

#### Gaming services market in India comprises: Outsourcing development services

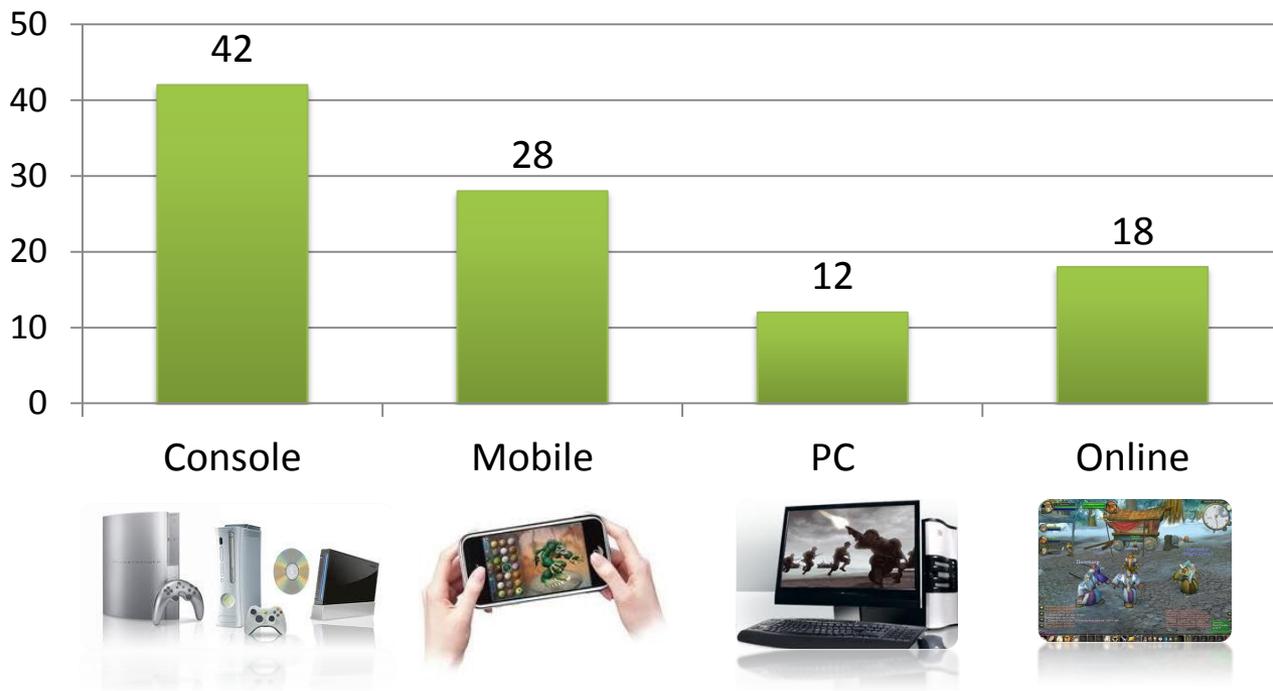
Ancillary services such as voice and email BPO support to MMOG (Massive Multiplayer Online Games) gamers worldwide, porting, testing, etc.



## Key Segments and Value Chain

Among the various segments, in India, Console Gaming is the largest with 42% of the market share (CY 2009).

### Gaming Sub-segments Revenue Split (CY 2009E) 100% = USD 239 Mn





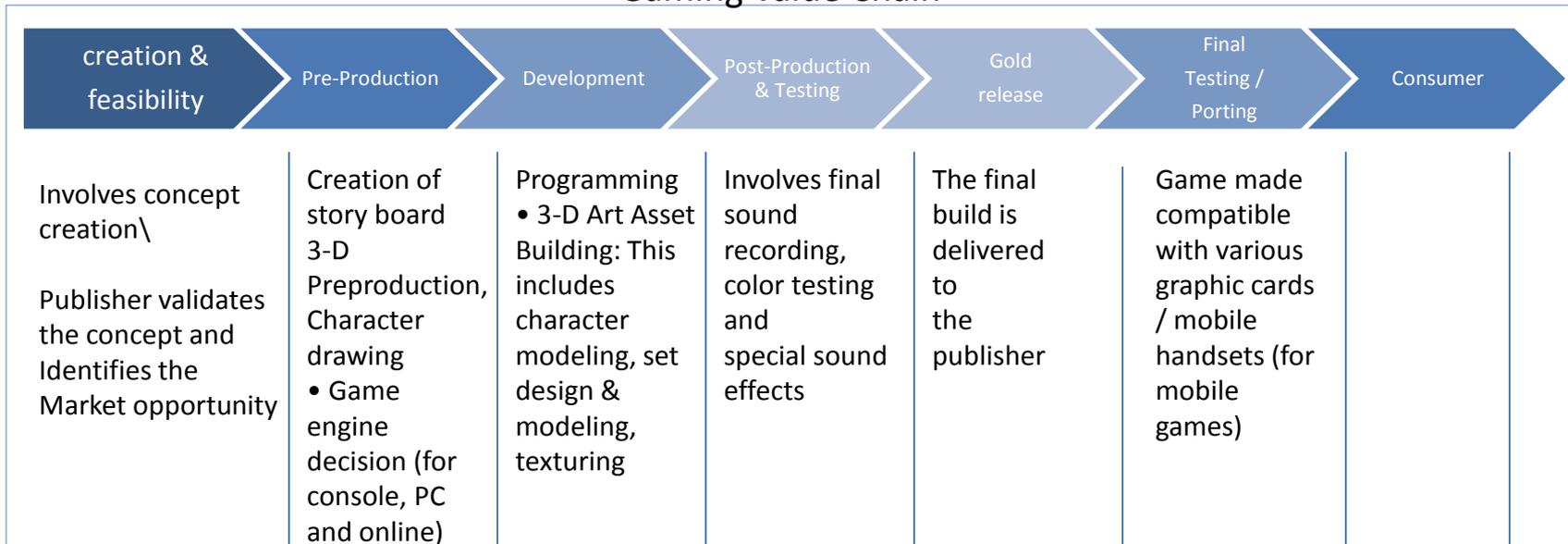
## Animation Market Analysis

Gaming

### Animation Entertainment – Gaming

The Indian animation entertainment industry is a fragmented industry, with the top 10 players contributing less than 20% of the industry revenues. Moreover, they compete along the different stages of the value chain. There are players who are present across all the stages of the value chain and there are others who provide services during specific stages of the value chain only. Some of the key players have been listed below, along with their presence in the value chain:

