Indian Languages - Defining India's Internet

A study by KPMG in India and Google
April 2017

Executive summary

Indian language internet user base grew at a CAGR of **41%** between 2011 and 2016 to reach **234 million** users at the end of 2016. This impressive growth has resulted in Indian language internet users surpassing the English internet users.

This growth momentum is likely to continue with the Indian language internet user base growing at a CAGR of 18% to reach **536 million by 2021** compared to English internet user base growing at 3% to reach 199 million. Indian language internet users are expected to account for nearly **75% of India's internet user base by 2021**.

Growth in user base will be complemented by the increasing penetration of internet enabled devices, availability of affordable high speed internet, India's rising digital literacy and Indian language enablement of the ecosystem bringing and engaging more Indian language users online.

Hindi internet user base is likely to outgrow English user base by 2021 and along with Marathi and Bengali users will drive the volume growth. Tamil, Kannada and Telugu users will be among the most digitally engaged through 2016 to 2021. Internet enabled mobile devices to be the clear choice of an Indian language user to consume digital content. Local language digital content will witness greater acceptance from Indian language users as they find it more reliable than English content.

Online content categories accessed by Indian language internet users

Mature categories

2016: High adoption levels

Till 2021: User base CAGR at par with overall Indian language internet user base growth

Over **90%** of Indian language internet users access Chat applications and digital entertainment. New Indian language internet users will contribute to growth in user base over the next five years.

Growth categories

2016: Moderate adoption levels

Till 2021: User base CAGR moderately higher than overall Indian language internet user base growth

Social media platforms and digital news are growing with ~ **300 million Indian language users** accessing them. Indian language enabled mobile devices and increased regional language content will result in more users accessing these categories

Emerging categories

2016: Low adoption levels

Till 2021: User base CAGR higher than overall Indian language internet user base growth

Digital write-ups, digital payments, online government services, e-tailing and digital classifieds are emerging categories among Indian language users. Indian language user base accessing these categories will **grow at a CAGR of ~26% to 33%** over the next five years. With increased local language support and content, these categories will see increased adoption among users.

Future trends of Indian language internet (2021)

Rise in user-generated original content online

Increasing penetration of affordable Indian language enabled smartphones will contribute to rise in user generated original content online

Faster evolution of Indian language internet users to become active users

Increasing penetration of internet and internet led businesses accompanied by improving digital literacy will help users make the shift from entertainment to online transactions significantly faster

Internet platforms to become content aggregators and witness increased time share for Indian language internet users

Indian language users' time spend on internet platforms across categories will converge to transform these platforms as content aggregators

Increase in hyper local consumption driven by content in Indian languages

Content led hyper local categories will focus on localised content and end to end Indian language enablement to attract more users

Informed response to sales initiatives by B2C players

Investment by businesses to establish digital channels to reach Indian language users in Tier 2+ markets directly in their local languages

Indian language enablement of platforms, supplemented by mobile compatibility

Mobile compatible content in Indian language enabled applications and websites to increase adoption of online services among Indian language internet user

Rise of digital advertisements in local languages

Indian language users' higher propensity to respond to a digital advertisement in their local language will increase the share of local language advertisements in the digital medium

Indian language enablement of digital payment interfaces

Indian language enabled payment interfaces play a pivotal role in Indian language users transacting online, enhancing internet's role as a revenue generating platform

Advanced technology to bring more Indian language users online

Advancement in voice recognition and translation technology and the advent of language agnostic internet will drive more Indian language users and accessible content online

Monetisation of Indian language internet user behavior analytics

Building multi language data analytics capabilities will generate insights for businesses and content generators

Table of contents

01
Introduction

Introduction to Indian language internet users

India, a nation with **over 1600 dialects**[1] has **30 languages**[1] spoken by more than a million native speakers each. The Indian Constitution recognises **22 official languages**[2].

Defining the Indian language users

Indian languages*	Hindi	Bengali	Telugu	Marathi	Tamil	Gujarati	Kannada	Malayalam
Speakers (primary languages) in India - 2016 (in million)	**521**	**101**	**91**	**89**	**75**	**56**	**46**	**40**
Indian language users - 2016 (in million)	**254**	**53**	**40**	**64**	**40**	**32**	**32**	**22**

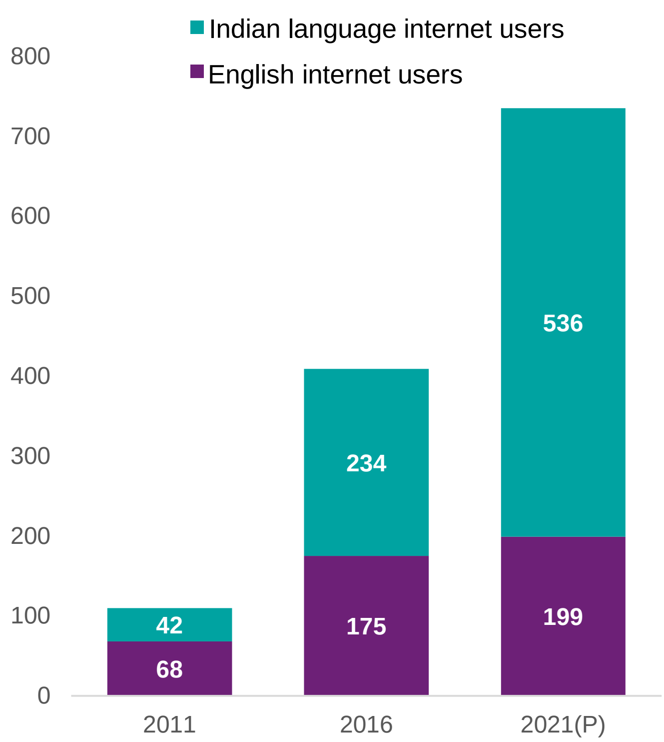
Language Diversity Index (LDI) in India
0.93[3]

Indian languages users are Indian language literates who **prefer their primary language over English to read, write and converse** with each other

*These 8 languages have been considered as Indian languages for the purpose of this report
[Source: KPMG in India's analysis, April 2017]

Indian language internet users are the present and the future[4]

Internet user base in India (in million)



Total internet users in India	110 million	409 million	735 million

Source: KPMG in India's analysis, April 2017 (P): Projections

Indian language internet users have grown from 42 million in 2011 to 234 million in 2016

Currently, there are 234 million Indian language internet users compared to 175 million English internet users

Indian language internet users are expected to grow at a CAGR of ~ 18% to reach 536 million in 2021. English users is expected to grow at a CAGR of 3%

9 out of every 10 new internet users in India over the next 5 years are likely to be Indian language users

1. Census of India, Government of Indian, 2001
2. 8th schedule of the Indian Constitution, as on November, 2015
3. Investing in Cultural Diversity and Intercultural Dialogue, UNESCO World report, 2009
4. KPMG in India's analysis, April 2017

Key growth drivers of Indian language internet users

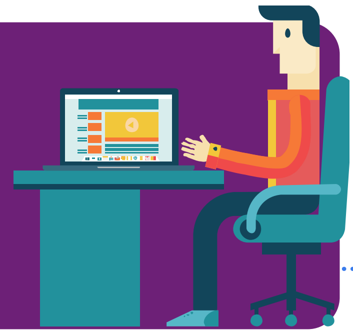
4. KPMG in India' analysis, April 2017
5. Indian Media and Entertainment Industry report, KPMG India – FICCI, March 2017
6. Number of smartphone users in India from 2015 to 2021 (in million), Statista.com
7. Indian Union Budget, 2017

