

Project Costa

Growth & Employment Project (GEM)

Federal Ministry of Industry, Trade & Investment
World Bank Assisted

Final report – Animation Segment

Reliance Restricted

24 August 2018 | Version 2.0 (Final)



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Final Market Study Report – Animation Segment

24 August 2018

Dear Sirs,

In accordance with your instructions, we have performed the work set out in your engagement agreement dated 11 September 2017 (the “Engagement Agreement”) in connection with the market study of four (4) value chains across different locations (the “Market Study”).

Purpose of our Report and restrictions on its use

This final report was prepared on the specific instructions of the Federal Ministry of Industry Trade & Investment for the Growth and Employment (GEM) project objectives, and should not be used or relied upon for any other purpose. This Report and its content may not be quoted, referred to or shown to any other parties except as provided in the Engagement Agreement.

We accept no responsibility or liability to any person other than GEM or to such party to whom we have agreed in writing to accept responsibility in respect of this Report, and accordingly if such other persons choose to rely upon any of the content of this Report they do so at their own risk.

Nature and scope of the services

The scope and nature of our work, including the basis and limitations, are detailed in our engagement letter.

This final written report comprises the Animation segment market assessment, where we have summarised our key findings, together with references to the supporting analysis. Our work commenced on 28 May 2018 and was completed on 27 July 2018, therefore, does not take account of events or circumstances arising after 27 July 2018.

Whilst each part of our Report addresses different aspects of the terms of reference for this engagement, the entire Report should be read for a full understanding of our findings and advice.

We appreciate the opportunity to provide our services to Federal Ministry of Industry Trade & Investment. Please do not hesitate to contact us if you have any questions about this engagement or if we may be of any further assistance.

Yours faithfully,

John Uwajumogu



Dashboard

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Introduction

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Project background, objectives and scope of study

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Project background

- The Government of Nigeria has emphasized the importance of diversifying the economy, supporting sectors that have potential for growth and creating massive employment.
- In line with this commitment, the Government has sought the World Bank's partnership to help Nigeria support Micro, Small and Medium Enterprises (MSME) operating in different high potential sectors throughout the country.
- This support is being implemented under the Federal Ministry of Industry, Trade and Investment (FMITI) and operationalized in the Growth and Employment (GEM) Project by the Project Implementation Unit (PIU).
- Project support addresses cross cutting sector issues, assistance to specific clusters, and more direct support to firms channeled through a platform called the Business Innovation and Growth (BIG) Platform providing various trainings, technical assistance and grant schemes.

Project objectives and methodology

- The objective of this study is to provide the GEM project with a deep market understanding of selected value chains (VC) within Nigeria, and an appraisal of their competitiveness in relation to other countries recognized for significant trading in these value chains. In this report, we consider the Nigerian Animation industry.
- The study methodology adopted involved all three research parameters namely desk research, qualitative interviews with industry stakeholders and a quantitative survey of selected value chain players across several states of Nigeria. Value chain players surveyed were drawn from the following sub-sectors:
 1. Motion graphics
 2. 2D Modeling
 3. 3D Modeling

Scope of study

Animation is defined as the rapid display of static images in a way that creates the illusion of motion. The animation process involves the pre-production, production, post-production and distribution. For the purpose of this report, the Nigerian animation industry has been sub-categorized into 3 broad segments, as defined below.

Motion Graphics:

This entails simulation of the illusion of motion by taking a picture of a character set in a specific pose against a background.

2D Modeling:

The process by which scenes and characters are animated in a two-dimensional space or environment.

3D Modeling:

This involves manipulating three-dimensional objects and virtual environments with the use of a computer program.

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International Overview

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2 International Overview

The Global animation industry

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The Global Animation Industry

- ▶ The global animation has grown significantly in the last decade and half. The industry was valued at \$62.3billion in 2006, but had grown to an estimated \$254billion in 2017 and is projected to reach \$270billion by 2020. ¹
- ▶ The global animation industry is dominated by the United States of America, India, Canada, Japan, France, China, Britain, South Korea and Germany. ¹ The rise in animation spend in the leading animation countries has been driven mainly by an increase in broadcasting hours by cable and satellite television, and affordable internet access. ¹
- ▶ The global animation industry is mainly dominated by the United States of America, as the animation industry is supported by the \$37billion Hollywood film base. In the United States of America, animation companies with a complete industrial chain such as the Walt Disney company dominate the market. ²
- ▶ The next top cluster in the global animation market is the Asian animation industry with major players such as India, China, Singapore, South Korea and the Philippines. The Asian animation industry, which was valued at \$52billion in 2017, services the regional market and also provides its service to overseas animation production companies primarily in the United States of America. About 90% of American animation production is currently co-produced in Asia. ¹
- ▶ Global animation companies have been drawn to the Asian animation industry as a result of low production costs in the region. Animation production costs are cheaper in Asian countries such as India due to the existence of tax incentives for creatives, and low regional labor costs. In addition, the growth in Asian animation companies has been driven by low cost of capital evidenced by low interest rates across the region. In 2017, India recorded the highest interest rate in the region at 6.1%. ³
- ▶ The African animation industry is dominated by South Africa, Kenya and Egypt. There have also been an emergence of animation studios in Nigeria and Zimbabwe.
- ▶ The following is expected to drive the expansion of the global animation industry:
 - Projected increase in the millennials consumer group with a market value of \$24trillion by 2020. ⁹
 - Development of virtual reality (VR) and augmented reality (AR) technology.
 - 200% growth in smartphone shipments within emerging markets such as India, Indonesia and Russia by 2019.
 - Global broadband penetration of 75% by 2025. ¹⁰
 - Increase in disposable household income.

Figure 2.1: Sub-segments in the global animation Industry

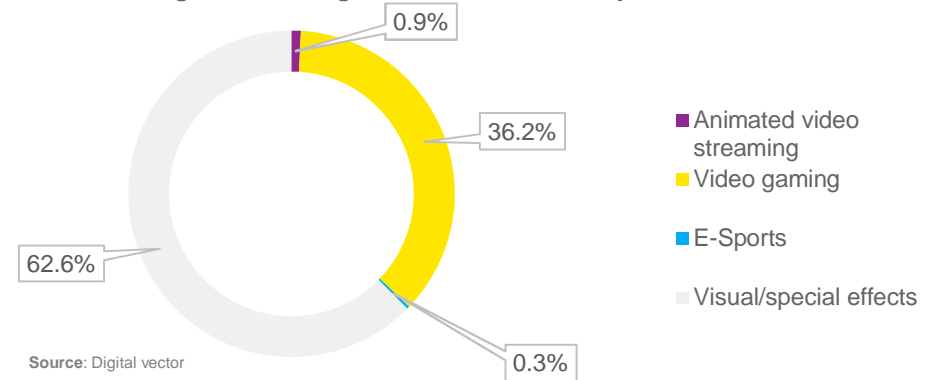


Table 2.1: Top 10 animation companies by 2017 total revenue

Company Name	Country	2017 Total Revenue (US\$'mn)	Business operations	Production
Cartoon Network	USA	627.8	Global	Adventure Time
Pixar	USA	487.3	Global	The Toy Story
Framestore	England	480.9	Global	Avengers: Age of Ultron
Walt Disney	USA	476.1	Global	The Lion King
Weta Digital	New Zealand	34.2	Global	King Kong
DreamWorks	USA	32.1	Global	Shrek
ILM	USA	26.1	Global	Star Wars
Blue Sky Studios	England	11.9	Global	Ice Age series
Nickelodeon	USA	4.9	Global	Hey Arnold
Studio Ghibli	Japan	0.9	Asia	Ocean Waves

Source: Gamedesigning



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The Global Animation Industry

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Table 2.2: Top animation companies by number of animation films produced (2010-2014)

Top animation countries	No. of animations films	Major animation company
Japan	110	Signal.MD
USA	109	Blue Dream Studios
France	47	Folivari, Panique! Production

Source: Animation Industry in Europe Report

Table 2.3: Top 10 international animation schools by ranking

Ranking	School	Country
1	Vancouver Film School	Canada
2	GOBELINS	France
3	Motion Pictures in Aries	France
4	National Film and Television School	UK
5	Vancouver Institute of Media Arts	Canada
6	Supinfocom Rubika	France, India & Canada
7	Filmakademie Baden-Wuerttemberg	Germany
8	Sheridan College	Canada
9	Lost Boys Studio-VFX	Canada
10	Think Tank Training Centre	Canada

Source: Animation Review

Global Macroeconomic Indicators of top animation countries

- ▶ Global trade rebounded in 2017 to 3.8% due to constant growth in emerging markets and technology. In addition, the 32% growth in the export market in 2016 also contributed to global growth.¹⁰
- ▶ To sustain this growth, most countries are implementing structural reforms to improve potential output of their respective labor force and counter the forecast global economic downturn. Industrialized countries with advanced technology are expected to experience consistent growth in their economy.
- ▶ Global crude oil prices increased by 20% in Q3 2017 following the extension of the OPEC agreement to limit oil production. The rise in oil price has however raised inflation in advanced economies.¹⁰
- ▶ The tax policy in the United States is expected to further drive commercial activity recording a positive impact on global economic growth. According to the U.S. Congressional Joint Committee on Taxation in the short term, the tax reform is projected to reduce the average tax rate on upper income U.S. households relative to those in the middle and lower segments.
- ▶ Asia is forecast to grow around 6.5% between 2018 and 2019. Despite the rise in oil prices to \$75 per barrel, the Middle East and North Africa are projected to remain at 3.5% growth due to the fiscal policies in the regions. Sub-Saharan Africa is expected to experience a 3.3% and 3.5% growth in 2018 and 2019 respectively. The subdued growth will be mainly driven by political uncertainty of elections in key countries in the region.¹⁰

Table 2.4: Global Macroeconomic Indicators of top animation countries – 2017E

Indicators	USA	China	India	Canada	Japan	France	South	
							Korea	Germany
Real GDP growth (%)	2.3	6.9	6.2	3.0	1.8	1.9	3.1	2.5
GDP per capita, real (US\$'000)	53.1	14.6	1.9	43.1	48.4	37.7	35.5	44.8
Population, (millions)	326	1,410	1,341	36.7	126	67	51	83
Inflation (%)	1.0	1.5	3.3	0.7	0.3	1.1	1.3	1.7
Interest rate (%)	2.8	2.8	6.1	10.2	0.0	0.0	0.0	0.0

Source: Oxford Economics



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Global industry trends

The Global Animation industry has been driven by some of the following trends:

- High budget allocation to animation movies:** Animation companies are reaching a larger market today than motion in the 90s. Frozen, a 2013 production of Walt Disney had a production budget of \$150million. However, the animation movie recorded a 867% return on investment, generating a revenue of \$1.3billion from domestic and international box offices. This excludes profit on merchandising and other distribution channels.
- Creation of ultra high definition channels** such as Sky Digital, Virgin TV and Freeview since 2005 has enabled viewers mainly in the United Kingdom to gain access to subscription channels that are sharper and more detailed than the normal TV formats. Ultra definition channels in USA such as A&E, ABC, BET amongst others were introduced in the USA in 1998.
- The use of streaming digital content.** The increase in bandwidth and growth in compression techniques has led to the availability of streaming channels, thereby reducing reliance on physical CDs. This has generated additional sources of revenue for animation companies as streaming enables viewers to pay per content streamed as against prepayment for an entire bouquet package. In 2017, the global streaming market for animation content was valued at \$2.4billion and is forecast to grow at 8% annually. ¹
- Real time rendering:** Real time technology is enabling animation companies to save production time and money. Real time rendering provides a platform for clients/designers to experience virtual reality and select designs in real time.
- The boom of anime:** Anime, the Japanese animation style which commenced in 1917 has been adapted by the global animation industry following the rise in English-dubbed programming. In 2016, the Anime market was estimated at \$18.4billion with a 9.9% y-o-y growth. Anime issues licenses to other countries to legally use their characters and in 2016 the industry earned \$7.0billion from the overseas market and signed 6,639 contracts with 221 countries.

Opportunities in the Global Animation Industry

Growth in the global animation industry has created the following opportunities for industry players.

- Mergers & acquisitions:** In 2017, Walt Disney proposed to acquire 21st Century Fox. The potential combination would account for 40% of the animation production in USA. The deal is expected to be completed in 2019.
- Cloud rendering:** The rise in cloud based technologies offers flexibility in animation production as cloud rendering eases animation production and saves production time by up to 20%-30%.
- Co-production and efficient synergies:** Production cost per animation movie is estimated between \$20million and \$300million. Animation studios are currently seeking strategic partnerships to gain synergies and lower production cost. ¹
- Impact of the Millennial Consumer Group:** It is projected that by 2025, the Millennial Consumer Group will have a spending power of approximately US\$7.5trillion – the ability of animation companies to quickly respond to the needs of this demographic group is critical to the future growth trajectory of animation market share.

Chart 2.1: IT Spending growth rate for the leading global animation regions 2017-2021

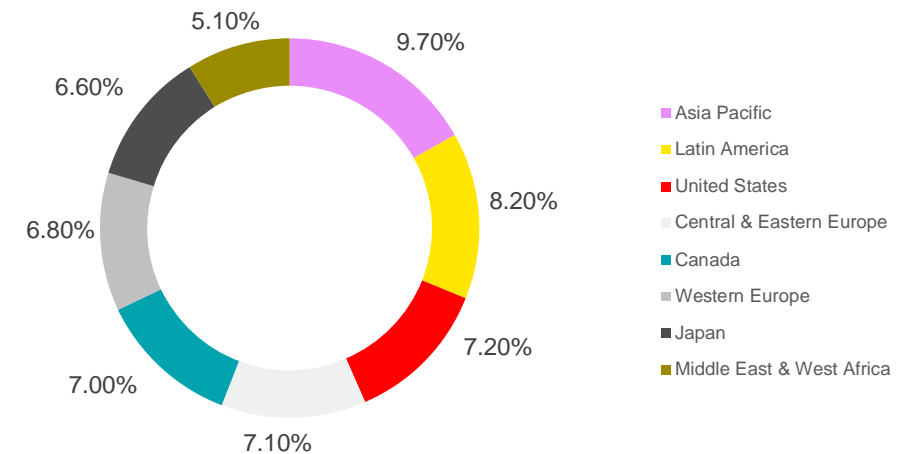
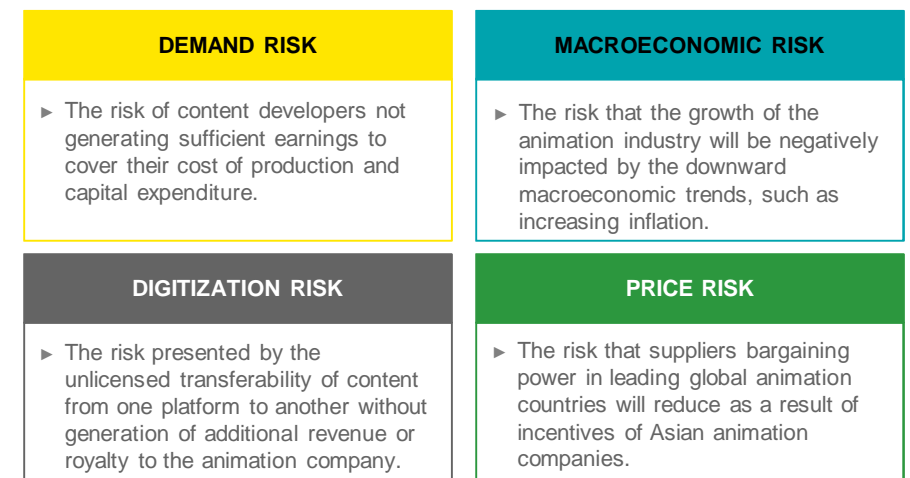


Figure 2.1: Key risks faced by global companies



¹ Digital vector

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Nigerian Overview

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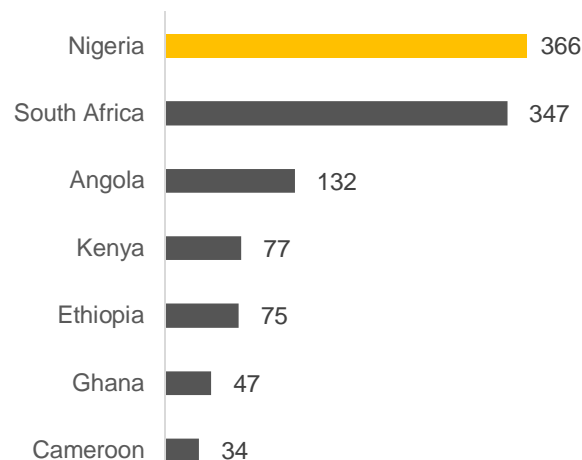


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Nigerian macroeconomic overview

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Chart 3.1: GDP (2017e US\$ billions)



Source: Oxford Economics, 2018

Table 3.1: Macroeconomic indicators

Indicator	2015A	2016A	2017E
Nominal GDP, US\$bn	495	406	366
Real GDP growth, % yoy	2.8%	(1.5%)	0.8%
Nominal GDP per capita, US\$	2,714	2,144	1,912
Inflation, CPI % yoy	9	16	16
Interest rate (MPR) %	11	14	14
Foreign reserves (US\$bn)	28.3	27	35
Average exchange rate: NGN/US\$	192	256	314

Source: Oxford Economics, 2018; CBN; World Bank

Country profile

Nigeria is principally an oil based economy, income from the sale of crude oil constitutes about 75% of budgetary revenues and close to 90% of exports. The country is the largest crude oil exporter in Africa, with the largest natural gas reserves of 5,173 bcm on the African continent.⁴

Nigeria witnessed robust economic growth with an annual average rate of 7% between 2005-2014 owing to favourable oil price and economic reforms embarked on by successive governments since the return to democratic rule in 1999.

However, the growth witnessed in the past decade has been negatively impacted by the decline in government revenues arising from dwindling crude oil prices since the second half of 2014, pipeline vandalism and security threats posed by terrorism. This has put pressure on the country's external reserves, consequently resulting in the depreciation of the Naira and the hike in inflation rate.

