



The Texas Department of Transportation – Newsroom

Usability Final Report – Fall 2018

Anmol Khandeparkar

Index

Project Timeline ...	3
Client Kickoff ...	4
Affinity Diagram ...	5
Background Research ...	7
Competitive Evaluation ...	12
Targeted Users ...	20
Surveys ...	23
Interviews ...	26
Key Takeaways ...	29
Recommendations ...	35

TXDOT PROJECT TIMELINE

	WEEK 1 OCTOBER 1	WEEK 2 OCTOBER 8	WEEK 3 OCTOBER 15	WEEK 4 OCTOBER 22	WEEK 5 OCTOBER 29	WEEK 6 NOVEMBER 5	WEEK 7 NOVEMBER 12	WEEK 8 NOVEMBER 19	WEEK 9 NOVEMBER 26	WEEK 10 DECEMBER 3
GENERATIVE RESEARCH										
Case Study / Competitive Eval										
Synthesis of Past Research										
SME Interviews										
#1 (UT Newsroom)										
#2/#3 (TxDot Regional)										
Synthesis of Analytics Data										
Generate Screener										
Survey										
Create										
Launch										
Analyze										
Interviews										
Recruit										
Test Script										
Conduct										
Analyze										
FORMATIVE RESEARCH										
Usability Test										
Recruit										
Test Script										
Conduct										
Analyze										
FINAL REPORT										

CLIENT KICKOFF

The client kickoff meeting is necessary to determine the problems that are currently being faced by the client.

The client wanted to explore the possibility of building a digital newsroom

TEAM

Beth Hallmark, Director of Communications

Michael Sledge, Creative Services Director

Joshua Hunter, Web Services Branch Manager

Julien Devereux, Editorial Services Branch Manager

Victor Tran, Information Architect

Don Barrett, Information Architect

Emily Parks, Social Media Coordinator

WHAT I LEARNT

The Texas Department of Transportation wants to create a newsroom – a state of the art multimedia platform

They want to be their own CNN – with video, articles, audio, images, written content

Success Measures:

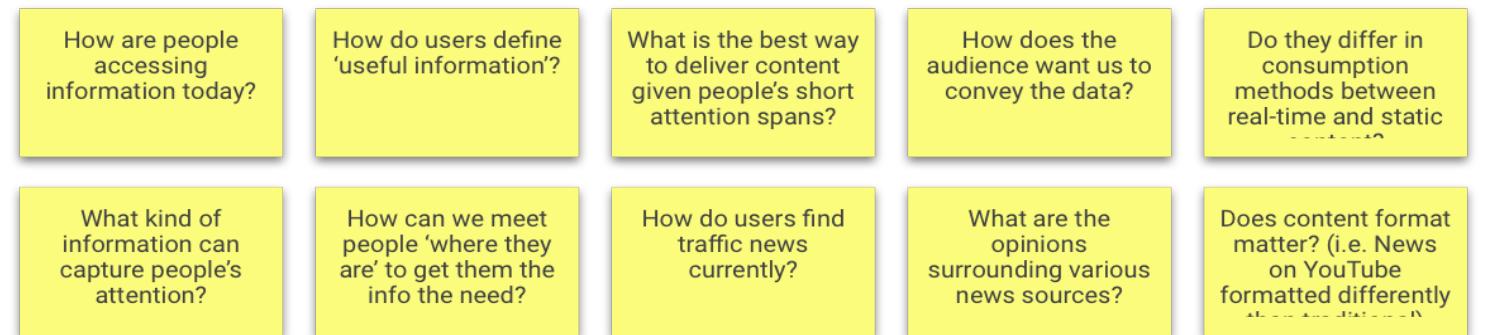
Engagement with the content would be one of the success measures

Another success measure would be a positive image about work and transportation

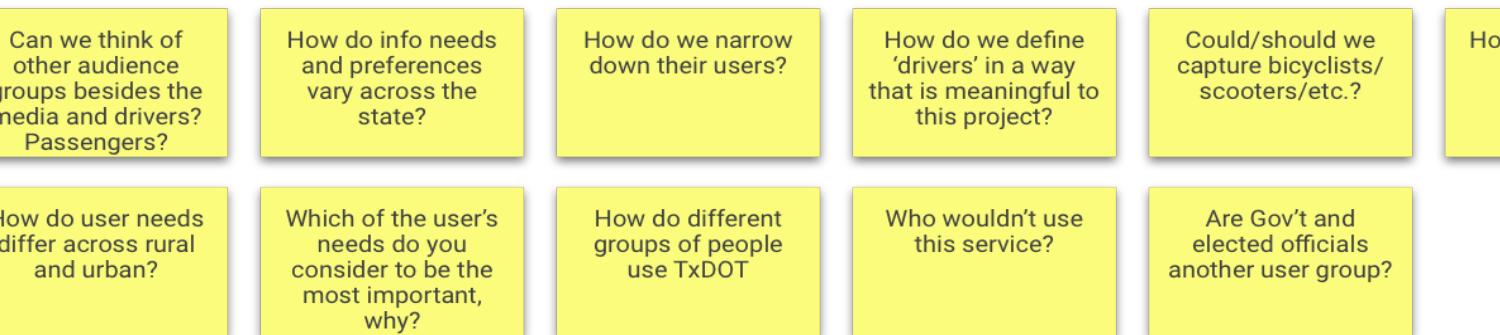
The client's number 1 priority is the safety of the drivers – Change in the behaviour of the drivers would also be a success

AFFINITY DIAGRAM

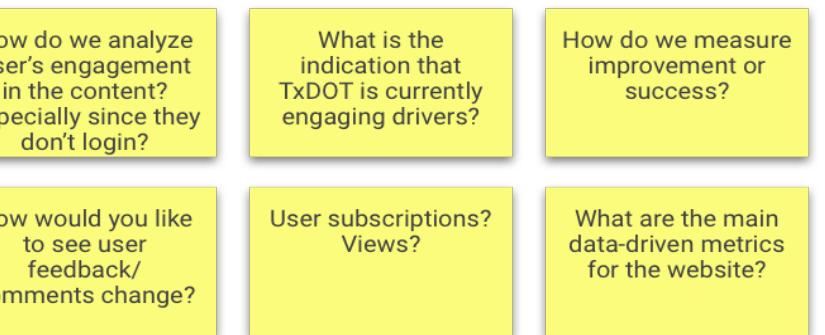
How do users consume information today?



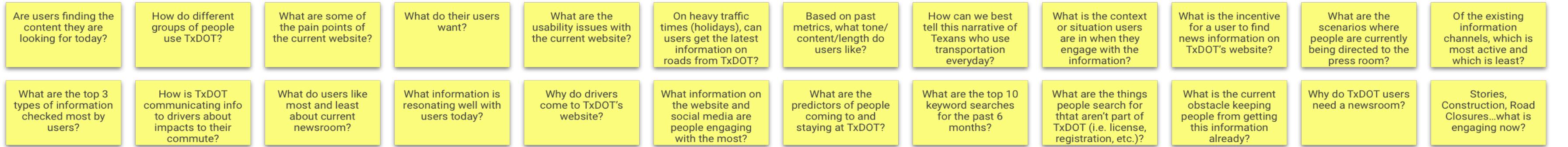
Who are our users?



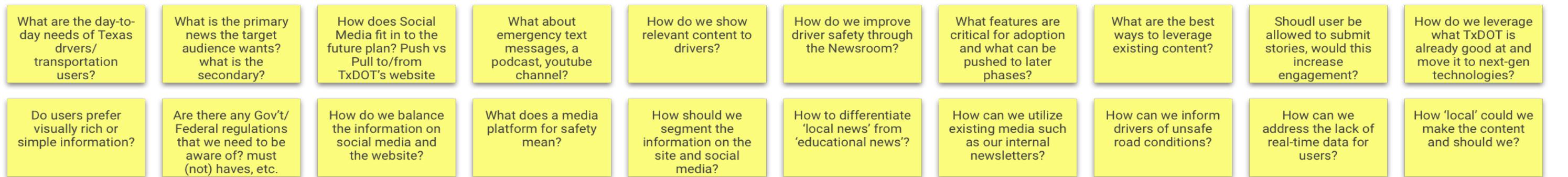
What are our success metrics?



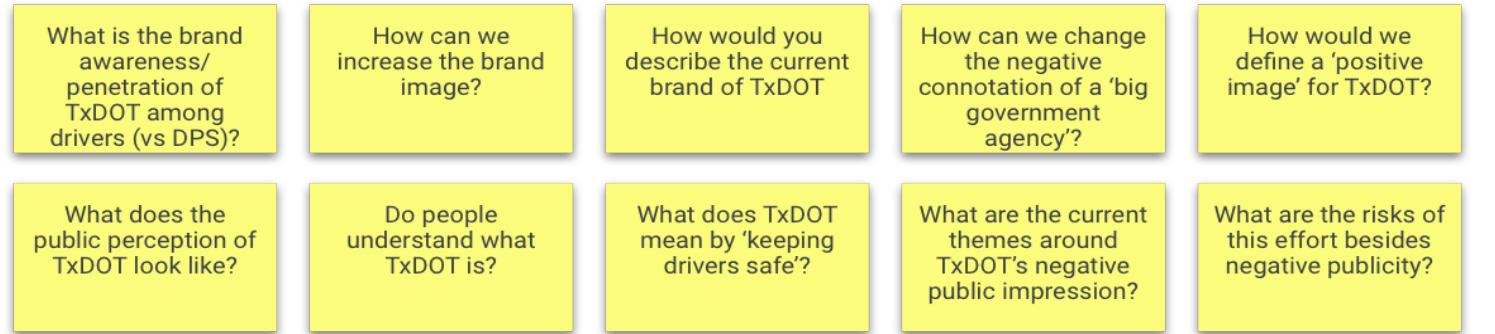
How are users currently using TxDOT's news/media website?



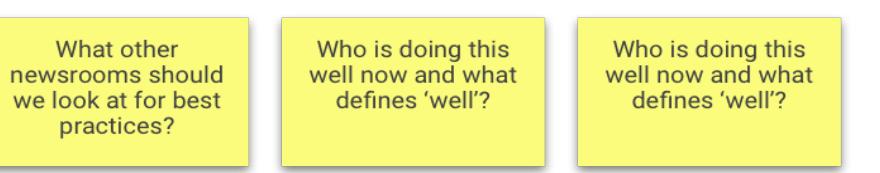
How can a TxDOT Newsroom meet users's future needs?