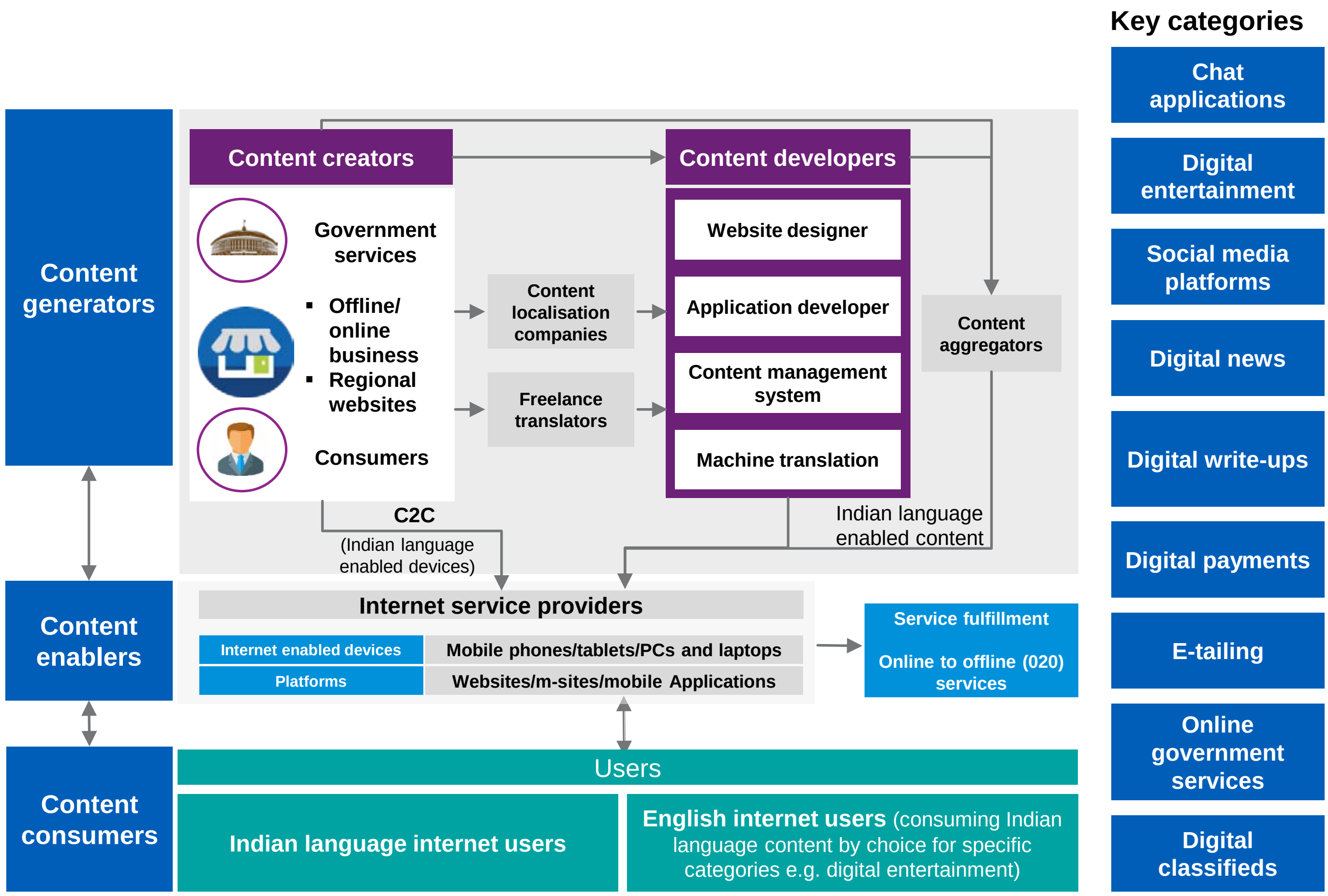
*Exchange rate: 1USD = INR 67

Indian language enabled internet ecosystem

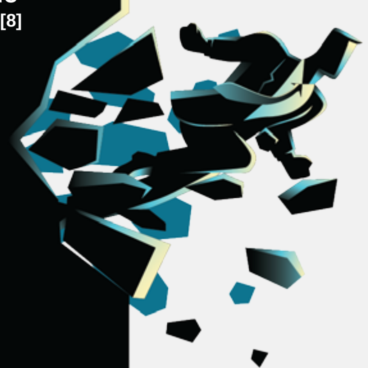
Overview of the ecosystem and associated operational elements

Majority of the online content currently available in Indian languages includes news and entertainment. Chat applications and social media platforms have seen increased adoption by Indian language users on account of local language enabled keyboards and smartphones. In recent times, e-tailing, digital classifieds, digital payments and online government services have also started to enable Indian language content on their platforms.





Challenges faced by the ecosystem[8]



70% Indian language internet users face challenges in using English keyboards

60% Indian language internet users stated limited language support and content to be the largest barrier for adoption of online services

60% of the users dropping out of internet stated high cost of internet and limited internet access as the primary reason

30% Indian language internet users are aware of the online content but not comfortable using the online medium

8. KPMG in India analysis and Primary research by Nielsen on select 8 Indian language internet users

Key behavioural aspects of Indian language internet users

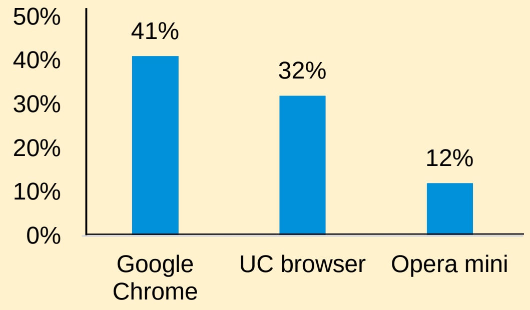
99% of Indian language users access internet through their mobile devices. The overall share of internet users in India accessing internet through mobile devices is 78% [9]

Pre-loaded applications and web browsers see high adoption among new Indian language internet users

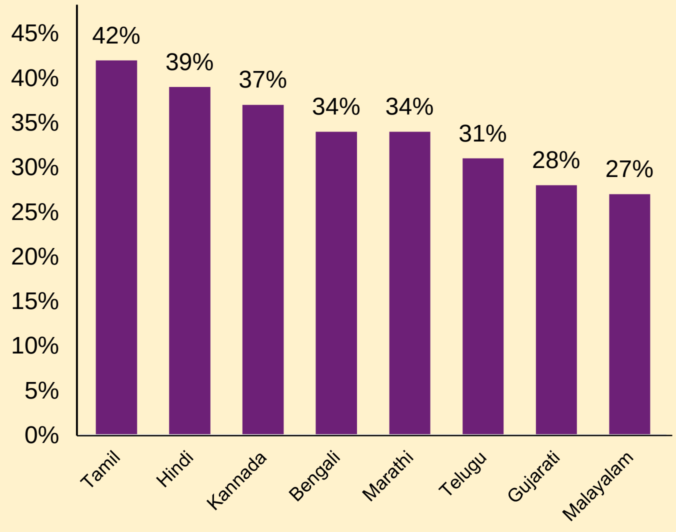
68%[9] Internet users consider local language digital content to be more reliable than English

Currently, Tamil (42%[9]) has the highest internet adoption levels followed by Hindi and Kannada among the Indian language users

Use of browsers for daily internet consumption 2016[14]

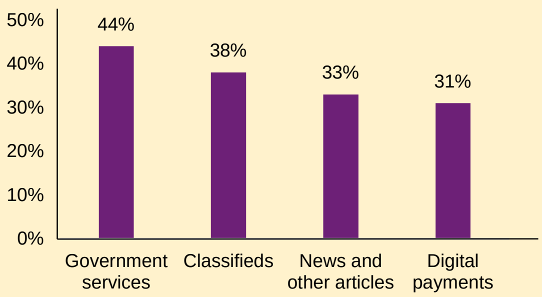


Language wise internet adoption levels for Indian language users – 2016[9]

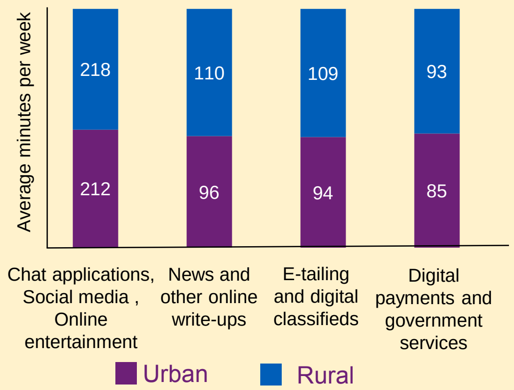


9. KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017

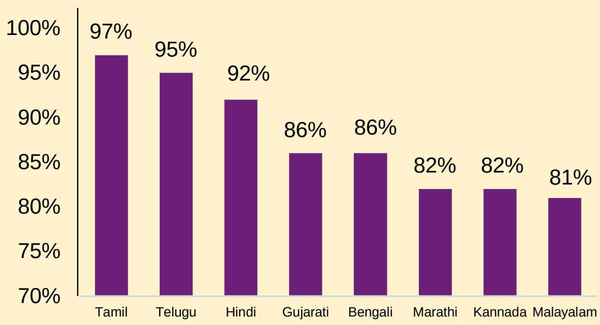
Users accessing services exclusively online – 2016[10]



Engagement levels – Urban vs Rural users[10]



Language wise propensity to respond to an advertisement in local language than English[10]



Around 35%[10] of Indian language internet users access government services, classifieds, news and payment services exclusively online

Rural Indian language internet users have higher engagement levels (~ 530 minutes per week[10]) than Urban internet users (~487 minutes per week[10])

Chat applications and Digital entertainment have more than 90%[10] adoption among Indian language users

88%[10] of Indian language internet users are more likely to respond to a digital advertisement in their local language as compared to English

10.KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017

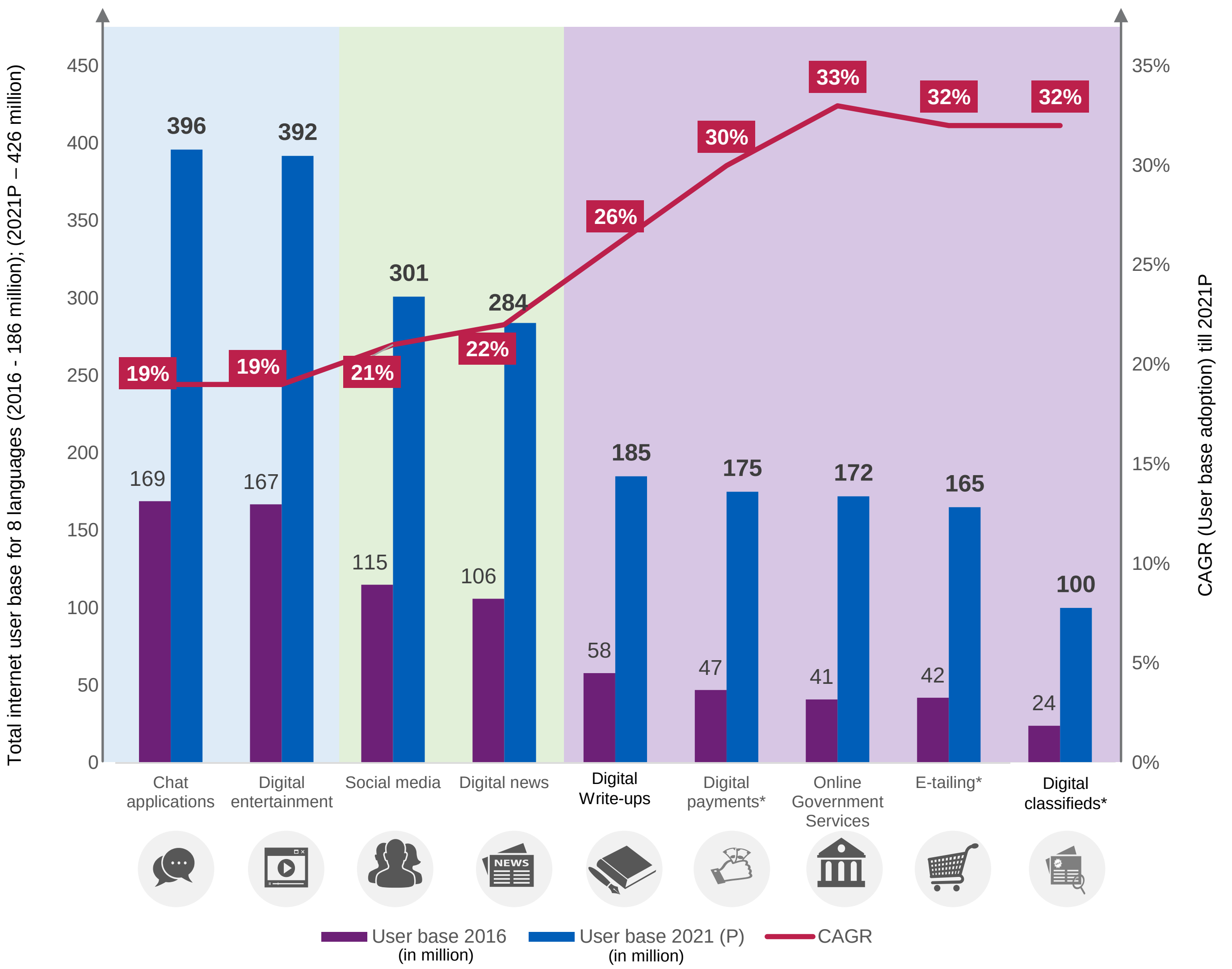
02
Key categories of consumption - Indian language Internet users