The Nigerian economy plunged into its first recession in 30 years after recording negative growth in each of the four quarters of 2016. However, NBS figures show that the economy rebounded in 2017 with growth rates of (0.9%), 0.7%, 1.4% and 2.1% in Q1, Q2, Q3 and Q4 2017 respectively. There was a marginal decline of (0.16%) as Nigeria recorded 1.95% growth in Q1 2018.⁵

Nigeria's inflation rate averaged 10.0% over the last 10 years to 2016. However, since 2016 inflation has consistently increased, peaking at 18.7% in January 2017. As at May 2018, the inflation rate had declined moderately to 15.7%.⁵

Macroeconomic Outlook

The Nigerian economy is expected to rebound moderately over the next 3 years to 2020 as the Federal Government implements its Economic Recovery and Growth Plan (ERGP) in supporting agricultural independence, energy sufficiency and infrastructural development. The primary objective of the ERGP is the diversification of the economy, with less reliance on crude oil trade.

In addition, stability in crude oil prices, expected from the continuous implementation of production cut agreements reached by OPEC members is expected to boost government revenue and alleviate public investment cuts.

Also, the ability of the Federal Government to sustain the relative peace in the oil rich Niger Delta region is expected to increase oil production thereby boosting government revenues over the near to medium term.

Population as at 2018

198m

NPC, 2018

GDP per capita – 2017

\$1,912

Oxford Economics, 2018

Nominal GDP – 2017

\$376b

Oxford Economics, 2018

Table 3.2: Macroeconomic outlook

Indicator	2018F	2019F	2020F
Nominal GDP, US\$bn	387	416	436
Real GDP growth, % yoy	2.6%	3.2%	4.3%
Nominal GDP per capita, US\$	1,966	2,058	2,116
Inflation, CPI % yoy	13	12	11
Interest rate (MPR) %	13.5	13.3	12
Foreign reserves (US\$bn)	32.1	35	48
Average exchange rate: NGN/US\$	390	430	425

Source: Oxford Economics, 2018; CBN; World Bank

⁴Business Monitor International; ⁵ NBS

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Nigerian animation segment

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Overview of the Nigerian animation industry

The demand for animation in Nigeria was estimated at \$23million in 2017. However, local players in the Nigerian animation industry supplied only c.30% of this demand. This is due to the development of animation in Western and Asian countries such as USA and Japan.

Global trends driving the local animation industry

Some of the global trends driving the Nigerian Animation Industry include:

1. **Emergence of Animation Short Skits:** There has been a significant shift in the length of animations shows. In 1906 when the use of animation as a medium of entertainment started, the standard animation show spanned c.15 minutes. In the 1950's, the length of a regular animation show increased to about 30 minutes, with Disney and Time Warner being the pioneers of this new form of extended animation shows and motion pictures.

However, the length of a standard animation show has shortened to about 2 minutes and this has considerably impacted the Nigerian animation market. The shortening of animation shows has been driven by the following factors:

- the relative affordability of producing skits;
- the ability of skits to capture viewers across various demographics; and
- the availability of multiple channels and mediums of broadcasting skits.

2. **Exponential growth of Silicon Valley and the impact on the Nigerian Technology Space:** Silicon Valley in California, USA is the global center for high technology, innovation and social media.

Between 1996 and 2001, Silicon Valley witnessed significant growth driven by increased venture capital, technology inventions and start-ups. This resulted in the creation of the new internet platforms such as Facebook, Hi-5, Bebo and Myspace.

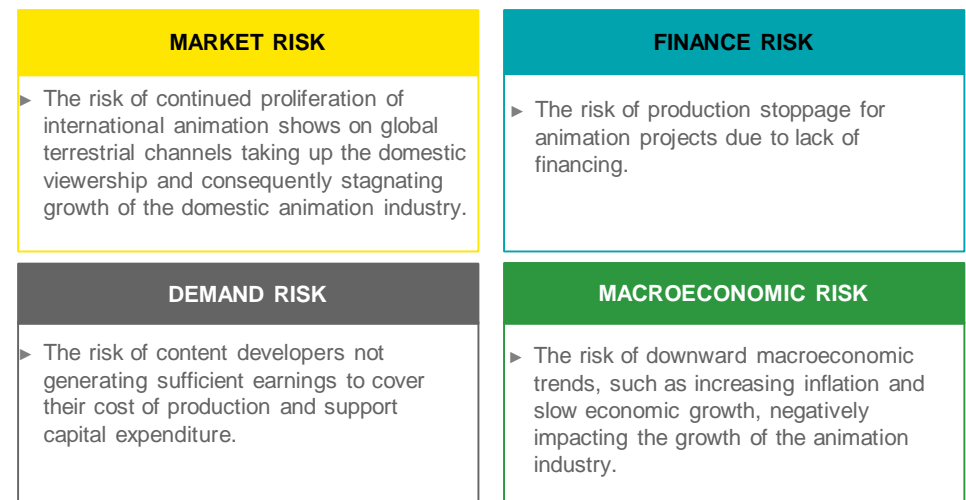
These platforms in turn enabled the expansion of the global entertainment industry. The YabaCon Valley, the Nigerian technological hub, has played a leading role in the development of the domestic animation industry. Companies such as Andela and Co-Creation Hub have benefited from the positive economies of scale in YabaCon Valley such as qualified personnel and high resolution graphic equipment.

3. **Proliferation of animation in advertisement:** The utilization of animation in adverts has significantly increased and this has been primarily driven by the cross-generational influence and impact of animation. Between 2010 and 2016, there were 7 animated-themed adverts shown at the Super Bowl, America's most televised event. And in the UK, the most popular Christmas commercials are animation-themed, with retail outlets such as Lidl, Argos, Toys R Us, Aldi, Asda and M&S all utilizing animation in 2017.

This has also had a ripple effect on the local industry with brands such as Diamond Bank, Mortein and MTN all utilizing animations for commercials.

More recently, we see a trend in local banks' digitization drive with several 3D characters such as "Leo & Ada" representing virtual support characters for personal banking in UBA and Diamond Banks.

Figure 3.1: Risks faced by Nigerian animation companies





3 Nigerian Overview

Nigerian animation segment

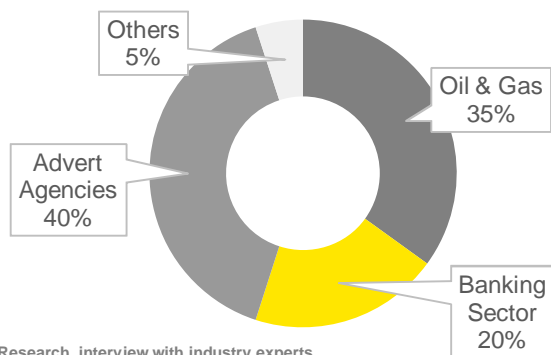
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Table 3.3: Key players in the Nigerian Animation Segment

#	Company	Creative Director	Est. Annual Turnover (N'000)	Market Share	Logo
1	Orange VFX	Richard Oboh	18,000	0.72%	
2	Smids Animation	Dami Solesi	12,000	0.48%	
3	Ajebotoons Animation	Eguvwe Yugbovwre	10,000	0.40%	
4	Basement Animation	Johnson Mbuotidem	10,000	0.40%	
5	EVCL Studios	Adamu Waziri	10,000	0.40%	
6	Magnus Media Studios	Cyril Odenigbo	7,500	0.30%	
7	Anthill Production	Niji Akinmolayan	7,000	0.28%	
8	MX Creative Studios	Philemon Otuya	6,000	0.24%	
9	Quadron Studios	Tayo Fasunon	6,000	0.24%	
10	Komotion Studios	Kolawole Olarewaju	3,200	0.13%	
11	Color Red Animation	Toochukwu Ogbogu	3,000	0.12%	

Source: Primary Research, 2018

Chart 3.2: Distribution of key animation customers



Source: EY Research, interview with industry experts

Opportunities in the Nigerian Animation Industry

Increased social awareness and the evolution of global consumerism has created immense opportunities for players in the animation industry.

- Utilization as an educational tool:** Animation has been identified by the United Nations Children Education Fund (UNICEF) as an effective tool for education. In addition, the United Nation (UN) has recommended that at least 26% of the national budget be allocated to the education sector. The combination of these two factors provides significant growth opportunities in the local animation industry.
- The increased use of animation as a tool of social activism:** The use of animation as a tool of social activism has grown in Nigeria, primarily as a result of the cross-generational impact of animation. Various pressure groups and activism movements in the country have utilized animation to tackle issues around Police Brutality, Malnutrition and Domestic Violence. The increased use of animation for social activism will drive the development of the domestic animation industry.
- International Film Festivals:** Annual film festivals and film awards such as the Eko Film Festival and the African Movie Academy Awards, have provided a platform for domestic graphic designers to showcase their production capabilities to a larger international audience and has contributed to recognition of local talents such as Lafem Animation.

In June 2018, Basement Studio will be the first Nigerian animation company to attend the Annecy International Animation Film Festival. The Annecy festival is an international animated film festival sponsored by ASIFA (International Animation Film Association) where over 3,050 animation films will be submitted.
- Increased demand for local talent by global terrestrial channels:** Global entertainment platforms such as Netflix, Sky, Hulu and Amazon Prime have increased their demand for domestically produced content. It is expected that this demand currently geared at motion pictures will extend to animation in the long term thereby supporting industry growth.
- Rise in demand for African animation content:** There are about 3,000 different cultures in Africa which are either unrepresented or misrepresented in the international film market. Global players in the animation industry are therefore exploring the untapped African animation market by seeking partnership with Nigerian animation players.



3 Nigerian Overview

Distribution of the Nigerian animation industry

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Nigerian animation industry location distribution analysis

- Historical Nigerian animation industry data by location is not readily available from secondary sources, therefore we have relied on a number of estimates from third party sources such as the NBS and data gathered through our primary research to derive a supported analysis in this regard.
- Our analysis is based on the following broad assumptions and estimates:
 - Animation industry contribution to GDP stood at 0.002% in 2017. This is taken as an average, with increased estimates for **Lagos, Abuja, Delta, Kano and Enugu** based on the increased animation activity of these locations and decreased estimates for **Zamfara, Jigawa, Benue, Kogi, Niger and States in the North-East** based on the decreased commercial activity of these locations arising from security and socio-economic issues.
 - An average employment rate of 81.2% (skilled, semi-skilled and unskilled) has been reported for 2017, and forms the basis of our employed pool estimate on a regional basis.
 - Animation industry contribution to national employment in 2017 was reported at 0.003%, this forms the basis of our animation industry employment contribution estimate per state.

Please refer to appendix F for a detailed analysis of animation industry contribution to GDP and employment for each of the 36 states of Nigeria and the Federal Capital Territory.

Table 3.4: Contribution of the Nigerian Animation Segment to GDP and Employment

Region	Regional GDP	Animation industry contribution to GDP	Animation industry contribution to employment	Ranking by GDP	Ranking by employment
	N'm	N'm	Jobs		
South-West	31,087,744	1,853	3,706	1 st	1 st
North-Central	13,623,490	313	626	2 nd	2 nd
South-South	29,393,817	209	418	3 rd	3 rd
South-East	14,512,824	63	125	4 th	4 th
North-West	17,344,308	37	73	5 th	5 th
North-East	8,827,923	26	52	6 th	6 th
Total	114,790,105	2,500	5,000		

Source: Primary Research

Table 3.5: Animation Industry location analysis

	South-South	South-East	South-West	North-Central	North-West	North-East
Regional GDP {N'm}- (a)	29,393,817	14,512,824	31,087,744	13,623,490	17,344,308	8,827,923
Average Animation industry contribution to GDP (b)	0.00071%	0.00043%	0.00596%	0.00230%	0.00021%	0.00030%
Estimated size of regional animation industry {N'm} c=(a*b)	209	63	1,853	313	37	26
Total Population (d)	28,625,276	21,800,046	37,986,533	29,045,402	48,595,966	26,078,009
Estimated employment rate per region (e)	81.2%	81.2%	81.2%	81.2%	81.2%	73.1%
Animation contribution to employment [%] (f)	0.00180%	0.00071%	0.01201%	0.00266%	0.00019%	0.00027%
Animation contribution to employment g=(d*e*f) (Number of Jobs)	418	125	3,706	626	73	52

Source: Primary Research

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Market sizing

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4 Market sizing

Historical Demand and Supply of the Nigerian Animation Industry

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Nigerian animation industry historical demand analysis

- Our analysis is based on the following broad assumptions and estimates driven by our market research results:
 1. An average annual turnover of individual animation player of NGN500,000.
 2. An average size of 5,000 animation players in Nigeria.
 3. An average of 30% of local animation demand met by local players.
 4. Documented number of animators in each region:
 - South-South: 8.4%
 - South-East: 2.5%
 - South-West: 74.1%
 - North-Central: 12.5%
 - North-West: 1.5%
 - North-East: 1.0%
 5. Demand for animation content has grown by an average of 10.52% per annum between 2013 and 2017 due to the increase in population of viewers between 0-29 years, rise in internet penetration, and increase in animation distribution channels.
 6. Supply of animation content has grown by a 5 year historical average of 9.52% driven by rise skilled personnel (coders & freelance animators) and 2D/3D technology.

Please refer to appendix A & B for a detailed analysis of historical demand and supply of the animation industry for each of the 36 states of Nigeria and the Federal Capital Territory.

Table 4.1: Historical demand in the Nigerian animation industry by geopolitical region

Region	2013	2014	2015	2016	2017
South-South	466,477,173	515,535,534	569,753,254	629,672,930	695,894,224
South-East	139,943,152	154,660,660	170,925,976	188,901,879	208,768,267
South-West	4,139,984,907	4,575,377,865	5,056,560,127	5,588,347,251	6,176,061,239
North-Central	699,715,759	773,303,301	854,629,881	944,509,395	1,043,841,336
North-West	81,633,505	90,218,718	99,706,819	110,192,763	121,781,489
North-East	58,309,647	64,441,942	71,219,157	78,709,116	86,986,778
Total	5,586,064,143	6,173,538,021	6,822,795,213	7,540,333,333	8,333,333,333

Source: Primary Research

Table 4.2: Historical supply in the Nigerian animation industry by geopolitical region

Region	2013	2014	2015	2016	2017
South-South	466,477,173	515,535,534	569,753,254	629,672,930	695,894,224
South-East	139,943,152	154,660,660	170,925,976	188,901,879	208,768,267
South-West	4,139,984,907	4,575,377,865	5,056,560,127	5,588,347,251	6,176,061,239
North-Central	699,715,759	773,303,301	854,629,881	944,509,395	1,043,841,336
North-West	81,633,505	90,218,718	99,706,819	110,192,763	121,781,489
North-East	58,309,647	64,441,942	71,219,157	78,709,116	86,986,778
Total	5,586,064,143	6,173,538,021	6,822,795,213	7,540,333,333	8,333,333,333

Source: Primary Research



4 Market sizing

Forecast Demand of the Nigerian Animation Segment

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Nigerian animation industry forecast demand analysis

- Our forecast demand analysis is based on the following projections/estimates:
 1. We expect the domestic animation industry to grow at an average rate of 16% over the forecast period, based on the following:
 - i. Historical industry growth rate of 10%
 - ii. Forecast economic growth (real GDP) of 3.7% from 2018; and
 - iii. Forecast population growth projections of 2.52% between 2017 and 2022.
 2. Customer categories for demand include:
 - Oil & gas: 35%
 - Banking Sector: 20%
 - Advert Agencies: 40%
 - Others (Campaigns, NGOs, SMEs etc.): 5%
 3. We do not expect any new category of customers over the next five years. However, there is a possibility that Nigerian television channels will begin to explore direct purchase of animation content vs. the current model of airtime purchase over the medium to long term.

Please refer to appendix C for a detailed analysis of forecast demand of the animation industry for each of the 36 states of Nigeria and the Federal Capital Territory.

Table 4.3: Forecast demand in the Nigerian animation industry by geopolitical region

Region	2018	2019	2020	2021	2022
South-South	794,752,958	916,249,115	1,066,366,252	1,241,736,762	1,445,221,680
South-East	238,425,887	274,874,735	319,909,876	372,521,029	433,566,504
South-West	7,053,432,498	8,131,710,897	9,464,000,490	11,020,413,763	12,826,342,411
North-Central	1,192,129,436	1,374,373,673	1,599,549,379	1,862,605,143	2,167,832,520
North-West	139,081,768	160,343,595	186,614,094	217,303,933	252,913,794
North-East	99,344,120	114,531,139	133,295,782	155,217,095	180,652,710
Total	9,517,166,667	10,972,083,154	12,769,735,872	14,869,797,726	17,306,529,620

Source: Primary Research

Table 4.4: Forecast demand in the Nigerian animation industry by customer segment

Region	2018	2019	2020	2021	2022
Oil & Gas - 35%	3,331,008,333	3,840,229,104	4,469,407,555	5,204,429,204	6,057,285,367
Banking Sector - 20%	1,903,433,333	2,194,416,631	2,553,947,174	2,973,959,545	3,461,305,924
Advert Agencies - 40%	3,806,866,667	4,388,833,262	5,107,894,349	5,947,919,090	6,922,611,848
Others - 5% (Campaigns, NGOs, SMEs etc)	475,858,333	548,604,158	638,486,794	743,489,886	865,326,481
Total	9,517,166,667	10,972,083,154	12,769,735,872	14,869,797,726	17,306,529,620

Source: Primary Research

We note that the delivery of the forecast demand estimates will be driven by certain macroeconomic factors and policy levers that the government may or may not deliver on over the next five years.



4 Market sizing

Forecast Supply of the Nigerian Animation Segment

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Nigerian animation industry forecast supply analysis

- Our forecast supply analysis is based on the following key parameter:
 1. Local supply of animation content is projected to remain at 30% of total market demand for animation in 2018.
 2. 10,000 trained animators are projected to be added to the industry yearly via the N-Power Creative Industries Scheme.

Economic factors that will accelerate a positive outlook for the animation industry

- Progressive industry policies, such as patent protection laws.
- Increased government intervention in the industry to drive economic/animation industry growth. e.g. the N-Power Creative Industries and establishment of Special Economic Zones.
- Increased private and public infrastructural investment.

Economic factors that will hinder the outlook of the animation industry

- Rise in exchange rate needed to import capital equipment.
- Rise in cost-push inflation.

Please refer to appendix D for a detailed analysis of forecast supply of the animation industry for each of the 36 states of Nigeria and the Federal Capital Territory.

