

Hotstar: Decoding the Enigma

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Abstract

The case is about Hotstar, a digital and mobile entertainment platform which is a part of the Indian video OTT industry that is currently valued at \$109 million. The case tries to decode the enigma of the company which overshadowed global giants and pioneered its own rat race. To achieve the objectives of the study, secondary data in the form of newspaper reports, case articles etc. were consulted and existing literature on the subject was thoroughly reviewed with major reference to the conceptual framework of Sujata, et al. (2015). The research hints at a combination of quirky marketing, sustainable technology and adaptive content as the drivers of the success of Hotstar.

Key words: *Hotstar, 3-Tranche model, OTT industry*

Introduction

“Hotstar sees more app downloads than

babies born in India per minute” -

(Malvania, 2018)

On 1st February 2015, a handful of people celebrated on the 27th floor of their office as they had finally launched the project they had been working on for over 15 months called ‘Hotstar’. There was a sense

of tension in the room as the team took turns refreshing the analytics page to keep track of the numbers. When the numbers finally arrived, Hotstar had beaten every application in the world to achieve the million mark and literally broke the internet. It had streamed the ICC World Cup 2015; the most viewed sporting event ever on a digital platform beating

viewership of the Fifa World Cup 2014 and Super Bowl 2014.

Hotstar is a digital and mobile entertainment platform owned by Novi Digital Entertainment, a wholly owned subsidiary of Star India. Hotstar was launched on 1st February 2015 after a month of beta testing during January 2015 (Kamanth, 2016). Hotstar was born as a result of necessity more than an innovation. The necessity came as Star India had different YouTube channels for each broadcasted with over 50,000 hours of content which needed to be segregated as per consumer demands. The consumer wanted to have a variety of content on a single platform with differentiated playlists as per his/her tastes and preferences. Consequently, Hotstar was born as a unified platform for over 50,000 hours of content in 7 different languages and also streamed sporting events such as Cricket, Kabaddi, Hockey etc. (Kamanth, 2016)

Hotstar is a part of the Indian video OTT industry that is currently valued at \$109 million and is expected to touch \$218 million by 2022 (Deloitte, 2015). The Indian video OTT industry is currently populated by international players like Netflix, Amazon Prime and regional players like Sony Liv, Voot apart from Hotstar. It is in this market that Hotstar tasted its success only a few days after its launch.

Hotstar in the Indian Video OTT industry

To understand how Hotstar stands up against its competitors in the Indian video OTT industry three independent research reports are presented.

- 1) The Kalagato report published in August 2017 presented a breakdown of the market share in the Indian video OTT industry for the respective players. The report states that the Star India owned Hotstar was a market leader with 73.19% with Amazon Prime trailing behind with

9.66% market share. Sony Liv was a close third 6.99% market share and was followed by Wynk movies run by Airtel with 6.36% . US based Netflix held a mere 1.26% of the market share. The massive difference in market size between the players can be on account of Hotstar's 1,00,000 hours of content spanning drama and movies in 8 languages and live streaming of sporting events. Also, the huge pie of Hotstar is a result of the mammoth downloads by more than 250 million users as on the date of the report (Bhattacharyya, 2017).

2) Counterpoint Technology market research report was published in December 2017 and gave necessary insights into the nascent Indian video OTT industry. The report considered the Top 5 players in the market which included Hotstar, Voot, Amazon Prime, Sony Liv and Netflix. They presented a more comprehensive overview of the Indian video OTT industry by studying the revenue model, monthly active subscribers, parent firm, subscription cost, percentage of paying

subscribers of the given players (**See Exhibit 1**). It may be inferred from Exhibit-1 that Hotstar lead the industry with a massive 75 million monthly active subscribers as on the date of the report. It follows a hybrid revenue model i.e. it provides free content which is ad-supported and the premium content has a payment gateway and has to be paid for by the consumer. Hotstar, Voot and Sony Liv benefit from being the subsidiaries of television giants like Star India (owned by 21st Century Fox), Viacom 18 (owned by Network 18) and Sony (owned by Sony Corporation) respectively (Tecnology, 2017).