Category wise growth for Indian language internet users - 2021

Each category will witness differential growth rate in adoption# by Indian language internet users over the next five years. The categories can be classified based on current adoption levels and expected growth in user base as follows:

Mature	Growth	Emerging
2016: High adoption levels Till 2021: User base CAGR at par with overall Indian language internet user base growth	2016: Moderate adoption levels Till 2021: User base CAGR moderately higher than overall Indian language internet user base growth	2016: Low adoption levels Till 2021: User base CAGR higher than overall Indian language internet user base growth

Category wise Indian language internet users - 2016 and 2021P (in million)[11]



Online government services will be the fastest growing category; growing at 33%[11] CAGR over the next five years

E-tailing, Digital classifieds and Digital payments is expected to grow at 30 - 32%[11] CAGR till 2021

Chat applications and Digital entertainment will bring new Indian language users online growing at 19%[11] CAGR in line with the growth in total Indian language user base

Adoption for a category is defined as the fraction of Indian language internet users accessing the category online
*Digital payments, e-tailing and digital classifieds user base refers to Indian language users accessing the category and not necessarily transacting on these platforms

11.KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017

Language wise Indian language internet users - 2021

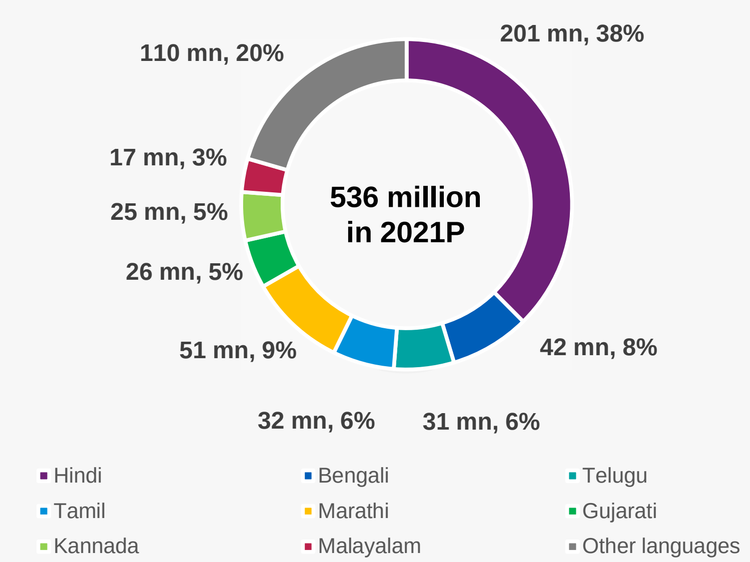
The Indian languages currently have different internet adoption levels. The propensity to adopt internet for each of the languages will vary based on growth in language speakers, user requirements and content availability in the local language.

By 2021, the number of Hindi internet users will be more than English users

Marathi, Bengali, Tamil and Telugu internet users are expected to form 30%[12] of the total Indian language internet user base

Tamil and Kannada speakers have the highest propensity to adopt internet in future with the Indian language enablement of the ecosystem

Language wise internet users 2021P[12]



Language	Adoption propensity
Hindi	54%
Bengali	46%
Telugu	60%
Tamil	74%
Marathi	43%
Gujarati	43%
Kannada	74%
Malayalam	44%
Other languages	NA*

* Propensity to adopt internet in future has been ascertained for select 8 Indian languages

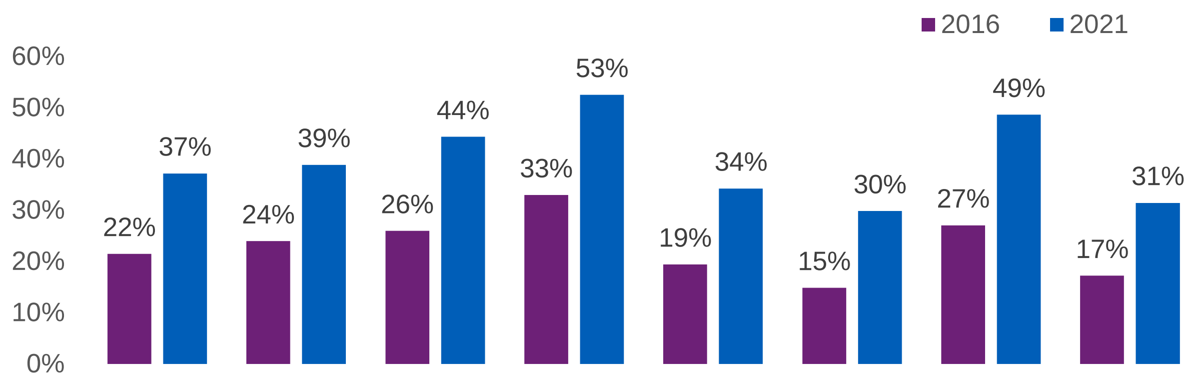
12.KPMG in India analysis, April 2017

4X growth in Indian language users accessing e-tailing by 2021, to reach 165 million

E-tailing is currently accessed by 42 million Indian language internet users* and expected to grow a CAGR of 32%[13] to reach 165 million users by 2021

Indian language internet users are more comfortable accessing consumer electronics category online rather than other categories like fashion & lifestyle, home care, groceries, beauty, books etc. This could be attributable to limited cataloguing available in Indian languages for these categories.

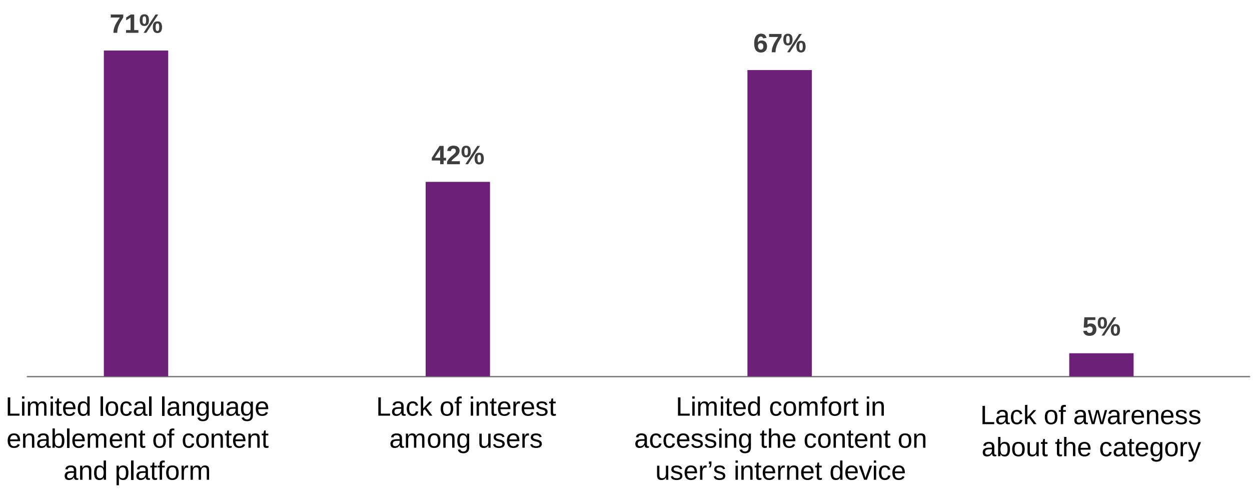
Adoption of Indian language internet users (2016 – 2021P)[13]



User base (in million)	Hindi	Bengali	Telugu	Tamil	Marathi	Gujarati	Kannada	Malayalam
2016	19	4	4	5	4	2	3	1
2021P	75	16	14	17	17	8	12	6

Indian language enablement across the e-tailing lifecycle including all associated services from search to delivery and outbound communication as an integrated ecosystem will ensure higher adoption and hence acquisition of 120 million[13] new Indian language internet users in the next five years.