Table 4.5: Forecast supply in the Nigerian animation industry by geopolitical region

Region	2018	2019	2020	2021	2022
South-South	272,296,669	316,905,621	372,333,519	433,794,410	504,625,576
South-East	81,689,001	95,078,686	111,707,056	130,145,323	151,394,673
South-West	2,416,632,936	2,812,458,640	3,304,381,235	3,849,846,641	4,478,473,237
North-Central	408,445,003	475,353,432	558,495,279	650,686,615	756,933,364
North-West	47,651,917	55,466,734	65,166,616	75,922,272	88,317,726
North-East	34,037,084	39,621,953	46,550,440	54,233,051	63,086,947
Total	3,260,752,609	3,794,885,066	4,458,634,145	5,194,628,312	6,042,831,523

Source: Primary Research

Table 4.6: Forecast regional distribution of trained animators

Region	2018	2019	2020	2021	2022
South-South	418	1,253	2,088	2,923	3,758
South-East	125	376	626	877	1,127
South-West	3706	11,117	18,528	25,939	33,351
North-Central	626	1,879	3,132	4,384	5,637
North-West	73	219	365	511	658
North-East	52	157	261	365	470
Total	5,000	15,000	25,000	35,000	45,000

Source: Primary Research

We note that the delivery of the forecast supply estimates will be driven by certain macroeconomic factors and policy levers that the government may or may not deliver on over the next five years.

5

Value chain

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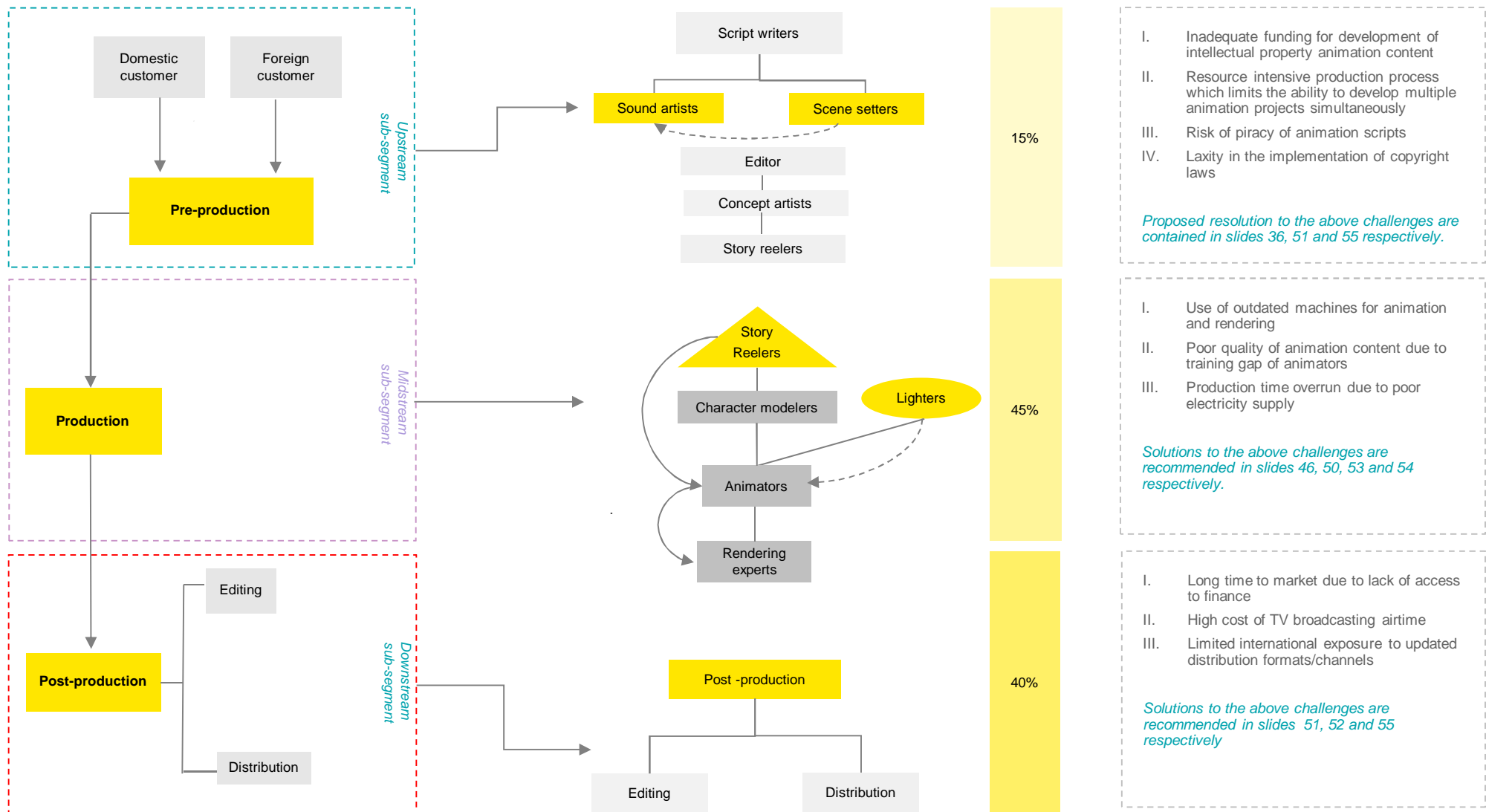


5 Value chain

Animation industry value chain

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Chart 5.1: Structure of the animation value chain



Source: EY Research, interview with industry experts

5 Value chain

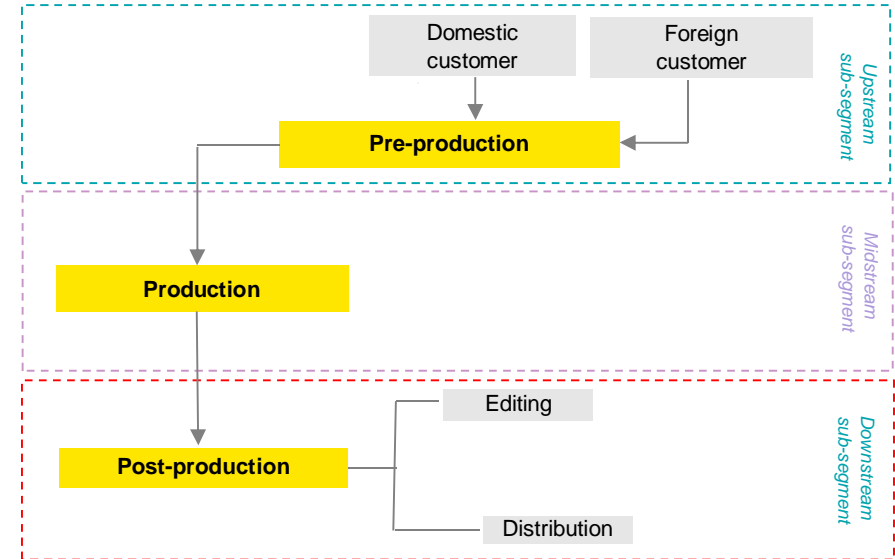
Animation industrial value chain

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Overview of the animation value chain

- ▶ There are c. 479 registered animation companies in Nigeria and c.5,000 freelancers engaged in production of animation content. ¹¹
- ▶ In 2017, animation contributed 0.002% to Nigeria’s GDP representing industry size of c.\$23 million - c.\$6.9 million of which is produced locally. In the same year, the market value of the global animation industry was estimated at \$254 billion. ¹¹
- ▶ Between 2006 and 2017 the global animation industry grew by 307%. ¹ However this growth is yet to be replicated in the Nigerian animation industry as the local industry recorded 11% growth between 2013 and 2017.
- ▶ The relatively slow growth is driven by the local animation industry structure (highly fragmented), life cycle stage (early stage industry) and several policy and infrastructural challenges.
- ▶ In recent times there has been minimal government intervention to assist players in the Nigerian animation market. Consequently, industry players are self-reliant and self-funding.
- ▶ Chart 5.1 across shows the structure of the local animation value chain which starts with pre-production and ends with effective distribution. In Nigeria, social media platforms are a popular distribution channel for freelance animation / own content, however, these channels are rarely monetized.
- ▶ Respondents stated that commercial content accounts for 90% of animation production in Nigeria with own content / intellectual property animation accounting for c.10% of work produced. The major clients of Nigerian animation players are as shown in Table 4.4.
- ▶ Own content (Intellectual property animation) is developed in-house. The development of IPs is a marketing tool for animation studios in Nigeria. IP rights are also assets to the animation studio as they can be sold as trademarks, copyrights, patents etc.

Chart 5.2: Structure of the animation value chain



Source: EY Research, interview with industry experts

¹ Digital vector; ¹¹ Decision Support

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Content development and pre-production

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The pre-production phase is the design and planning stage of any animation project and determines the ultimate product quality. It is also the longest phase in animation production.

The phases involved in content development and pre-production are explained below;

- i. **Content development:** Every animation project begins with identification of the target audience. The existing concept of the producer is then summarized in a 'bible' which sets up the concept of the content, the characters, and the potential story lines. Concept development accounts for c.10% of the total animation production cost.

Due to the confidentiality of intellectual property, advanced countries such as USA enforce privacy laws to safeguard intellectual property from piracy throughout the stages of the value chain. In Nigeria, the Industrial Property Commission (IPCOM) bill which recently passed its second reading in the national assembly is expected to streamline the procedures of registering intellectual property rights.

Currently, Nollywood, the base for Nigerian animation players reportedly loses \$2bn annually due to piracy as there is no confidentiality policy preventing theft of intellectual property in Nigerian film industry.

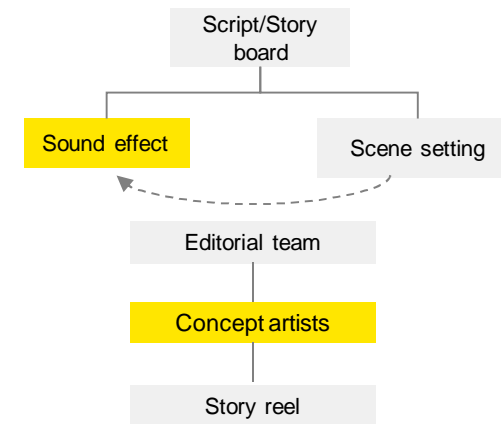
- ii. **Financing:** Establishment of a budget for the content production is determined during the pre-production phase to prevent cost and time overrun during production.

Due to the private ownership of intellectual property, financing is usually sought by the animation studio/producer. Most investors are not drawn to invest in the animation industry due to the long payback period. Custom animation is however usually funded in phases by the client.

Licensing & pre-selling: At this stage, producers of IP identify buyers ready to purchase their content. This is essential to prevent demand risk. Parties to a pre-sale or license contract are found at Animation film festivals such as the Annecy International Animated Film Festival where scripts with project descriptions are sent out to potential buyers. According to a respondent, international pre-sales have been sought by players in order to compensate for the lack of financing from Nigerian investors.

- iv. **Storyboarding:** Subsequent to the introduction of the 'bible', the content director's script/storyboard is shared with the project team. The storyboard is created to depict the building-blocks of the animation by providing sketches of each scene in the project. In addition, an insurance policy is secured to protect the animation content and the production crew.

Chart 5.3: Structure of the pre-production stage



Source: EY Research, interview with industry experts

Editorial teams create animatics (animated storyboard) from the story board and produce reels showing storyboard images, music and sound effects. This is to provide the client with frames reflecting the final output. Following client feedback for custom animation, the final dialogue is included.

- iv. **Visual development:** This involves understanding the personality of each character and determining the environment to suit them. Visual developers and concept artists create design elements such as the characters, environments, props, color pallets and backgrounds which gives the creative director an idea of what the final output would look like. This stage accounts for c.5% of the cost of animation production.

This phase is usually supported by a legal unit to provide advisory service regarding the legality of characters, ethical issues / considerations and to prevent consequent litigation of the animation content e.g. characters in a car should wear a seatbelt.

Pre-production costs entail feasibility study, recruitment of artistic and technical resources.

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Production stage

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The mid-stream animation value chain pre-dominantly entails production. The long time to market of animation content is partly due to the long production period and rewriting of scripts. The average time required to produce a 60-90 seconds animation content is three weeks.¹² This is further extended when there are complex features in the content such as multiple characters and multiple character movement.

PRODUCTION COST

Globally, production cost per animation movie ranges between \$20million to \$300million.¹ Respondents stated that it costs an average of NGN500k to produce a 60 seconds animation skit and NGN10million to produce an animation series containing 13 (60 seconds) episodes.¹²

Cloud production has been utilized by animation studios as a cost-arbitrage method as it reduces time, CPU power and storage needed for rendering and character modeling. It is cheaper as it is on a pay-per use basis. In addition, cloud production has enabled animation producers to review computer-generated characters using high definition.

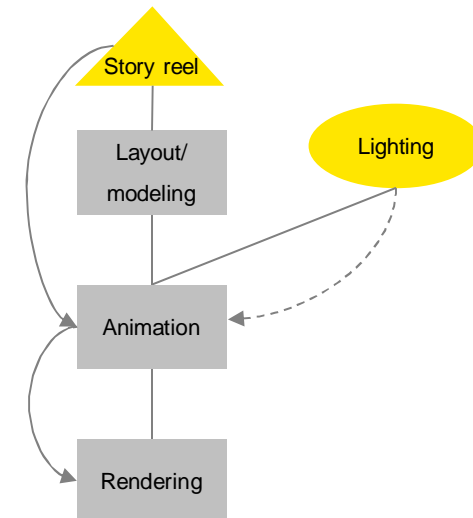
The HP's Halo Collaboration Studio offered DreamWorks Animation Studio the opportunity to produce Shrek the Third without the production team being in the same physical location.

The production phase employs the highest labor cost in the animation value chain. As a result, key international animation companies outsource labor-intensive aspects of the production stage to Asian countries due to the low cost of labor in such countries. In Nigeria, production cost contribute c.45% to the total cost of animation production.¹¹

PRODUCTION PROCESS

- i. **Modeling:** This is the process of creating and positioning the 2D/3D characters/objects within a scene or layout. **Rendering** is also carried out in this stage to show the final output of the completed computer graphics. The modeler sculpts and refines the characters until modelling is completed.
- ii. **Animation:** This involves the following processes.
 - **Texturing:** This entails coloring the created characters and environment by the surfacing artist in order to match the textures of the characters and environment in the visual development stage.
 - **Rigging:** This is the process of setting up controllable skeletons and fastening them to the characters enabling animators to move the face and body of the characters to act according to the script. The crowd department create realistic crowd characters in the movie.
 - **Layout/animation preparation:** This involves placing the artwork from other departments into a 3D dimensional environment.
 - **Character animation:** Character animators are the actors in the animation who tell the story through movements and expressions. They act out scenes via video to use as reference for their animation. 3D animators pose the character using the rig created by the rigging department.

Chart 5.4: Structure of the production stage



Source: EY Research, interview with industry experts

- **Character effects:** Character effect artists create all elements moving on a character and interaction of the characters with external objects such as hair, clothing, feathers etc.
 - **Special effects:** The special effect artists ensure that all details appear realistic.
 - **Matte painting:** This involves creation of the background outside the set such as cityscapes, mountains, etc.
- iii. **Lighting:** This is necessary to ensure that the animated scenes are close to real life.
 - iv. **Rendering:** This is the final stage in the production of animation content. It is the process of generating photorealistic effects or non-photorealistic images from the 2D/3D model. Rendering software simulate visual effects such as lens flares, or motion blur. The types of rendering available to producers are as follows:
 - **Offline rendering:** This is favored by the animation company when the project has no tight deadline and high image quality is required. In Nigeria, most players use offline rendering as it is cheaper.
 - **Real-time rendering:** This is used when images must be computed at a high speed and high degree of realism.

¹ Digital vector; ¹² Orange VFX; ¹¹ Decision Support



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The post-production stage

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The post-production stage entails the final editing of the produced content and distribution of the animation content to final users.

Post-production costs entail cost of editing, music, marketing, insurance and equipment leasing. An average 30 second and 1 minute animation costs c.N0.3 million and c.N0.5 million respectively, to produce.

EDITING

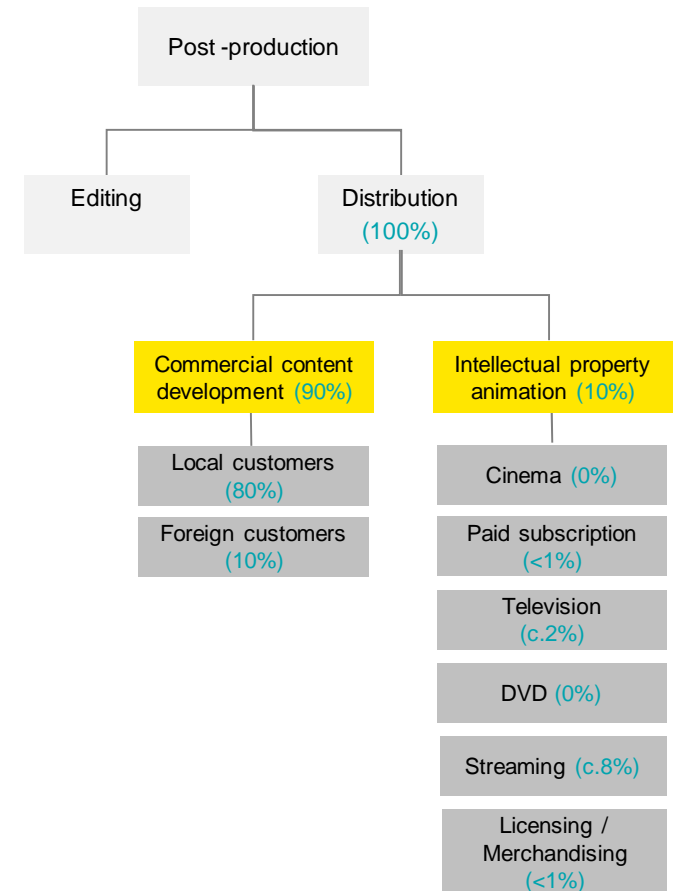
This entails putting together rendered production images in the correct sequence. The music and sound design is assembled in sync with the animation layout and finalized at this stage. Color graders also ensure that the picture is consistent throughout each sequence to avoid difference in lighting at any point of the production.

Cloud computing in post-production creates content storage and distribution opportunity for animation companies – large volume high quality animation content can be easily distributed to third parties.