### Gaming Value Chain



*It is the development and post development activities which are outsourced. The Indian gaming players play a limited role in concept creation and pre-production. It is limited to a handful of players, who develop their own games, primarily for the Mobile and Online platforms.*

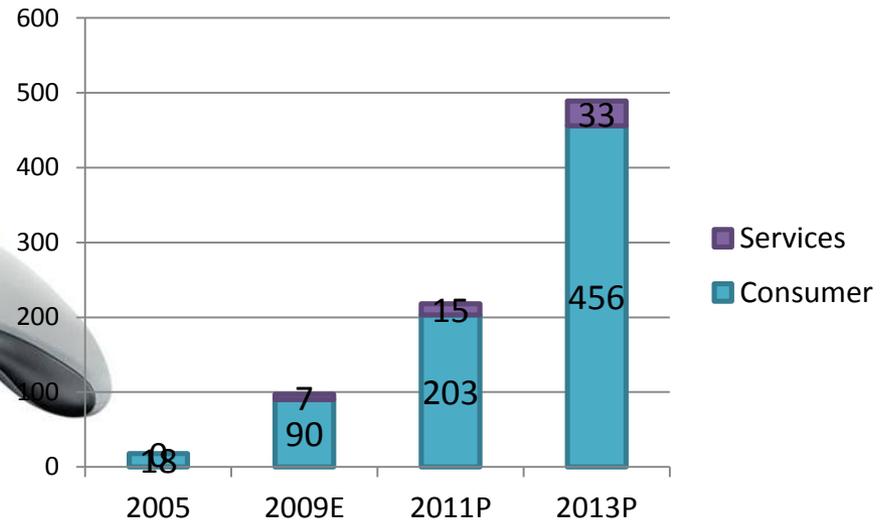


### Console Gaming

Indian console gaming market is estimated at ~ USD 97 million (2009) and expected to grow at 50% p.a. to reach ~ USD 489 million by 2013. A significant percentage of the console gaming consumer revenues is shared with the console hardware manufacturers / software publishers: International Players viz. Sony, Microsoft, Nintendo, Ubisoft, Electronic Arts etc. Moreover, the margins involved in this distribution business are very low. Hence, it is the 'Consumer Gaming Services' market which has been analyzed from the growth perspective.



Indian Console Gaming Market (USD Mn)





## Animation Market Analysis

## Console Gaming



### Growth Indicators

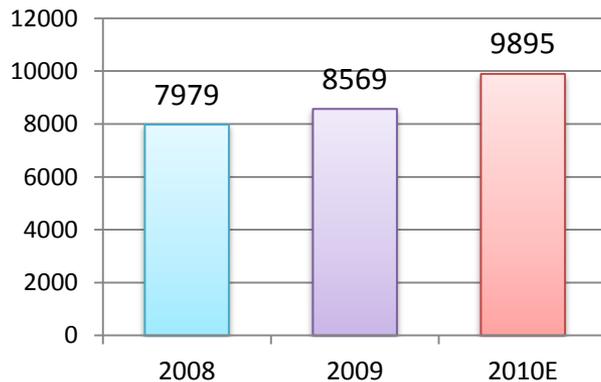
Currently, the revenues from console game development services are only ~ USD 7 million. These revenues are completely derived from providing services to international companies. It is the growth of console gaming overseas and extent of outsourcing to India, which would determine the growth of console gaming services in India.

### Increase in production of console games overseas

Global console software market is expected to grow at 11% p.a. till 2010 . This implies a greater need for game development services, which indicates a growing opportunity for Indian console gaming services' players.

### Global Console Software Sales

Market  
(USD Mn)



### Increase in outsourcing to India

*There is a significant cost differential between the production costs in India and that in US. Nasscom estimates that it costs USD 11 million to 18 million in India for a console NGN (Next Generation) game development compared to USD 18 million to 44 million in US for the similar work. Growth of console software globally coupled with the high cost savings offered by Indian console game services indicates large opportunity for gaming service providers in India.*

# Mobile Gaming

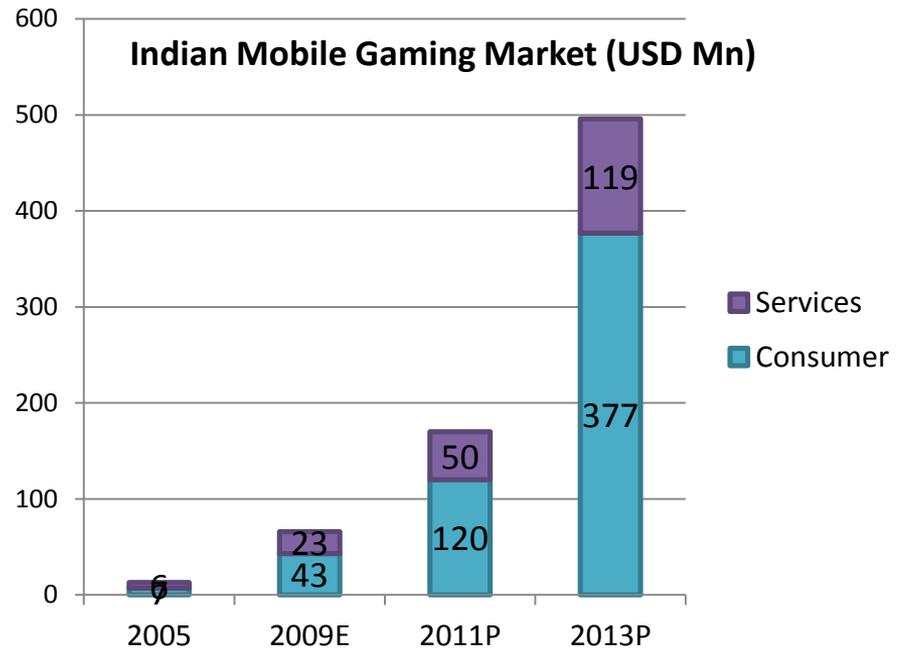


Indian mobile gaming market is estimated at ~ USD 66 million (2009) and expected to grow at 66% p.a. to reach ~ USD 496 million by 2013. Unlike console gaming, which is completely dominated by games from international publishers, mobile gaming consumer market in India comprises games from both the Indian publishers (e.g. India games, Mobile2win) and overseas publishers. Mobile consumer gaming revenues in India includes the consumption of games from international and Indian publishers. In India, Indian mobile gaming players earn revenues from Distribution of mobile games for international publishers (Small percentage of the overall revenue accrues to the Indian gaming player with a low profit margin) and Publishing their own games and distributing through telecom operators (~70% revenue from sale of the game is shared with telecom operators in India).