Limitations for Indian language internet users accessing e-tailing websites/applications[13]



*E-tailing user base refers to users accessing the category and not necessarily transacting on these platforms

13. KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017

The perceived value of online shopping by Indian language internet users[13]

Product range (Exclusivity and variety) (70%)

Convenience (21%)

Cashbacks and promotions (9%)

Indian language internet users perceive exclusivity, product range and convenience as key benefits of e-tailing. Cash backs and discounts are not perceived as the key benefits by more than 90%[13] of users

~ 25%[13] of Indian language internet users face challenges with respect to use of payments interface provided by the e-tailer, leading to probable drop-outs at this stage

~44%[13] Indian language internet users finding it difficult to comprehend product description and customer reviews in English. High involvement categories like fashion and lifestyle need to invest in product description and user reviews in Indian languages

~75%[13] of the Tamil and Telugu speaking internet users show a propensity to start accessing local language enabled e-tailing websites compared to 50% of Hindi internet users

Despite high awareness among Indian language internet users, language barrier and comfort factor play a crucial role in influencing e-tailing adoption. Over 50%[13] of offline shoppers are willing to access e-tailing sites/ applications if provided with end to end Indian language interface

13. KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017

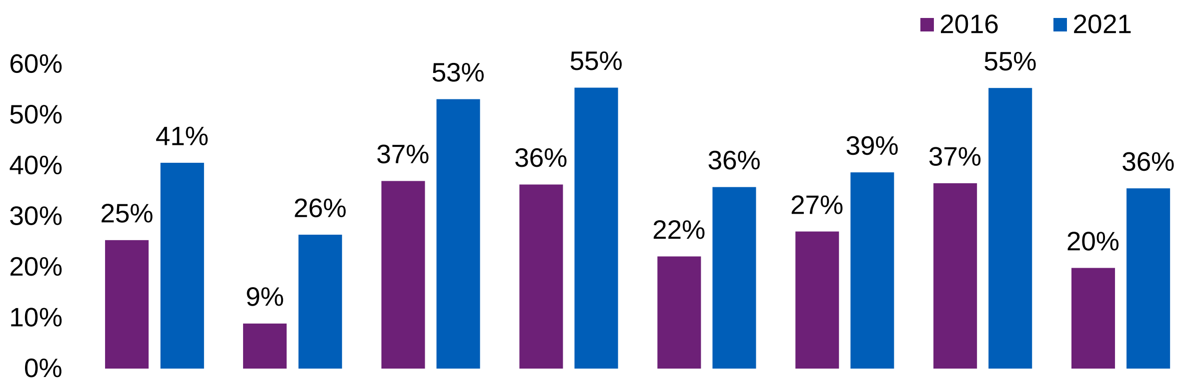
Indian language internet users accessing digital payments will triple, to reach 175 million

Digital payments is currently accessed by **47 million Indian language internet users*** and expected to grow at a CAGR of 30%[14] to reach **175 million** by 2021

Indian language internet users access digital payments largely for mobile recharges and utility bill payments (75%).

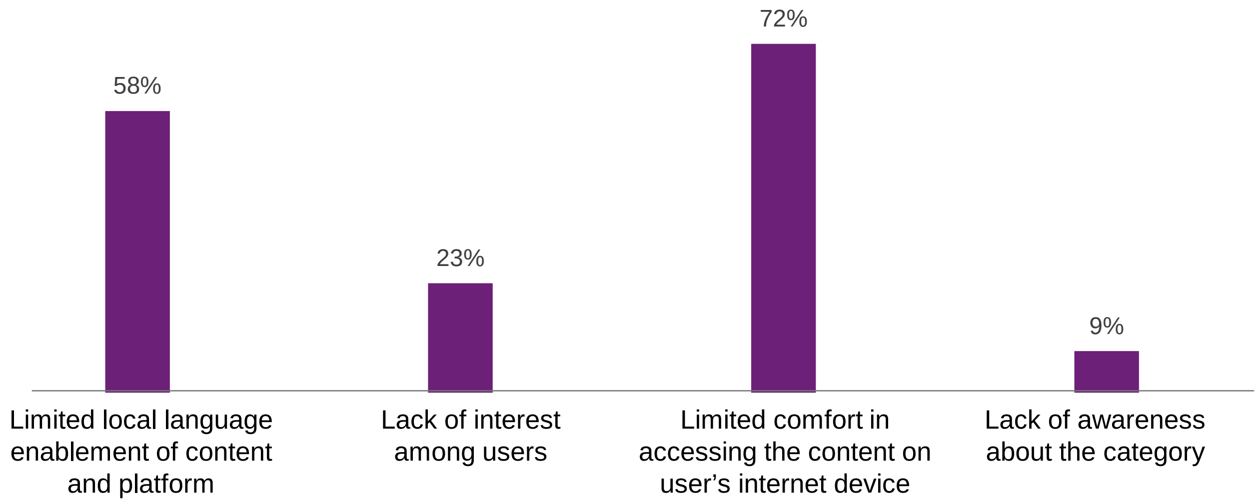
Adoption rate of digital payments across the 8 Indian languages is in the range of 9% to 37%, indicating the focus necessary for digital payment platforms to realise the market's potential[14].

Adoption of Indian language internet users (2016 – 2021P)[14]



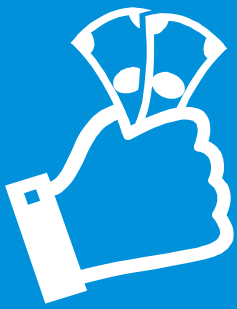
User base (in million)	Hindi	Bengali	Telugu	Tamil	Marathi	Gujarati	Kannada	Malayalam
2016	22	2	5	5	5	3	4	2
2021P	81	11	17	17	18	10	14	6

Limitations of Indian language internet users accessing digital payments[14]



*Digital payments user base refers to users accessing the category and not necessarily transacting on these platforms

14. KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017



Total share of Indian language internet users accessing digital payments is expected to increase from 28% today to 43% by 2021, thus limiting the potential market of an English only platform to 57% of user base[14]

More than 75%[14] of Indian language internet users prefer mobile wallets over bank promoted websites and applications. Select leading mobile wallets have extended Indian language support on their platforms

~33%[14] of Indian language internet users perceive safety to be the most important benefit of online transactions

Despite being aware of online services, ~ 58%[14] of Indian language internet users continued to use only the offline channel on account of language barrier in the online ecosystem

Tamil, Telugu and Kannada users have relatively higher potential for adoption of digital payments with more than half of their user base expected to avail the online service by 2021[14]

14. KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017

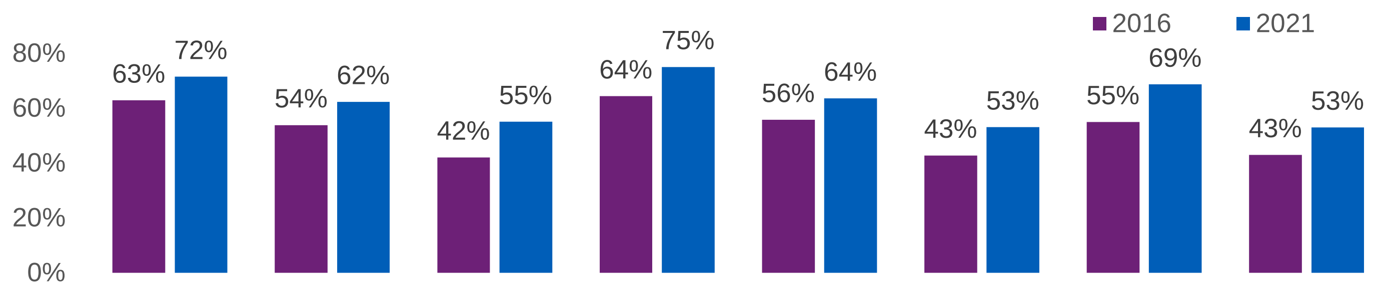
Digital news to add ~180 million Indian language users by 2021

Indian language internet users consuming digital news in local languages will grow from 106 million in 2016 to 284 million in 2021[15]

The total Indian language internet users consuming digital news in the 8 Indian languages will exceed the English users by ~85 million[15] in 2021, hence presenting a significantly larger market for regional languages

An average rural user spends 15%[15] more time consuming digital news than the urban counterpart.

Adoption of Indian language internet users (2016 – 2021P)[15]

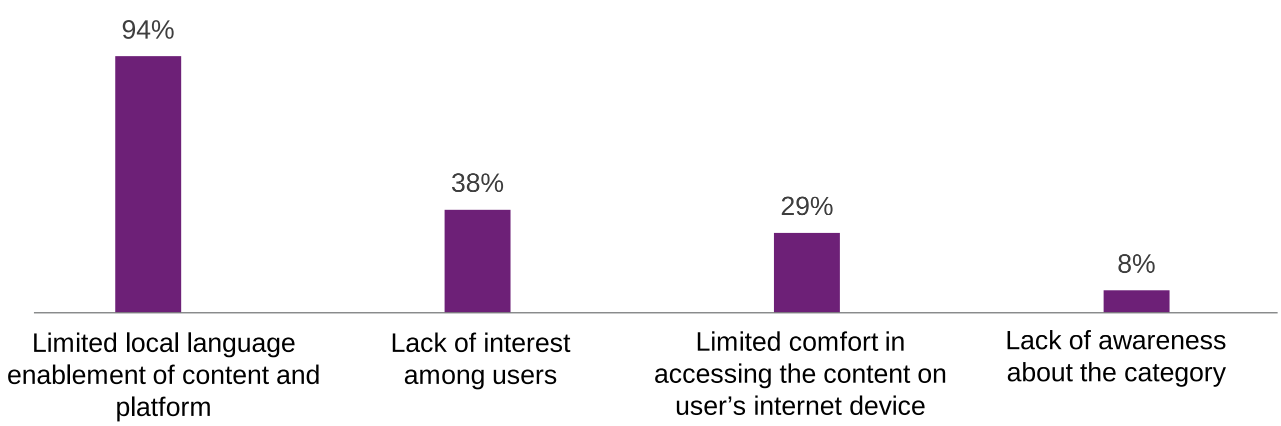


User base (in million)	Hindi	Bengali	Telugu	Tamil	Marathi	Gujarati	Kannada	Malayalam
2016	55	10	6	9	12	5	6	3
2021P	144	26	17	24	32	14	17	9