DISTRIBUTION CHANNELS

- ▶ In 2017, the market size of the global animation streaming industry was US\$2.4 billion, with an estimated annual growth rate of 8%.
- ▶ In 2016, IrokoX, an online multi-channel network was introduced to support content producers with access to YouTube, iTunes, and other global platforms. The distribution agency (Iroko) sells the content on the platforms, while retaining 20% of the revenue, as well as generating advertising income.
- ▶ In recent times, the use of social media by animators has provided a platform to showcase intellectual property animation. For instance, the ‘Ovie and Wale’ series became popular via transfer on social media platforms. Various animation studios like Anthill Studios and Komotion Studios also share teasers of their content on various social media channels.
- ▶ Nicademia, an online channel with a business model similar to Netflix also helps local players to present their content to public at a marginal rate. Nigerian animators can also explore the export market segment by retailing the content rights to international customers. Asian countries such as Japan have taken advantage of this market segment and in 2016, the Anime industry generated \$7.0 billion from the overseas market, signing IP contracts with 221 countries.
- ▶ Globally, traditional distribution channels for animation content include TV, DVDs, internet and Cinema. The volume of revenue earned by animation players is dependent on their ability to exploit numerous distribution channels. **Worldwide Animation Project** which launched in May 2018 aims to create a platform where animation content from around the world can be distributed globally.

Chart 5.5: Structure of the post-production stage



Source: EY Research, interview with industry experts



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Factors driving market distribution in the Nigeria Animation Industry

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01

Demographic Factors

- Population dispersion has been a major factor in the location of the animation market in the country. Lagos, FCT and Kano have the biggest animation markets largely driven by population.
- Religion and culture also play an important role in driving animation.

02

Economic Factors

- Economic growth, favorable interest and exchange rates and low inflation are factors that will positively impact animation industry development in Nigeria.
- Lagos, being the major economic hub in Nigeria has the largest city-level spend in the country.

03

Policy Factors

- The tech-cluster "YabaCon" Valley has created a hub for high-tech innovation in Lagos. Government participation in the animation industry such as provision of landed property as in YabaCon Valley is poised to drive the establishment of animation production hubs.
- States such as Lagos where the State Government has implemented general policies and programs such as N-Power that support the growth of the animation industry have a high proportion of animation spend and animation industry generated employment.

04

Technological Factors

- Technological factors affecting the animation industry include the evolution of animation software and the growth / development of e-commerce.
- States with the highest number of active internet users such as Lagos, Rivers, FCT and Oyo have reported above par animation segment activity.



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Margin (Cost-Revenue) Analysis in the Nigerian Animation Industry

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Table 5.1: Margin Analysis of commercial content development

Duration	2D		3D	
	30 secs	60 secs	30 secs	60 secs
	NGN	NGN	NGN	NGN
Revenue	800,000	1,500,000	1,000,000	1,800,000
Fixed production cost	(144,000)	(270,000)	(180,000)	(324,000)
Variable production Cost	(176,000)	(330,000)	(270,000)	(486,000)
Gross Profit	480,000	900,000	550,000	990,000
Gross Margin	60%	60%	55%	55%

Source: Interviews with industry experts

Margin Analysis of commercial content development

- In Nigeria, commercial content development accounts for 90% of total animation production. Our analysis of the profit margin of players in this market niche is based on the following broad assumptions and estimates:
- An average 2D animation costs less than a 3D animation content of the same length, driven by increased complexity and technology requirements of 3D animation.
- Average cost of production for 2D and 3D animation is c.40% and 45% of revenue, respectively. Fixed costs are based on respondents' estimates and include rent, admin staff salaries and power; while the major variable costs are staff related (incremental technical staff required for long projects). The following table shows the fixed costs per animation type and length:

Type	2D		3D	
Duration	30 secs	60 secs	30 secs	60 secs
Fixed cost (NGN)	(144,000)	(270,000)	(180,000)	(324,000)

- Therefore, average gross margins for 2D and 3D commercial animation content development ranges between 55% to 60%.

Table 5.2: Margin Analysis of intellectual property development

Duration	DVD Production	Cinema Screening	TV Networks
	90 mins	90 mins	30 mins
	NGN	NGN	NGN
Revenue	315,000,000	110,250,000	21,477,855
Fixed production cost	(29,260,000)	(29,160,000)	(9,720,000)
Variable production Cost	(175,000,000)	(43,740,000)	(9,400,000)
Gross Profit	110,740,000	37,350,000	2,357,855
Gross Margin	35%	34%	11%

Source: Interview with industry experts

Margin Analysis of Intellectual property development

- About 10% of animation produced in Nigeria is own content (Intellectual property animation). The appropriate monetization of intellectual property via DVDs, TV, merchandising, etc. (currently very low) will improve the market value of the Nigerian animation industry.
- DVDs: Mass production of DVDs in Nigeria is prominent in Alaba market which is situated in Ojo, Lagos. This is due to the cheap cost of production in the industrial cluster. A master copy of an animation DVD is produced for N2,000 while the reproduced copies are churned out at N175 each - these can be sold for N300 (estimated street value) per DVD. The above estimate is based on the production of 1 million DVDs. This distribution channel reports an average gross margin of c.35%.
- Cinemas: According to our research, an average animation content is viewed at the cinema for c.6 weeks, subject to a 2 week extension (based on viewership and customer behavior). About 75% of the ticket sales is allocated to the cinema managers, while the animation producer is entitled to 25% of the ticket sales. This channel is virtually non-existent for Nigerian animators due to the huge cost of production for cinema length animation. However, this distribution channel has the potential to report an average gross margin of c.34% based on the following assumptions:
 - Average cinema ticket per animation movie is N750.
 - 1,500 tickets are sold per week per cinema. We have assumed 7 major cinemas in Nigeria.
 - Viewership remains strong for 8 weeks post movie-release.
- TV networks: There is a low level of Nigerian animation content distribution via TV stations in Nigeria. This is due to the high cost of airtime and high penetration of foreign animation content in Nigeria. Thus, players who utilize this channel such as Ajebotoons record a gross profit margin of c.11%. Revenue via this channel is earned through advertising agents who bargain based on demographics and anticipated volume of the target audience.

5 Value chain

Current and forecast employment distribution across the Nigerian animation industry value chain

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Forecast of Nigerian animation industry forecast demand analysis

- Our employment distribution analysis is based on the following projections:
 - There are approximately 3 staff required in the pre-production stage; 8 required for the production process and 4 staff required for the post-production editing and compositing.
 - The pre-production stage accounts for 20% of the animation process, while production and post-production accounts for 53% and 27% of the animation process respectively.
 - The domestic animation industry will mirror economic growth (real GDP forecast) from 2018.
 - Strong population growth projections at an average annual rate of 2.52% between 2017 and 2022. This is a primary driver of the domestic animation industry.
 - Local supply of animation content is projected to remain at 30% of total market demand for animation in 2018.
 - 10,000 trained animators are projected to be added to the industry yearly via the N-Power Creative Industries Scheme.

Please refer to appendix E for a detailed analysis of employment distribution across the Nigerian animation industry value chain.

Table 5.3: Employment distribution across the Nigerian animation industry value chain

Stages in the value chain	2018	2019	2020	2021	2022
<i>Pre-Production</i>	1,000	3,000	5,000	7,000	9,000
<i>Production</i>	2,667	8,000	13,333	18,667	24,000
<i>Post-production</i>	1,333	4,000	6,667	9,333	12,000
Total	5,000	15,000	25,000	35,000	45,000

Source: EY Research, interview with industry experts

Table 5.4: Workforce distribution across the Nigerian animation industry value chain

Animation value chain activities	Key Players
Pre-Production	Script Writer
	Storyboard Artist
	Voice Artist
Production	Modeller
	Texture Artist
	Character Animator
	Character Rigger
	Layout Animator
	Screen Play
	Visual Development
Post-Production	Director
	Video Editor
	Sound Editor
	Compositing
	Sound Design

Source: EY Research, interview with industry experts

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Competitive landscape

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6 Competitive landscape

Leading players in the animation Industry

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Table 6.1: Top industry players by market share and Revenue

#	Company	Creative Director	Est. Annual Turnover (N'000)	Estimated Market Share
1	Orange VFX	Richard Oboh	18,000	0.72%
2	Smids Animation	Dami Solesi	12,000	0.48%
3	Ajebotoons Animation	Eguvwe Yugbovwre	10,000	0.40%
4	Basement Animation	Johnson Mbuotidem	10,000	0.40%
5	EVCL Studios	Adamu Waziri	10,000	0.40%
6	Magnus Media Studios	Cyril Odenigbo	7,500	0.30%
7	Anthill Production	Niyi Akinmolayan	7,000	0.28%
8	MX Creative Studios	Philemon Otuya	6,000	0.24%
9	Quadron Studios	Tayo Fasunon	6,000	0.24%
10	Komotion Studios	Kolawole Olarewaju	3,200	0.13%
11	Color Red Animation	Toochukwu Ogbogu	3,000	0.12%
	Others			96.29%
	Total			100.00%

Source: Primary Research

Rankings, turnover and market share have been estimated based on the following:

- Discussion with management of top Nigerian animation companies;
- Strength of active customer base;
- Average project price;
- Presence on International animation fairs
- Number of animation content Nigeria and Overseas (particularly in America and Asia);
- Export generating potential of the value chain in which the players operates;
- Number of active years of production.



6 Competitive landscape

Demographic Customer Segmentation

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Demographic Customer Segmentation

This entails customer segmentation according to demographic factors stated below.

Age

- ▶ The lifecycle stage of the individual informs the demand for animation content. Toddlers within 0-14 require entertainment and are more inclined to view animation content than other age groups. However, animation viewership by other age groups has been on the increase due to its use in advertising, education, advocacy etc. In response, animation companies now target other age groups.
- ▶ According to our research, the degree of animation content consumed by age group is shown below:

Age	% of animation content viewed
0-14	85.0%
15-24	55.5%
25-54	45.0%
55-64	2.3%
Above 65	1.2%

Gender

- ▶ Male viewers are more inclined to animation, as our research shows that 45% percent of males watch animation content while 30% of females watch animation content. This disparity in gender viewership has been considered by animation industry players in developing animation characters.
- ▶ In the Aladdin story, 12 male characters were used to 1 female. Snow White and the seven dwarfs also included 10 male characters and 2 female characters. In addition, the Nigerian animation industry player-Orange VFX commenced with 2 male characters-Ovie and Wale.

Customer segment

- ▶ Nigerian animation players target content development mostly for Corporate customers, due to their high buying power. Hence quality animation content which might not be affordable for individuals are developed for B2B.
- ▶ 90% of content developed by animation players in Nigeria are mostly used to create awareness of health and safety precautions in the oil & gas work environment and advertisement in the banking and telecommunication industries.

Degree of Unionization

- ▶ The Nigerian Labour Congress (NLC) is the umbrella organization for trade unions in Nigeria. However, there are no affiliated animation unions within the NLC to advocate for the animation industry.
- ▶ Animation Nigeria, similar to a union in the Nigerian animation industry was launched by Johnson Mbuotidem in 2016. Animation Nigeria was established for the following reasons:
 - To promote Nigerian animation players within the international community
 - To organize film festivals
 - To share technical know-how between member companies.
 - To collaborate with players in the South-African animation industry, currently considered the most developed African animation market.
- ▶ Furthermore, the Lagos Comic Convention provides a platform for the creative industry comprising of animation, comics, gaming and virtual reality players. The 2016 edition which held in Lagos had over 3,000 attendees.
- ▶ Despite the above, the Nigerian animation industry is not unionized, and currently enjoys very minimal local player collaboration.

Industry Structure






- ▶ The Nigerian animation industry is highly fragmented with low entry barriers, as there are no legal, economic or geographical barriers to entry. In addition, there is no observable monopoly along the local value chain. This is as a result of equivalent accessibility to equipment required for animation production.
- ▶ Pricing of animation content in Nigeria is not regulated, partly supported by the high degree of industry fragmentation. The volume of output produced by individual animation players is also not restricted.
- ▶ Players in the Nigerian animation industry report similar operating margins due to the even distribution of labor and hardware costs along the industry value chain.
- ▶ Based on our work, the top 10 industry players account for c.4% of market share, with numerous fringe players (mostly freelancers) making up the rest of the market.



6 Competitive landscape

Porter's five forces of the Nigerian animation industry

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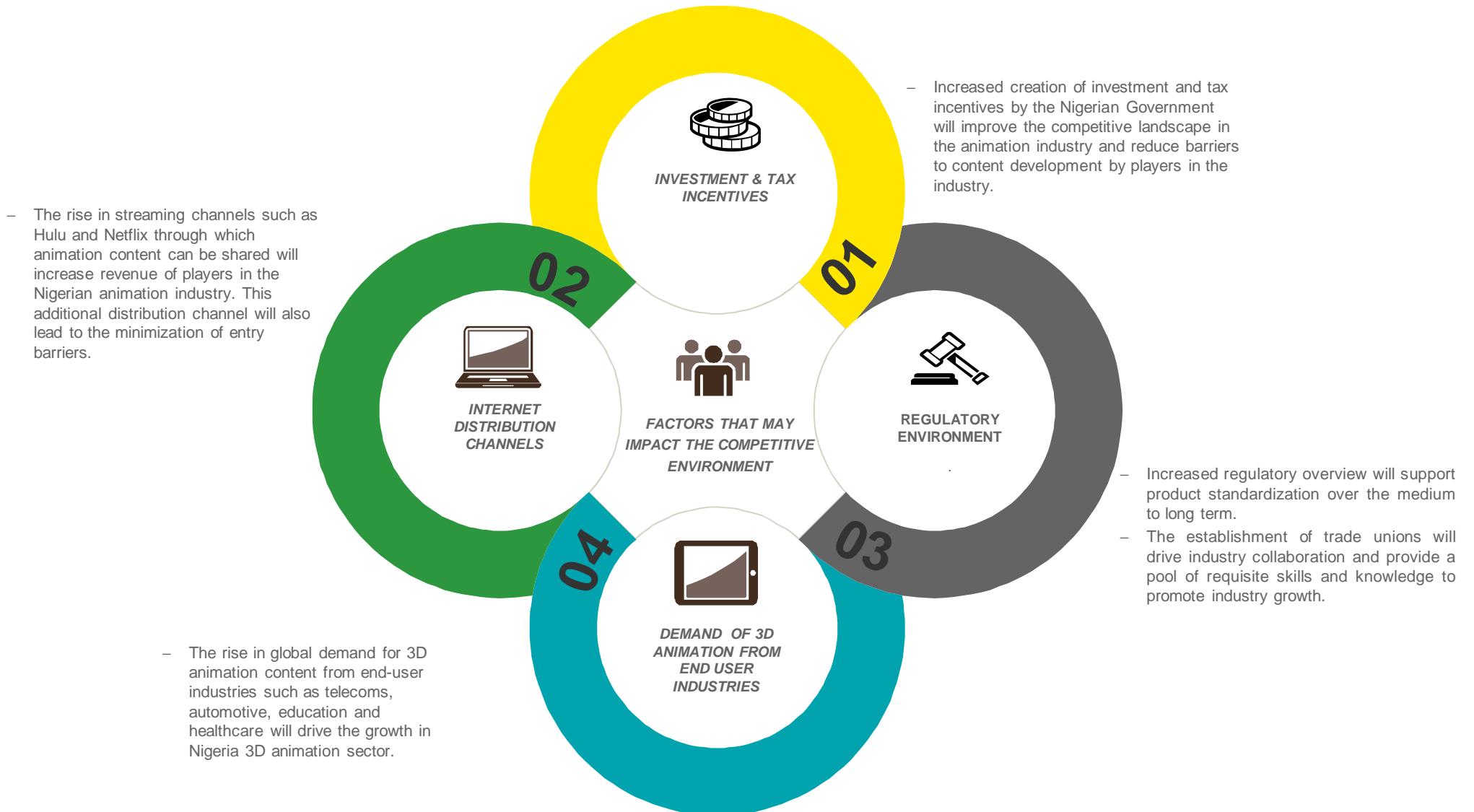
ELEMENTS	ANIMATION	COMMENTS
Threat of new entrants	<p>Low</p> 	<p>§ Small scale animators and freelancers can commence animation production with minimal initial investment, therefore experience minimal barriers to entry. However, a structured, large scale animation player will require significant investment in equipment (computer/laptops, servers, alternative power source and human capital, etc.) with attendant business support costs.</p> <p>§ In addition, industry players require a portfolio of vast and credible jobs, as new clients require a demonstrable track record as a pre-requisite for awarding high value jobs to animators.</p> <p>§ The absence of local inputs creates a barrier to new entrants, as laptops necessary for the production of animation content are mostly imported. The high cost of power and energy intensive processes also serve to deter new entrants.</p> <p>§ The degree of skill and expertise required for brand development and content distribution also pose a barrier to new entrants.</p>
Bargaining power of customers	<p>High</p> 	<p>§ Based on our industry interviews, the typical customer profile is shown below:</p> <ul style="list-style-type: none"> - Business organizations including banks, telecoms, oil & gas companies, etc. which account for c.90% of animation revenue have more flexibility to negotiate engagement and trade terms, therefore high bargaining power. The penetration level of Nigerian animation industry in the business organizations are low, therefore most business organizations prefer to patronize foreign animators across Asia (primarily Japan and India) with very little switching cost. - Individuals, political parties, NGOs and startups account for 10% of animation revenue and have less bargaining power due to their inability to switch to numerous animators.
Bargaining power of Suppliers	<p>Medium</p> 	<p>§ The key suppliers in the Nigerian animation industry include equipment suppliers and manpower (skilled animation personnel). Equipment suppliers have strong bargaining power, as most computers, laptops, servers, etc. are imported, and prices are relatively set for various brands / versions.</p> <p>§ Although manpower is relatively cheap and available in Nigeria, skilled animators are few given the specialized training required for this skill set. Therefore, skilled animators enjoy strong bargaining power in the industry.</p>
Threat of substitutes	<p>Low</p> 	<p>§ The threat of substitutes to locally produced animation production is low as the entertainment alternatives to animation - live action and social media posters do not engage the audience to the same degree as animation videos.</p> <p>§ Substitutes to animation production would require actors and set locations which are more expensive when compared to animation production.</p>
Competitive rivalry	<p>Low</p> 	<p>§ Competitive tension is low in the Nigerian animation industry and this is primarily due to the highly fragmented nature of the market and the current life cycle of the industry in Nigeria. There are few players in the Nigerian animation industry with very little product differentiation.</p> <p>§ Major players produce undifferentiated products and are thus able to bargain to maintain relatively uniform pricing.</p>