3) The second report by Counterpoint Technology Market Research was published in June 2018 and it analyzes the Indian video OTT industry with the app installs between January 1, 2018 and March 31, 2018. **Exhibit 2** represents the market share with respect to the app installs as on January 1, 2018. Hotstar led the

market with 76% of app installs followed by Voot, Amazon Prime, Sony Liv, Yupp TV and Netflix. Exhibit 3 represents the market share with respect to the app installs as on March 31, 2018. During this period, the biggest gainer was Sony Liv with an increase of 7.1%. The gainers ate into the pie of the ‘monster’ Hotstar which held a colossal 70% even though it witnessed a drop of approximately 6% from the beginning of the year. However, the numbers were only expected to shoot up again as Hotstar was to see increased install activity due to Vivo Indian Premier League (IPL) in the month of April-May. The finals of the same saw Hotstar serving 10.3 million concurrent streams which was a new world record (Team, 2018).

From all the three reports studied it can be inferred that Hotstar is unanimously the leader of the Indian video OTT market in

all aspects covering market share, app installs, active subscribers etc. Such kind of dominance is a result of various internal and external factors that have shaped Hotstar in becoming what it is today. The 3 tranche model is discussed to study the internal factors for this phenomenon.

‘The 3 Tranche’ Model

To decode the success of Hotstar, a model has been presented called the 3 Tranche Model. This model has been adapted from the conceptual framework of Sujata, Sohag, Tanu, Chintan, Shubham and Sumit (2015). **Exhibit 4** presents the conceptual framework of Sujata et al. (2015). The framework explains the ‘Trends’ affecting ‘Factors’ which in turn affect ‘Adoption of OTT services’ and finally go on to have ‘Impacts on Telco’s’. The Factors in the framework which impacts OTT adoption of services are cost, content availability, convenience, smartphone & mobile internet penetration, user experience, features and net

neutrality. This case study limits its focus on the Factors aspect of the conceptual framework and more specifically on the *internally controlled factors*. The internally controlled factors are user experience, content availability and features.

The model developed from an adaptation of this framework has been termed as ‘The 3 tranche model’ and is specific to the OTT video industry. Under ‘The 3 tranche

model’, the three tranches are Technology, Content and Marketing. Where technology relates to user experience, content relates to content availability and marketing relates to promotion of the features. Hence, ‘The 3 tranche model’ studies *only the internally controlled factors* (Sujata et al. 2015) affecting the OTT services which directly or indirectly influences the customer, allowing us to examine the intricacies more comprehensively.

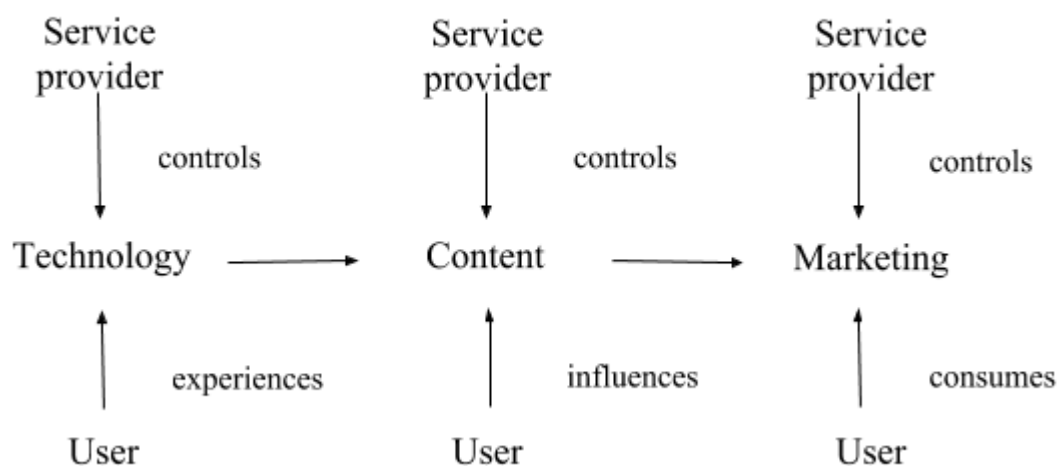


Figure 5 - The 3 tranche model for OTT video market

Technology is controlled by the service provider in the form of systems, support

etc. while the user experiences the same in the form of user interface, playlist

segregation, keyword searches etc. Content is controlled by the service provider by way of originals, partnerships, content license etc. but is heavily influenced by the taste and preferences of the target user (Guichard, 2016). Marketing is also controlled by service provider by way of advertising, free trials etc. but is consumed by users through various media like digital, print, platform itself etc.