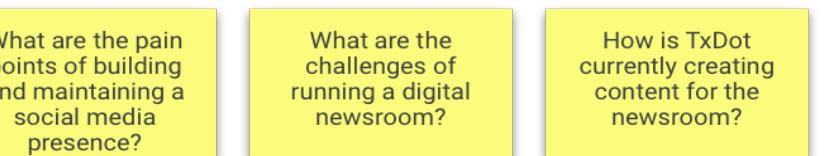
Brand Awareness/Image



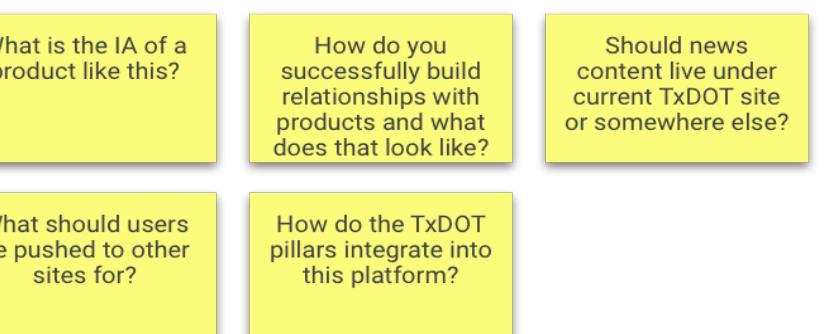
Competitors (Direct and Indirect)



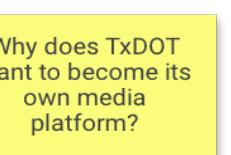
Backend Support/Processes



Information Architecture



Misc



KEY QUESTIONS TO BE TACKLED:

The affinity diagram gave us a few major areas and questions that need to be tackled to solve the problem at hand:

How are people consuming information today ?

How does visual content influence the consumption of information ?

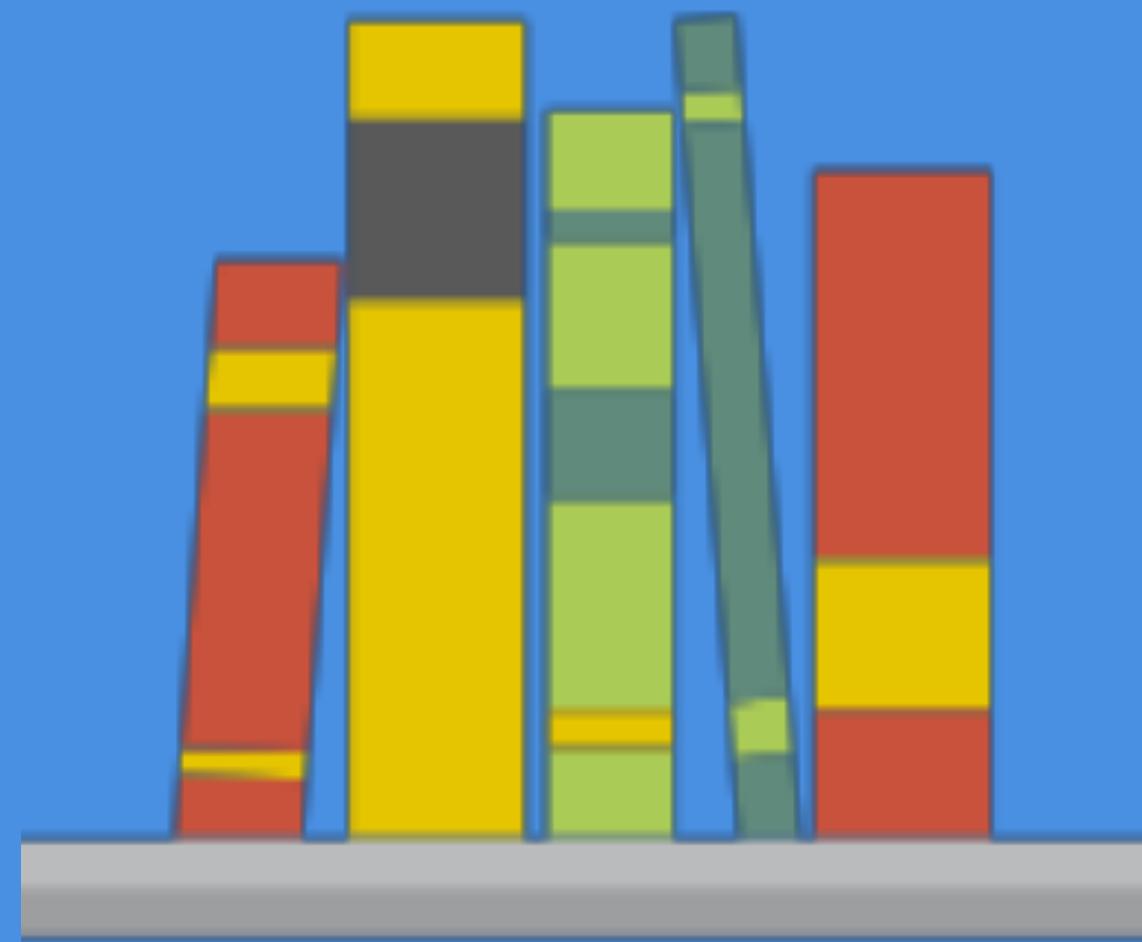
What is the effect of personalization on content consumption ?

Who are the target users ?

How have similar organisations/entities built a newsroom ?

How are people currently using the website of the Texas Department of Transportation ?

How do people currently perceive the Texas Department of Transportation ?



Background Research

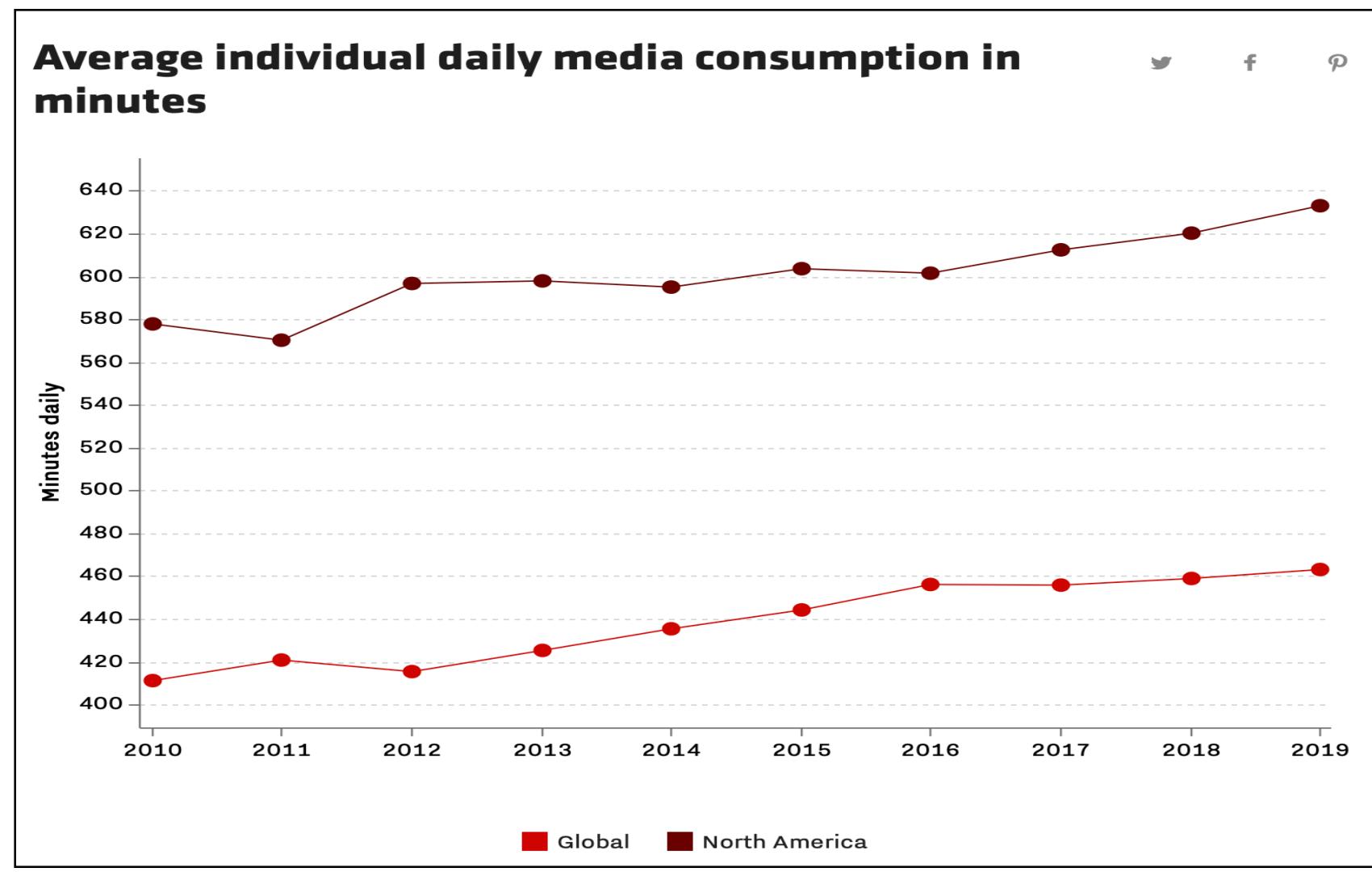
RESEARCH

How are people consuming information today ?