## Animation Market Analysis

## Mobile Gaming



### Growth Indicators | Domestic Demand

Mobile is the platform with the largest reach in India. It is believed that over 3 million users are engaged in mobile gaming every month. The top categories of games include cricket, Bollywood and action based games. Increasing mobile penetration, introduction of 3G in India, falling price points of mobile games and increased adoption of Value Added Services by telecom operators are expected to drive the mobile gaming consumer market in India and demand for mobile gaming services from domestic players.

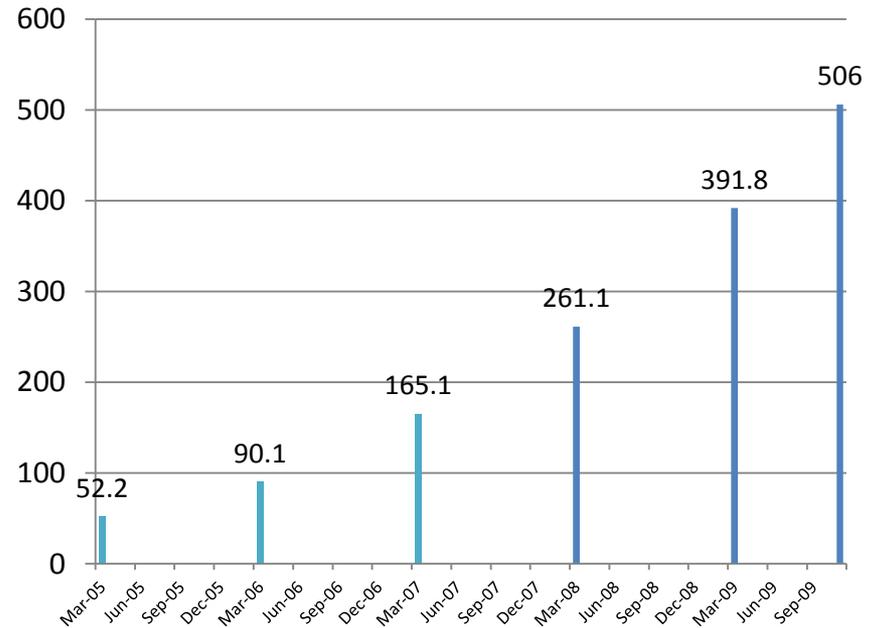


## Animation Market Analysis

## Mobile Gaming



**Growth in Indian Mobile Subscriber Base (Mn)**



### Increased mobile subscriber base

The Indian mobile subscriber base has been growing at a high rate of > 60% p.a. This growth rate is expected to continue as the overall mobile penetration in India continues to be way below that of the developed countries

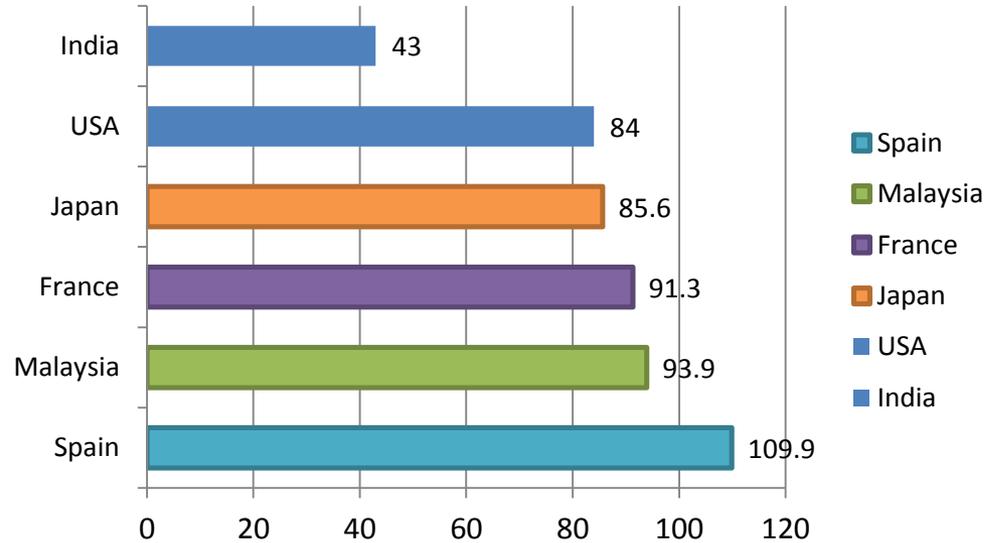


# Animation Market Analysis

## Mobile Gaming



Mobile Penetration Level: India (Sept '08)  
(%)



As the mobile penetration increases, more and more people will get exposure to mobile games, which is expected to lead to greater mobile game downloads.



## Animation Market Analysis

## Mobile Gaming

### Falling price points

There has been a significant fall in the prices of the mobile games from USD 3.33 to current average of USD 1. Increased affordability is expected to drive greater usage of mobile games..

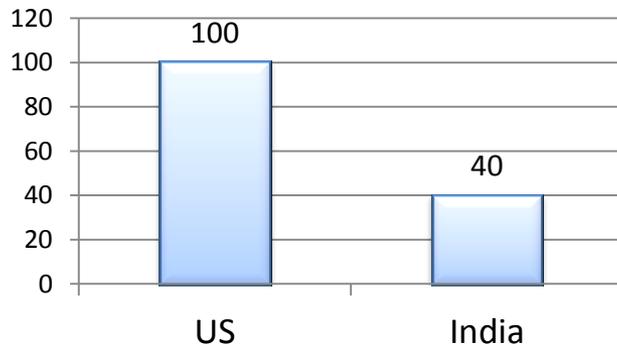
### Increased focus on 'Value Added Services' by telecom operators

Reducing profitability on account of decreasing voice tariffs in India is expected to drive telecom operators towards more value added services. Moreover, VAS as a % of overall revenue contribution lags behind the global %, indicating scope for growth. These services also include games which are generally developed by the local developers, hence presenting a significant market opportunity for organizations developing their own mobile games.

Increased exposure to gaming, increased affordability and greater demand for games are expected to drive the demand for mobile games in India. This is expected to encourage the Indian players to increase developing and publishing their own games, which, in turn, will drive the demand for mobile gaming services from domestic market.