Studying ‘Hotstar’ Through ‘The 3 Tranche’ Model

For the purpose of studying the case of ‘Hotstar’ with the help of ‘The 3 tranche model’, Technology will be studied through the three subdivisions of Virtual Reality, Knol – data platform and Machine Learning. Content will be studied in terms of its portfolio and Marketing will be studied with references to the ‘Paper Cup marketing’ and ‘Quirk marketing’.

1) Technology. Although the idea of Hotstar was fairly simple the challenges of developing a new video OTT platform was

huge. Hence, in order to cash in early in a yet to be exploited market Hotstar decided to outsource product design and engineering to Accenture Video Solution (AVS). The internal teams of Hotstar and AVS worked together to develop a platform with basic functionalities in order to livecast the ICC World Cup 2015 (KJ, 2015).

Hotstar used quality tech stacks where ‘tech stack is a set of components or layers in a software offering that provides broad functionality’ (Hanburger, 2011). The following are the tech stack that Hotstar uses internally corresponding to their functionality (Products Hotstar, n.d.)

- Productivity and Operation :
Yusp, G Suite, Microsoft Office 365
- Analytics and data science :
Adobe Analytics, Google Analytics, Mixpanel
- Devops and IT - Facebook comments, New Relic, Amazon Route 53, Amazon S3, Akamai Intelligent Platform

Virtual reality. Hotstar added a new dimension to its technological foray when it announced that it would live stream Vivo IPL matches in Virtual Reality (VR). Hotstar pushed the boundaries further in terms of its technological advancement by creating an overall immersive experience by including dedicated cricket emoji's to express views, access on-demand replays & highlights and allow users a 360 degree view (Lidhoo, 2018). Hotstar had previously experimented with live streaming 2016 Kabaddi World Cup in VR. The 3D Virtual reality involved 1) A 2-dimensional 180 degree experience allowing the user to pan around without a VR headset.2) Stereoscopic 3D VR experience supported by a Google Cardboard or Samsung VR headset.

To setup the 3D Virtual reality, 12 cameras were placed per pod, 6 per eye allowing 2 streams per

pod. One for 2D and other for 3D.

The VR experience flowed through the tech stack, from Amazon S3 storage (Devops and IT) through Akamai cache (Devops and IT) and finally distributed to the apps (Pushpendran, 2017).

The challenge of VR penetration could have been a concern given the weak infrastructure facilities of India. But, the entry of Jio in the telecom industry resulted in increase of video consumption of Hotstar by more than 5 times while Jio topped 4G download speed charts giving a limit of 1GB consumption per day leading to easy and quality streaming of services. Also, the requirements of the VR experience in Hotstar were majorly back-end driven – 1) The user could watch the match directly using VR glasses if Hotstar's back-end technology was compatible with the VR device, 2) The app allowed users to pause the match at any given time,

and swipe the screen to get a 360-degree view of the stadium generating a greater consumer base.

Knol. Knol is the data platform of Hotstar. Such a platform is highly important for companies like Hotstar who produce about 10 TB of data everyday including industry data, social data, customer support data, behavioral click stream data, ad impressions etc. (Sidwani, 2017). It can be inferred from **Exhibit 5** that KAFKA is the centre of the whole architecture of Knol and as a result mediates all kinds of data flowing through Knol. Knol coordinates different but interconnected functions like data movement, data processing and data storage with ease. Data movement is facilitated through the open source and custom KAFKA connectors which allow point and click solution for exchanging data between KAFKA and sub-systems. Data processing is enabled as Knol allows building of real-time streaming applications using KAFKA streams,

Apache Spark etc. leading to greater efficiency. Data Storage is made possible as the data so moved and processed is stored in different databases to enable business and engineering solutions. Amazon S3 (Devops and IT) is used as a data-lake, Redshift for warehousing, Cassandra to enable recommendations and Druid for time-series data. Such data is practically used for cases such as 1) Personalization - to recommended content and send push notification to users, 2) Engineering intelligence - to develop data-driven applications using ad impressions, click stream events, support queries, social data etc.,3) Inter-service communication - where Knol is used as a change-data agent enabling sync communication and replication between varied data sources (Sidwani, 2017).