Information is being consumed in various forms across the world, in the forms of articles, videos, books, audio etc

This is consumed through various channels such as the Television, Desktop, Laptops, Mobile Devices, Game Stations etc

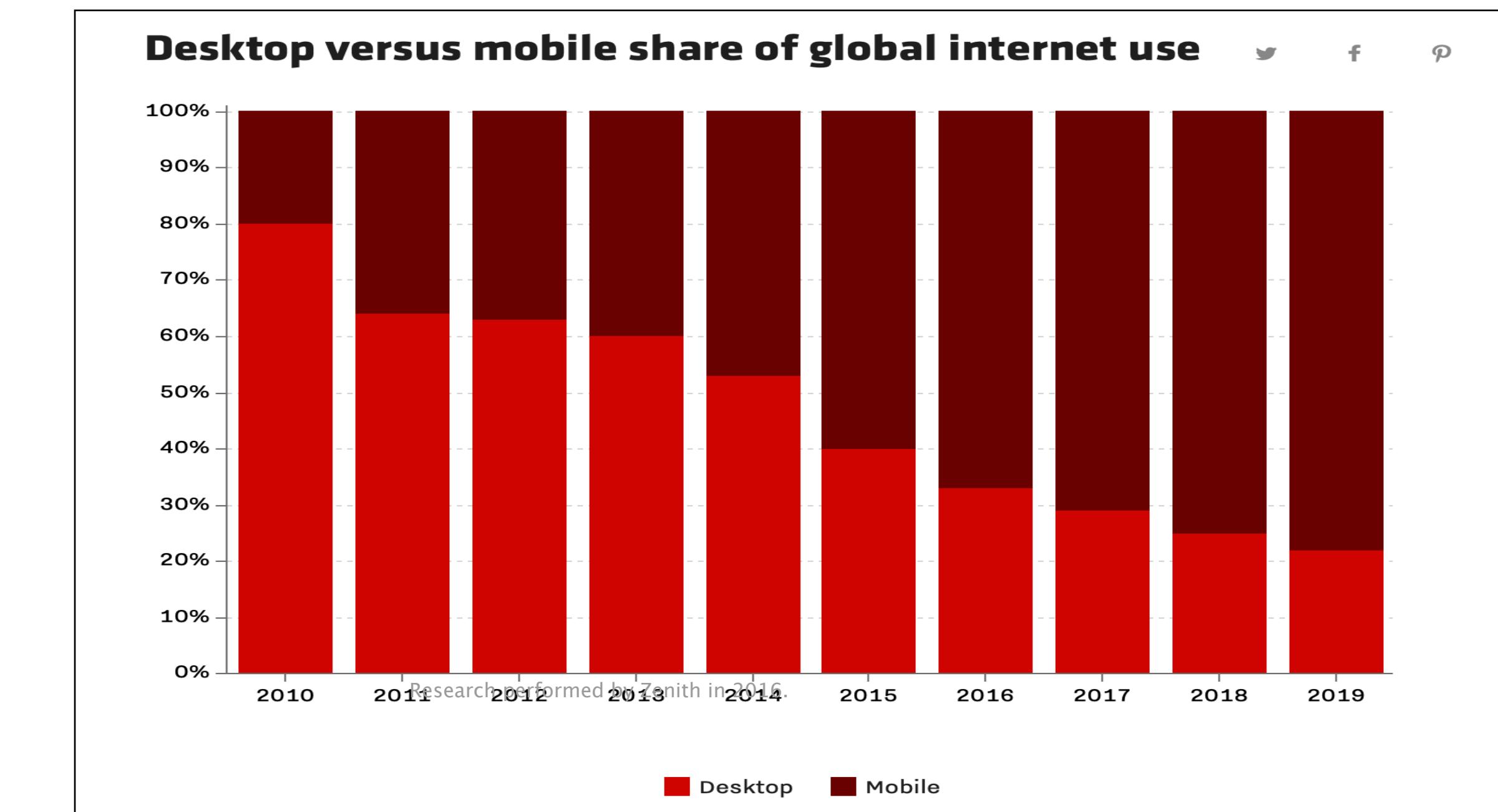
According to a research in 2016 done by Zenith, a research firm, it was found that individuals on average spent around **456.1 minutes** consuming media, while individuals in North America in the same time-frame spent **601.5 minutes** consuming media.



Research performed by Zenith in 2016.

Consumption is shifting from the desktop to the mobile device. Mobile media consumption has increased 44% on an average from 2010 to 2016, with 19% of all media in the world consumed through the mobile phone in the year 2016.

An over-whelming reason for this popularity is the rampant use of social-media by people of all age-groups.



Research performed by Zenith in 2016.

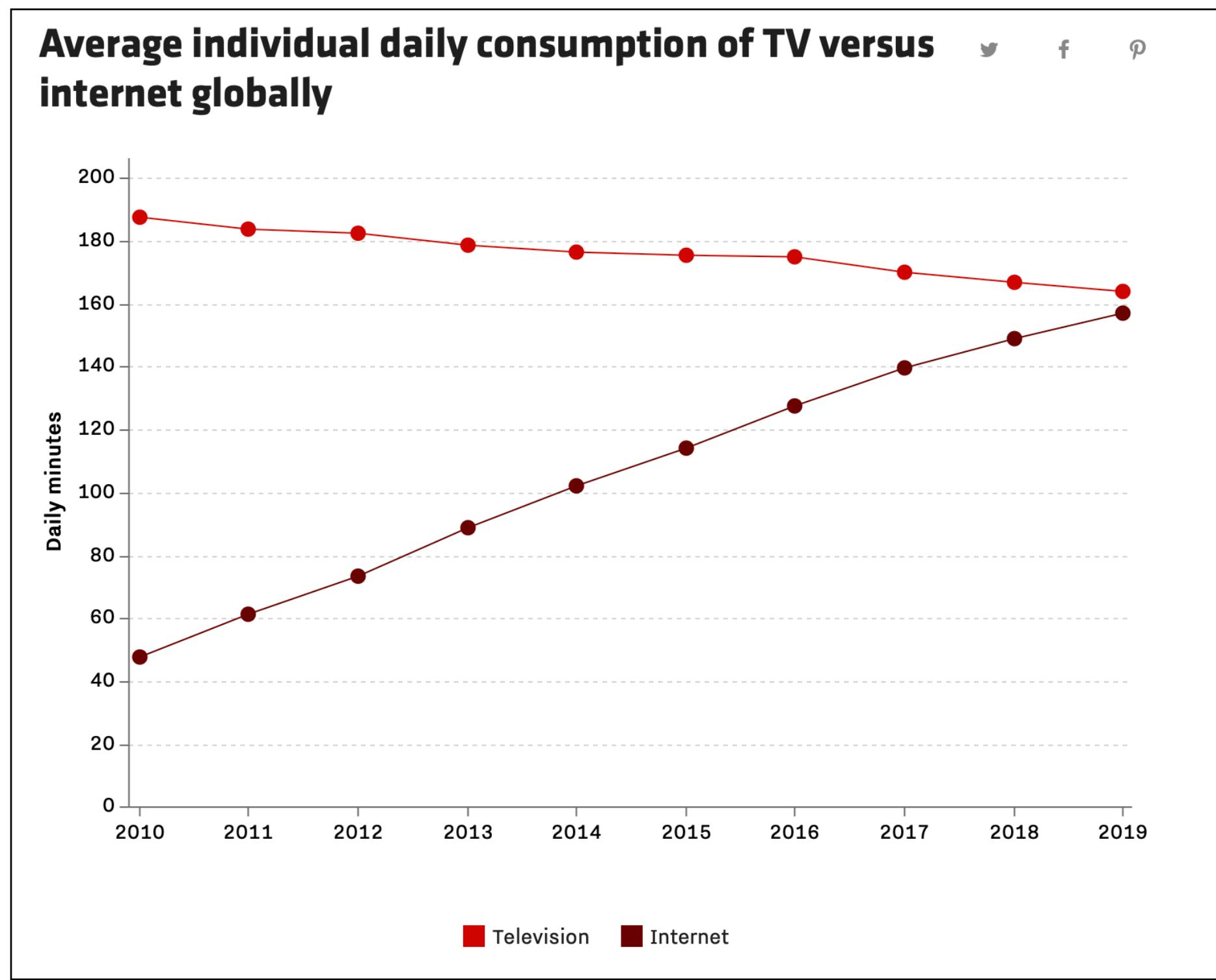
Page No: 8

RESEARCH

How are people consuming information today ? (contd..)

Consumption of media through traditional means such as radio, newspapers and the television has fallen through the last few years.

However, the usage of the internet is currently still less than the traditional outlet of watching Television.



Research performed by Zenith in 2016.

KEY INSIGHT

Currently, even though the amount of people watching TV is more than the amount of people using the Internet, it is safe to assume that the internet will be the dominant force for the consumption of media in the future, and **the mobile will be the dominant channel for accessing the internet**.

RESEARCH

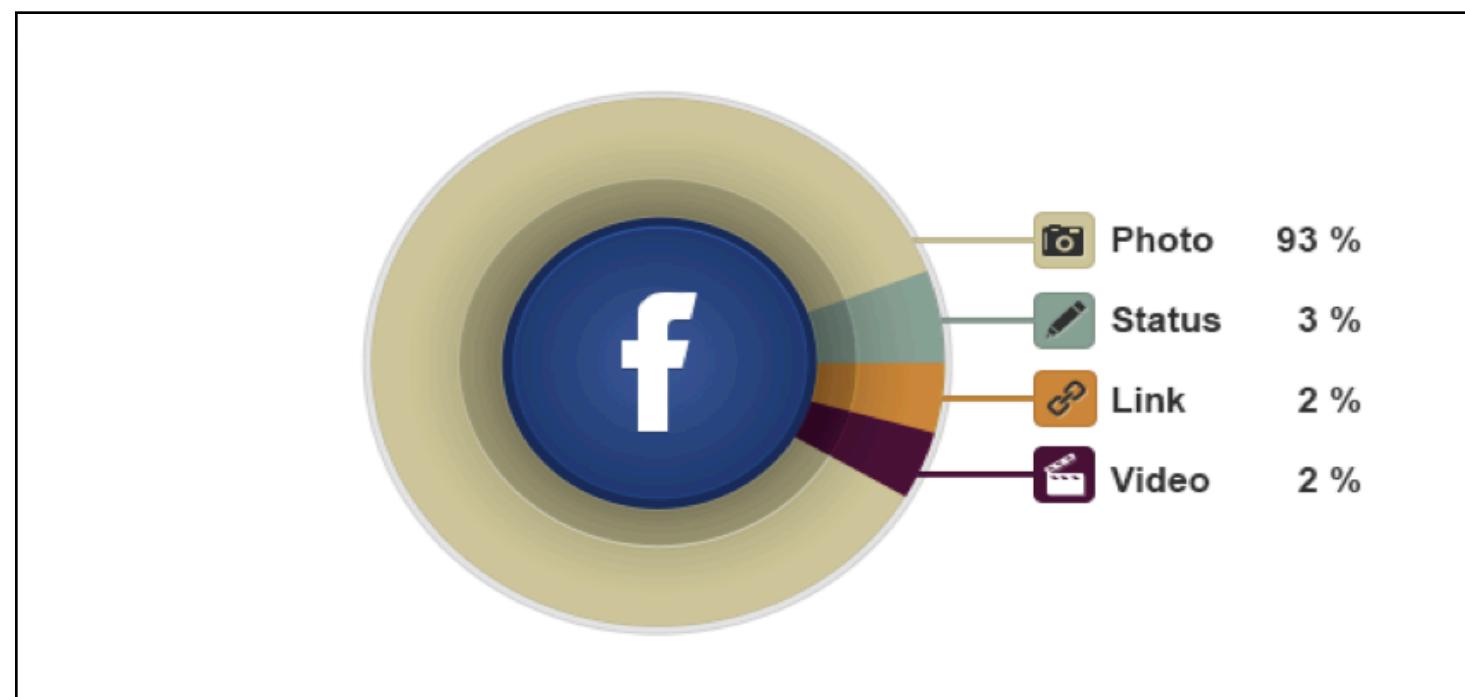
How does visual content influence the consumption of information ?