### Production Cost Index - Mobile Games



### Demand from Overseas

International off-shoring accounts for more than 90% of the mobile gaming services market. Significant cost savings offered by Indian mobile gaming services is expected to drive the overseas demand for mobile gaming services. Nasscom estimates that it costs

USD 2 million – 5 million in the US compared to USD 1 million – 2 million in India for a mobile game. Hence, foreign companies can save around 50% of their development costs by outsourcing the work to India.

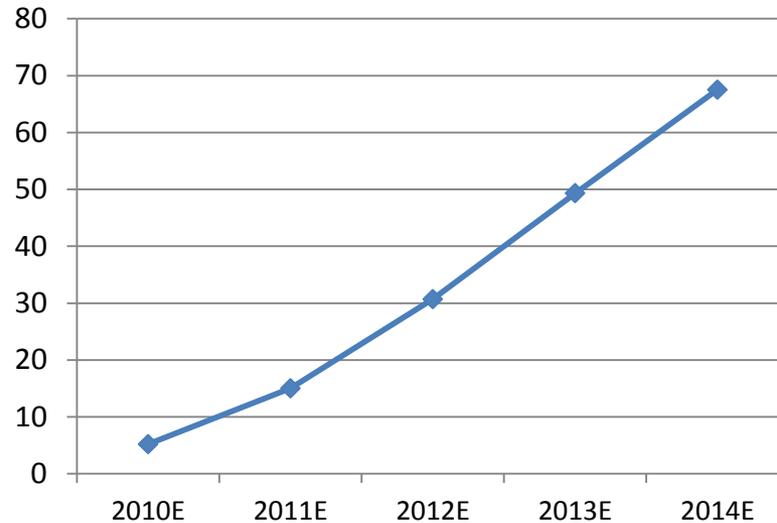


## Animation Market Analysis

## Mobile Gaming



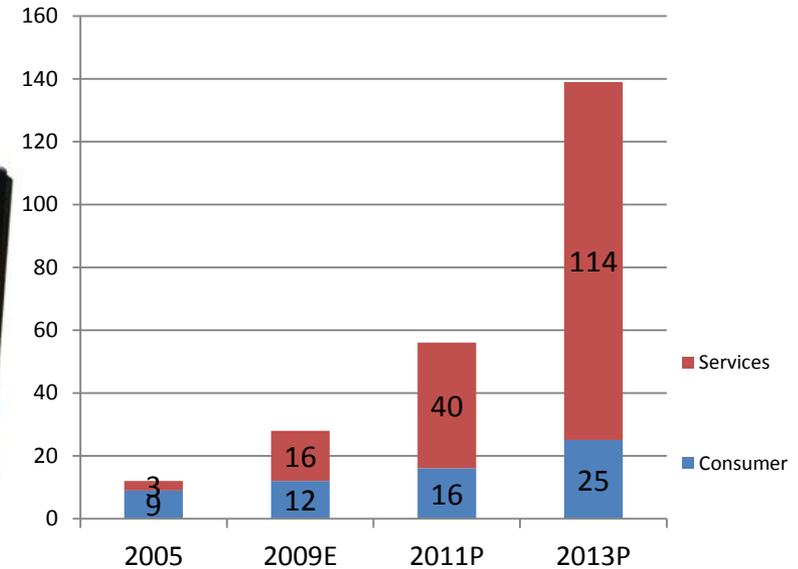
### Total 3G Handsets - India (Mn)



### Introduction of 3G enabled handsets

The demand for 3G enabled handsets is expected to be at 67.5 million by 2014 (assuming 3G services are launched in India in 2010) Introduction of advanced handsets will facilitate development of advanced mobile games and rollout of 3G services will provide efficient, high speed data networks to mobile gamers, thus driving consumption of mobile games.

# PC Gaming



## PC Gaming

The Indian PC gaming market is estimated at ~ USD 28 million (2009) and expected to grow at 49% p.a. to reach ~ USD 139 million by 2013. A significant percentage of the PC consumer gaming revenues is shared with the international PC Game publishers, who own the IP for the PC game. Moreover, the margins involved in this distribution business are very low. Hence, it is the 'Gaming Services' market which has been analyzed from the growth perspective.

# PC Gaming

## Growth Indicators

The Indian PC Gaming Services revenues are completely derived by providing services to international companies. It is the growth of PC gaming overseas and extent of outsourcing to India, which would determine the growth of PC gaming services in India. Skill sets required to develop PC Games are relatively easier to master: Thus, the Indian gaming players look at this as a significant opportunity.





# Online Gaming

## Online Gaming

The Indian Online gaming market is estimated at ~ USD 48 million (2009) and expected to grow at 41% p.a. to reach ~ USD 192 million by 2013. Currently, advertising forms the major chunk (85%) of the revenues from online games consumer market in India. However, as penetration of the internet in India and consumption of online games increases, this percentage is expected to change favorably towards subscription.

## Growth Indicators | Demand from Overseas

More than 95% revenues of the Indian online gaming services come from the international market. Increasing MMORG Trend Globally Increasing demand for MMORG globally is expected to drive the growth of this market.

China is the fastest growing online gaming market, primarily due to growth of MMORG. This trend is catching up with North America and European countries as well. The 22% growth in online gaming is expected to grow at a faster rate with greater MMORG adoption. With an increase in these games, more development, testing and porting work can be expected to get outsourced to India.

## Improving skill sets of Indian Gaming Players

The Indian gamers are improving their skill-sets for developing casual online games. As the Indian players improve their capabilities, India can be an attractive destination for third-party volume off-shoring work.

# Online Gaming

## **Domestic Demand**

Increasing internet penetration and higher adoption of MMORG (Massive Multi-player Online Role Playing Games) Games are expected to drive growth of online gaming consumer market in India.

## **Increased internet penetration**

There has been a significant growth in the internet penetration in India. The internet penetration has increased from a mere 0.6% in 2005-06 to 1.25% in 2008-09. This increased penetration along with the introduction of 3G services will facilitate playing of high end online games in India.

## **Increasing trend of MMORG in India**

MMORG (Massive Multiplayer Online Role Playing Games) is the leading trend worldwide. As this trend catches on in India, online gaming consumer market is expected to get a big boost. This increased demand for online gaming in India is expected to encourage the Indian players to increase developing and publishing their own games, which will drive the demand for online gaming services from domestic market.