Popular categories of digital news for Indian language internet users[15]:

- **General (67%)**
- **Sports (44%)**
- **Politics (39%)**

Limitations of Indian language internet users accessing digital news[15]



15. KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017

32 million[15] Indian language users consume news exclusively on digital medium. This is one third of the current user base accessing digital news

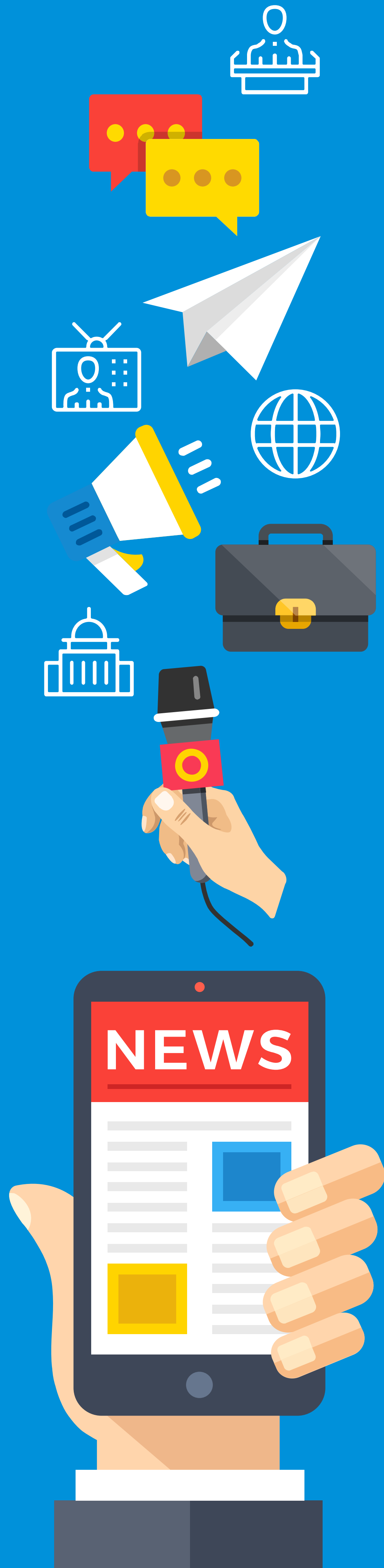
Over 60%[15] of the Indian language internet users prefer to consume regional news. Companies curating regional news in Indian languages will play a large role in contributing to growth of the user base

The top drivers of digital news consumption for Indian language internet users are real time updates and headlines on topics of interest

Hindi, Marathi, Bengali and Tamil users will form 80% of the total Indian language user base accessing digital news by 2021[15]

Digital news content should be optimised for consumption on mobile devices as approximately 99%[15] of Indian language internet users access online content on mobile devices

56%[15] Indian language internet users who do not access digital news are likely to adopt with increased availability of regional news content online. Tamil, Kannada and Hindi have the highest propensity to adopt this category in the next five years



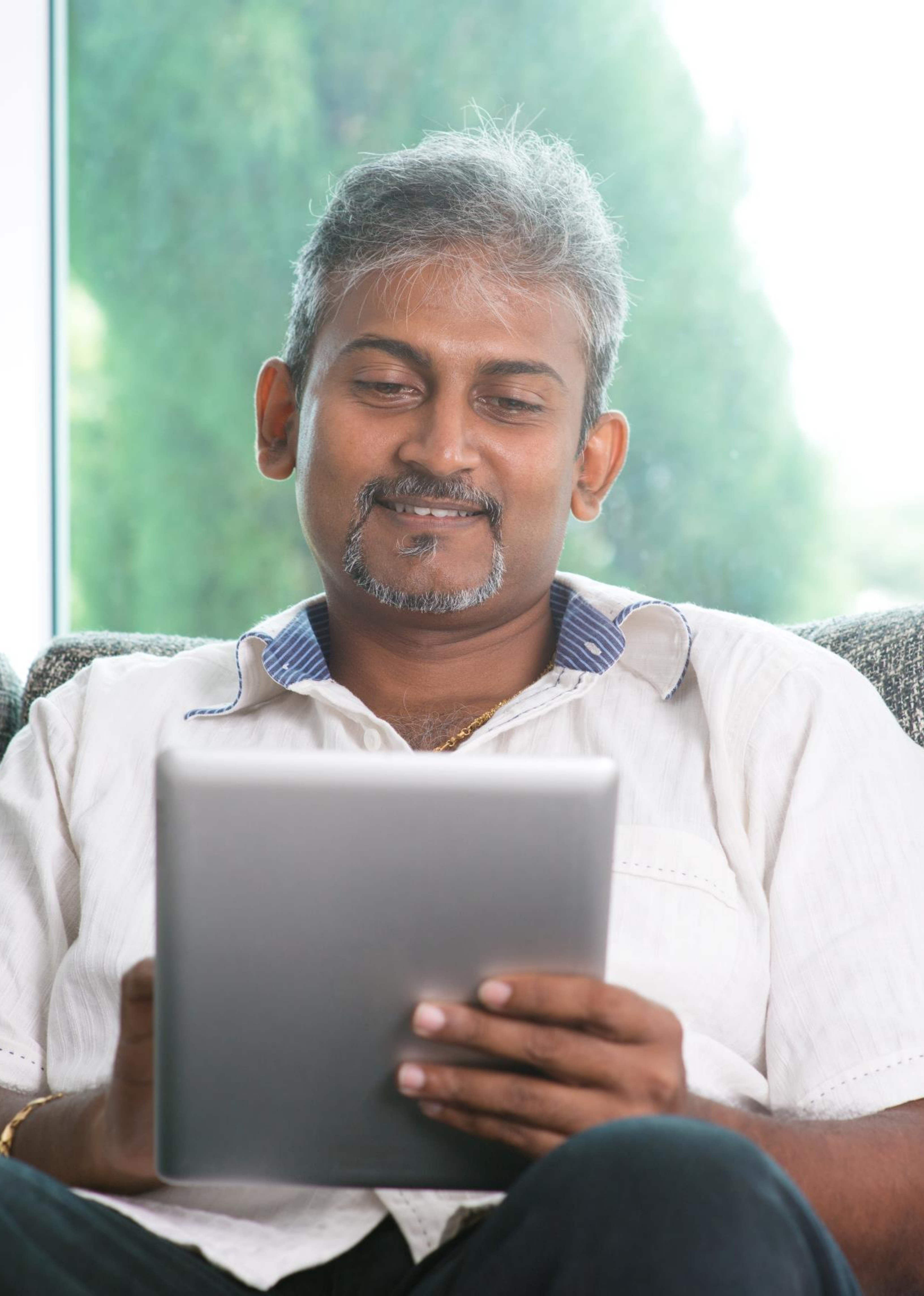
15. KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017

Regional news is the most preferred category of digital news accessed by Indian language users. However the preferences beyond regional news vary from one language user to another as depicted below. Other popular digital news categories accessed by Indian language internet users are financial news, health and nutrition etc.

Language wise preference for digital news categories[16]

Categories	Hindi	Bengali	Telugu	Tamil	Marathi	Gujarati	Kannada	Malayalam
Regional	82% [1]	67% [1]	58% [2]	63% [1]	72% [1]	68% [1]	56% [1]	63% [1]
Sports	49% [2]	60% [2]	42%	45% [3]	35% [3]	44% [3]	47% [2]	16%
Politics	40%	16%	64% [1]	61% [2]	27%	17%	47% [2]	36% [3]
Entertainment	48% [3]	35% [3]	58% [2]	44%	43% [2]	67% [2]	31%	59% [2]

16. KPMG in India analysis and Primary research by Nielsen on select 8 Indian language internet users, April 2017

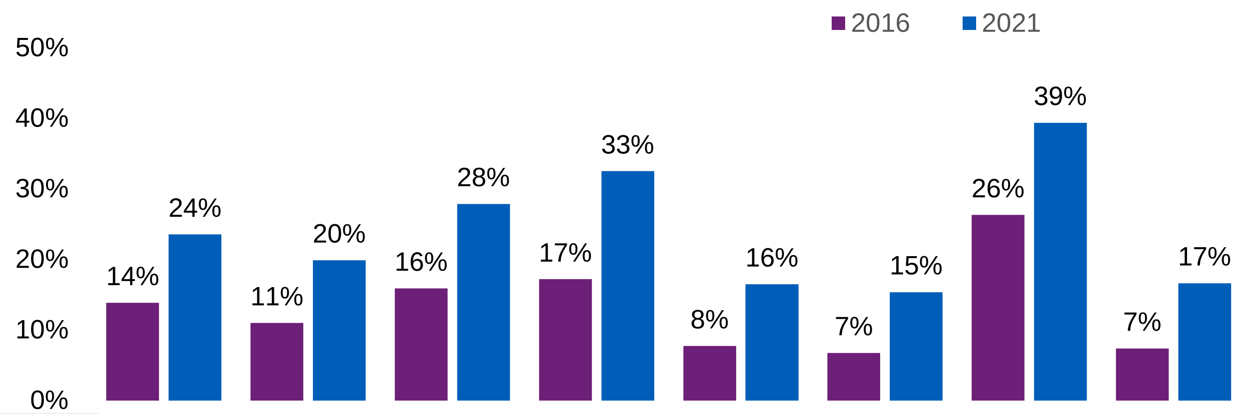


4X growth in Indian language user base for digital classifieds, to reach 100 million by 2021