According to a study done by Jeff Bulas, articles with images get **94% more total views** than articles without images.

1. Using images of real people increases user engagement

According to Jacob Nielsen, users spent **10% more time** looking at pictures than reading content

2. Combining photos and text increases viewer retention and engagement



3. Optimized images load quickly

According to research, **47%** of viewers want a 2 second load time for their images

In another research conducted by Nielsen, when the image took **8 seconds to load**, the viewer spent a mere **1% of their time** looking at the image.

However, when the image loaded quickly, the users spent almost **20% of their time** looking at the image

4. High-quality images to establish credibility

According to the Stanford Persuasive Technology Lab, **visual design** was the **number one criterion** for establishing the credibility of the presented material. It is known as the '**Halo Effect**'

The Halo Effect states that if you are good in one area, people automatically assume that you are good at other areas too.

Hence, if your site is visually appealing, people will automatically assume that it functions well too.

5. Using images supports persuasion and call-to-action

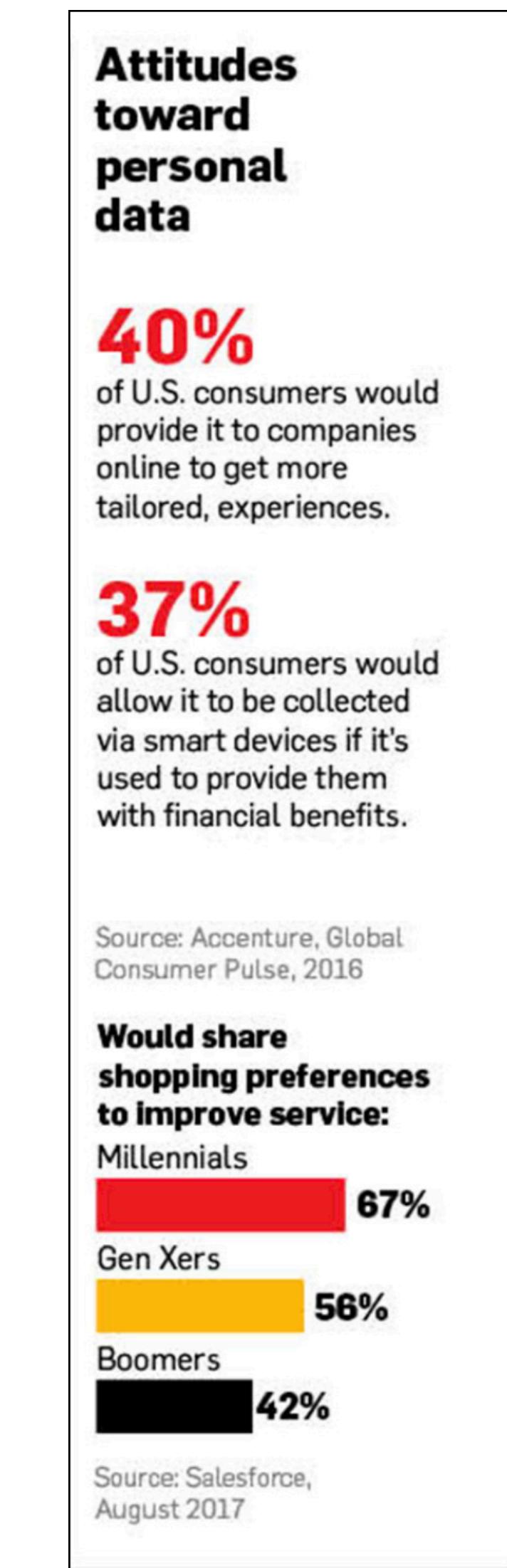
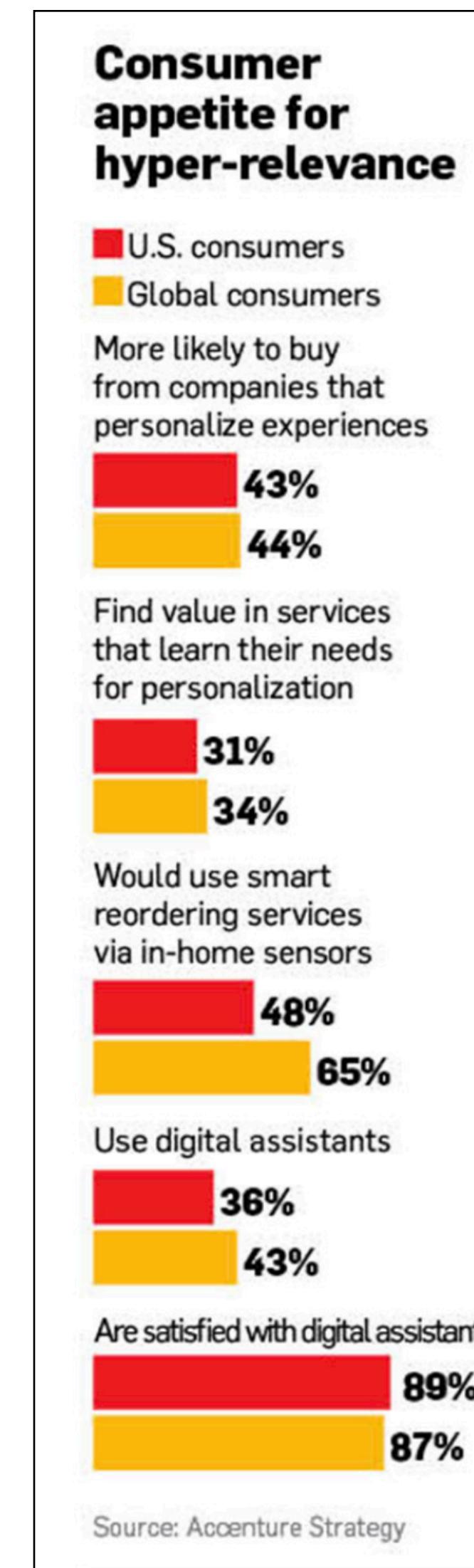
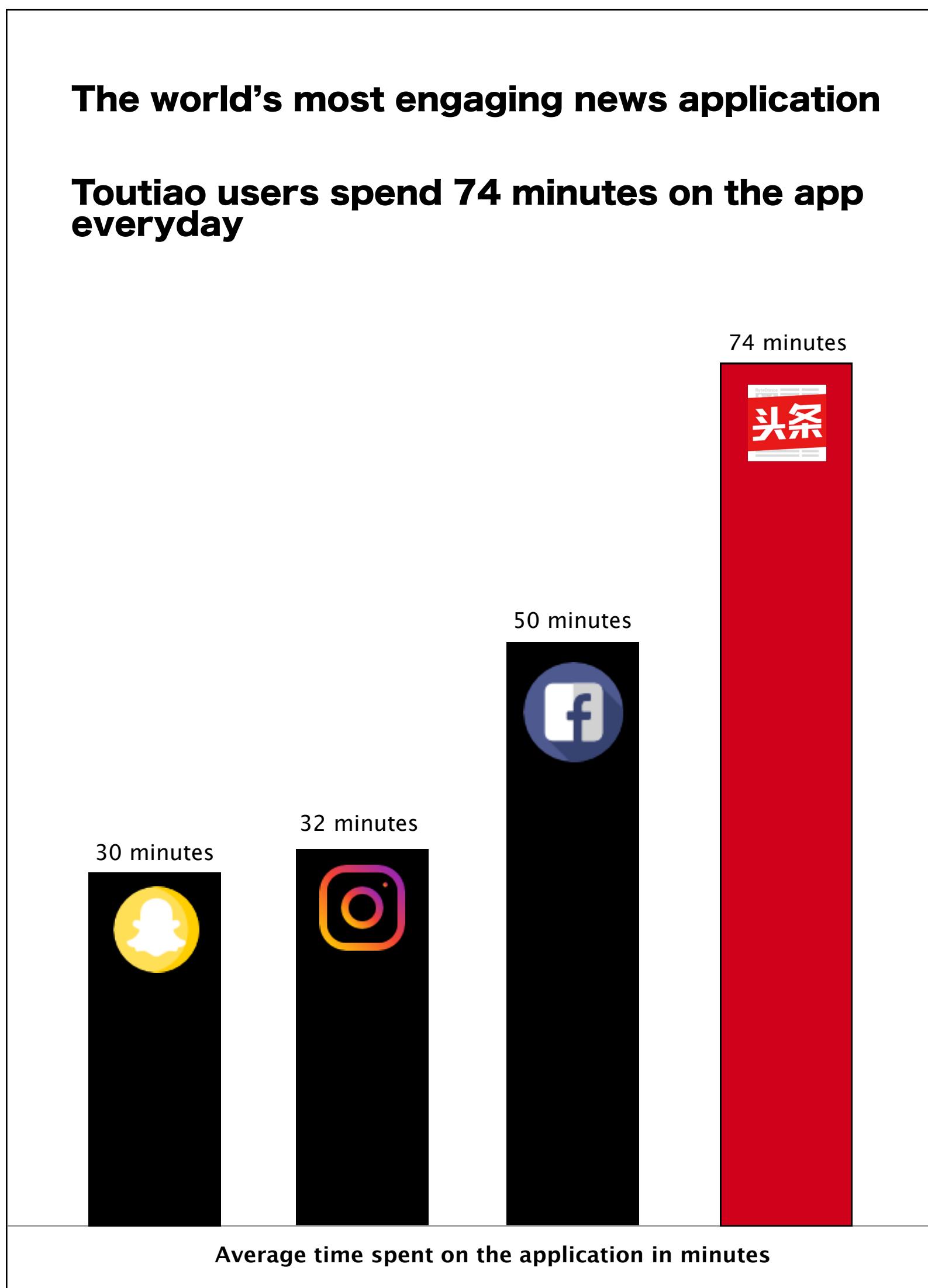
According to a study conducted by the University of Minnesota School of Management and the 3M corporation, presentation with images are **43% more likely** at converting users to agree to their point of view.