## Animation Market Analysis

## Gaming Service Models

| Service Model                                       | Description  |
|---|--|
| Integrated Player                                   | Integrated companies that have presence in the complete gaming value-chain – from conceiving a gaming idea, to publishing it. They also take care of developing the complete game to distributing it across geographies. Indian Players have a very limited presence in this model that too restricted to mobile gaming. |
| Integrated Player                                   | Company invests in the development of the game, along with the publisher, in addition to providing one or more services along the value chain.   |
| Multi-Platform Development                          | Companies may publish / develop gaming content for multiple platforms.   |
| Development Service Provider (Third Party /Captive) | Third party developers or captive centers develop the game conceived by publisher / developer.   |
| Ancillary Services Provider (Third Party / Captive) | Third party or captive centers of a gaming company that serves the other parts of the gaming value chain such as the development of game art for all gaming platforms, porting and testing of mobile games etc.  |
| Distribution Services                               | Distributing the gaming products to the end consumer – May distribute the hardware (consoles) OR / And the software / Game   |
| BPO/Technical Service Providers                     | Companies offering technical support services online to customers of various gaming platforms  |



## Animation Market Analysis

## Revenue Models

### Revenue Models

Players in the gaming industry can realize revenues from different sources depending upon the service model that they adopt. The different revenue models for the gaming players are as follows:

| Service Model  | Revenues can be from sale of the games, advertising, IP licensing etc.  |
|--|---|
| Integrated Model   | Revenues can be from sale of the games, advertising, IP licensing etc.  |
| Co-Publishing  | Revenue Sharing   |
| Multi-Platform Development                               | IP Licensing / Sale of content  |
| Development Service Provider<br>(Third Party / Captive ) |   |
| Ancillary Services Provider<br>(Third Party / Captive)   |   |
| BPO / Technical Services Provider                        | Work for Hire<br>Revenues are generally realized on a per hour basis. Most of the Indian players realize revenue on this model. |
| Distribution Services                                    | Revenue from the sale of the game / hardware. Distributors earn distribution margins in this model.                             |



Gaming - Key Players



## Animation Market Analysis

## Gaming - Key Players

### Gaming - Key Players

| Service Model                      | Players  |
|------------------------------------|--|
| Integrated Player                  | Indiagames -> Mobile games; Plays the role of developer, publisher and distributor for its mobile games in India |
| Co-Publishing                      | Trine Entertainment  |
| Multiple Platform Development      |  |
| Development Service Provider       | Dhruva Interactive, Trine Entertainment Games, FX Labs, Lakshya Digital, Jamdat                                  |
| Ancillary Services Provider        | The Porting Lab, RZ2 Games   |
| Distribution Services              | Indiagames   |
| BPO / Technical Services Providers | Milestone eExpress, I-Energizer  |





## Gaming – Challenges

Gaming industry faces challenges due to lack of skilled manpower, low consumer propensity towards gaming, high standards already set by international players and unfavorable revenue sharing arrangements.

### Lack of Skilled Manpower

### Cultural Constraint

### Higher standards set by the International players

### Revenue Sharing With Telecom Operators



## Animation Market Analysis

## Gaming – Challenges

- **Skilled Manpower**

The Indian gaming industry is constrained on the talent supply side. Manpower requirement for gaming in India expected to grow from an estimated 2,300 in 2009 to 13,000 by 2012. However, there are not enough resources available and those who are available are not readily employable. While the constraints on quality of manpower remain, the development of domestic consumer market faces specific challenges

- **Cultural Constraint**

There is low awareness in India for gaming as an entertainment option. Parents generally consider playing games as a waste of time as compared to reading books, watching educational programs, or playing other recreational games. Until and unless this mindset change, gaming will not be adopted by masses and hence will be a big deterrent for the development of the industry.

- **Higher standards set by the International players**

The Indian consumers have had significant exposure to the international games. They expect similar quality from the Indian games as well. Therefore, there is a benchmark set for the local developers. Indian companies who are looking to develop their own IP have to reach that quality level for achieving success in the Indian market. So far, none of the Indian players have been really successful in the PC or console gaming. There are successful Indian games on the mobile and online, but they are quite limited as well.

- **Revenue Sharing With Telecom Operators**

Telecom operator keeps 60% to 70% of the revenues that accrue from the mobile game downloads. With mobile game developers getting only a small share of the overall revenues, there is not much incentive for them to develop IPs and distribute them..

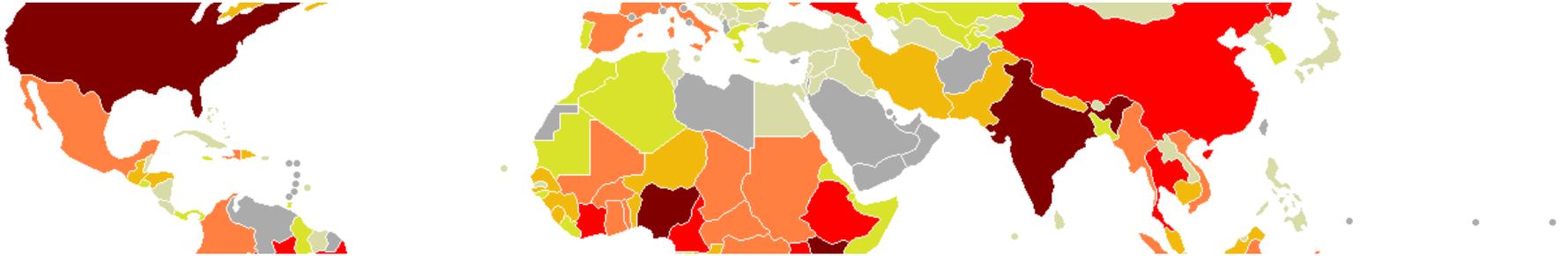
# International Outsourcing Trends – Implications for India





## Animation Market Analysis

## Outsourcing Trends



### Increased focus on cost containment

As a result of the recent economic slowdown, International Studios (Animation Entertainment), Gaming Publishers (Gaming), Corporate Sector (Custom Content Development) all are expected to increase their focus on cost containment. This is expected to lead to:

Higher propensity to outsource work to cost-effective destinations: The Indian animation industry captures a miniscule 8% of the total outsourced work while the Indian gaming industry is limited to an estimated ~1% of the outsourced work. As the adoption and extent of outsourcing by international players increases, Indian players need to leverage this opportunity and increase their share in the outsourcing market.