Machine Learning. Machine Learning is being used at Hotstar for working in various dimensions. Currently the focus is on broadly two areas -

1) Personalization - The data that is processed in Knol is further used by Hotstar through Machine Learning to enable a more personalized experience for users. As Hotstar has a diverse set of content such as TV shows, Movies, Sports and News the watching pattern differs for each type of content. Hence, different algorithms with implicit ratings were designed. The diversity of users and content consumed across regions also varied. Consequently, one model does not help to study such varied consumption patterns. Hence, on top of global recommendation models the local collaborative filtering models are deployed to better deliver the personal user experience (Sachan, 2017).

2) Adtech - Machine Learning is a very important component of Hotstar's Adtech. With Adtech Hotstar balanced advertisers who want to reach target consumers at a minimum budget and customers who are looking for meaningful promotions. As Mr. Amit Sachan of Hotstar puts it 'for a

company selling beauty cream, it is more beneficial to target females within a certain age group than random users' and that's where Machine Learning helped Hotstar by finding users interests, demographics and preferences to match the user with meaningful promotions. The advertiser's requirements are minimum accuracy, conversion rate and Click-through rate (CTR) (Sachan, 2017). For the same, Hotstar continuously improved its modeling strategies through LSI (Large scale integration), clustering and deep learning. To automate feature generation in its algorithms in Neural network architectures Hotstar is exploring Auto Encoders and Deep Learning Algorithms (Sachan, 2017).

2) Content. Hotstar unlike its competitors not only provides TV shows, movies and originals, it has a vast library of sports collection with live coverage of sporting events such as F1, Cricket, Kabaddi, Football etc. It also provides news content with live

telecast of channels like Republic TV, Fox news, TV9 Telugu, Bloomberg Quint, ABP news etc. Hotstar also has access to the vast regional media libraries from its parent Star India which appeals to the regional content consumers giving it the much needed mass appeal. But with Indians increasing appetite for international content, Hotstar further benefits as it is the only service with content partnerships with global studios like HBO, Fox and Disney giving it entry to the niche consumer market of international content consumers as well. It currently has 1,00,000 hours of exclusive content spanning 8 languages (The unbelievable journey to success for Hotstar). **Exhibit 6** represents the Indian video OTT content landscape. From Exhibit 6, it may be inferred that Hotstar is a leader in the Indian video OTT market with 75 million monthly active subscribers as it maintains a fine

balance between its regional content and global content. As previously discussed, the regional players such as Sony Liv and Voot aim at the regional and niche users with their exclusive content sourced through their respective parent companies. Similarly, the international players like Netflix and Amazon Prime stream their originals and other acquired content following their global approach to India. While both these international players have added regional content and Indian originals to their library it is no match for Hotstar's media library (Bhatia, 2018).

To increase Hotstar footprint beyond its platform Hotstar announced a strategic partnership with Airtel which will allow Hotstar portfolio content to be streamed on Airtel TV creating positive synergies for both companies (Malvania, 2018).

3) **Marketing.** Hotstar has been a breakthrough innovator in marketing right from the beginning. But its micro marketing strategy with the paper cups and ‘quirk’ in promotional content has stood out over the years.

Paper Cup Marketing. This micro marketing approach of Hotstar was put to the ground by Ginger Cup. Cups like in **Exhibit 7** were distributed in corporate parks, colleges, Wifi stations etc. with messages like ‘*Yeh hi Mocha hai*’ followed by ‘*Chai + Wifi = Hotstar*’.

This campaign was heavily pushed at wifi stations to have a greater impact as people have long waiting times at stations. According to a study, when a consumer is calm and silent and is ready to take the promotion in his mind, that time is critical for success of such micro marketing. Technically, such influence is termed as ‘Situation based impact’ (Saha, 2017).