Adoption of digital classifieds among the Indian language internet users is currently at 15% and is expected to rise to approximately 31% by 2021[17]

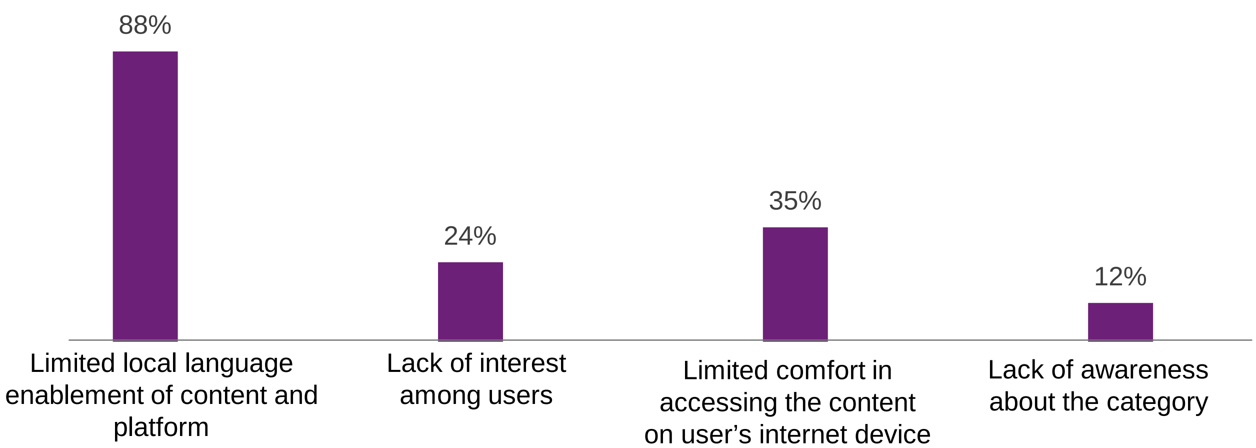
As the Indian language user base grows by 76 million over the next five years, localisation is an emerging trend in digital classifieds. This rests on the basis that users are more likely to transact with others in the same area. Localised listing of products and services in Indian languages would be an important phase in the evolution of digital classifieds.

Adoption of Indian language internet users (2016 – 2021P)[17]



User base (in million)	Hindi	Bengali	Telugu	Tamil	Marathi	Gujarati	Kannada	Malayalam
2016	12	2	2	2	2	1	3	1
2021P	47	8	9	10	8	4	10	3

Limitations of Indian language internet users accessing digital classifieds[17]



*Digital classifieds user base refers to users accessing the category and not necessarily transacting on these platforms

17. KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017

Top classifieds categories for Indian language internet users[17]

- **Recruitment (53%)**
- **Matrimony (34%)**
- **Real estate (28%)**

Easy search and navigation, real time updates on listings and information in preferred language are the key aspects to effectively engage an Indian language internet user accessing digital classifieds

Perceived value of digital classifieds by Indian language internet users[17]

- **Easy access (32%)**
- **Listing updates (27%)**
- **Structured information in local languages (27%)**

30% of Indian language internet users access classifieds offline and 50% of these users are likely to adopt the category if these services are provided online in their preferred language[17]

Digital classifieds should focus on Hindi, Tamil and Kannada. These languages are expected to contribute to ~ 70%[17] of Indian language internet users for this category by 2021

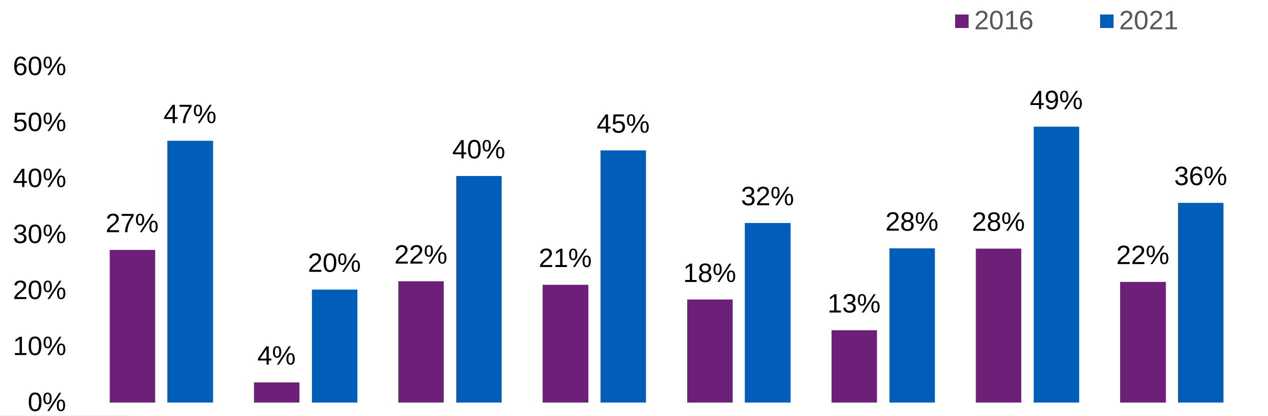
17. KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017

Online government services will add 131 million Indian language users by 2021

Online government services are currently accessed by 41 million Indian language internet users and expected to have 172 million users by 2021 growing at a CAGR of 33%[18]

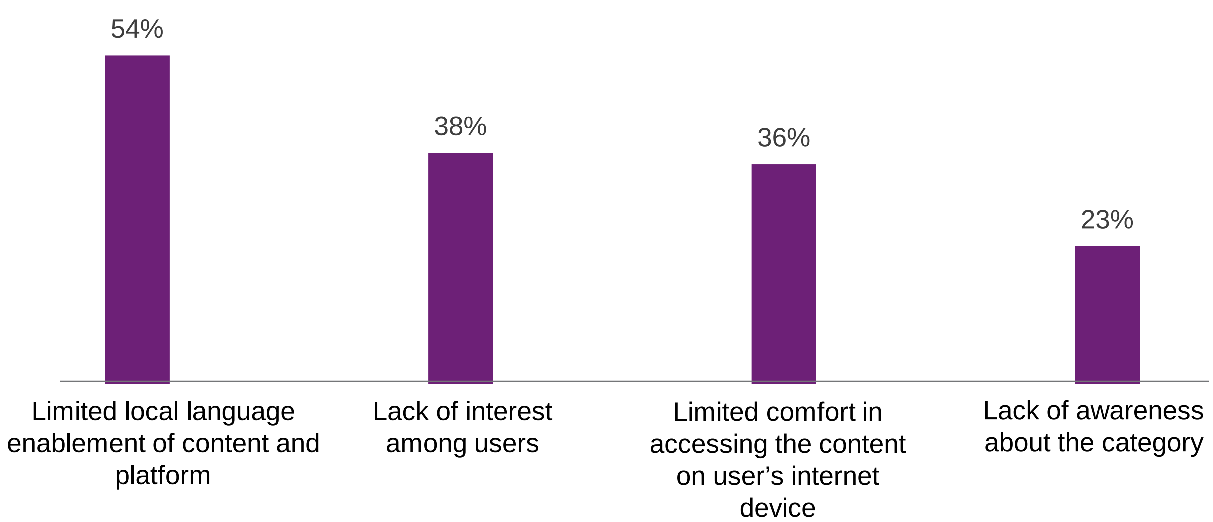
28%[18] of the Indian language internet users access government services online for filing applications, job search, accessing information on government schemes and tax related services.

Adoption of Indian language internet users (2016 – 2021P)[18]



User base (in million)	Hindi	Bengali	Telugu	Tamil	Marathi	Gujarati	Kannada	Malayalam
2016	24	1	3	3	4	1	3	2
2021	94	8	13	15	16	7	12	6

Limitations of Indian language internet users accessing online government services[18]



*Digital classifieds user base refers to users accessing the category and not necessarily transacting on these platforms

18. KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017

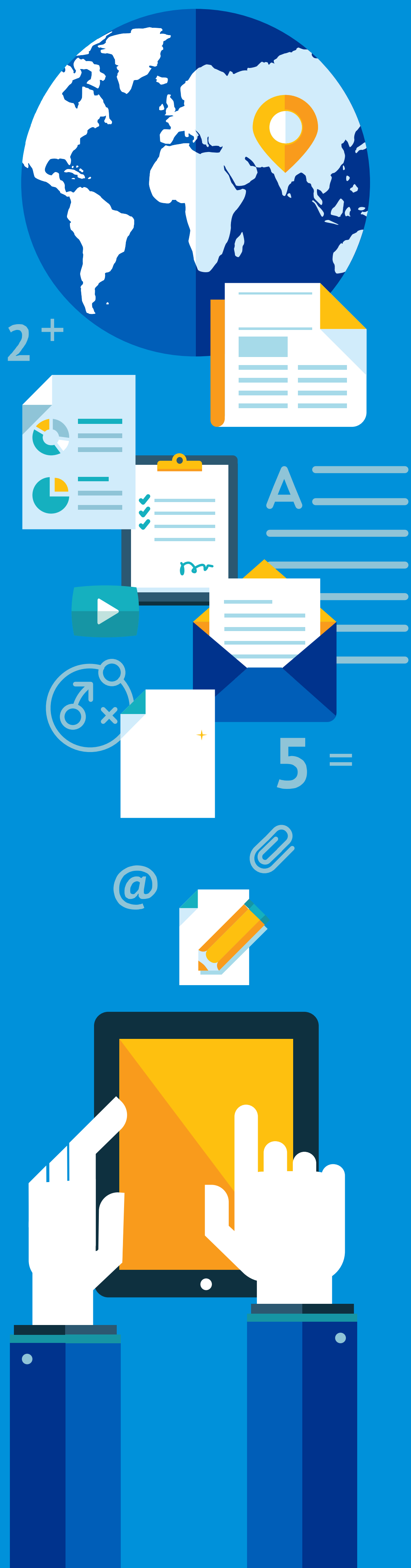
Online government services is the fastest growing category for Indian language internet users growing at a CAGR of 33%[18]. Content optimisation for mobiles, increased transparency and end-to-end Indian language enablement will drive this growth