Greater inclination towards countries which offer tax treaties: For example, “The South East England Development Agency” (SEEDA) awarded grant of GBP 950,000 to NCsoft, a Korean online gaming developer and publisher, to expand and create over 100 new high skilled jobs in UK. Similar grants and rebates are provided by Canada as well.

The combined effect of tax rebates, grants and captive revenue streams gives a 20-30 percent cost differential for Canada. This is a negative sign for the Indian players as it reduces their cost competitiveness.





## Rhythm & Hues

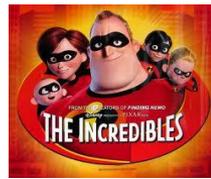
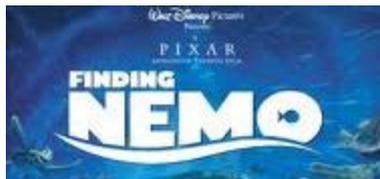
Setting up of captives in countries which international players deem fit on cost and quality parameters:

For example, Rhythm and Hues India added a second centre in Hyderabad and has expanded its employee count from 160 to 300 in last 2 years. This is a threat as well as an opportunity for the Indian players – While the captives eat into the opportunity available for Indian gaming and animation developers, it also helps the Indian companies demonstrate that India as a country has developed the requisite skills and the infrastructure to provide a quality output.

### Increased Risk Sharing – Co-Production Deals

International players are entering into more and more co-production deals for animation movies to share the inherent risks involved. Moreover, the nature of the co-production is also undergoing a transition – Initially, the co-production deals were limited to territorial revenue sharing; now more deals are being signed for sharing global revenues.

### Increasing usage of 3D effects / VFX in movies



The usage of 3D Effects in animation movies is increasing to enhance the visual appeal. Most of the recent hits like Ratatouille, Finding Nemo, The Incredibles and Avatar have made extensive usage of 3D animation techniques. The Indian players though well established in the 2D animation outsourcing, are yet to showcase their capabilities in 3D animation. Thus there exists a case for Indian players to upgrade their skill sets and compete in the 3D outsourcing market as well.



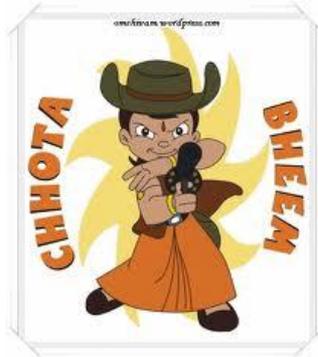
## Animation Market Analysis

## Outsourcing Trends

### Development of cross platform content in gaming

Due to the high costs involved in development of games, publishers are looking to develop cross platform games to increase the sales volume and thus recover the cost. This opens an opportunity for the Indian players to attract more outsourcing work by showcasing their capabilities in cross platform development of content and porting services.

### Signs of interest for Indian content overseas



There are signs of Indian content finding audience overseas. Motion Pixel Corporation (MPC) – an animated studio in America has taken licenses to develop, produce and distribute a theatrical film release based on popular Raj Comics property – ‘Nagaraj’. 13 episodes of the popular Indian TV Series – Chhota Bheem have been acquired by Cartoon Network, Japan. With the presence of large Indian diaspora across the globe, Indian companies may enter into specific deals to target this segment.



## Animation Market Analysis

### **Domestic Trends – Implications for India**

#### **Emerging trend of IP/Content development by Indian companies**

The Indian animation companies are moving up the value chain by increasingly developing their own IPs which can be monetized through various revenue streams. Similarly, increasing presence of the mobile screen and introduction of 3G are expected to encourage organizations (e.g. Indiagames) to develop their own mobile games.

#### **Increase in demand for local content**

There is a significant increase in the demand for local content, be in the form of movies or TV Broadcast. The kids and cartoon channels eg. Cartoon Network and Pogo are looking for local content which can easily strike chord with the children. For example, the success of animation TV series 'Little Krishna' has spurred the demand for local content by the kids and cartoon channels.

#### **Leveraging IPs across platforms**

The Indian animation and gaming companies are trying to leverage their successful Ips for all the platforms.

For example:

Short stories that are generally found in the story books are now been published on DVDs, distributed over mobile and their characters are getting used in commercials as well. Comics Publishers looking to monetize their content across platforms: The Indian Comics Publishers are planning to monetize their content libraries by introducing famous characters across platforms. Some of the examples are –

Diamond Comics plans of launching a children TV channel targeted at the age group of 4 to14 years. The content broadcasted will include both animation and live action. Diamond Comics tie-up with Loop mobile and Vodafone to push its mobile applications and its plans for tie-up with other mobile operators as well.



## Animation Market Analysis

## Domestic Trends

India games has recently secured the mobile content rights for 'Nagaraj' and 'Bankeylal' – the two most popular characters of Raj Comics.

Toonz animation India Pvt. Ltd. is producing a full length animated movie on one of the popular characters of Chandamama.

### Domestic Trends – Implications for India

Proposed government mandate for broadcasting local content

A proposal to fix the minimum percentage of local content to be shown on the channels has been floated and is expected to see some action from the ministry of information and broadcasting in the coming year. If a minimum percentage is fixed for broadcasting the local content, then it will open up opportunities for the local players to develop more IPs.

### Supply Side Constraints

Lack of employable skilled talent is the primary constraint impeding the growth of the Indian animation and gaming industry. Lack of standardized courses and curriculum Post-graduate / Degree / diploma courses in animation are very few in no. in India. Curriculum is not up to the international standards, thus decreasing the employability of students in India. Moreover, accreditation of these courses is also a concern.

Limited number of institutions providing animation / gaming education There are only a handful of institutes that provide relevant courses / degrees in animation and gaming, the leading institutes in this domain being National Institute of Design, Toonz Academy, Maya Academy, Arena Animation.

Awareness amongst students for animation and gaming as a career opportunity  
Indian students still prefer engineering, medical and commerce fields when it comes to a professional career choice making. The students have very low awareness of animation and gaming as a career option, especially in Tier-2 and Tier-3 cities in India.