6 Competitive landscape

Future Market Conditions That May Impact The Competitive Landscape

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Policy, legislation & case studies

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7 Policy, legislation & case studies

Tax Incentives in the Nigerian Animation Industry

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<p>Pioneer Status</p>	<ul style="list-style-type: none"> - “Pioneer status” is a fiscal incentive granted to companies in designated pioneer industries especially those involved in local raw material development and labor-intensive processing. - The status grants between 3-5 years tax holiday to companies that incur capital expenditure and it was established by the Pioneer Status Incentive Regulations of 2014. - In 2017, players in the Nigerian creative industry were added to the list of industries eligible for the grant of pioneer status. 	<p>Value Added Tax Exemptions</p>	<ul style="list-style-type: none"> - Section 3 of the VAT Act of 2007 allows animation companies exemptions from paying 5% VAT on machinery imported for production purposes. - Market players in the animation industry are permitted to claim the VAT input incurred on their input materials as a deduction from their VAT output. - These exemptions have reduced instances of double taxation for industry players.
<p>Investment Tax Relief</p>	<ul style="list-style-type: none"> - Section 38 of the Company Income Tax Act of 2004, provides that equipment that incur expenditure on electricity for the purpose of a trade or business carried on by the company shall be allowed an “investment tax relief” at the rate of 50% for locations without electricity. - To be eligible under this relief, companies must be located at least 20km away from electricity grid provided by the government. - The relief is not available to companies already granted the pioneer status. 	<p>Capital allowance</p>	<ul style="list-style-type: none"> - Section 35 of the Companies Income Tax Act of 2004, grants special allowances to companies that incur qualifying capital expenditure on machinery purchased for business use. - The Act permits companies in the animation sector eligibility to 100% claims of capital allowance in any year of assessment. - The incentives of the Act will also benefit operators of animation equipment due to the high proportion of their equipment that is imported.
<p>Low Tax Treaty Concession Rate of 7.5% for Foreign Investors</p>	<ul style="list-style-type: none"> - Dividends, royalties and interest payable to foreign investors in China, France, Canada, United Kingdom, etc. are subject to 7.5%. - The implication of the incentive is that eligible companies are not required to pay the statutory 10% WHT. 	<p>Loss Relief</p>	<ul style="list-style-type: none"> - Section 31 of the Companies Income Tax Act of 2004, permits animation companies to roll forward losses indefinitely against future profits. - The Act permits future profits generated by the animation companies to remain untaxed until all historical losses are absolved completely.
<p>Work Experience Acquisition Program Relief (WEAPR)</p>	<ul style="list-style-type: none"> - This is a relief on the employment and retention of five experienced employees for a minimum of two years from the year of assessment when the employees were first employed. - The relief grants the company an exemption from income tax at 5% of its assessable profit in the year it qualifies. 	<p>Rebate on Importation of Animation Equipment</p>	<ul style="list-style-type: none"> - This is a relief on equipment purchased for animation production. - The rebate grants the company a waiver of import tariffs that would have been charged on importation of their equipment.

Source: EY Research, interviews with industry experts



7 Policy, legislation & case studies

Comparison with leading global animation countries

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Table 7.1: Comparison of domestic tax incentives with leading animation countries

Tax incentives	USA	India	Canada	Japan	France	China	South Korea	Germany
Pioneer Status	√	√	√	X	√	√	√	X
Low Tax Treaty Concession Rate of 7.5% for Foreign Investors	X	√	X	√	X	√	√	√
Work Experience Acquisition Program Relief	√	√	√	√	√	√	√	X
Value Added Tax Relief	√	X	√	X	X	X	X	X
Loss Relief	√	√	X	√	√	√	√	√
Rebate on Importation of Animation Equipment	X	X	X	X	X	X	X	X
Capital Allowance	√	√	√	√	√	√	√	√
Investment Tax Relief	√	√	X	√	√	X	√	X

USA	<ul style="list-style-type: none"> - The American animation industry benefit from investment incentives in certain states. The <i>Georgia production incentive</i> grants up to 30% of production expenditures of companies resident in Georgia as transferable tax credits. - The Federal R&D tax credit offers start-ups the opportunity to offset taxes. 	France	<ul style="list-style-type: none"> - In 2015, the tax credit rate for the innovation tax credit (ITC) increased to 40% of the asset invested in for companies operating in French Overseas Departments while all other qualifying companies apply a 20% rate.
India	<ul style="list-style-type: none"> - Start-ups are granted 100% deduction of the profits and gains from their income for three out of seven consecutive assessment years under 80 IAC of the Act. - R&D and Manufacturing Companies incorporated after April 2016 are eligible for a tax holiday of three to seven years. 	China	<ul style="list-style-type: none"> - Pioneer status which entails 2 to 5 years tax holiday is granted to licensed animation companies that develop intellectual property before 31 December 2017. the tax holiday commences from the earlier of the first profit-making year and 2017. - High technology enterprises are granted a two-year tax holiday followed by three years at a 12.5% rate. - Carryforward loss relief is available to animation companies for a maximum of 5 years.
Canada	<ul style="list-style-type: none"> - Refundable tax credit of 16% is granted on wage paid to animation workers in British Columbia. Refundable tax credit of 18% is granted on qualified Ontario animation workers. - Refundable tax credits ranging between 20%-50% is granted by various provinces in Canada. 	South Korea	<ul style="list-style-type: none"> - Foreign Investment Zone-tax incentive is granted at the rate of 100% on Company Income Tax for five years and 50% for the subsequent two years. - Free Economic Zone (FEZ) tax incentive is granted for a minimum investment amount. The threshold for the manufacturing industry is fixed at US\$10m.
Japan	<ul style="list-style-type: none"> - Effective from FY13, Capital intensive industries are granted incentive for new investment into production facilities. This entails a special depreciation at 30% or 3% tax credit on acquisition cost, and 20% corporate tax liability. - In March 2014, the 12% tax credit for SMEs was limited to 25% (formerly 30%) of the company's national corporation tax liability. 	Germany	<ul style="list-style-type: none"> - Foreign Tax credit is provided for foreign tax paid in a year of assessment. - Depreciation is allowed at the rate of 33% for computer hardware and software.

Source: EY



7 Policy, legislation & case studies

Strategies and policy to protect the Nigerian animation industry

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IMPACT OF CHANGES IN POLICY OR LEGISLATION ON THE NIGERIAN ANIMATION INDUSTRY

Intervention funds with single digit interest rates

- ▶ The provision of intervention funds in capital expenditure projects by providing long term loans and working capital to animation companies at single digit interest rates will enable industry players to make a viable entry into the global animation market forecast to be \$270billion by 2020.
- ▶ The intervention funds will be disbursed by the Central Bank of Nigeria or the Bank of Industry and will have single digit interest rates, payable over a long time.

Enforcement of intellectual property rights

- ▶ Nigeria currently operates under the Trademarks Act of 1965 and Trademarks Regulation of 1967. However, the bureaucratic procedure involved in obtaining trademarks, patents and character licensing has discouraged players in the animation industry from developing intellectual property.
- ▶ The Industrial Property Commission (IPCOM) bill which is expected to harmonize and streamline the procedures involved in registration of intellectual property rights has recently passed its second reading in the National house of assembly.
- ▶ The passage of the IPCOM bill is expected to encourage players in the animation industry to develop innovative content as it reduces the bureaucracy involved in registration of trademarks, patents and character licensing.

Co-funding for development of animation content

- ▶ The part-funding of production of animation content will significantly impact the industry. According to our market research, an animation series that contains about 13 (two-minute) episodes is estimated to cost NGN10million and take about 2-3 months to be completed.¹²
- ▶ Commercial content is largely client funded, however the development of own content (intellectual property animation) requires intensive working capital support which the industry practitioners are unable to self-fund. However, the development of own content is critical to sustainable organic industry growth.
- ▶ Creation of funding policies organized by the Federal Ministry of Information and Culture and the Central Bank of Nigeria (CBN) and focused at content development, production and post-production stages of the value chain will significantly impact the animation industry.
- ▶ The Funding routed through the Bank of Industry (BOI) will provide an incentive for animation film producers to employ more Nigerian animation talent, consequently supporting the Nigerian economy and attracting foreign investment into the sector.

STRATEGIES FOR GOVERNMENT PROTECTION AND INDUSTRY GROWTH

Anti-piracy committee

- ▶ This committee which comprises of representatives of the Federal Ministry of Information and Culture, police and industry stakeholders was set up to protect against piracy in the creative industry.

Intellectual property protection

- ▶ The Nigerian Copyright Commission registers copyright work and gives the holder of such copyright the exclusive right to control utilization, production and revision of the animation content for a certain period of time.
- ▶ Patents rights in Nigeria create a legal situation in which the patented animation character can normally only be utilized, produced, sold or exported with the consent of the owner of the character. Patent rights in Nigeria are granted for 20 years following the filing of the application for patent right.

The Creative Industry Finance Conference

- ▶ The conference which commenced in 2017 is jointly organized by the Federal Ministry of Information and Culture and Think-tank Media & Advertising. The conference addresses ways through which players in the animation industry can access short and long term finance. In addition, it is a forum where market players are lectured on local and international content distribution trends.

National Film Development Fund

- ▶ The Nigerian Film Corporation (NFC), Nigerian Copyright Commission (NCC), Nigerian Film & Video Censors Board (NFVCB) and the National Broadcasting Commission (NBC) which form the four regulatory agencies for the Nigerian film industry have indicated the intention to establish the National Film Development Fund. The Fund is expected to meet the funding need of filming activities in Nigeria.

Ease of Doing Business Initiative

- ▶ Nigeria ranked 145th out of 190 economies in the 2018 World Bank's Ease of Doing Business Report, an improvement from the 2016 World Bank report. The Ease of Doing Business Initiative set up by the government in July 2016 was positioned to review business processes in the country, with the objective of eliminating inefficiencies in government processes and critical bottlenecks or constraints to doing business.
- ▶ The Federal Government approved a 60-day national action plan with the aim of improving the way in which business is conducted in Nigeria. The Initiative is expected to impact the animation industry, as the Council has developed strategies that will expedite trade processes.

¹²Orange VFX;

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Business factors impacting market segment development

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8 Business factors impacting market segment development

Business mechanisms in the Animation Industry

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S/N	Business Mechanism	Impact on the industry	Description
1.	Availability of Skilled Labour		<ul style="list-style-type: none"> ▶ As a technology based industry, skilled labor has been identified as one of the most important factors in the local animation industry. ▶ According to respondents in the industry, there are few training institutes offering animation courses with an average animation program ranging between NGN50k and NGN850k. The only tertiary institution offering animation courses is the National Open University of Nigeria. The direct implication is that animation producers in the labor market are without the required skill set needed to match the quality delivered by comparable countries, thereby resorting to self-education. ▶ In Denmark, animation education is assisted by public funding. The Viborg Animation Workshop established in 1997 provides training in animation for pre and post-graduate students and animation professionals. The Workshop offers students accommodation and talent development support. ▶ Most respondents stated that an apprenticeship training method will be an effective education technique in the animation industry. However, an average training institute has 9 trainees annually and this method has its own shortcomings, bordering around lack of depth in the training covered.
2.	Access to Finance		<ul style="list-style-type: none"> ▶ Access to finance is the second most important factor in the industry as large scale production is capital intensive. In 2018, the Creative Industries Sector Deal (CISD) was agreed by the United Kingdom government and the Creative Industries Council (CIC). The CISD pledges to invest £150million across the value chain of creative industries including animation and includes a £72million Industrial Strategy Challenge Fund of which 46% will aid advanced areas of technology such as Virtual Reality. ▶ Animation industry players believe that the difficulty in accessing local finance has resulted in numerous skilled professionals soliciting for foreign funding. ▶ The extensive time-to-market of projects leads to unfavorable lending conditions making it difficult to access finance for capital expenditure projects in the animation industry. Financial institutions are primarily disposed to granting loans to manufacturing/trading entities with relatively simple cash flow patterns/business models that are considered more credit-worthy and more likely to repay loans in record time.
3.	Access to Infrastructure		<ul style="list-style-type: none"> ▶ Nigeria's infrastructure deficit has limited the development of the animation industry. According to the Africa Finance Corporation, Nigeria has an infrastructure deficit that will peak at N7.6 trillion in 2019. This projection is expected to keep increasing, without proper infrastructure investment by the government at different levels. ▶ The unstable electricity supply has negatively impacted the animation industry as inadequate power supply truncates the animation production process leading to an increase in the time-to-market. This has discouraged many investors who prefer a short payback period on their investment. ▶ Lack of power was indicated as a key constraint by most of the animation industry respondents interviewed and they have resorted to alternative sources of energy or in extreme cases exited to neighboring African cities such as Abidjan where there is constant power supply. Based on our field study, about 40% of total revenue is spent on power supply. This has also increased the cost of production of Nigerian animation companies thus limiting their competitiveness among international counterparts.



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S/N	Business Mechanism	Impact on the industry	Description
4.	Technological advancement	H	<ul style="list-style-type: none"> ▶ As a technologically driven industry, certain animation software based trainings become outdated as technology evolves. It is therefore imperative for industry players to possess basic transferable software skills that are applicable across various technology enhancements. ▶ The Media Development Authority of Singapore (MDA) which was established in 2003 has promoted the Singapore animation industry by creating programs such as the Digital Technology Development Scheme. The scheme is aimed at introducing virtual reality for clinical training in the healthcare sector through the use of virtual excursions. ▶ According to an established industry player, the need for <i>rendering machines</i> cannot be overstated. Some of the respondents explained that utilizing a cloud rendering service may cost between \$100 and \$1,500 depending on the complexity of the project and the number of frames. The respondent further added that cloud rendering is used for high value clients, as it increases the overall project production cost. ▶ Companies who use their own rendering machines do so mostly at night so that it does not interfere with the other animation processes during the day.
5.	Accessibility to foreign exchange	M	<ul style="list-style-type: none"> ▶ Foreign exchange accessibility has been identified as a major constraining factor in the animation industry. According to various respondents, difficulty in accessing foreign exchange at the official interbank exchange rate for the importation of laptops and servers for start-up operations poses a barrier to new entrants in the industry. However, we note that the equipment are available locally, and can easily be purchased across Nigeria. ▶ In addition, the fluctuations in the parallel market exchange rate between FY15/16 deeply impacted the business activities of the players in the industry. ▶ Players are largely unable to transfer increased input cost to the customers as domestic customers who do not yet appreciate the value of the local industry insist on value-billing.
6.	Availability of licensed software	M	<ul style="list-style-type: none"> ▶ In 2017, the Jamaican government in collaboration with the World Bank purchased 558 3D animation licenses for six animation training institutions. The aid which is part of the Youth Employment in Digital and Creative Industries Project has built the capacity and skills of the Jamaican animation industry. ▶ The players in the animation industry utilize software such as Autodesk Maya and Flipbook. However, most Nigerian companies can only make use of royalty-free versions as the licenses are expensive. The availability of paid subscription for local companies can significantly impact the animation industry within a short period. ▶ According to respondents in Nigerian animation sector, license agreements with software vendors such as Autodesk and Microsoft Azure would drive astronomical growth in the Nigerian animation industry. The production quality of the local animation industry is also forecast to improve significantly as a result of the agreements.



8 Business factors impacting market segment development

Impact of implementing the underlying mechanisms in the Nigerian Animation Industry

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Impact of implementing the underlying mechanisms in the Nigerian Animation Industry

Having identified the prevalent issues hindering the development of the animation industry, the Nigerian government (Federal and State) has commenced the implementation of various projects and strategies, which include the following:

The N-power Creative Industries

- ▶ In 2017, the Federal Government of Nigeria introduced N-power for job creation and empowerment initiatives.
- ▶ The scheme has been created to train 5,000 young Nigerians for 3 months (1 month of theoretical training and 2 months of practical training). The training focuses on animation, graphic design, post-production and script writing.
- ▶ The scheme provides the requisite computing device for participants and links them to local or international companies for internship on completion of the scheme.

The Nigerian Infrastructure Projects

- ▶ The Federal Government has commenced various infrastructure projects in the country as it seeks to tackle the country's infrastructure deficit.
- ▶ The 2018 budget includes the NGN9.8billion Mambilla hydro power project and the NGN2.56 billion Fast Power Program Accelerated Gas and Solar Power Generation amongst other power projects.
- ▶ Development of these infrastructure projects are expected to increase the output of the animation industry through stable electricity, thus reducing the lead time of content development.

Special Economic Zone Projects

- ▶ In November 2017, the President presented the budget of the 2018 fiscal year named the 'Budget of Consolidation'. The budget has an estimate of N46.4billion appropriated for Special Economic Zone projects.
- ▶ The appropriation is expected to be utilized in completing the Calabar and Kano Free Trade Zones and invest in Enyimba Industrial Park.
- ▶ The investment in these zones is expected to drive industrialization across the country.

Film Production Fund

- ▶ The NGN700million Fund was set-up in 2013 by the Federal Government to provide affordable financing to participants in the value chain. The Fund provides grants of up to NGN10million to individual players across the film value chain, including animation.
- ▶ The grants are expected to support pre-production, production, post-production and marketing of films.
- ▶ Access to the fund assisted in elevating the activities of film producers, as it has helped in positioning Nollywood as the 3rd largest film industry.

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Policy factors impacting market segment development

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Policy 1

RESEARCH & DEVELOPMENT POLICIES

- ▶ Development of innovative policies for a creative industry without the support of research work will lead to poorly targeted approaches. Promoting research and development into animation and its derivatives will provide insight into market analysis which will enable animation players create content that is marketable.
- ▶ In 2012, the National Animation Creative Research and Development Cooperation was commissioned in China by the Walt Disney Group and the Ministry of Culture's China Animation Group. The platform utilized the expertise of Walt Disney to carry out market research and develop marketable local content.