Hindi ,Tamil and Marathi users will form ~75% of the total Indian language user base accessing online government services by 2021[18]

An opportunity for government to increase awareness and hence adoption exists, considering 24% urban and 20% rural Indian language internet users are not aware of these online services[18]

More than 40% of urban and 30% of rural Indian language internet users are not interested in accessing government services online, therefore additional value added services and benefits should be evaluated for acquisition of new user base for this category[18]

More than 60% of rural Indian language internet users stated language as a barrier to access government services online. These services should be available in local languages for such users to engage effectively



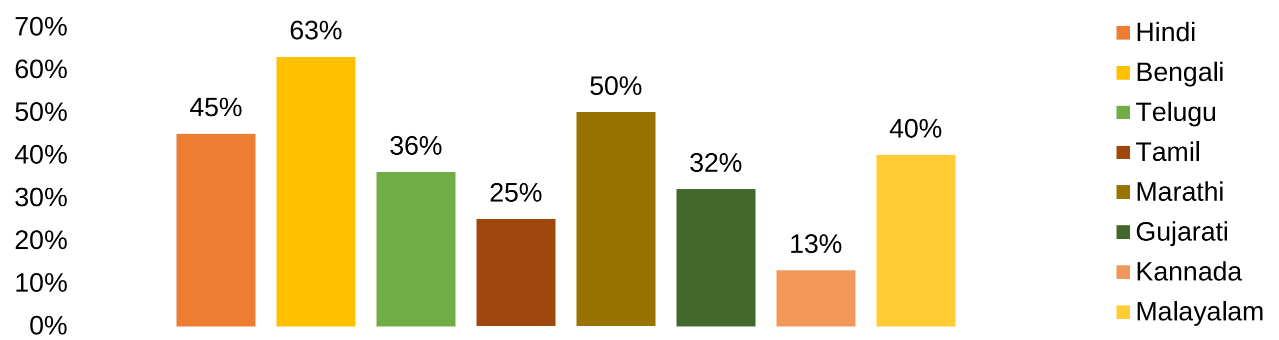
18. KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017

Indian language digital entertainment user base to reach 392 million by 2021

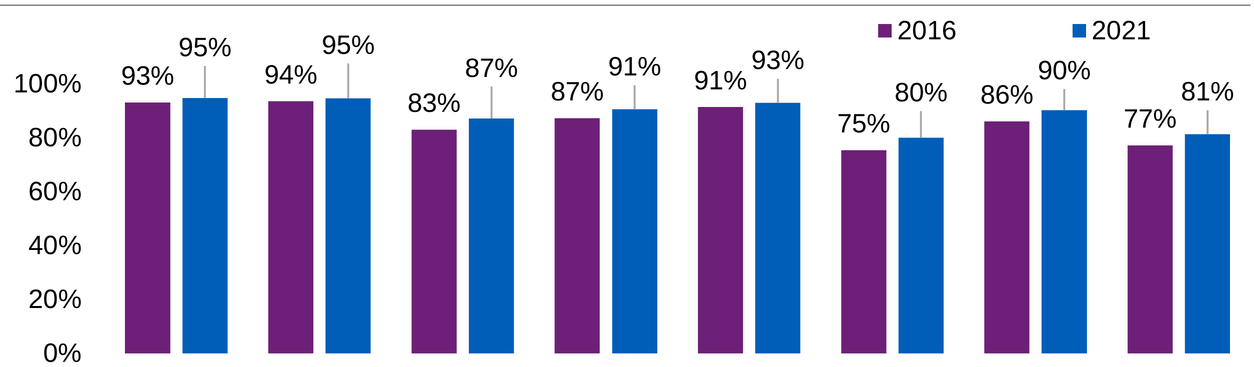
Digital entertainment caters to 167 million Indian language internet users and is expected to have 392 million users by 2021 growing at a CAGR of 19%[19]

Indian language users have an adoption rate of 90% for digital entertainment, second only to chat applications. Users associate convenience and availability of content on demand as the primary reason to access this category online. These users access both video and audio content online. 84% of Indian language internet users view content on leading video sharing platform followed by 36% users accessing India's leading Video on demand application.[19]

Percentage of users that stated limited content availability[19]



Adoption of Indian language internet users (2016 – 2021P)[19]



User base (in million)	Hindi	Bengali	Telugu	Tamil	Marathi	Gujarati	Kannada	Malayalam
2016	82	17	11	12	20	8	10	6
2021P	191	40	27	29	47	20	23	14

19. KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017

Digital entertainment was the first category accessed online for 43%[19] of Indian language internet users. Considering the high adoption and growing user base, this category is expected to be the largest platform for digital advertisements in local languages in the next five years

Ease of access and increased local language content is excepted to acquire 56%[19] of Indian language internet users who do not access digital entertainment today

Hindi followed by Bengali and Marathi languages have the highest user base for digital entertainment [19]. Availability of content in these local languages could be important to increase adoption for this category in future.

Bengali, Kannada and Malayalam, represent the fastest growing Indian language user base [19] of digital entertainment over the next five years. The growth will be dependent on content availability in these languages

19. KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017

Chat applications, social media platforms and digital write-ups for Indian language internet users

Chat applications cater to 170 million Indian language internet users, This is expected to grow to 400 million by 2021 at a CAGR of 19%[20]

Current market is dominated by Hindi internet users, accounting for ~50% of the Indian language internet users. Kannada is expected to be the second largest user base growing at a CAGR of ~20% in next five years. [20]

45% [20] of Indian language users face challenges in text input on chat applications. Adoption of input mechanisms such as voice to text support, local language keyboards and transliteration is expected to improve user experience

Social media platforms have 115 million Indian language internet users and is expected to increase to ~ 300 million by 2021[20]

Hindi users form ~ 44% Indian language internet users for this category. Bengali, Telugu and Tamil together account for ~30% of the Indian language internet users for social media platforms[20]

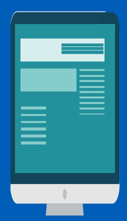
58%[20] Indian language internet users who do not access social media platforms are likely to adopt with enablement in local languages. Tamil, Telugu and Kannada have the highest propensity to adopt this category in the next five years

*This category refers to non-news text content in the form of articles and blogs

1	**Target age group below 30 years** Age group below 30 years represents nearly 33% of India's current population[21]. One out of every three Indian language internet users in this age group access this category[20], thus providing an opportunity for content generators in this industry
2	**Increase depth and variety of content** Two out of every three Indian language readers[20] of digital write ups seek increased content and variety. Their willingness to adopt this medium along with the challenge of content deficiency for the users will present an opportunity for content generators
3	**Focus on publishing local language content on mobile platforms** 54%[20] of Indian language internet users not reading digital write ups are likely to adopt this category if the content is optimised for mobile devices and available in the preferred language

20. KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017
21. Age Structure And Marital Status, Census of India, by Government of India, 2001

03. Indian language internet – The road ahead



Rise in user-generated original content online

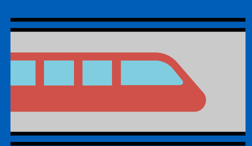
With smartphone users set to increase by 176 million[22] in next five years and 90%[23] of new users expected to be Indian language users, penetration of smartphones among Indian language users will increase. Government has mandated smartphones sold in India to be Indian language enabled. This will lead to increase in user-generated online content (Video, Audio and Text) in Indian languages.

Faster transition from being a passive user to an active user

With proposed government initiatives to improve digital literacy in 60 million[24] rural households during the next three years and the businesses enabling their ecosystem to accommodate Indian language internet users; the shift from entertainment to infotainment to transacting online is expected to be significantly faster going forward.

Changing role of internet platforms 2021

Internet platforms are expected to have ~ 500 million[25] Indian language internet users by 2021. Similar to an English user, an Indian language user's time spend is expected to converge across categories; transforming these internet platforms into content aggregators



Hyper local consumption driven by content in Indian languages

Consumption and fulfilment of services in Digital news, Digital classifieds and financial solutions tend to be more hyper local. This accentuates the need for support in Indian languages in the immediate future.

It is expected that there will be focus on localised content in Indian languages as well as end to end enablement with local support for fulfilment, given the rising importance of localisation of products, services and (offline) assistance.

Informed response to sales initiatives by B2C players

Investment in digital channels supporting Indian languages by consumer products, automotive and financial services companies is expected to rise in the near future.

With focus on capturing Tier 2 and rest of the untapped markets in India, there would be significant investment in creating a digital channel by the likes of e-commerce players, news sites, payments and small finance banks, m-wallets, Insurance players etc., enabling direct access to a large portion of this potential customer base adopting internet.

22. Number of smartphone users in India from 2015 to 2021 (in million), Statista.com
23. KPMG in India analysis, April 2017
24.Cabinet approves Rs. 2,351 Cr. digital literacy programme, Times of India, 9 Feb 2017
25. KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017

Indian language enablement of applications and websites, supplemented by mobile compatibility

For enhanced user engagement, content generators should ensure that original and translated content is optimised for minimum data consumption without compromising on quality, adaptive display of output (across language and screen sizes) and minimum usage of physical memory on devices.