## Animation Market Analysis

### Recent Deals in the Animation and Gaming Industry

| Announcement Date | Target Name            | Acquirer / Investor Name                              | Deal Amount(USD) and Stake      | Comments  |
|-------------------|------------------------|---|---------------------------------|---|
| February 2009     | Studio Brahma          | India TV Interactive's (ITVI) digital arm             | Undisclosed – Controlling stake | Studio Brahma is a design, development and production company having clients across graphic design, web design, multimedia and 3D animation |
| January 2009      | Laser Infomedia Ltd.   | Compact Disc India                                    | 20.6 million –50% stake         | Laser Infomedia is a gaming development firm with multi-platform gaming development Projects  |
| August 2008       | True Games Interactive | UTV Software Communications                           | Undisclosed – 80% stake         | True Games Interactive is a US based online game publishing group   |
| August 2008       | Indiagames Ltd.        | UTV Software Communications                           | Undisclosed – 51% stake         | India games is a mobile and online gaming publisher   |
| July 2008         | Babel Media Ltd.       | Quattro BPO Solutions and D.E. Shaw Group             | Undisclosed                     | Babel Media Ltd. Is a UK based provider of specialist services to the online games and interactive Entertainment industry                   |
| March 2008        | Frameboxx              | Manmohan Shetty and Chandir Gidwani (Centaur Capital) | 8.8 million – 51% stake         | Frameboxx provides training for animation and visual effects through a network of more than 40 training centers across India                |
| February 2008     | Method Films SA        | DQ Entertainment Plc.                                 | Undisclosed – 20% stake         | Method Films SA has been a co-producer with DQ Entertainment in a number of Productions   |

## Players

Animation and Gaming Industry in India is a highly fragmented market. We have profiled the leading players across Animation Entertainment, Entertainment VFX, Custom Content Development and Gaming.



The following players have been profiled across the various segments of the Animation & Gaming Industry:

| Animation Entertainment                               | Entertainment VFX   | Custom Content Development        | Gaming   |
|---|---|-----------------------------------|--|
| <p>1.Crest Animation</p> <p>2.Toonz Entertainment</p> | <p>1.Prime Focus</p> <p>2.Visual Computing Labs, a division of Tata Elxsi</p> | <p>1.Tata Interactive Systems</p> | <p>1.Indiagames</p> <p>2.Dhruva Interactive</p> <p>3.Trine Entertainment</p> |



**S**

**Strengths**



**W**

**Weaknesses**



# Animation Industry - SWOT Analysis

**O**

**Opportunities**



**T**

**Threats**



## SWOT Analysis

# Strengths

**3D Animation** is used in almost every aspect of Computer Graphics. It is used in Films, Commercials, Architecture, Industrial Modeling, etc to create visually compelling stuff when used in conjunction with post production software.

The **Future** of **3D** Animation appears very bright as there is a huge consumption of Computer Graphical Imagery in all kinds of medium.

**VFX** is used in almost every aspect of digital entertainment like movies, TV, Animation Serials, Show-reels, etc.

**Gaming** is very popular among teenagers and Young Adults. This demographic spends most of their time hooked to video games and are responsible for a vast majority of video games and console sales.

The **Future** of the **web is going to be 3Di**.

**3Di** stands for **3D Internet** and is used to represent the increasing 3D presence of the internet.

**3D Stereoscopy** is very much popular in the recent years.

The 3D experience is overwhelming and they keep coming back for more. Thus the demand of 3D Stereoscopic movies.

Relatively **new to India**. Can **capture much market share**.

All the **kids channel** content and movies are being done in animation than live shooting.

Tremendous scope for both **architectural** and **industrial visualization**



# Weakness

Lack of quality manpower

**Availability of experienced people is very less**

High end projects need hundreds of artists and huge infrastructure

**Relatively new industry to Indian market - so less exposure to the management and project leads to design perfect pipelines for project execution**

No proper academic courses available in India – at present, artists with little knowledge and skill set are available



## SWOT Analysis

# Opportunities

2d animation

UI Designing

Matte Painting

Set Development

Game content

3d content Development

3d Games

Product showcasing

TV Idents

3d titles

3d worlds

Rich text Media

E-Learning

walkthrough

Film Titling

In Film Graphics

Visual Effects

SFX

Architect Visualization

Industrial Visualization

Corporate Presentation

Kids CBT

DVD Authoring

Flash Games

Flash Videos

Motion Graphics

Internet ads

Banner ads

Rich text media

Flash intros

Brochure artwork

Video album graphics

3d simulations

Animation ads

Channel packaging

Corporate show-reels

Corporate presentation

Web designing

Film trailers

3d Storyboarding

Virtual reality

Data visualization

Animation Serials

Animation Movies

3d Walkthrus

2d games



# Threats



### **MANPOWER and INFRASTRUCTURE**

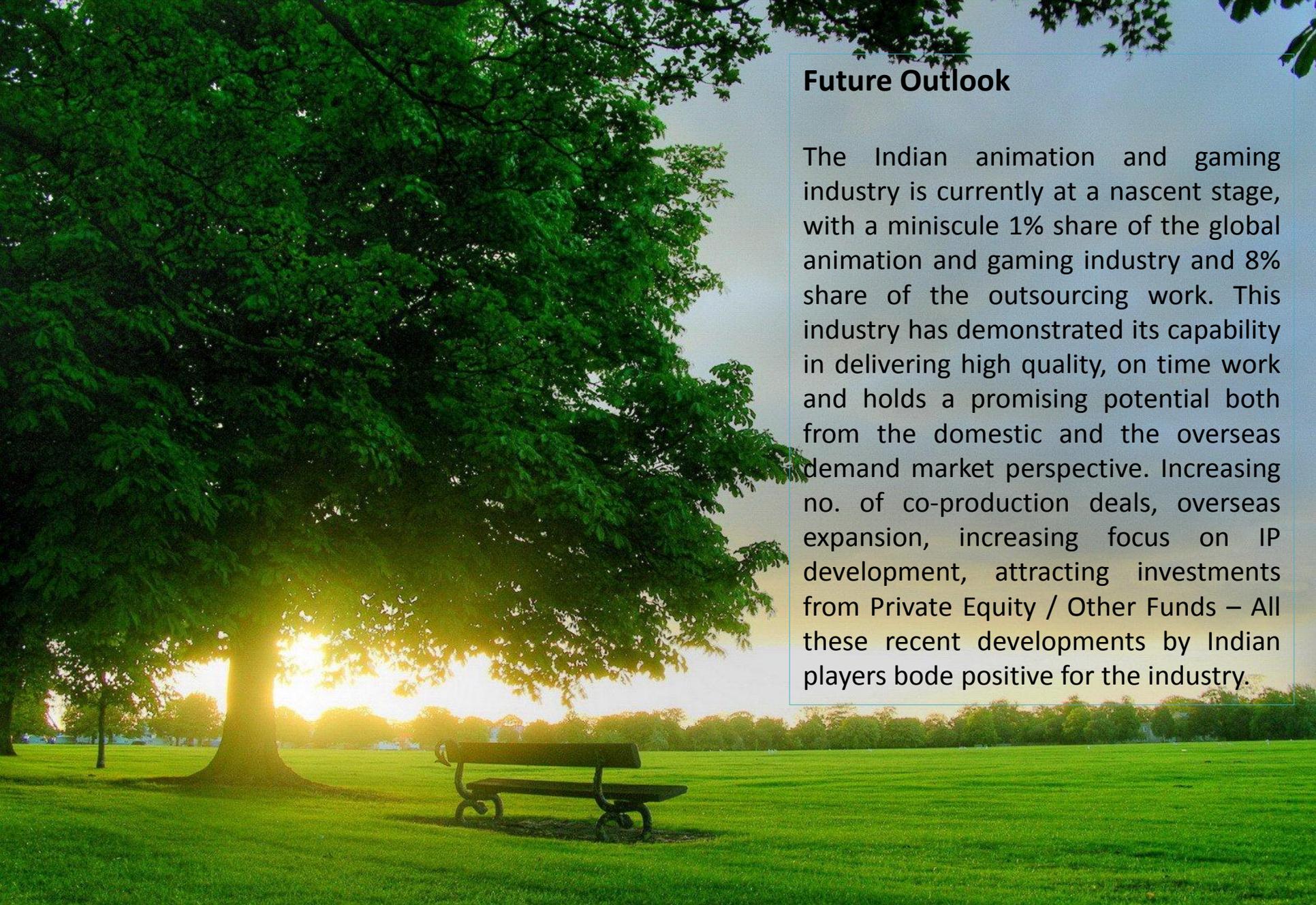
artists tend to move from one workplace to the other very quickly compared to offshore markets which is a big threat to execute projects in time