KEY TAKEAWAY

Using visual content in an article is extremely beneficial since it not only increases user engagement, and user retention but also helps the brand in establishing credibility and persuades the user to do an action that the brand wants the user to do. eg: buy its products.

RESEARCH

How does personalisation influence the consumption of information ?



The biggest newsroom in the world – Jinri Toutiao is a news application in China with 100 million users

Jinri Toutiao is a news application which uses machine learning to create personalized content which is tailored for each user

Personalization is something that is craved by users all over the world

Almost 43% of U.S consumers want personalized experiences

31% of U.S consumers find personalized services to be valuable in nature

40% of U.S consumers would provide companies with their personal data to get more personalized experiences

67% of millenials would share their data to improve services, followed by 56% of Gen X'ers.



Competitive Evaluation

COMPETITIVE ANALYSIS

Why are we doing this ?

To understand the purpose of the newsrooms of each organisation/brand and to understand the operations of each type of newsroom.

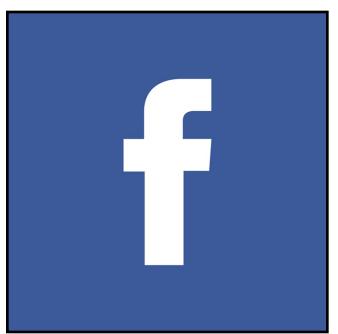
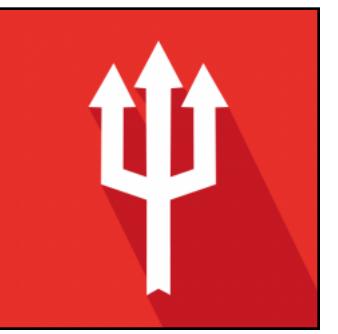
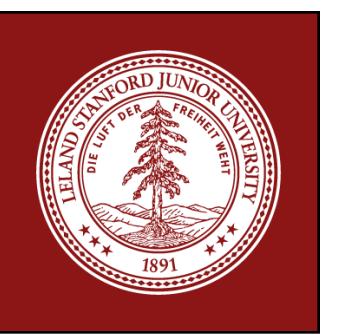
How were the organisations/entities compared ?

We have compared organisations and entities from different sectors, including social media behemoths, super-successful sports teams, restaurant chains, media outlets, university newsrooms etc

The organisations and entities were compared based on a set of factors which determined the quality of a newsroom. The factors are:-

1. Visual Design
2. Content Personalization
3. Brand Strength
4. Discoverability of the newsroom
5. Content Engagement
6. Image Presence
7. Video Presence
8. Page Views
9. Reach

ORGANISATIONS AND ENTITIES

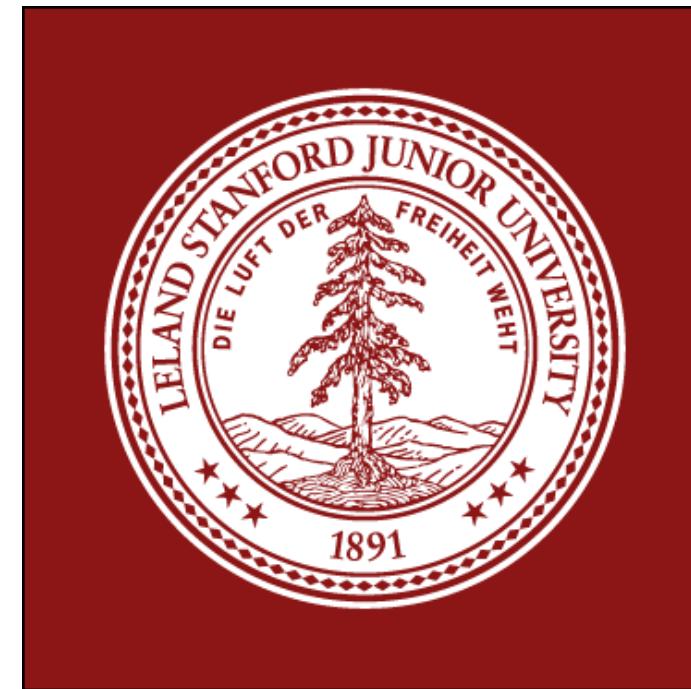


NEWSROOMS

University Newsrooms



MIT



Stanford



U.T Austin

The primary purpose of a university newsroom is:

1. Brand-building
2. Improving brand recognition
3. Increasing the reach of the brand.

Universities generally have three ways of building their brand through the newsroom:

1. Using paid media (Content being marketed on facebook ads, instagram ads)
2. Using direct media (Website or mobile app)
3. Using earned media (Example: A local channel pays you to feature your story on their site)

These newsrooms generally contain:

Stories regarding the academic achievements of their alumni

Breakthroughs in university research

News regarding the university events, etc .

NEWSROOMS

Government Institutional Newsrooms



NHS



CalTrans



New York Dept of Transportation

The primary purpose of a government institution newsroom is:

Making people aware of events related to the institution's goal.

For example: The National Health Services in Britain has the goal of keeping the people of Britain, healthy.

Hence, the NHS tends to post news which it thinks would help the people of Britain, in leading a healthier life.

Government institutional newsrooms have a common problem:

The content presented to the audience is not captivating enough to hold their attention.

There is a lack of immersiveness in the content, which causes people to avoid these newsrooms.

These newsrooms generally contain:

Stories to make the target audience aware of events/topics related to the institution's goals.

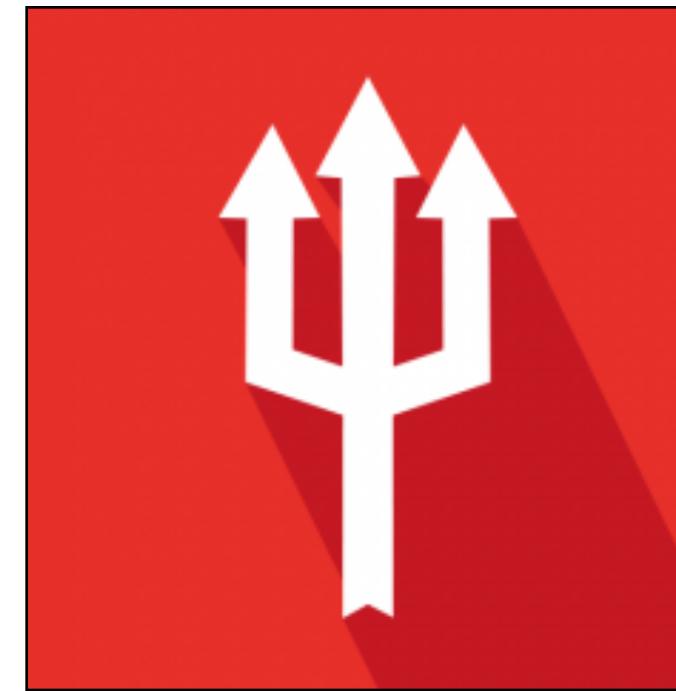
Transportation departments such as the California Department of Transportation had integrated Google Maps into their website and alerted people of fires through various fire symbols placed on the map.

NEWSROOMS

Established Private Brand Newsrooms



Real Madrid



Manchester United



Whataburger

The **primary** purpose of an established private brand newsroom is:

Improving the awareness of the brand

Increasing the reach of the brand

Increasing brand loyalty

Established Private Brand Newsrooms usually have a huge fan-following.

Their main concern is:

Getting information on a regular basis to the fans

Provide the audience with content that the audience would love to consume

These newsrooms generally contain:

Inspirational stories regarding their brand or related to their products or services.

Knowledge about their events and latest products or services

Ex: Real Madrid regularly post about their legendary players to make the fans nostalgic.

Whataburger regularly post inspirational stories on their newsrooms on a regular basis.

NEWSROOMS

Independent Digital Newsrooms



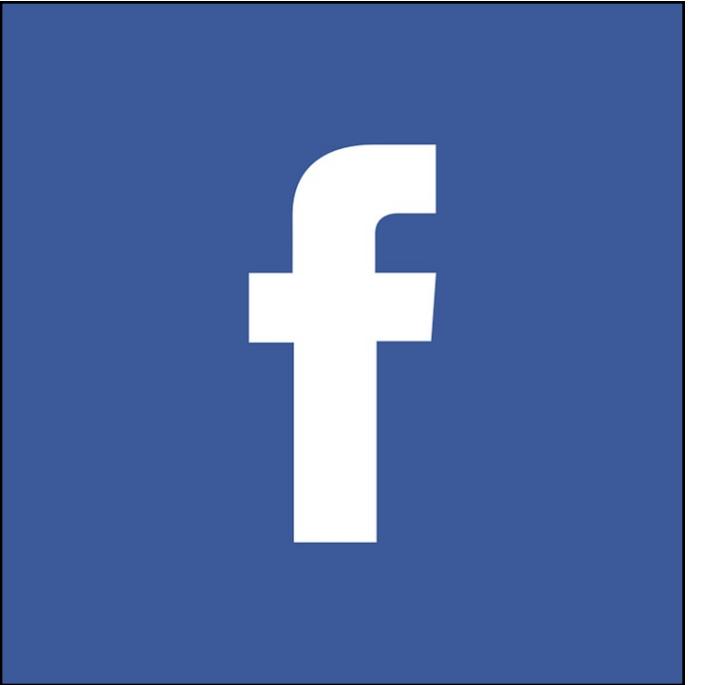
Jinri Toutiao



The Huffington Post



BuzzFeed



Facebook



BBC News

The primary purpose of independent digital newsrooms is:

- Creating content for users to consume
- Verifying the authenticity of the content
- Building brand loyalty and recognition

These independent digital newsrooms have a massive reach and the newsroom is their primary source of income.

The main source of income of digital newsrooms is:

- Advertisements on their website
- Paid promotions
- Subscriptions

These newsrooms generally utilize cutting edge technologies to constantly stay ahead of the competition

Ex: **Jinri Toutiao** is the biggest news application in the world, and uses machine learning algorithms to deliver personalized content to the users.

Buzzfeed creates daily events such as quizzes, and videos for its users to consume through different channels such as Youtube and their website and mobile application.