Policy 2

EDUCATION & TRAINING POLICIES

- ▶ Establishment of training institutes will provide the required skillset to bridge the identified training gap following research into global industry standards. The training institutes can be established through affiliation with existing animation programs in the USA and top Asian countries.
- ▶ Specialist animation and visual effect education and training is a key priority for Canada. In Vancouver, high quality animation institutions such as the Vancouver Film School groom professional animation students, provide opportunities to meet with industry leaders and also facilitate placement opportunities for animators to practice in a professional animation studio.

Policy 3

FOREIGN INVESTMENT POLICIES

- ▶ Opening the local animation companies to the foreign animation market will improve the international competitiveness of the Nigerian animation industry. This would entail encouraging the local players to accept outsourcing/sub-contracting jobs from top international animation companies.
- ▶ Sub-contracting agreements between Asian animators and their West African counterparts has resulted in skill improvement and improved quality of production from Asian animators.

Policy 4

EASE OF DOING BUSINESS POLICIES

- ▶ Developing policies that will create an enabling environment, particularly relating to business set up, cross border trading and local tax administration. This can be implemented by creation of clusters to encourage exchange of knowledge and co-working space for small animation companies to collaborate with international animation organizations.
- ▶ In 2017, the Creative Industries Cluster was created in Grand Duchy, Luxembourg to support the creative industry. In 2018, Grand Duchy had 6 animation studios, 2 production studios and 15 post-production companies.

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Risk assessment

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10 Risk assessment

Macroeconomic Risk Impacting the Nigerian Animation Industry

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Table 10.1: Macroeconomic Risk Impacting the Nigerian Animation Industry

Risk	Description	Impact	Risk Countermeasures
Finance Risk	§ This relates to the inability of the animation companies to raise the required capital to execute new or existing projects and achieve financial close within an acceptable time limit.		<p>To reduce the exposure of animation companies to finance risk, the government can provide the following buffers:</p> <ul style="list-style-type: none"> § The development of additional investment incentives tailored specifically for the animation industry, particularly intervention funds with single digit interest rates. § An increase in grant initiatives such as YouWin whereby the funding is released in tranches to animation developers. One of the industry leaders interviewed is a beneficiary of the YouWin program. § Co-financing of large animation projects by providing equity finance to budding animation companies with a track record.
	§ The risk that players across the entire animation value chain would be unable to access financing as a result of the long content development lead time and the high interest rates charged by financial institutions.		
Demand Risk	§ The risk of non-patronage or low demand for motion, 2D and 3D content.		<ul style="list-style-type: none"> § The launch of an off-takers forum to connect animation companies to businesses and organizations that would require this service. § Signing of MOUs with international clients to provide distribution channels for the content of Nigerian animation industry. § Mandatory quota airing of Nigerian animation content on domestic flights to promote awareness. § Partnership with international animation networks to showcase Nigerian animation content.
	§ The risk that clients will not repeat patronage for animation content upon completion of a prior project.		
Foreign Exchange Risk	§ The risk of continued Naira depreciation when compared against global currencies.		<ul style="list-style-type: none"> § The inclusion of animation industry players in the IEFX window special foreign exchange window to provide them with access to foreign currency at a rate close to the official interbank rate. § The education and awareness of market players on the benefits of utilizing hedging tools in mitigating risks emanating from FX exposures. These tools include Forwards, whereby a party (domestic player) agrees an underlying amount that is going to be paid to the counterparty (foreign partner) at a future date, and bears the benefits if there is an upward change in the price of the goods.
	§ The risk of industry players continuously sourcing foreign exchange on the parallel market due to the non-eligibility on the official interbank market.		
Commodity Price Risk	§ The risk that a change in price of production input such as rendering equipment will adversely affect the cost of production of animation companies.		<ul style="list-style-type: none"> § Cost of production in the Nigerian animation industry is primarily driven by input costs and cost of power and data connectivity. Most respondents interviewed indicated that they rely largely on alternative sources of energy such as generators. § Countermeasures to the energy issue faced by the industry include: <ul style="list-style-type: none"> – encouraging the use and providing support in the acquisition of more affordable energy sources such as Inverters/solar panels to players on an individual company basis. – Improved supply of power from the national grid to select animation clusters. § In addition, respondents represented that most of their production equipment are imported thus increasing the cost of each animation project. The countermeasure would be to provide special windows through which these equipment can be imported at a comparatively lower than parallel market exchange rate.
	§ The risk that animation companies will be unable to transfer this increase in the cost of production to the respective end users/clients.		

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Sector-specific Risk Impacting the Nigerian Animation Industry

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Table 10.2: Sector-specific Risk Impacting the Nigerian Animation Industry

Risk	Description	Impact	Risk Countermeasures
Development Risk	§ The risk related to time and cost overruns in the completion of an animation project and resultant probability of financial loss.		§ The procurement of license agreement with software vendors such as Maya, Autodesk and Adobe, to shorten the production time spent on animation production.
	§ The risk that inadequate manpower and capital equipment will result in a delay in meeting the client's deadline.		§ Creation of an animation cluster where Nigerian animation companies have joint access to a general pool of talent and infrastructure (internet connection and electricity, etc.).
Manpower Risk (Capacity outsourcing)	§ The risk of shortage of skilled manpower.		§ Provision of scholarships for Nigerian animation content developers via paid programs on professional animation courses with key players in the global animation industry e.g. Pixar and Walt Disney Studios.
	§ The risk that trained manpower in companies would emigrate to foreign countries where their skills are well compensated, "brain-drain".		§ Contracting experienced practitioners from leading animation countries to transfer the requisite skills to Nigerian animation players. § Tailor made training modules and practical studio work at tertiary institutions on design, content development and commercialization of locally produced animation.
Obsolescence Risk	§ The risk of a change in consumer behavior and preference as a result of constant change in animation technology.		§ The organization of tours as part of trade mission for local animation producers to witness first-hand international processes and best practice.
	§ The risk that the technology utilized in the local animation industry is out of date, and not at par with the global standards.		§ Organization of local animation trade fairs to expose the content and processes of the local players to their international contemporaries for learning purposes. § Establishment of modern animation institutes and the revision of animation curriculum in Nigerian educational institutions. This would introduce players to new opportunities and technology in the industry.
Technological Risk	§ The risk emanating from lack or inadequacy of requisite equipment for production of animation projects.		§ The utilization of leasing agreements, whereby the government, as the Lessor, will provide access to animation equipment such as Lightbox and rendering desktops at nominal rental cost. Other concessions can also be provision of free government land to subsidize the overall cost of production, so that players can invest in requisite machinery. § Creation of an on-lending arrangement targeted at local animation players looking to acquire production equipment. The facilities will be accessed at single digit rates, with repayment period of 3-4 years.

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Strategic recommendations & roadmap

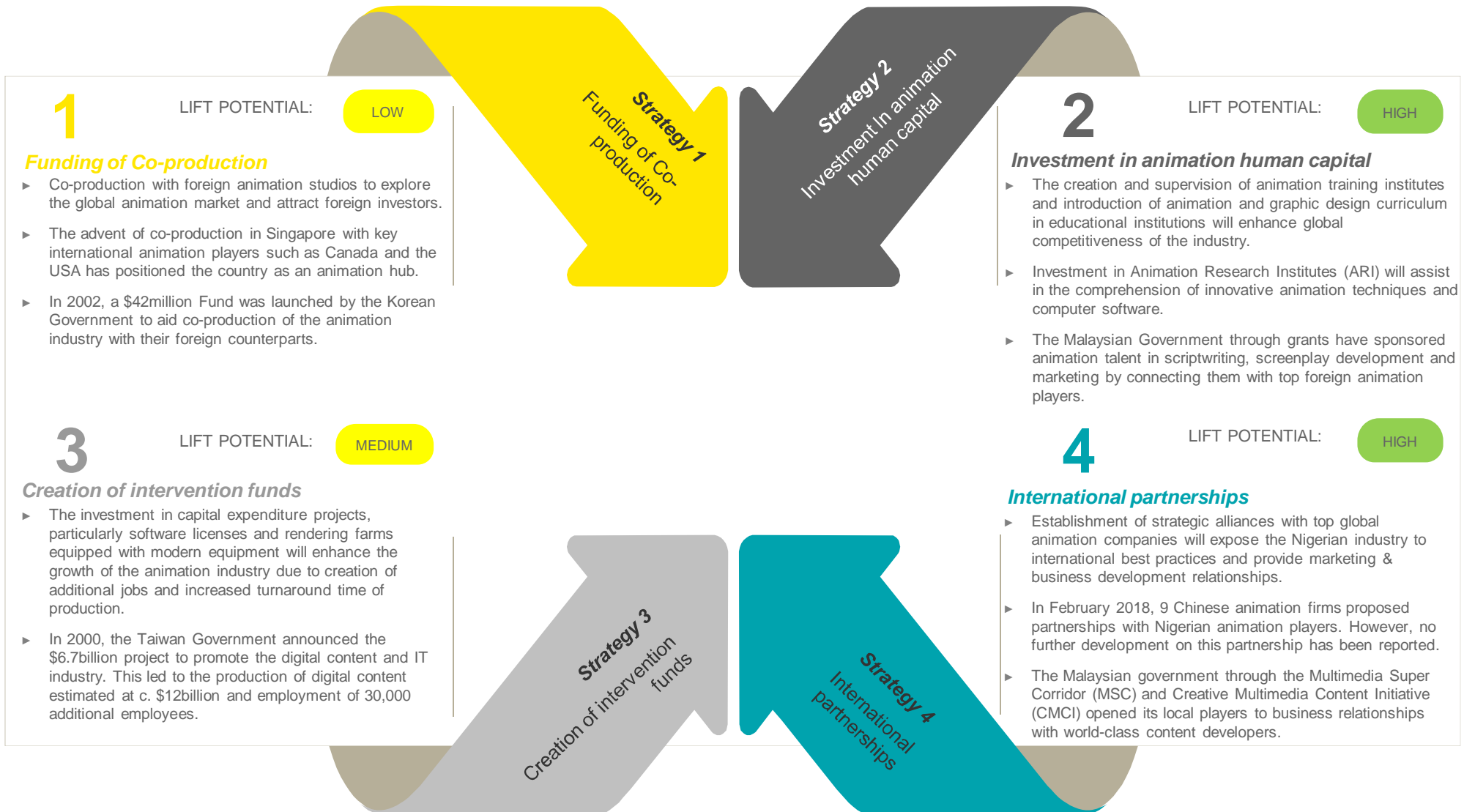
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Strategies for improving the competitiveness of the Nigerian Animation Industry

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International Experience – China

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PEOPLES REPUBLIC OF CHINA
President: Xi Jiping
Capital City: Beijing
Animation Hubs: Beijing, Shanghai, Shenzhen and Guangzhou

MAJOR PLAYERS IN THE CHINESE MARKET

ORIENTAL DREAMWORKS	CHINA FILM ANIMATION	HAOLINERS ANIMATION	VASOON ANIMATION
HUANGZHOU MINGLANG	ALPHA GROUP CO. LTD	SHANGHAI ANIMATION	MILI PICTURES

THE CHINESE ECONOMY

- The transformation of the Chinese economy from an emerging third world economy to the second largest economy in the world commenced in 1979 during the cultural revolution driven by the Communist Party of China.
- Economic policies and legislations were designed to foster self-sufficiency and economic independence. The economic reform included ownership or land incentives for food crops farmers and price incentives for cash crop farmers, such as cotton farmers.
- In addition, policies aimed at enhancing trade liberalization resulted in the elimination of state price control, freedom to start a business and decentralization of the powers held by the Central Government. These policy factors encouraged internal competition and attracted foreign investment.
- According to the IMF, between 1979 and 2016, China recorded an average annual real GDP growth rate of 9.6%. The economic growth recorded by the country can be largely attributed to large scale capital investment and productivity growth.

ANIMATION IN CHINA

- In 2016, the animation industry was estimated at \$20.3billion. The country currently has a 7.9% market share of the global market and it is projected that by 2021 the industry would be rise to \$35.9billion.
- The Chinese animation industry has developed partly due to the animation outsource provided to Western countries and also the development of intellectual property of its original content.
- In 2016, the Chinese animation market approved 182 animated films for production and completed about 33% of the proposed production. In the same year, 15 startup animation companies obtained funding and commenced operation.

The following factors have played a vital role in position of China as one of the key market leader:

- Development of technology industries is evidenced in the eastern coastal cities such as Shen Zhen, Hang Zhou and Shanghai. This development is driven by the improved infrastructure, and availability of cheap labor.
- **COLLABORATION WITH FOREIGN COUNTERPARTS**

To expose the Chinese animation industry to the international scene, some animation companies have partnered with other global animation companies to produce animation content. In 2016, Oriental DreamWorks (Pearl Studio) and DreamWorks Animation co-produced Kung Fu Panda 3.

- SPECIAL ECONOMIC ZONES

In 1979, special economic zones located in mainland China were created to provide tax and investment incentives that attract foreign and domestic investors. Currently the SEZs are Shenzhen, Haining, Zhuhai, Shantou, Xiamen and Kashgar. The animation industry in Shenzhen was established in the 80s. According to the Shenzhen Film & TV Animation Association, there are about 500 animation companies in Shenzhen and an annual workforce of about 10,000 personnel. The cluster produces animation output for local and international clients.

- TAX AND INVESTMENT INCENTIVES

The Chinese government provides tax breaks and investment incentives to local animation players which are part of the emerging cultural industries. Based on the Circular on VAT Policies for Software Products, exported animation content is exempt from VAT and animation companies are charged 16% VAT and a refund of the excess VAT input that exceeds 3% percent of the taxpayer's actual tax burden. Animation companies are charged to a Business Tax (BT) at 3% less than other businesses.

- FUNDING OF ANIMATION COMPANIES

To fund the requisite capital necessary for production of animation projects, the government has embarked on an interest rate subsidy ranging from \$47,000 to \$156,000 for selected projects that meet socio-economic needs of the country.

- INCREASE IN AIRTIME FOR ANIMATION CONTENT

The government has implemented policies that ensure that at least 60% of animation airtime on TV is sourced by the local animation industry. This is to create awareness of the local industry and boost the revenue of the players. In addition, a rise in TV showcase of the animation industry is expected to promote creation of original Chinese content.

SIMILARITIES TO THE NIGERIAN STORY

- China is the most populated country in the world and has exploited the size of its population in establishing its position as the leading animation country. As the eight most populous country in the world, the proper utilization of our population size can drive strong local demand for Nigerian animation.
- Inclusion of animation companies in the Lekki Free Trade Zone will introduce tax and business incentives to the Nigerian animation industry.



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International Experience – Thailand

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KINGDOM OF THAILAND

President: Gen Chatchai Sarikan

Capital City: Bangkok

Animation Hubs: Bangkok, Chiang Mai

MAJOR PLAYERS IN THE THAILAND MARKET

SHELLHUT ENTERTAINMENT

THE MONK STUDIOS

IMAGINE DESIGN

KANTANA ANIMATION

BANGKOK PRODUCTION

IMAGIMAX

THE THAILAND ECONOMY

- The transformation of the Thailand economy from a low income country to an upper income country can be attributed to a focused reduction in poverty levels and sustained economic growth.
- Following the economic boom between 1960 and 1966, Thailand recorded 7.5% economic growth. However, the Asian financial crises between 1999 and 2005 resulted in economic growth decline over the period.
- As the second largest economy in Southeast Asia, Thailand recorded an average growth of 3.5% over 2005 and 2015. ⁶
- A well developed infrastructure, pro-investment policies and a free-enterprise economy has resulted in improved quality of life. In 2013, the Thai government developed a minimum wage policy between \$0.16 and \$0.68 per day for government employees. The new tax reforms also ensures reduced tax rates for middle income earners. ⁷
- In 2017, a twenty-year National Strategy (2017-2036) for was adopted for Thailand. In 2017, GDP was estimated at \$1.23 trillion with a GDP growth rate of 3.9%. The country is expected to record a 3.2% economic growth in 2018. ²
- The economic growth recorded by the country can be largely attributed to increased tourism, government spending on infrastructure and low interest rates.

ANIMATION IN THAILAND

- Thailand has adopted the creative economy model of United Nations Conference on Trade and Development (UNCTAD) whereby the creative industry of the country is classified into four sub-sectors namely cultural heritage, the arts, media, and functional creation. ⁸
- With over 50 animation companies in Thailand, the country has become a key player in South-East Asia. Between 2004 and 2009, Thailand invested \$2billion into the animation and multimedia industries. In 2011, animation products estimated at \$23million was exported from Thailand while local animation production was \$36million. ⁸
- The Thai animation industry is characterized by skilled animators and low labor cost. A 22 minute length animation episode is produced at an estimated amount between \$50,000 and \$100,000.
- Animation companies and freelancers in the Thai animation industry are supported by digital content association such as TACGA, TDEC, TGA, DCAJ. These associations are beneficiaries of funds from government agencies.

The following factors have played a vital role in the positioning of Thailand as one of the leading global animations player:

– THAILAND 4.0:

In 2016, the sector-specific policy was created to attract new investment towards transforming the economy. The industrial policy was aimed at complementing the 12th National Economic and Social Development Plan (2017-2021).

Thailand 4.0 is aimed at creating an economy that is digital oriented and driven by innovation in order to improve on high value-adding manufacturing. The success of the strategy is expected to hinge on the ability of the country to attract foreign direct investment (FDI).

– THAILAND ANIMATION AND COMPUTER GRAPHIC ASSOCIATION (TACGA):

TACGA was established in 2006 and encompasses all players in the industry. The association provides support for strategic cooperation between members and related companies thus improving the profile of the culture-rich Thailand animation content.

– SOFTWARE INDUSTRY PROMOTION AGENCY (SIPA):

The agency was established in 2003 and is administered by the Ministry of Information and Communication Technology. The agency is responsible for developing the standard of animation and ensuring that industry content matches international standards. In addition, SIPA collaborates with international partners and develop a marketing network for the Thai animation industry. This significantly impacted the joint development of 2D animation series from Korea and Thailand.

SIPA has organized seminars such as Intellectual Property Rights in the ASEAN Economic Community, and the 'Thailand Digi Challenge in 2015 which has enhanced the skill set of Thailand animators.

SIMILARITIES TO THE NIGERIAN STORY

- In 2017, Thailand with a population of 68.4 million had a labor force estimated at 38.37 million and exploited the size of its population to establish its position as a leading animator. Nigeria is the eight most populous country in the world with a labor force of 85 million. If this labor force is harnessed properly with requisite training and development, there will be an increase in animation professionals.
- Thailand animation associations are able to directly receive funds from the government. N-power creative when efficiently implemented is expected to facilitate the training of 5,000 animation players yearly.