Bringing the ‘Quirk’ back.

a) ‘Torrent Morghulis’. To advertise the streaming of the fan popular show

‘Game of Thrones’ in India, Hotstar decided to use it as a medium to announce its new content feature and also bring in new users. The title ‘Torrent Morghulis’ is a play on ‘Valar Morghulis’ a popular catchphrase among the fans of the show. The title directly translates ‘All Torrents must die’. This campaign puts through the trouble people face in illegally finding and downloading torrents for the content which is available at the user’s fingertips at Hotstar Premium. The promotional content involved messages like - 1) ‘*Shall we begin? The futile search for the right Torrent*’, 2) ‘*A Very small man can cast a very large shadow. And still not find the right Torrent*’, 3) ‘*Shame, Shame, Shame. On you for downloading The Game of Thongs Torrent instead*’. The campaign added more to its quirk factor with a tagline ‘*minutes after America, hours before Russia*’ a jibe at

the then political scenario (Bureau, 2017).

- b) Dare or Stay There. Hotstar marketing gimmicks were not only confined to attract consumers to its platform. With its marketing, it also tried to reach out to the tech professionals like product managers, designers and engineers of India and influence them to join Hotstar to build the future of online video for the world. The campaign titled 'Dare or Stay there' was the first campaign of Hotstar in 2018 and took the industry by storm. The promotional content involved messages like - 1) *'Code for a billion minutes of live watch-time, instead of any other billion thing'*, 2) *'Go work for a tech giant Or dare to build one'*, 3) *Write code that will see the light of the day. Every day'* 4) *'You didn't evolve from a monkey to be an execution monkey'* (bureau, 2018).

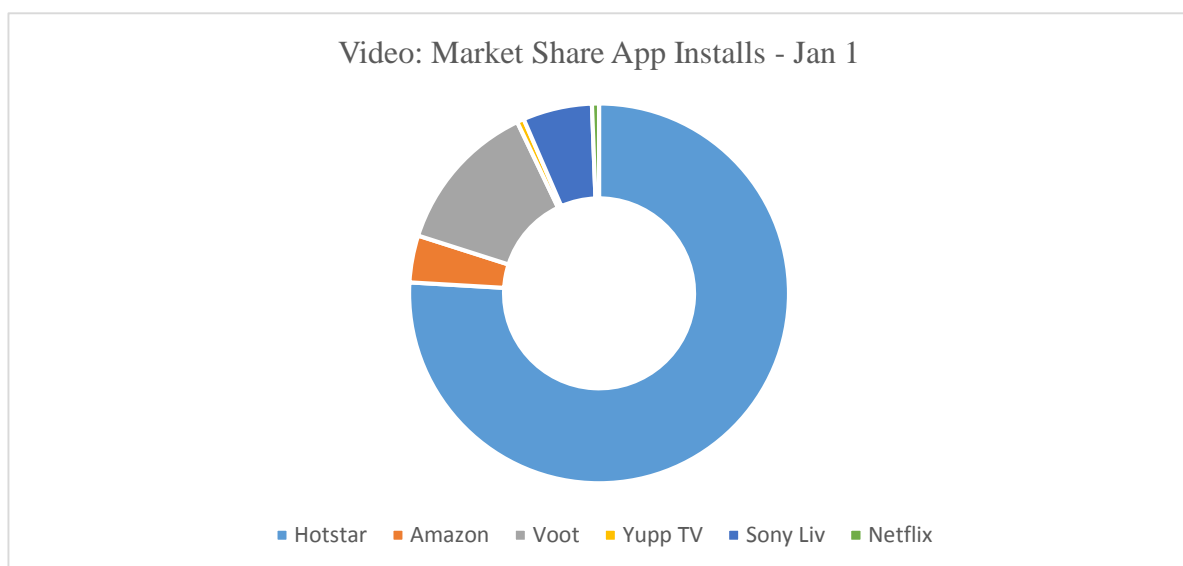
Closing Comments

The case studies the Indian video OTT market leader Hotstar with the help of 'The 3 tranche' model which considers the internally controlled factors allowing us to study the scenario much comprehensively with decisions and effects. From the study, it can be generalized that the video OTT services is largely internally influenced by Technology, Content and Marketing which are also the tranches of the model so developed. Also, from the study it can be inferred that the success of Hotstar is a result of sustainable technology which majorly consists of Virtual reality, Knol & Machine learning, content which includes its regional offerings from its parent company and international offerings from partnerships and marketing which incorporated a 'quirk' factor in paper cup marketing and campaigns like *'Torrent Morghulis'* and *'Dare or stay there'*.