COMPETITIVE EVALUATION

S.No	Companies	Visual Design	Content Personalization	Brand Strength	Discoverability of newsroom	Content Engagement	Image Presence	Video Presence	Page views	Reach
1	UT Austin Newsroom	Green	Red	Yellow	Yellow	Green	Green	Red	Yellow	Yellow
2	MIT Newsroom	Yellow	Red	Yellow	Green	Green	Red	Yellow	Green	Yellow
3	Stanford Newsroom	Yellow	Red	Yellow	Green	Green	Red	Yellow	Green	Yellow
4	Whataburger Newsroom	Green	Red	Yellow	Yellow	Green	Green	Yellow	Yellow	Yellow
5	Facebook Newsroom	Green	Green	Green	Green	Green	Green	Green	Green	Green
6	NHS Britain Newsroom	Yellow	Red	Green	Green	Green	Red	Red	Yellow	Yellow
7	Real Madrid	Green	Red	Green	Yellow	Green	Green	Green	Green	Green
8	Manchester United	Green	Red	Green	Green	Green	Green	Green	Green	Green
9	Toutiao	Green	Green	Green	Green	Green	Green	Green	Green	Green
10	BBC	Green	Red	Green	Green	Green	Green	Green	Green	Green
11	The Huffington Post	Green	Red	Green	Green	Green	Green	Green	Green	Green
12	Buzzfeed	Yellow	Red	Yellow	Green	Green	Green	Yellow	Yellow	Green



KEY INSIGHTS

1. Visual Design of a website is an extremely important aspect in developing trust with users and to establish a brand in the minds of the customers

The more attractive the design of the product, the more people will assume you have an attractive product.
The phenomenon is a cognitive bias, known as the 'Halo Effect'

2. News articles in the newsroom should have a high-quality contextual images

Having a high-quality and contextual images helps increases the click rate and decreases the bounce rate of the reader

3. News articles with high-quality images, videos and content will have a high-share rate on social media

High-quality images and videos along with good content will result in a lot of traffic from social media sites.
Users usually do not prefer sharing posts with low-quality images and videos.

4. Discoverability of the newsroom is single-handedly the most important aspect of a newsroom.

A separate accessible newsroom page is extremely necessary for engaging users. A well-designed but indiscernible newsroom is a bad investment and will not help meet the organisation's goals.



Targeted Users

TARGETED USERS

Drivers



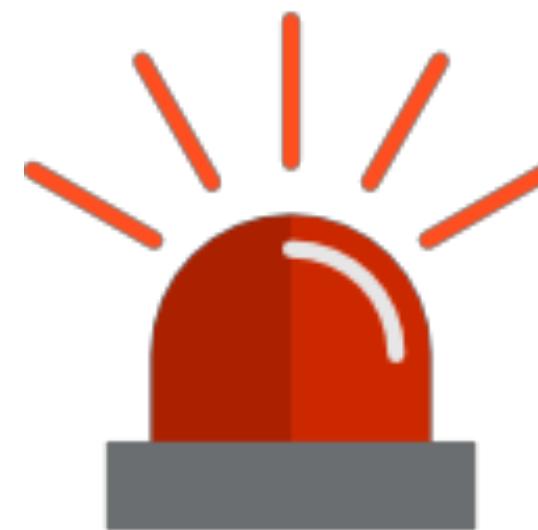
We are targeting three types of drivers: the Regular Commuter, the Recreational Driver and the Commercial Driver

Regular Commuters commute regularly for different reasons such as work, study, running errands etc

Recreational drivers drive for activities such as visiting friends on weekends, going on a roadtrip alone or with family etc

Commercial drivers drive for a living. These drivers possess a special driving license called a Commercial Driving License. For example, Truck drivers

Evacuees



We are targeting people from the state of Texas, who have evacuated from a place in the end of a natural disaster

The natural disaster may include:

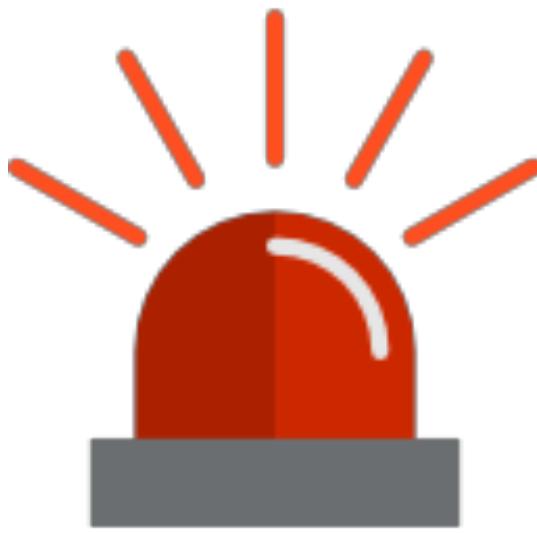
1. Hurricane
2. Flash floods
3. Wildfires
4. Tornados

SCREENER

Drivers



Evacuees



TxDOT Screener

- Are you of driving age (16 years old or older)? Check Y/N
- Check your gender. (gender option boxes)
- Do you live in a metropolitan area in Texas? Y/N
 - If so, DFW, Austin, Houston, San Antonio, El Paso? (check one)
 - *or do you want to divide by regions?
 - If so, West Texas, North Texas/Panhandle, East Texas, Central Texas, South Texas? (check one)
- Are you a Texas resident? Y/N
- How often are you driving on Texas roads? Check one (never, daily, a few times a week, a few times a month)
- Do you drive on Texas roads for commuting purposes? Y/N
 - If so, how long is your typical commute? Check one (less than 30 minutes, 30 min-60 min, 1+ hours)
- Do you use the internet? Y/N
 - -if so, how often (daily, a few times a week, a few times a month)

Evelyn

Do you access your news via the internet? Y/N

- If so, what platform do you use? Check all that apply

Are you interested in transportation and construction news?

- If so, when was the last time you accessed this type of news? (within the last week, within the last month, within the last 6 months, within the last year)

Have you been involved in public local meetings and forums related to transportation or construction?

- If so, when was the last time you were involved? (within the last week, within the last month, within the last 6 months, within the last year)

Have you looked up local construction or transportation news online? Y/N

- If so, when was the last time you looked this news up online? (within the last week, within the last month, within the last 6 months, within the last year)

Javier

- Have you ever been directly affected by a natural disaster in Texas (hurricane, flash flood, wildfire, tornado?) Y/N and check all that apply
 - If so, were you forced to evacuate? Y/N

Melanie

- Have you driven long distances (100+ miles) on Texas highways for non work-related purposes? (aka a recreational long-distance driver)
 - If so, how recent was your trip? (within the past month, six months, past year)
- Are you typically in a group while traveling? Y/N
 - If so, who are you traveling with? Check all that apply (friends, spouse/partner, children)



Surveys

SURVEY

Why are we doing this ?

The survey helps us target a large number of targeted users at one time and helps us gather additional information about our target users across various topics, to help us provide better recommendations.

What information did we gather from the survey

We gathered information across a broad list of sectors. These sectors included:

1. The user's preference of digital devices

2. The user's driving habits

3. The user's purpose of using a digital device

4. The user's frequency of using a digital device

5. The user's perception of the Texas Department of Transportation

6. The user's information preferences



Survey Responses: 311

Survey Results

#	Field	News	Weather	Traffic	None of these	Total
1	Website	50.00% 155	37.74% 117	12.26% 38	0.00% 0	310
2	Mobile Application	27.37% 133	39.71% 193	32.92% 160	0.00% 0	486
3	Television	51.04% 98	39.58% 76	9.38% 18	0.00% 0	192
4	Radio	52.54% 93	27.12% 48	20.34% 36	0.00% 0	177
5	Facebook	72.12% 119	23.03% 38	4.85% 8	0.00% 0	165
6	Twitter	83.33% 55	9.09% 6	7.58% 5	0.00% 0	66
7	Instagram	83.72% 36	13.95% 6	2.33% 1	0.00% 0	43
8	Other Social Media	80.65% 25	12.90% 4	6.45% 2	0.00% 0	31
9	Word of Mouth	41.92% 96	39.74% 91	18.34% 42	0.00% 0	229
10	Print (Newspaper, Magazine)	81.61% 71	16.09% 14	2.30% 2	0.00% 0	87

Comparing different modes used by drivers to access information

SURVEY

Survey Results (contd..)

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	News	1.00	7.00	3.27	1.60	2.55	232
2	Social Media	1.00	8.00	2.35	1.78	3.18	280
3	Entertainment	1.00	8.00	3.44	1.74	3.03	228
4	Traffic/Navigation	1.00	7.00	3.91	1.48	2.18	254
5	Education	1.00	7.00	4.32	1.80	3.25	138
6	Work	1.00	7.00	3.44	1.95	3.80	215
7	Weather	1.00	8.00	4.23	1.72	2.97	264
8	Other	1.00	8.00	4.76	2.45	5.99	21

Comparing the different types of information that a driver accesses

What is your overall perception of the Texas Department of Transportation ?
Needs improvement
Slow
No opinion about them really
Neutral
Mediocre
Long wait
Neutral
Slow and understaffed

KEY INSIGHTS

The most preferred digital device for Drivers is the **Mobile Phone**.

Drivers **access weather and traffic applications through their mobile phones**

Weather information is #2 and Traffic Information is #3 on the list of information consumed by drivers

Drivers use **Google Maps/Waze for Navigation**

Drivers generally use the **Weather application on the iPhone for weather information**

Most people have a **negative or neutral perception** of the Texas Department of Transportation

Majority of the people still associate the **Texas Department of Transportation with the DMV**

72% of people did not even visit the website of the Texas Department of Transportation in the past year

People are most interested in learning about traffic conditions and the weather, followed by road construction and recreational activities.



Interviews

INTERVIEWS

Why are we doing this ?

The interviews helps us in:

- Understand the pain points of the drivers in depth.
- Understand the driver's perceptions about the Texas Department of Transportation

How many people were interviewed

We interviewed drivers, who drove for both commuting and recreational purposes:



Interview Responses: 13

Interview Quotes regarding Traffic and Weather Information

"My husband has that **Waze** thing now, that checks traffics while we drive"

"We check the weather on our phone, before a trip. I use the **weather app** built into my iPhone."

"Before driving, I check the weather on the **weather application on my iPhone** to see if it is sunny. I hate driving in the rains."

"While driving, I use **Google Maps** even if I know the way. This sometimes saves me the pain of re-routing later"

"I check the weather on the **weather.com application** on the iPhone, to see if it might rain or not."

"On the morning of a trip, I usually use **Google Maps** for directions"

"For checking the weather and traffic, I use the **iPhone weather application and Google Maps**"

"For my trip to Fortworth, I looked up **Google Maps** on the tablet."

INTERVIEWS

Interview Quotes regarding their perception of the Texas Department of Transportation

“I don’t know. I don’t know anything about them. I am not even sure what they’re in-charge of. Sorry”

“Some traffic authority”

“Never heard of them before”

“I don’t have any perception of TxDot since I don’t know what they’re responsible for.”