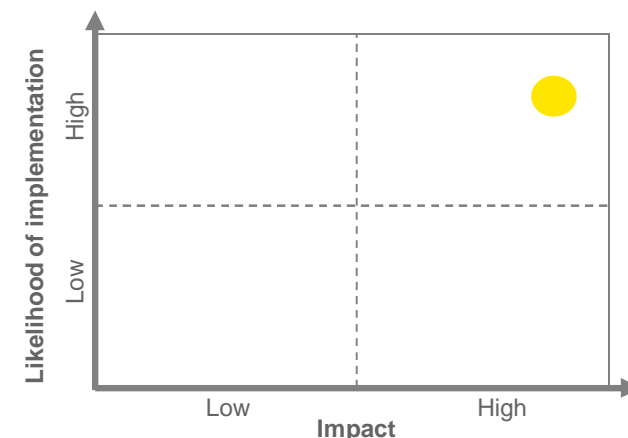


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TARGET AREAS	POLICY ISSUE	STAKEHOLDERS	POLICY RECOMMENDATION & RATIONALE	ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> Pre-production Production Post-Production 	<p>Proliferation of numerous independent animation freelancers</p> <p>Self-reliance of individual animation company</p> <p>Limited industry collaboration</p> <p>Absence of industry network</p>	<ul style="list-style-type: none"> Animation companies Lagos State Government Rivers State Government Cross River State Government Enugu State Government Kano State Government Delta State Government Federal Capital Territory Nigerian Government 	<p>DEVELOPMENT OF A PIONEER LAGOS ANIMATION CLUSTER</p> <p>The development of a Lagos Animation Cluster will be a major catalyst for the growth and expansion of the Nigerian Animation Industry due to the positioning of Lagos as a commercial hub in Africa. In 2016, Google announced its plan to situate its first Google Launchpad Space outside the USA in Lagos.</p> <p>The Lagos animation market has the largest concentration of the Nigerian animation industry as 9 of the top 10 players in the industry are located in Lagos.</p> <p>There is currently no formal association in the animation industry. Hence, support provided by government to the players in the entire film industry are unlikely to be accessed by individual players in the animation industry.</p> <p>The Lagos State Government should commence development of the animation cluster by establishing the following:</p> <ul style="list-style-type: none"> - Provision of freehold land at YabaCon where the players in the animation industry have access to the pool of other digital personnel. The site currently hosts between 200,000-300,000 tech personnel. - Creation of Memorandum of Understanding (MOUs) with global animation companies regarding the development of the cluster. - Creation of Industrial Power Plant and internet networking infrastructure. - Signing of partnership agreement between the Federal Government, venture capitalists and international animation training centers. This will equip players in the cluster with the technical know-how to improve the quality of animation production and eliminate project funding challenges. <p>NB: The medium to long-term strategy will be the deployment of an animation cluster in a capital city within each geopolitical zone of Nigeria. The animation clusters will be established in Lagos, Rivers, Cross River, Enugu, Kano and Delta States and Abuja.</p>	<ul style="list-style-type: none"> - Job creation within the cluster, environs and state; and the promotion of local enterprise. - Access to venture capitalists, technology and strategic partnerships. - Proximity to Lagos Island where most commercial and service based companies are located will reduce transportation cost for players to clients and promote awareness of the industry. - Development of the Lagos State Economy, which will trickle down to neighboring states in the South-West region. 	<ul style="list-style-type: none"> - The absence of competitors in the cluster may discourage the need for constant upgrade of animation technology and software used in the cluster. - High equity holding expected by venture capitalists potentially eroding the equity ownership of the players.



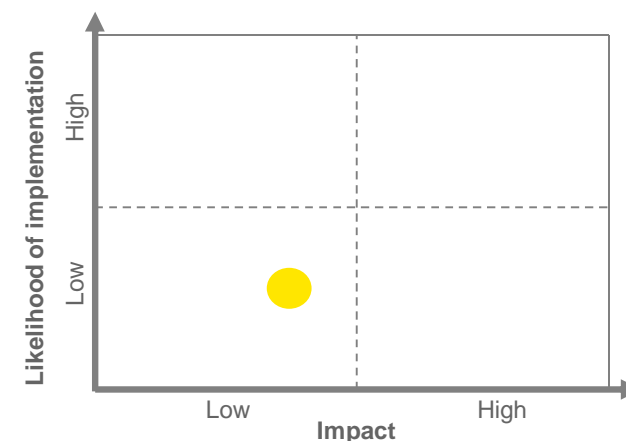


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TARGET AREAS	POLICY ISSUE	STAKEHOLDERS	POLICY RECOMMENDATION & RATIONALE	ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> Pre-production Post-production 	<p>Lack of finance to develop own content (intellectual property animation)</p> <p>High cost of funding</p>	<ul style="list-style-type: none"> Animation companies Nigerian Government Bank of Industry Central Bank of Nigeria Consumers 	<p>ESTABLISHMENT OF FINANCING FACILITIES</p> <p>This will involve the creation of financing facilities to support the expansion of the animation industry. The Federal Government commenced a \$700 Film Production Fund in 2013. However, only few businesses could access the Fund.</p> <p>An average animation company would rather create commercial content at the discretion of a client than develop own content (intellectual property animation). This is due to the lack of the requisite equity capital and intensive working capital required to develop intellectual property animation.</p> <p>The long lead time to market also poses a deterrent to intensive development of own content animation.</p> <p>A fresh funding scheme is required for the development of the animation industry due to the following:</p> <ul style="list-style-type: none"> The hesitance of financial institutions to provide funding for animation projects due to the long incubation period required for animation content development. The high production cost of developing intellectual property by animation developers. Inability of Nigerian animators to participate in international animation film festivals such as the Annecy International Animation Film Festival, which is critical for exposure and collaboration/partnerships. <p>The provision of funding can be implemented by:</p> <ul style="list-style-type: none"> Special scholarship windows for players to enroll for international animation film courses. Co-investment in animation projects to alleviate the financial burden on Nigerian content developers. Establishment of a Fund specifically for the Nigerian animation industry to encourage upcoming animation companies. The Fund which will be operated in tranches, will disburse loans at a single digit interest rate and a long tenor exceeding traditional commercial terms. This will be targeted towards working capital loans and acquisition of capital equipment. 	<ul style="list-style-type: none"> Availability of concessional capital will increase in project profitability due to lower cost of capital. Increase the production speed of beneficiary players and enhance local industry competitiveness. 	<ul style="list-style-type: none"> Unskilled animation personnel may churn out poor quality work despite the financing provided. Overcrowding in the industry that may arise in the long run as a result of increased Government participation, resulting in low productivity and poor outcomes.



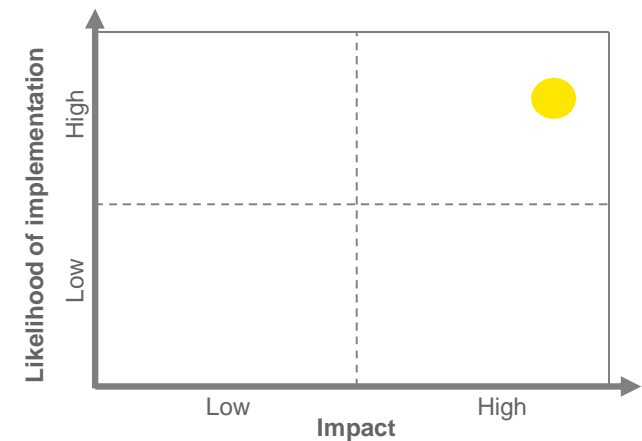


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TARGET AREAS	POLICY ISSUE	STAKEHOLDERS	POLICY RECOMMENDATION & RATIONALE	ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> Pre-production 	Lack of customer awareness in the Nigerian animation industry	<ul style="list-style-type: none"> Content developers Nigerian Broadcasting Commission Television stations Nigerian Government Consumers 	<p>PROMOTION OF LOCAL CONTENT</p> <p>The proliferation of foreign animation content has limited the demand for Nigerian content. The concerted promotion of local animation content will further drive development of the Nigerian animation industry.</p> <p>This can be implemented by ensuring that a minimum percentage of entertainment programs (e.g. 10%) aired on national television stations should be local content in nature and production. This is plausible due to the prevalence of English speaking animation producers in Nigeria.</p> <p>The following are driving the demand for local content from the Nigerian animation industry:</p> <ul style="list-style-type: none"> New distribution channels: The availability of new distribution channels such as the internet has increased the demand for animation content. Broadband penetration in Nigeria is projected to be 30% by the end of 2018. Access to technology: The existence of online learning materials on animation offer players in the industry opportunities to create content and render frames. <p>This will position the Nigerian animation industry on the international scene and represent accurately the vast ethnic groups and local stories.</p> <p>Policies to promote local content development of animation should entail the following:</p> <ul style="list-style-type: none"> Protection of intellectual property to serve as an incentive for local players to develop local content. Establishment of secure online platforms such as Nicademia which will ensure distribution of African inspired animation content. <p>The above processes are expected to improve the opportunities for local players to source for international finance due to minimum established levels of demand.</p>	<ul style="list-style-type: none"> Accurate presentation of Nigerian culture to domestic and international audience. Our stories are best told by us. Introduction of indigenous values into Nigerian entertainment space. Limit the inculcation of harmful non-African culture in the country e.g. many foreign cartoons targeted at children have prevailing LGBT themes. 	<ul style="list-style-type: none"> Animation companies may be content with airing on national TV and remain in their comfort zones. The gap in industrialization level of Nigerian animation compared with foreign counterparts may result in poor output and might discourage exports.



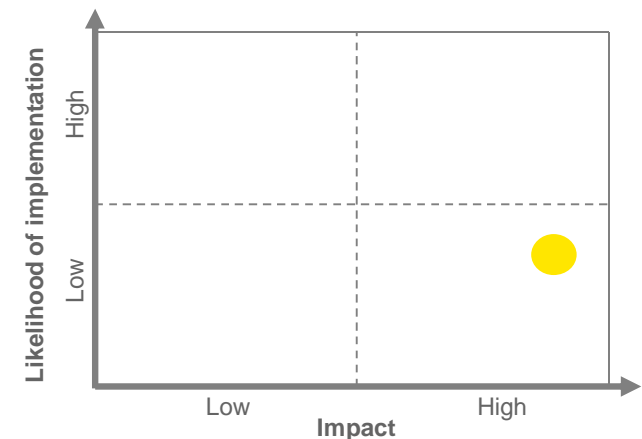


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TARGET AREAS	POLICY ISSUE	STAKEHOLDERS	POLICY RECOMMENDATION & RATIONALE	ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> Production Post-production 	Limited number of quality studios	<ul style="list-style-type: none"> Animation companies USA, India and other top animation countries Nigerian Government 	<p>CO-PRODUCTION TREATY</p> <p>The establishment of co-production treaties with countries will drive down the cost of production of animation content. The treaty will also entail exchange of creative and technological skill and introduce Nigerian animation players to production process of world-class content.</p> <p>An average animation series with 13 episodes costs c.N10million to produce in Nigeria. The uncompetitive cost of production is mostly due to the high cost of sourcing for electricity by individual companies.</p> <p>In recent times, the global animation industry has experienced various forms of partnership such as joint ventures and co-production. Canada has 54 international co-production treaties with Germany, Norway and other countries.</p> <p>This will encourage the development of lengthy animation films in Nigeria thereby increasing the portfolio of the industry.</p> <p>The resultant low cost of production of animation content in Nigeria will attract foreign investment from international key players. The following factors are expected to encourage productivity from the co-production treaty:</p> <ul style="list-style-type: none"> - The English- speaking players in the Nigerian animation industry. - The large pool of labor force in Nigeria will result in low cost of labor for co-production partners. <p>The co-production treaty will expose Nigerian animation players to standard practices and facilities in the global industry and should specify the proportion in which partner countries will contribute to the production.</p>	<ul style="list-style-type: none"> - Reduction in the production cost of animation content - Sharing of technical know-how among participating countries. - Rise in the number of quality animation studios. - Development of the Nigerian animation sector and subsequently increasing the contribution of the sector to the National GDP. 	<ul style="list-style-type: none"> - The intervention of the government in the industry might result in a monopoly as only major players with structured animation companies might be considered.



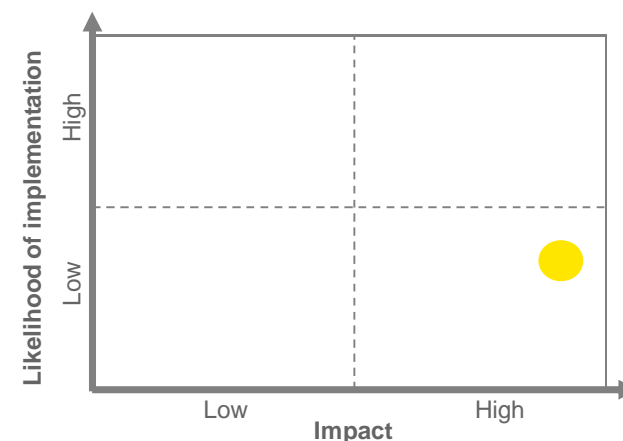


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TARGET AREAS	POLICY ISSUE	STAKEHOLDERS	POLICY RECOMMENDATION & RATIONALE	ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> • Pre-production • Production • Post-Production 	<p>Lack of global standard technical skill across the animation industry value chain</p> <p>Limited number of skilled animation professionals</p>	<ul style="list-style-type: none"> • Animation professionals • Animation companies • Nigeria Government • Consumers 	<p>SKILL (CAPACITY) DEVELOPMENT SCHEME</p> <p>The skill development scheme will entail establishment of modern animation institutes, introduction of the animation curriculum in Nigerian educational institutions and sponsoring local animation players to international animation schools/institutes.</p> <p>The technical skills and creative designs of Nigerian animation players is not at par with the global industry standards. This is mostly to the self-education practiced by animators due to the high cost of enrolling in foreign colleges or institutions where animation is taught professionally.</p> <p>The quality of technical skill acquired by the manpower in each animation company will impact the quality of content produced by each player, enabling them to compete effectively with their foreign counterpart.</p> <p>The skill development scheme in this industry would be introduced by;</p> <ul style="list-style-type: none"> - Promoting research and development into various parts of the production process such as scriptwriting, 3D modeling, licensing and marketing. - Quarterly training seminars to introduce players to innovative equipment and creative designs. - Introduction of animation training to Nigerian training institutions such as the National Institute of Information Technology (NIIT) who offer creative content courses. - Establishment of training institutes in partnership with key international animation players in different regions of the country. - Introduction of enterprise support skills via short courses on animation & motion graphics to local animators. - Introduction of animation film making to young students within 0-14 years. The South- Korean government introduces animation movie production to students in their elementary school. This has exposed the young population to animation thus providing an edge for their players in the global animation industry. 	<ul style="list-style-type: none"> - Increase in export potential of the Nigerian animation industry due to enhanced output by trained personnel. - Increased competences and knowledge will reduce the lead time of content development. - Regional location of animation training institutions will provide equal opportunities for development of local players. 	<ul style="list-style-type: none"> - Labor flight may occur when players have been trained and updated with the latest knowledge and skills, thus the medium term risk of brain drain. - Expensive trainings and seminars may not produce commensurate rewards.



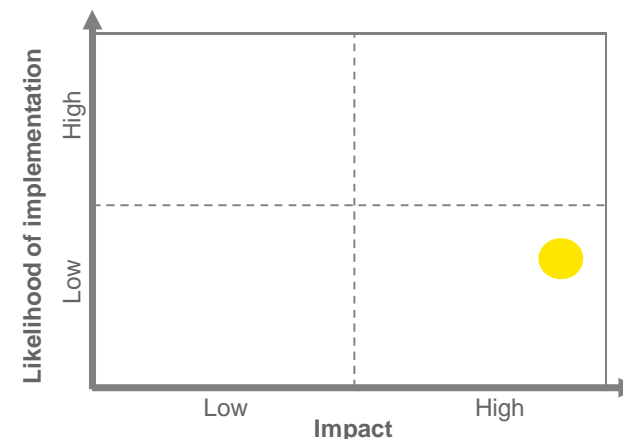


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TARGET AREAS	POLICY ISSUE	STAKEHOLDERS	POLICY RECOMMENDATION & RATIONALE	ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> Post-Production 	Lack of affordable/viable online distribution channels	<ul style="list-style-type: none"> Animation companies Private entertainment companies Nigeria Government Consumers 	<p>INCENTIVIZATION OF NOVEL DISTRIBUTION CHANNELS</p> <p>Nigeria currently participates marginally in the global animation streaming market, which was valued at US\$2.4 billion in 2017.</p> <p><i>Iroko</i>, which is a prominent Nigerian online multi-channel network does not currently distribute animation content (Foreign/Local) on its platform. However, <i>Nicademia</i> which operates a business model similar to Netflix supports local animation players to project their content.</p> <p>Incentivizing private parastatals such as <i>Ebony TV</i> and <i>Iroko</i> will encourage private players to invest in the distribution of animation content of local players. This can be implemented by the following:</p> <ul style="list-style-type: none"> Tax exemption on 50% of advertising income obtained from distributing the animation content on these platforms. This will boost the participation of private companies in the local animation industry as tax incentives are granted globally to attract private participation. Subsidized pre-buy option for private entertainment companies to dub animation content to Nigerian and non-Nigerian languages will expand the audience niche of Nigerian animation content. Sales of merchandising rights to the private entertainment companies with the proceeds shared between the animation company and the private entertainment company on a 70:30 basis. Nigerian animation companies such as <i>EVCL Studio</i> in Abuja have proven that merchandizing Nigerian animation characters could be profitable. <p>The private companies would establish channels through which animation companies can distribute their content via the following:</p> <ul style="list-style-type: none"> Creation of free video-streaming business models which will result in increase in subscription of the platform, thus generating advertising income for the private entertainment company. Introduction of subsidized airtime slots for Nigerian animation companies to present their content. 	<ul style="list-style-type: none"> Increase in popularity of Nigerian animation content due to availability of multiple online distribution platforms. Increased awareness of the animation content will reduce the lead time to market for animation studios. Global presence of Nigerian animation content via online platforms. 	<ul style="list-style-type: none"> Lack of stringent implementation of piracy law may result in loss of revenue of animation companies. Free distribution channels could be a threat to existing paid distribution channels.