Exhibit 1: Overview Of The Indian Video OTT Industry (Bhatia, 2018)

Players	Revenue Model	Monthly Active Subscribers (in million)	Parent Firm	Subscription cost (US \$ per month appx.)	% of paying subscribers
Hotstar	Hybrid	75	Star India	\$3	3-5%
Voot	Advertisement	22	Viacom 18	Free	N.A
Amazon Prime Video	Subscription	11	Amazon	< \$1-2	100%
Sony LIV	Hybrid	5	Sony	< \$1	0-1%
Netflix	Subscription	5	Netflix	< \$7.8	6-8%

Source: *Bhatia, (2018)*

Exhibit 2: Market Share As Per App Installs As On January 1, 2018

Source: *Team (2018)*

Exhibit 3: Market Share As Per App Installs As On March 31, 2018

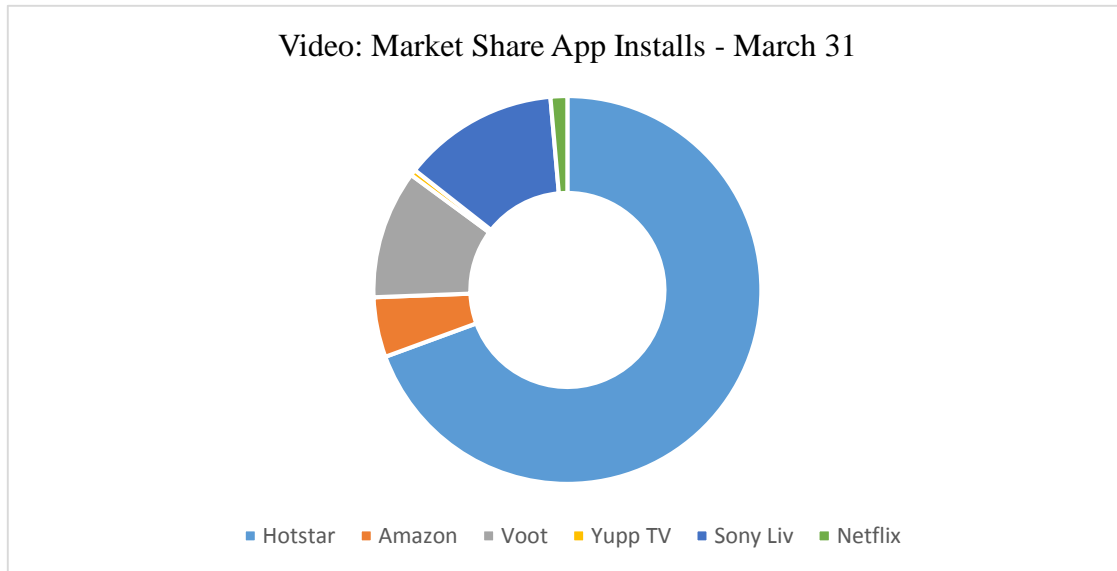


Exhibit 4: Conceptual Framework of Sujata, Sohag, Tanu, Chintan, Shubham, & Sumit (2015)