“No idea about what they do, do they register vehicles ?”

KEY INSIGHTS

The most preferred digital device for Drivers is the **Mobile Phone**.

Drivers **access weather and traffic applications** through their mobile phones

Drivers use **Google Maps/Waze for Navigation**

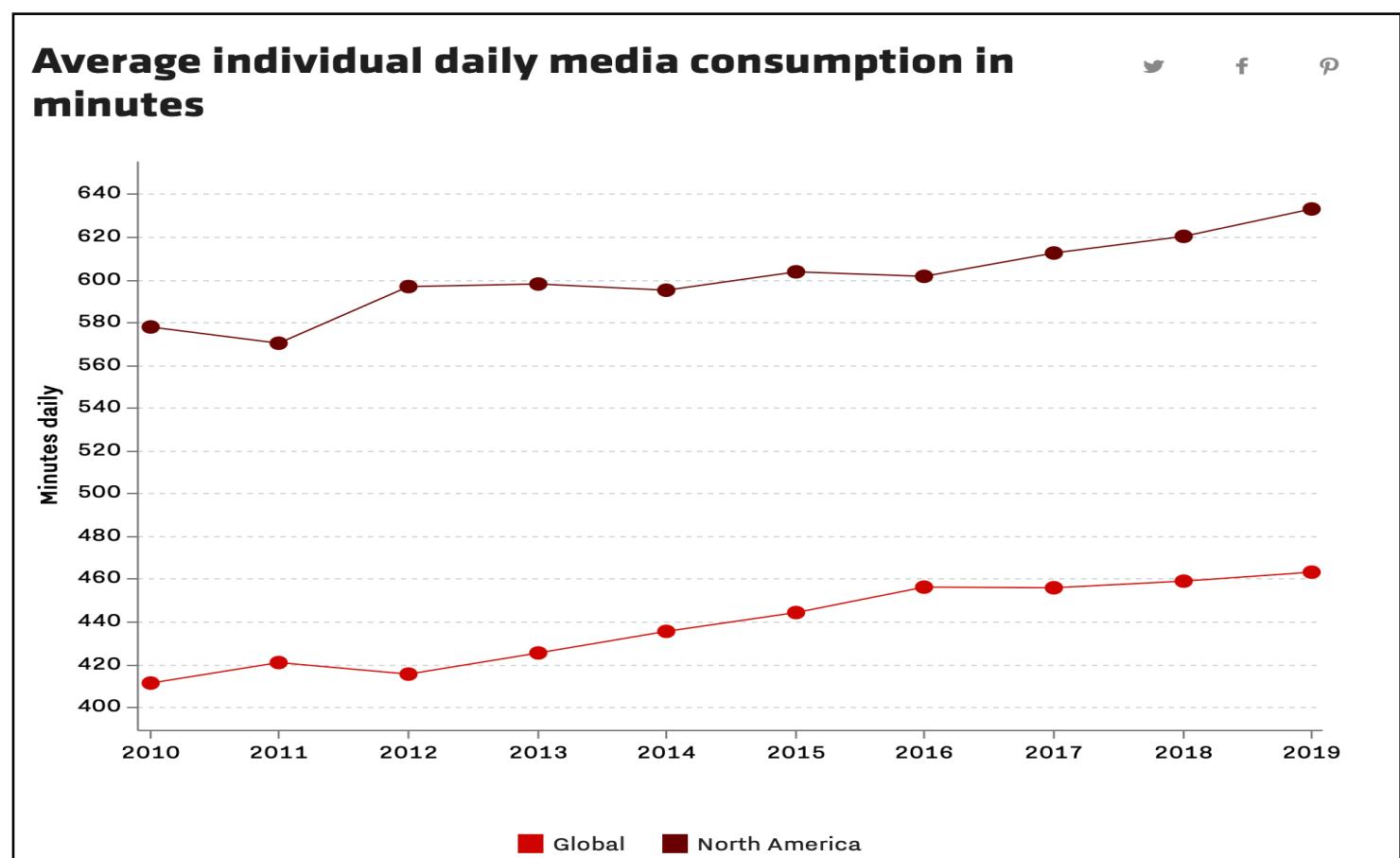
Drivers generally use the **Weather application on the iPhone** for weather information

Most people have a **negative or neutral perception** of the Texas Department of Transportation