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Abbreviation

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%	Percentage
2D	2 Dimension
3D	3 Dimension
AFDB	Africa Development Bank
AR	Augmented Reality
BMI	Business Monitor International
BOI	Bank of Industry
CBN	Central Bank of Nigeria
CMCI	Department of Culture, Media and Creative Industries
CPI	Consumer Price Index
DSC	Decision Support Consulting
ERGP	Economic Recovery Growth Plan
FCT	Federal Capital Territory
FDI	Foreign Direct Investment
FEZ	Free Economic Zone
FMITI	Federal Ministry of Industry, Trade & Investment
FY15	Financial Year 2015
FY16	Financial Year 2016
GDP	Gross Domestic Product
GEM	Growth and Employment
IEFX	Investors' & Exporters' Window
IFCIC	Institute for the Funding of Cinema & Cultural Industries
IP	Intellectual Property
IPCOM	Industrial Property Commission
IT	Information Technology

ITC	Innovation Tax Credit
MDA	Media Development Authority of Singapore
MOU	Memorandum of understanding
MPR	Monetary Policy Rate
MSC	Multimedia Super Corridor
MSME	Micro, Small & Medium Enterprises
NBC	The National Broadcasting Commission
NBS	National Bureau of Statistics
NCC	Nigerian Communications Commission
NFC	Nigerian Film Corporation
NLC	Nigeria Labor Congress
NPC	National Population Commission
OPEC	Organization of the Petroleum Exporting Countries
PIU	Project Implementation Unit
Q3	Quarter 3
R&D	Research & Development
SME	Small and medium-sized enterprises
TV	Television
UK	United Kingdom
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund.
USA	United States of America
VAT	Value Added Tax
VC	Value chain
VR	Virtual reality



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Appendix A – Historical Demand of the Nigerian Animation Industry

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South-Southern States	2013	2014	2015	2016	2017
Akwa Ibom	69,983	77,343	85,477	94,467	104,402
Bayelsa	27,149	30,004	33,160	36,647	40,501
Edo	74,419	82,245	90,895	100,454	111,018
Cross River	58,166	64,283	71,044	78,515	86,772
Delta	104,846	115,873	128,059	141,526	156,410
Rivers	131,914	145,787	161,119	178,064	196,791
Sub-Total	466,477	515,536	569,753	629,673	695,894

South-Eastern States	2013	2014	2015	2016	2017
Ebonyi	10,393	11,486	12,694	14,029	15,504
Enugu	16,722	18,481	20,425	22,573	24,947
Abia	33,043	36,518	40,358	44,602	49,293
Anambra	25,728	28,433	31,424	34,728	38,381
Imo	54,058	59,743	66,026	72,970	80,644
Sub-Total	139,943	154,661	170,926	188,902	208,768

South-Western States	2013	2014	2015	2016	2017
Oyo	846,841	935,902	1,034,328	1,143,106	1,263,324
Ogun	549,991	607,833	671,757	742,404	820,481
Ondo	441,988	488,470	539,842	596,616	659,361
Osun	382,436	422,656	467,106	516,230	570,521
Lagos	1,769,109	1,955,162	2,160,782	2,388,026	2,639,170
Ekiti	149,620	165,355	182,745	201,964	223,204
Sub-Total	4,139,985	4,575,378	5,056,560	5,588,347	6,176,061

North-Central States	2013	2014	2015	2016	2017
Niger	121,594	134,382	148,514	164,133	181,395
Kogi	94,058	103,950	114,882	126,964	140,316
Kwara	77,831	86,017	95,063	105,060	116,109
Nassarawa	61,239	67,680	74,797	82,664	91,357
Benue	139,061	153,686	169,849	187,711	207,453
Plateau	104,416	115,397	127,533	140,945	155,768
FCT	101,517	112,193	123,992	137,032	151,443
Sub-Total	699,716	773,303	854,630	944,509	1,043,841

North-Western States	2013	2014	2015	2016	2017
Zamfara	7,656	8,461	9,351	10,334	11,421
Jigawa	5,547	6,131	6,775	7,488	8,275
Kaduna	19,186	21,204	23,434	25,899	28,622
Kano	23,008	25,427	28,102	31,057	34,323
Katsina	11,181	12,357	13,656	15,093	16,680
Kebbi	6,109	6,752	7,462	8,247	9,114
Sokoto	8,946	9,887	10,926	12,075	13,345
Sub-Total	81,634	90,219	99,707	110,193	121,781

North-Eastern States	2013	2014	2015	2016	2017
Adamawa	11,938	13,193	14,581	16,114	17,809
Bauchi	12,281	13,573	15,000	16,578	18,321
Borno	13,483	14,901	16,468	18,200	20,114
Gombe	6,515	7,200	7,957	8,794	9,718
Taraba	8,852	9,783	10,812	11,949	13,206
Yobe	5,241	5,792	6,401	7,074	7,818
Sub-Total	58,310	64,442	71,219	78,709	86,987



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Appendix B – Historical Supply of the Nigerian Animation Industry

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South-Southern States	2013	2014	2015	2016	2017
Akwa Ibom	20,995	23,203	25,643	28,340	31,320
Bayelsa	8,145	9,001	9,948	10,994	12,150
Edo	22,326	24,674	27,268	30,136	33,306
Cross River	17,450	19,285	21,313	23,555	26,032
Delta	31,454	34,762	38,418	42,458	46,923
Rivers	39,574	43,736	48,336	53,419	59,037
Sub-Total	139,943	154,661	170,926	188,902	208,768

South-Eastern States	2013	2014	2015	2016	2017
Ebonyi	3,118	3,446	3,808	4,209	4,651
Enugu	5,017	5,544	6,127	6,772	7,484
Abia	9,913	10,955	12,107	13,381	14,788
Anambra	7,718	8,530	9,427	10,419	11,514
Imo	16,217	17,923	19,808	21,891	24,193
Sub-Total	41,983	46,398	51,278	56,671	62,630

South-Western States	2013	2014	2015	2016	2017
Oyo	254,052	280,771	310,299	342,932	378,997
Ogun	164,997	182,350	201,527	222,721	246,144
Ondo	132,596	146,541	161,953	178,985	197,808
Osun	114,731	126,797	140,132	154,869	171,156
Lagos	530,733	586,549	648,235	716,408	791,751
Ekiti	44,886	49,606	54,823	60,589	66,961
Sub-Total	1,241,995	1,372,613	1,516,968	1,676,504	1,852,818

North-Central States	2013	2014	2015	2016	2017
Niger	36,478	40,315	44,554	49,240	54,418
Kogi	28,217	31,185	34,465	38,089	42,095
Kwara	23,349	25,805	28,519	31,518	34,833
Nassarawa	18,372	20,304	22,439	24,799	27,407
Benue	41,718	46,106	50,955	56,313	62,236
Plateau	31,325	34,619	38,260	42,284	46,730
FCT	30,455	33,658	37,198	41,110	45,433
Sub-Total	209,915	231,991	256,389	283,353	313,152

North-Western States	2013	2014	2015	2016	2017
Zamfara	2,297	2,538	2,805	3,100	3,426
Jigawa	1,664	1,839	2,033	2,246	2,483
Kaduna	5,756	6,361	7,030	7,770	8,587
Kano	6,902	7,628	8,430	9,317	10,297
Katsina	3,354	3,707	4,097	4,528	5,004
Kebbi	1,833	2,026	2,239	2,474	2,734
Sokoto	2,684	2,966	3,278	3,623	4,004
Sub-Total	24,490	27,066	29,912	33,058	36,534

North-Eastern States	2013	2014	2015	2016	2017
Adamawa	3,581	3,958	4,374	4,834	5,343
Bauchi	3,684	4,072	4,500	4,973	5,496
Borno	4,045	4,470	4,940	5,460	6,034
Gombe	1,954	2,160	2,387	2,638	2,916
Taraba	2,656	2,935	3,244	3,585	3,962
Yobe	1,572	1,738	1,920	2,122	2,345
Sub-Total	17,493	19,333	21,366	23,613	26,096



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Appendix C – Forecast Demand of the Nigerian Animation Industry

Value: N'000

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South-Southern States	2018	2019	2020	2021	2022
Akwa Ibom	119,233	137,460	159,982	186,292	216,820
Bayelsa	46,255	53,326	62,062	72,269	84,112
Edo	126,790	146,172	170,121	198,098	230,561
Cross River	99,099	114,249	132,967	154,835	180,208
Delta	178,630	205,937	239,678	279,095	324,830
Rivers	224,747	259,104	301,556	351,148	408,692
Sub-Total	794,753	916,249	1,066,366	1,241,737	1,445,222

South-Eastern States	2018	2019	2020	2021	2022
Ebonyi	17,707	20,414	23,758	27,665	32,199
Enugu	28,490	32,846	38,227	44,514	51,809
Abia	56,296	64,902	75,535	87,958	102,371
Anambra	43,833	50,534	58,813	68,486	79,708
Imo	92,100	106,179	123,576	143,898	167,479
Sub-Total	238,426	274,875	319,910	372,521	433,567

South-Western States	2018	2019	2020	2021	2022
Oyo	1,442,792	1,663,356	1,935,878	2,254,245	2,623,651
Ogun	937,039	1,080,287	1,257,280	1,464,047	1,703,962
Ondo	753,029	868,147	1,010,383	1,176,547	1,369,349
Osun	651,570	751,177	874,249	1,018,024	1,184,849
Lagos	3,014,090	3,474,863	4,044,180	4,709,271	5,480,985
Ekiti	254,912	293,881	342,030	398,279	463,546
Sub-Total	7,053,432	8,131,711	9,464,000	11,020,414	12,826,342

North-Central States	2018	2019	2020	2021	2022
Niger	207,164	238,834	277,964	323,677	376,718
Kogi	160,250	184,747	215,016	250,377	291,407
Kwara	132,604	152,875	177,922	207,182	241,134
Nassarawa	104,335	120,285	139,993	163,015	189,729
Benue	236,923	273,143	317,894	370,174	430,834
Plateau	177,896	205,092	238,694	277,949	323,496
FCT	172,957	199,398	232,067	270,232	314,515
Sub-Total	1,192,129	1,374,374	1,599,549	1,862,605	2,167,833

North-Western States	2018	2019	2020	2021	2022
Zamfara	13,044	15,038	17,501	20,380	23,719
Jigawa	9,451	10,896	12,681	14,766	17,186
Kaduna	32,689	37,686	43,860	51,073	59,443
Kano	39,199	45,192	52,596	61,245	71,282
Katsina	19,050	21,962	25,560	29,763	34,641
Kebbi	10,409	12,000	13,966	16,263	18,928
Sokoto	15,241	17,571	20,450	23,813	27,715
Sub-Total	139,082	160,344	186,614	217,304	252,914

North-Eastern States	2018	2019	2020	2021	2022
Adamawa	20,339	23,448	27,290	31,778	36,985
Bauchi	20,924	24,123	28,075	32,692	38,049
Borno	22,972	26,483	30,822	35,891	41,773
Gombe	11,099	12,796	14,892	17,341	20,183
Taraba	15,082	17,388	20,237	23,565	27,426
Yobe	8,929	10,294	11,980	13,950	16,236
Sub-Total	99,344	114,531	133,296	155,217	180,653



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Appendix D – Forecast Supply of the Nigerian Animation Industry

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South-Southern States	2018	2019	2020	2021	2022
Akwa Ibom	40,853	47,544	55,859	65,080	75,706
Bayelsa	15,848	18,444	21,670	25,247	29,369
Edo	43,442	50,557	59,400	69,205	80,505
Cross River	33,954	39,516	46,427	54,091	62,923
Delta	61,204	71,228	83,686	97,500	113,420
Rivers	77,005	89,617	105,292	122,672	142,702
Sub-Total	272,307	316,906	372,334	433,794	504,626

South-Eastern States	2018	2019	2020	2021	2022
Ebonyi	6,067	7,061	8,296	9,665	11,243
Enugu	9,763	11,361	13,348	15,552	18,091
Abia	19,290	22,449	26,376	30,729	35,746
Anambra	15,020	17,480	20,537	23,926	27,833
Imo	31,559	36,727	43,150	50,273	58,481
Sub-Total	81,699	95,079	111,707	130,145	151,395

South-Western States	2018	2019	2020	2021	2022
Oyo	494,329	575,293	675,917	787,493	916,080
Ogun	321,048	373,631	438,983	511,447	594,959
Ondo	258,002	300,260	352,778	411,012	478,125
Osun	223,240	259,804	305,246	355,634	413,704
Lagos	1,032,686	1,201,827	1,412,036	1,645,126	1,913,752
Ekiti	87,338	101,643	119,421	139,134	161,853
Sub-Total	2,416,643	2,812,459	3,304,381	3,849,847	4,478,473

North-Central States	2018	2019	2020	2021	2022
Niger	70,980	82,605	97,053	113,074	131,537
Kogi	54,906	63,898	75,075	87,467	101,749
Kwara	45,433	52,875	62,123	72,378	84,196
Nassarawa	35,748	41,603	48,880	56,948	66,247
Benue	81,176	94,472	110,995	129,317	150,433
Plateau	60,952	70,935	83,342	97,099	112,954
FCT	59,260	68,966	81,028	94,403	109,818
Sub-Total	408,455	475,353	558,495	650,687	756,933

North-Western States	2018	2019	2020	2021	2022
Zamfara	4,470	5,202	6,112	7,120	8,283
Jigawa	3,239	3,769	4,428	5,159	6,001
Kaduna	11,202	13,036	15,316	17,844	20,757
Kano	13,433	15,633	18,367	21,398	24,892
Katsina	6,528	7,597	8,926	10,399	12,097
Kebbi	3,567	4,151	4,877	5,682	6,610
Sokoto	5,223	6,078	7,141	8,320	9,678
Sub-Total	47,662	55,467	65,167	75,922	88,318

North-Eastern States	2018	2019	2020	2021	2022
Adamawa	6,970	8,112	9,530	11,103	12,916
Bauchi	7,171	8,345	9,804	11,423	13,287
Borno	7,873	9,162	10,764	12,540	14,588
Gombe	3,804	4,427	5,201	6,059	7,048
Taraba	5,169	6,015	7,067	8,234	9,578
Yobe	3,060	3,561	4,184	4,874	5,670
Sub-Total	34,047	39,622	46,550	54,233	63,087



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Appendix E – Employment distribution across the Nigerian animation industry value chain

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Stages in the value chain	Key Players	2018	2019	2020	2021	2022
<i>Pre-Production</i>	Script Writer	333	1,000	1,667	2,333	3,000
	Storyboard Artist	333	1,000	1,667	2,333	3,000
	Voice Artist	333	1,000	1,667	2,333	3,000
	Sub-Total	1,000	3,000	5,000	7,000	9,000
<i>Production</i>	Modeller	333	1,000	1,667	2,333	3,000
	Texture Artist	333	1,000	1,667	2,333	3,000
	Character Animator	333	1,000	1,667	2,333	3,000
	Character Rigger	333	1,000	1,667	2,333	3,000
	Layout Animator	333	1,000	1,667	2,333	3,000
	Screen Play	333	1,000	1,667	2,333	3,000
	Visual Development	333	1,000	1,667	2,333	3,000
	Director	333	1,000	1,667	2,333	3,000
Sub-Total	2,667	8,000	13,333	18,667	24,000	
<i>Post-Production</i>	Video Editor	333	1,000	1,667	2,333	3,000
	Sound Editor	333	1,000	1,667	2,333	3,000
	Compositing	333	1,000	1,667	2,333	3,000
	Sound Design	333	1,000	1,667	2,333	3,000
	Sub-Total	1,333	4,000	6,667	9,333	12,000
Total		5,000	15,000	25,000	35,000	45,000



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Appendix F – Contribution of the Nigerian Animation Segment to GDP and Employment

- 1 Introduction
- 2 International Overview
- 3 Nigerian Overview
- 4 Market sizing
- 5 Value chain
- 6 Competitive landscape

- 7 Policy, legislation & case ...
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South-Southern States	Animation Contribution to GDP		Animation industry contribution to employment	
	NGN	Jobs		
Akwa Ibom	31,320,478	79		
Bayelsa	12,150,299	33		
Edo	33,305,508	61		
Cross River	26,031,722	56		
Delta	46,923,059	82		
Rivers	59,037,201	106		
Sub-Total	208,768,267	418		

South-Western States	Animation Contribution to GDP		Animation industry contribution to employment	
	NGN	Jobs		
Oyo	378,997,307	759		
Ogun	246,144,411	505		
Ondo	197,808,164	453		
Osun	171,156,386	456		
Lagos	791,750,960	1216		
Ekiti	66,961,145	317		
Sub-Total	1,852,818,372	3,706		

South-Eastern States	Animation Contribution to GDP		Animation industry contribution to employment	
	NGN	Jobs		
Ebonyi	4,651,276	16		
Enugu	7,483,974	25		
Abia	14,787,958	21		
Anambra	11,514,205	32		
Imo	24,193,067	31		
Sub-Total	62,630,480	125		

North-Central States	Animation Contribution to GDP		Animation industry contribution to employment	
	NGN	Jobs		
Niger	54,418,470	119		
Kogi	42,094,879	96		
Kwara	34,832,744	68		
Nassarawa	27,407,119	54		
Benue	62,235,809	123		
Plateau	46,730,377	90		
FCT	45,433,004	76		
Sub-Total	313,152,401	626		



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Appendix F – Contribution of the Nigerian Animation Segment to GDP and Employment (Cont'd)

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North-Western States	Animation Contribution to GDP		Animation industry contribution to employment	
	NGN		Jobs	
Zamfara	3,426,326		7	
Jigawa	2,482,623		9	
Kaduna	8,586,745		12	
Kano	10,296,938		20	
Katsina	5,003,985		12	
Kebbi	2,734,234		7	
Sokoto	4,003,596		7	
Sub-Total	36,534,447		73	

North-Eastern States	Animation Contribution to GDP		Animation industry contribution to employment	
	NGN		Jobs	
Adamawa	5,342,663		8	
Bauchi	5,496,357		13	
Borno	6,034,241		12	
Gombe	2,915,544		6	
Taraba	3,961,822		6	
Yobe	2,345,407		7	
Sub-Total	26,096,033		52	