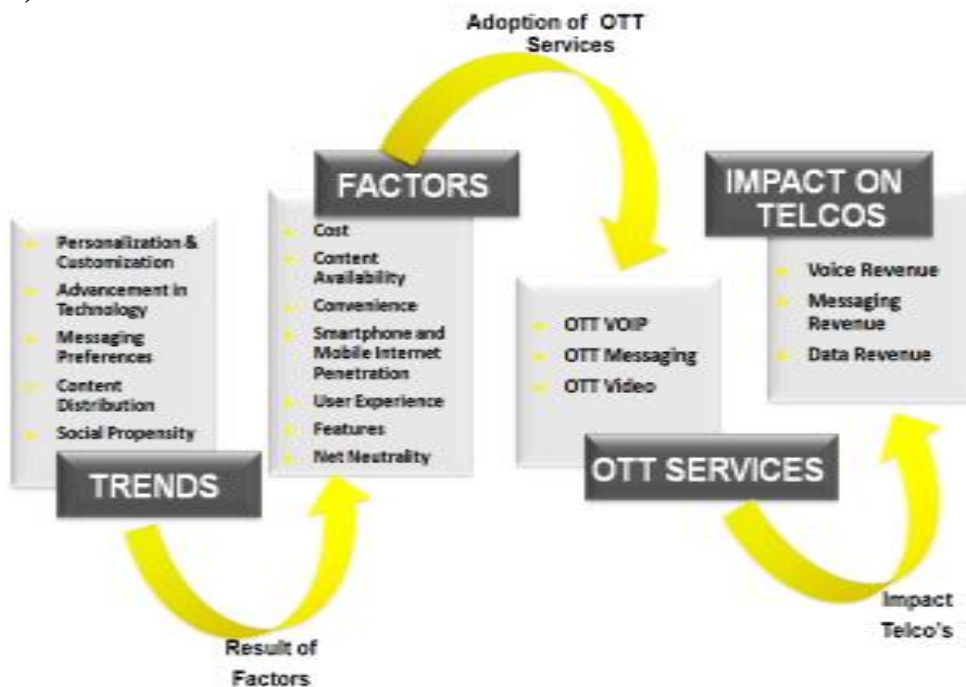
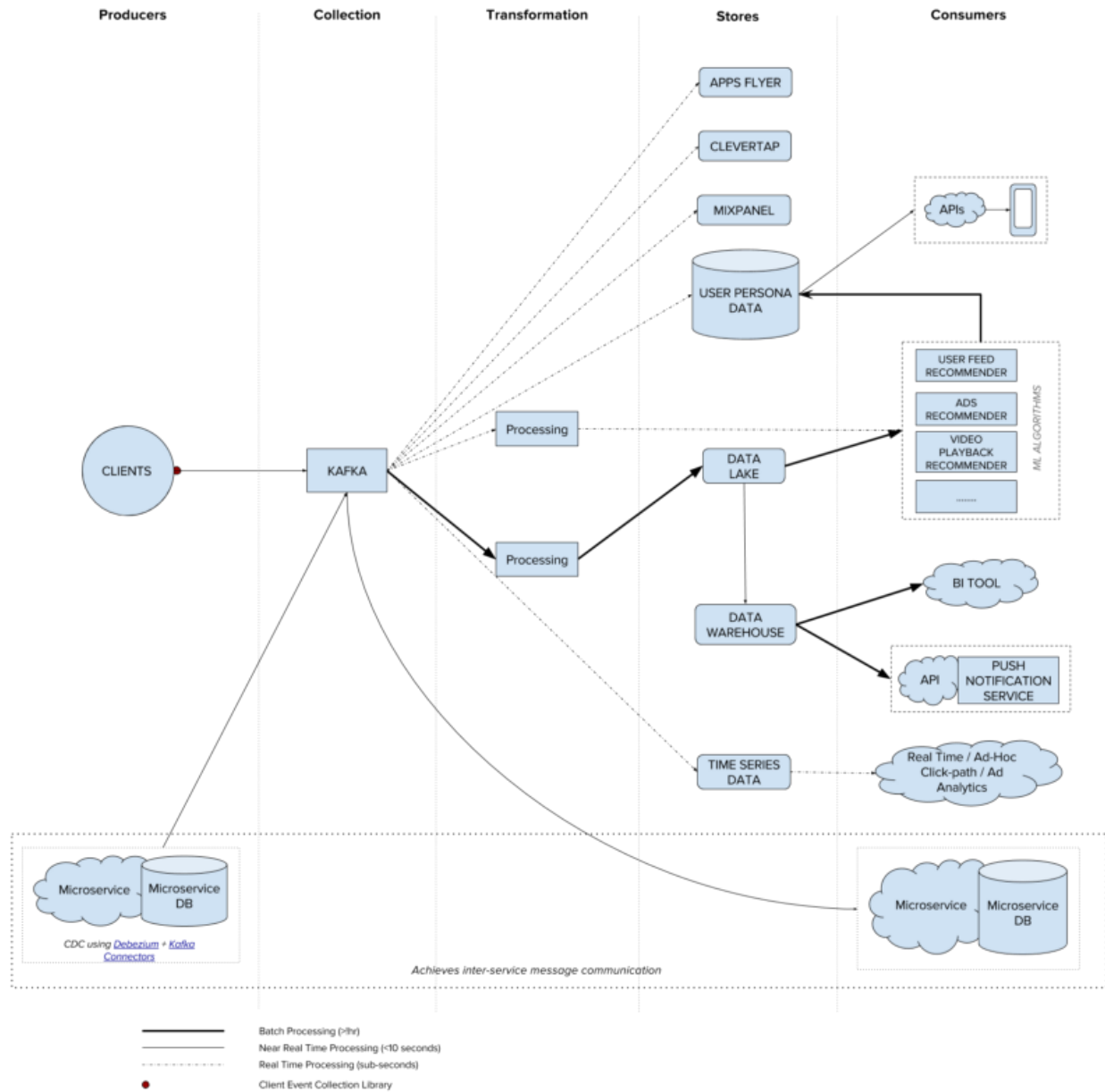
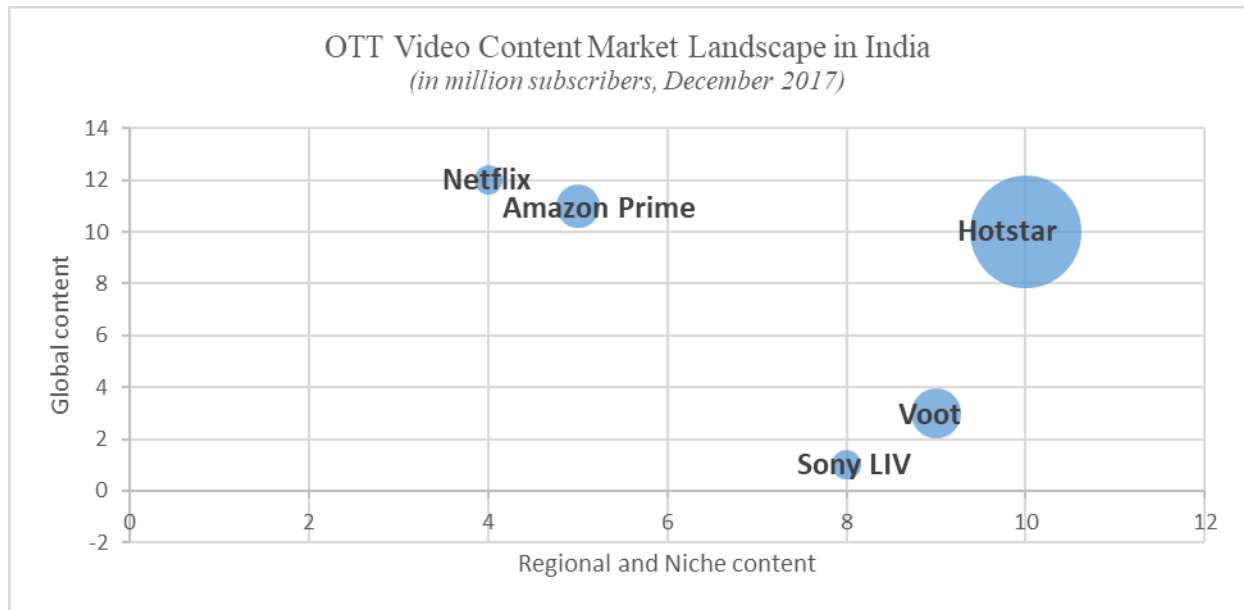


Exhibit 5: Data Architecture of Knol



Source: Sidwani (2017)

Exhibit 6: Indian video OTT content landscape



Source: *Bhatia (2018)*

Exhibit 7: Images of Paper Cup marketing by Hotstar and Ginger Cup



Source : *(Saha, 2017)*

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