Elements of online and offline ecosystem across touch points e.g. discovery, payments, fulfillment and after sales, need seamless enablement of local languages to drive a unified customer experience and higher engagement among Indian language internet users.

Rise of digital advertisements in local languages

Today, close to 90%[26] of the Indian language internet users prefer to respond to digital advertisements in their regional languages as they perceive regional language content online to be more reliable compared to English.

Digital advertisements are expected to grow at a CAGR of 31% to reach USD4.4 billion in 2021. The share of digital advertisements in local languages is expected to increase from 5% to about 35% by 2021[27].

Indian language enablement of digital payment interfaces

India currently has 13% of its consumer payments made digitally*, with rural market recording higher frequency of use of digital payments. This share is expected to be 26% by 2020 and 37% by 2025. Initiatives like UPI and QRpay technologies directed towards the aspirations of a cashless economy, will facilitate adoption among Indian language internet users expected to be 73% of the total internet users by 2021[28]

It is expected that both private players as well as the government would invest in creating online interfaces in Indian languages for convenient and faster payments.

Voice recognition and language agnostic internet

Advanced voice translation and recognition technology could help Indian language internet users, who find search and navigation using text inputs in their regional language a challenge.

To increase content availability in local language, technology advancements are required to move to a language agnostic ecosystem. This will enable integration of the user base and assist in standardising the efforts of content generators.

Monetisation of Indian language internet user behavior analytics

Structured investments and focused effort in facilitating multi-language data analytics will help integrate language specific databases (including text, videos, graphics and audio formats) generated through online activities and analysis to generate customer insights.

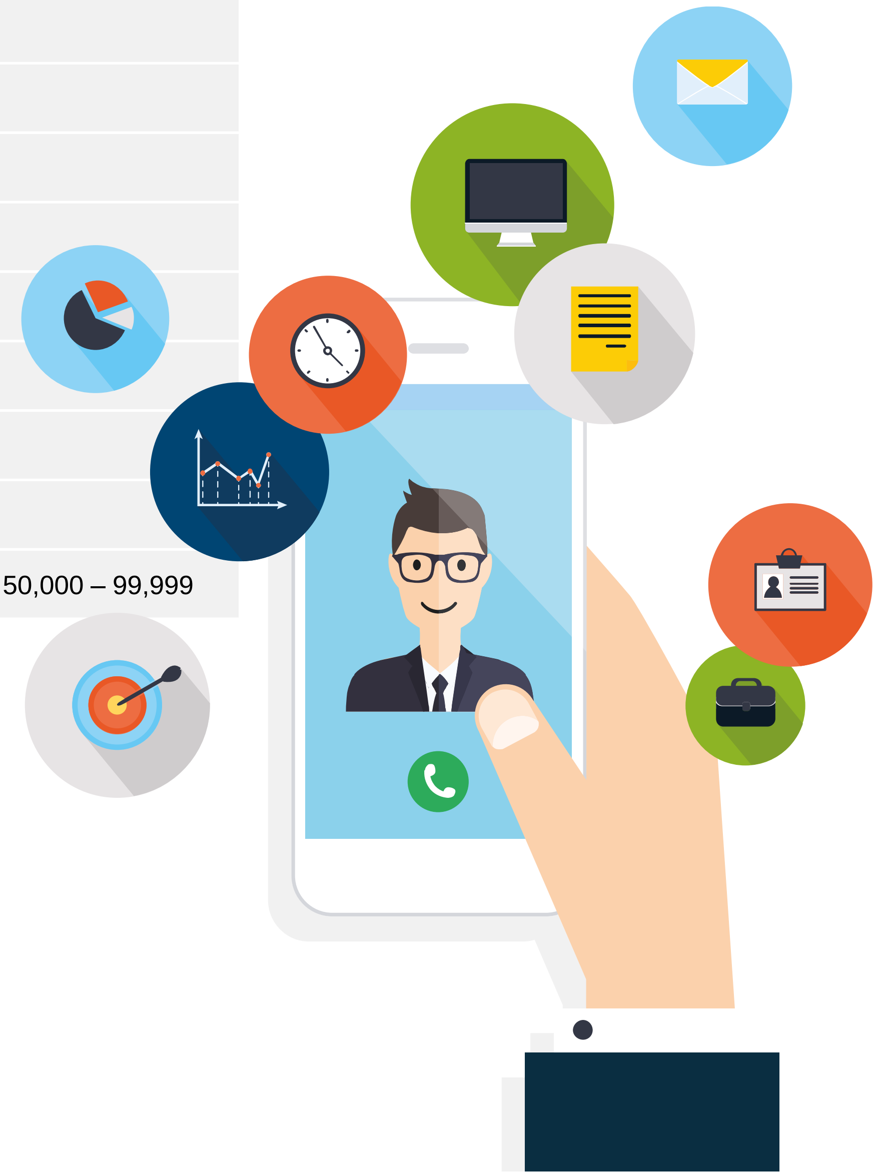
Analytics will also provide the advertisers and content generators with direct and indirect feedback from content distributors and consumers.

*Digital payments include direct/ACH electronic payments and mobile based payments

26 KPMG in India's analysis with primary research by Nielsen on select 8 Indian language internet users, April 2017
27. Indian Media and Entertainment Industry report, KPMG India – FICCI, March 2017
28. Digital payments 2020, Google-BCG report, 2016

Glossary

Term	Definition
LDI	Language Diversity Index
CAGR	Compounded Annual Growth Rate
GB	Gigabytes
E-tailing	Electronic retailing
C2C	Customer to customer
PC	Personal computer
M-sites	Mobile websites
O2O	Online to offline
MB	Megabytes
B2C	Business to customer
UPI	Unified Payments Interface
QRPay	Quick Response Payments
Tier 2 city	City with a population of between 50,000 – 99,999



Annexure - Overview of primary research conducted by Nielsen

Nielsen conducted a multi phased research including Indian language internet users and content generators

Phase I: The exploratory phase

The exploratory phase of the research commenced with focused group discussions (across urban and rural centres) and detailed interviews. The discussions and interviews were conducted with NCCS classes A2, A3, B1, B2 and C1, who access internet in Hindi, Telugu, Bengali, Marathi and Tamil. The respondents were of different age groups listed below:

- 15 to 21 years
- 22-30 years and
- 31- 40 years

Mode of communication in Indian languages, with Indian language applications installed on their mobiles was a parameter used to ensure that the respondents were not very familiar with using internet in English.
Note: Criteria in the rural centres was updated with respect to school grades completed (grade 5 and above) and use of Indian language applications along with no English consumption at all – this was based on low penetration of education and internet in rural India compared to Urban India

A total of 20 Focus groups and 10 Individual interviews were conducted across Delhi, Mathura, Chennai, Coimbatore, Hyderabad, Visakhapatnam, Kolkata, Siliguri, Mumbai and Pune. 30 Focus groups were conducted across Uttar Pradesh, Tamil Nadu, Andhra Pradesh, West Bengal, Maharashtra (2 villages from each state with a population of less than 10,000). Each Focus group had 6 Internet users and was moderated by a Nielsen researcher for ~ 2 to 2.5 hours, while an Individual interview was conducted for ~ the same length of time per user.

Phase II: The Quantitative interviews

The exploratory phase was followed by Quantitative face to face interviews. These were conducted to measure and calibrate different triggers and barriers among Indian language users. The quantitative interviews were conducted among a sample of 7060 (4612 urban and 2448 rural respondents) Indian language internet users of Hindi, Bengali, Telugu, Tamil, Marathi, Gujarati, Kannada and Malayalam.
The respondents were selected basis online content consumption in Indian languages. They primarily access online text in Indian language and/or video in Indian language and performed at least 2 activities such as chat, social networking, watching videos/listening songs, accessing news and online reading.

The respondents were also required to fulfil the below criteria:

- Primary education with one of the select 8 Indian language as the medium of instruction
- Should not be very comfortable in speaking or reading or writing in English
- Should have been using internet for more than 1 month
- Should be accessing internet at least once a week

The interviews were planned with some fixed quotas to ensure a spread among the complete sample:

Age group	15 to 21 years	22 to 30 years	31 to 40 years	41 to 50 years
Quota for respondents	20%	20%	30%	30%

Considering the online internet penetration among male and female population in India, the ratio of male and female respondents were planned at 70:30. The interviews were conducted among NCCS classes A, B and C with at least 20% coverage of each of these class.

Phase III: Interviews with content generators

Close to 60 interviews with respondents across varied stakeholders such as publishers of news and other articles, advertisers and advertising agencies were conducted to understand their motivations, methods and challenges faced while creating and publishing content in Indian languages. The interviews were conducted across Mumbai, Delhi, Kolkata, Chennai and Bangalore. The interviews were conducted among content creators and advertisers of different categories such as e-tailing, travel, payments, classifieds, communication device manufacturers and service providers.

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Shveta Pednekar
Priyanka Agarwal

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Varun Bora
Rahil Bassim
Sakshi Rai

KPMG in India contacts:

Mritunjay Kapur
Partner and Head
Sales and Markets
T: +91 98104 38888
E: mritunjay@kpmg.com

Akhilesh Tuteja
Partner and Head
Management Consulting
T: +91 98710 25500
E: atuteja@kpmg.com

Sreedhar Prasad
Partner
Internet Business, E-Commerce and Start-ups
T: +91 98454 67676
E: sreedharprasad@kpmg.com

KPMG.com/in

Follow us on:
kpmg.com/in/socialmedia

Google contact:

Dushyant Khare
Director
Global Partnerships
Google Asia Pacific Pte Ltd
T: +65 65218000
E: dushyant@google.com

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