Data security and data management is another major area. Any kind of data loss may results delay in project delivery.

Failing to reach deadlines may result in bad reputation and heavy penalties

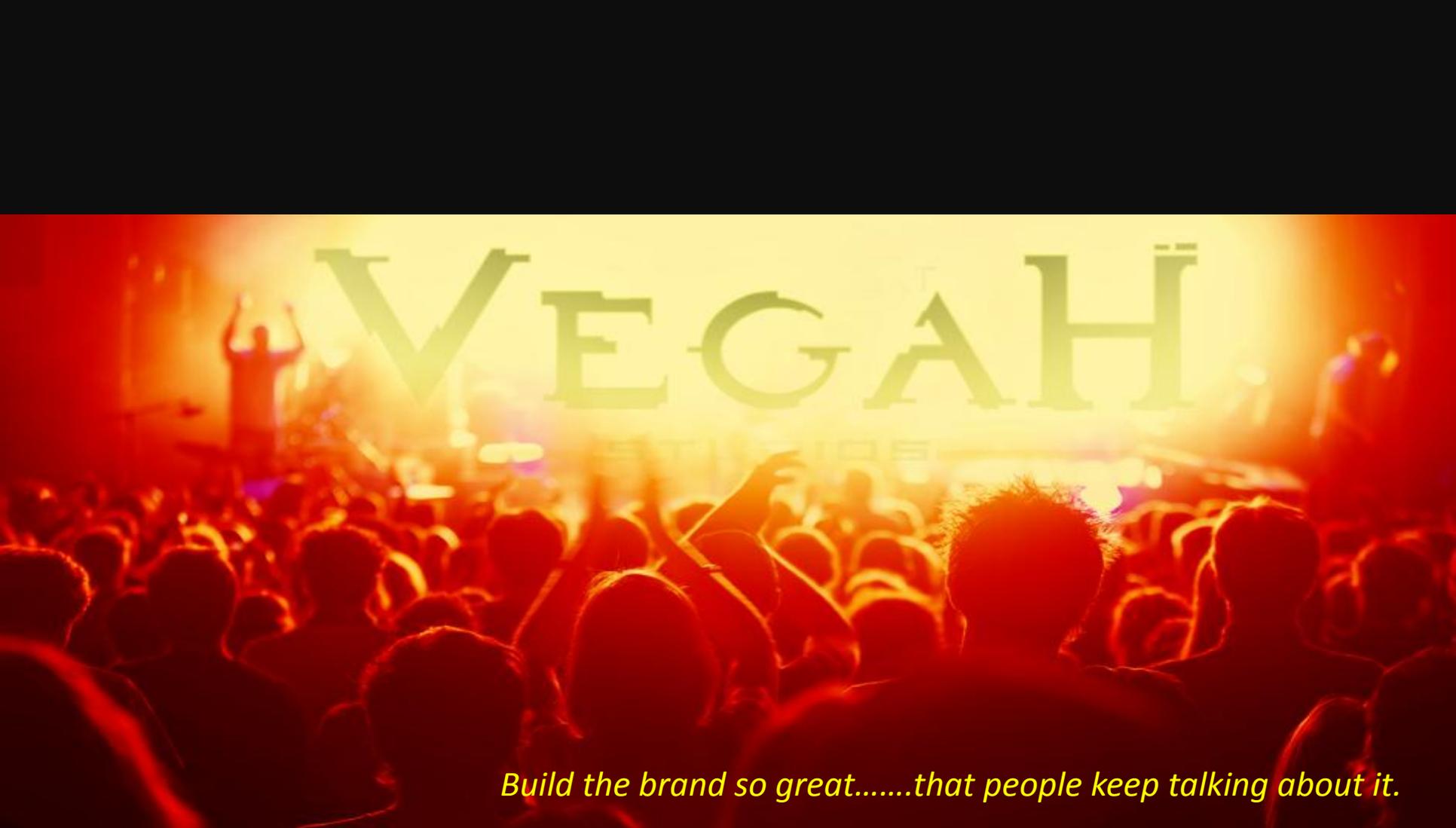


# Future Outlook



## Future Outlook

The Indian animation and gaming industry is currently at a nascent stage, with a miniscule 1% share of the global animation and gaming industry and 8% share of the outsourcing work. This industry has demonstrated its capability in delivering high quality, on time work and holds a promising potential both from the domestic and the overseas demand market perspective. Increasing no. of co-production deals, overseas expansion, increasing focus on IP development, attracting investments from Private Equity / Other Funds – All these recent developments by Indian players bode positive for the industry.



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