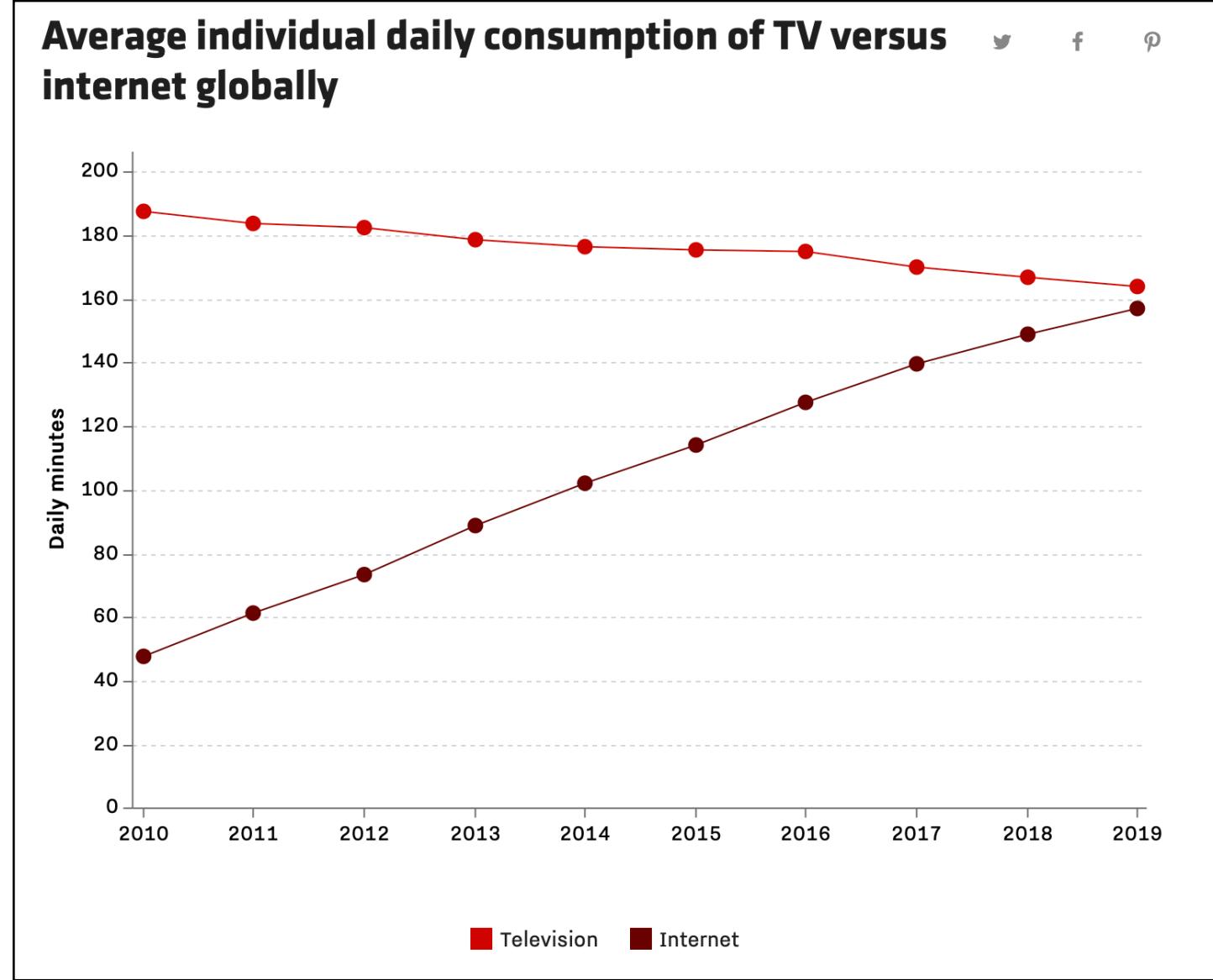


Key Takeaways

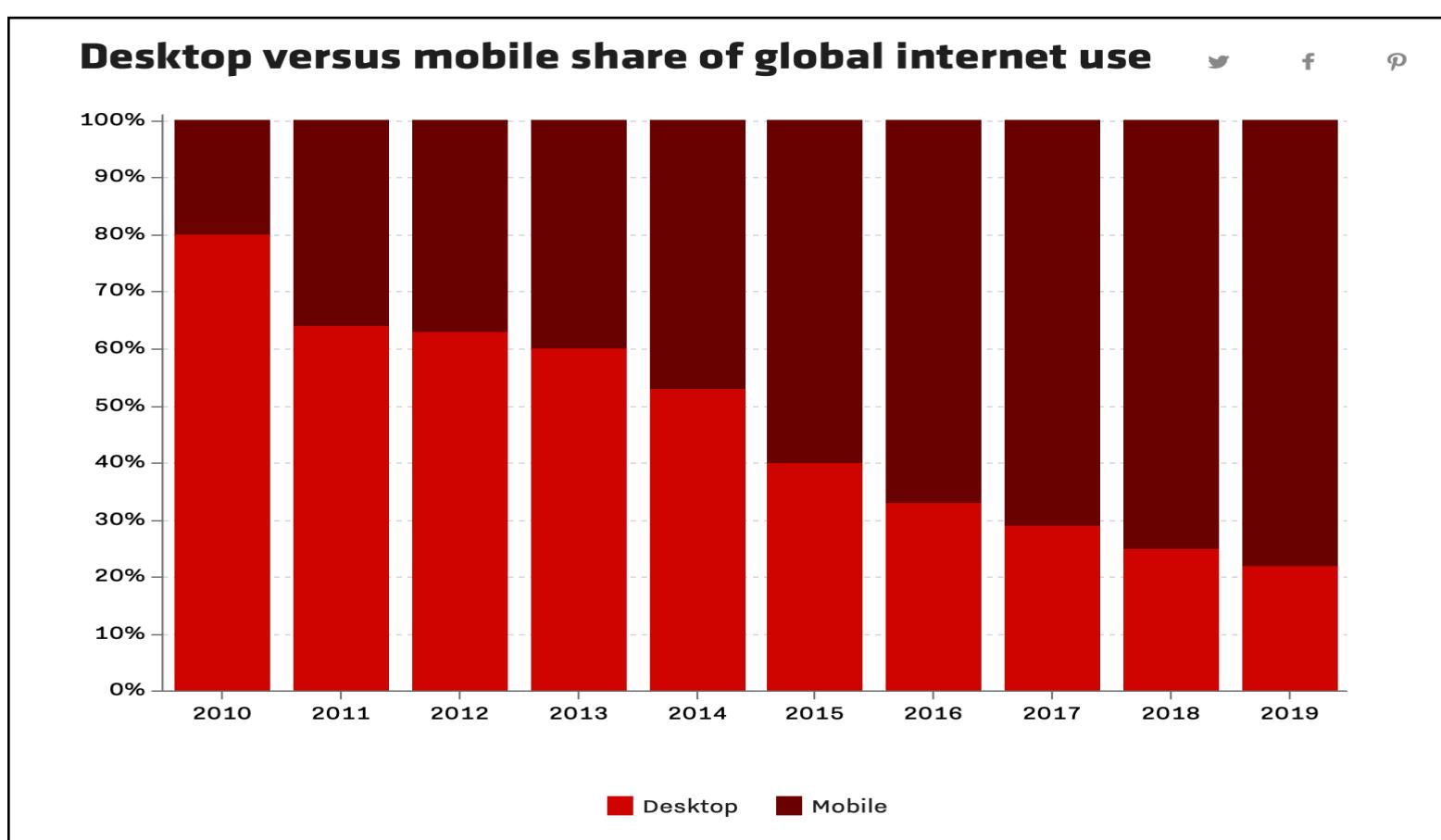
KEY TAKEAWAY: MOBILE PHONES WILL BE THE DOMINANT CHANNEL FOR MEDIA CONSUMPTION



Research performed by Zenith in 2016.



Research performed by Zenith in 2016.



Research performed by Zenith in 2016.

Individuals on average spent around 456.1 minutes consuming media, while individuals in North America in the same time-frame spent 601.5 minutes consuming media.

Currently, for consuming media, the usage of traditional means such as the Television is more than that of the internet

Consumption of media is shifting from the desktop to the mobile device.

Mobile media consumption has increased 44% on an average from 2010 to 2016.

19% of all media in the world consumed through the mobile phone in the year 2016.

Currently, even though the amount of people watching TV is more than the amount of people using the Internet, it is safe to assume that the internet will be the dominant force for the consumption of media in the future, and the mobile will be the dominant channel for accessing the internet.

KEY TAKEAWAY: MOST DRIVERS USE MOBILE APPLICATIONS TO ACCESS NEWS, TRAFFIC AND WEATHER INFORMATION

#	Field	News	Weather	Traffic	None of these	Total
1	Website	50.00% 155	37.74% 117	12.26% 38	0.00% 0	310
2	Mobile Application	27.37% 133	39.71% 193	32.92% 160	0.00% 0	486
3	Television	51.04% 98	39.58% 76	9.38% 18	0.00% 0	192
4	Radio	52.54% 93	27.12% 48	20.34% 36	0.00% 0	177
5	Facebook	72.12% 119	23.03% 38	4.85% 8	0.00% 0	165
6	Twitter	83.33% 55	9.09% 6	7.58% 5	0.00% 0	66
7	Instagram	83.72% 36	13.95% 6	2.33% 1	0.00% 0	43
8	Other Social Media	80.65% 25	12.90% 4	6.45% 2	0.00% 0	31
9	Word of Mouth	41.92% 96	39.74% 91	18.34% 42	0.00% 0	229
10	Print (Newspaper, Magazine)	81.61% 71	16.09% 14	2.30% 2	0.00% 0	87

Comparing different modes used by drivers to access information

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	News	1.00	7.00	3.27	1.60	2.55	232
2	Social Media	1.00	8.00	2.35	1.78	3.18	280
3	Entertainment	1.00	8.00	3.44	1.74	3.03	228
4	Traffic/Navigation	1.00	7.00	3.91	1.48	2.18	254
5	Education	1.00	7.00	4.32	1.80	3.25	138
6	Work	1.00	7.00	3.44	1.95	3.80	215
7	Weather	1.00	8.00	4.23	1.72	2.97	264
8	Other	1.00	8.00	4.76	2.45	5.99	21

Comparing the different types of information that a driver accesses

INTERVIEW QUOTES

“My husband has that Waze thing now, that checks traffics while we drive”

“We check the weather on our phone, before a trip. I use the weather app built into my iPhone.”

“Before driving, I check the weather on the weather application on my iPhone to see if it is sunny. I hate driving in the rains.”

“While driving, I use Google Maps even if I know the way. This sometimes saves me the pain of re-routing later”

“I check the weather on the weather.com application on the iPhone, to see if it might rain or not.”

“On the morning of a trip, I usually use Google Maps for directions”

“For checking the weather and traffic, I use the iPhone weather application and Google Maps”

“For my trip to Fortworth, I looked up Google Maps on the tablet.”

KEY TAKEAWAY: THE PUBLIC HAVE A BAD PERCEPTION OF THE TEXAS DEPARTMENT OF TRANSPORTATION

SURVEY QUOTES

What is your overall perception of the Texas Department of Transportation?

Needs improvement

Slow

N/A

No opinion about them, really.

Neutral.

TXDoT probably does a decent job of maintaining our infrastructure. However, when we really need light rail, roundabouts, or stoplight timing fixes, they're only solution is to partner with a shady company and build another toll road.

mediocre

Long wait

Long lines, a place to get license renewed (and get TX Tags), but now that there is the option to renew license/get TX tags online, I don't have to go in as much - haven't been to one in years.

Neutral

Slow and understaffed

Not very knowledgeable about their responsibilities. Traffic messages are good.

No opinion

Unsure, I've heard of it generically

Only heard the name

I have no thoughts.

No opinion about them, really.

INTERVIEW QUOTES

What do you think the Texas Department of Transportation does ?

"I don't know. I don't know anything about them. I am not even sure what they're in-charge of. Sorry"

"Some traffic authority"

"Never heard of them before"

"I don't have any perception of TxDot since I don't know what they're responsible for."

KEY TAKEAWAY: INTERACTIVE CONTENT INCREASES THE CLICK-THROUGH RATE AND ENGAGES READERS

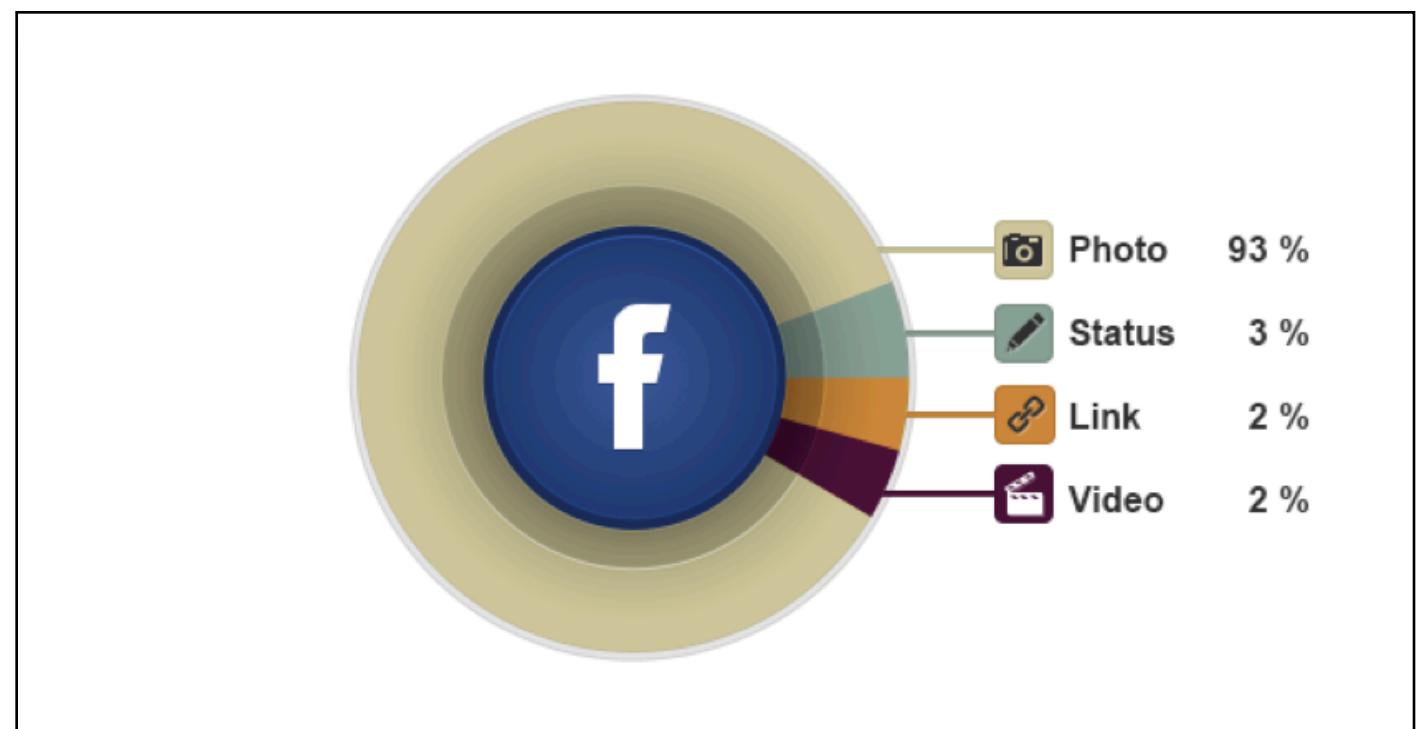
The articles on the Texas Department of Transportation newsroom have no images embedded in them.

According to a study done by Jeff Bulas, articles with images get **94% more total views** than articles without images.

1. Using images of real people increases user engagement

According to Jacob Nielsen, users spent **10% more time** looking at pictures than reading content

2. Combining photos and text increases viewer retention and engagement



3. Optimized images load quickly

According to research, **47%** of viewers want a 2 second load time for their images

In another research conducted by Nielsen, when the image took **8 seconds to load**, the viewer spent a mere **1% of their time** looking at the image.

However, when the image loaded quickly, the users spent almost **20% of their time** looking at the image

4. High-quality images to establish credibility

According to the Stanford Persuasive Technology Lab, **visual design** was the **number one criterion** for establishing the credibility of the presented material.

It is known as the '**Halo Effect**'

5. Using images supports persuasion and call-to-action

According to a study conducted by the University of Minnesota School of Management and the 3M corporation, presentation with images are **43% more likely** at converting users to agree to their point of view.

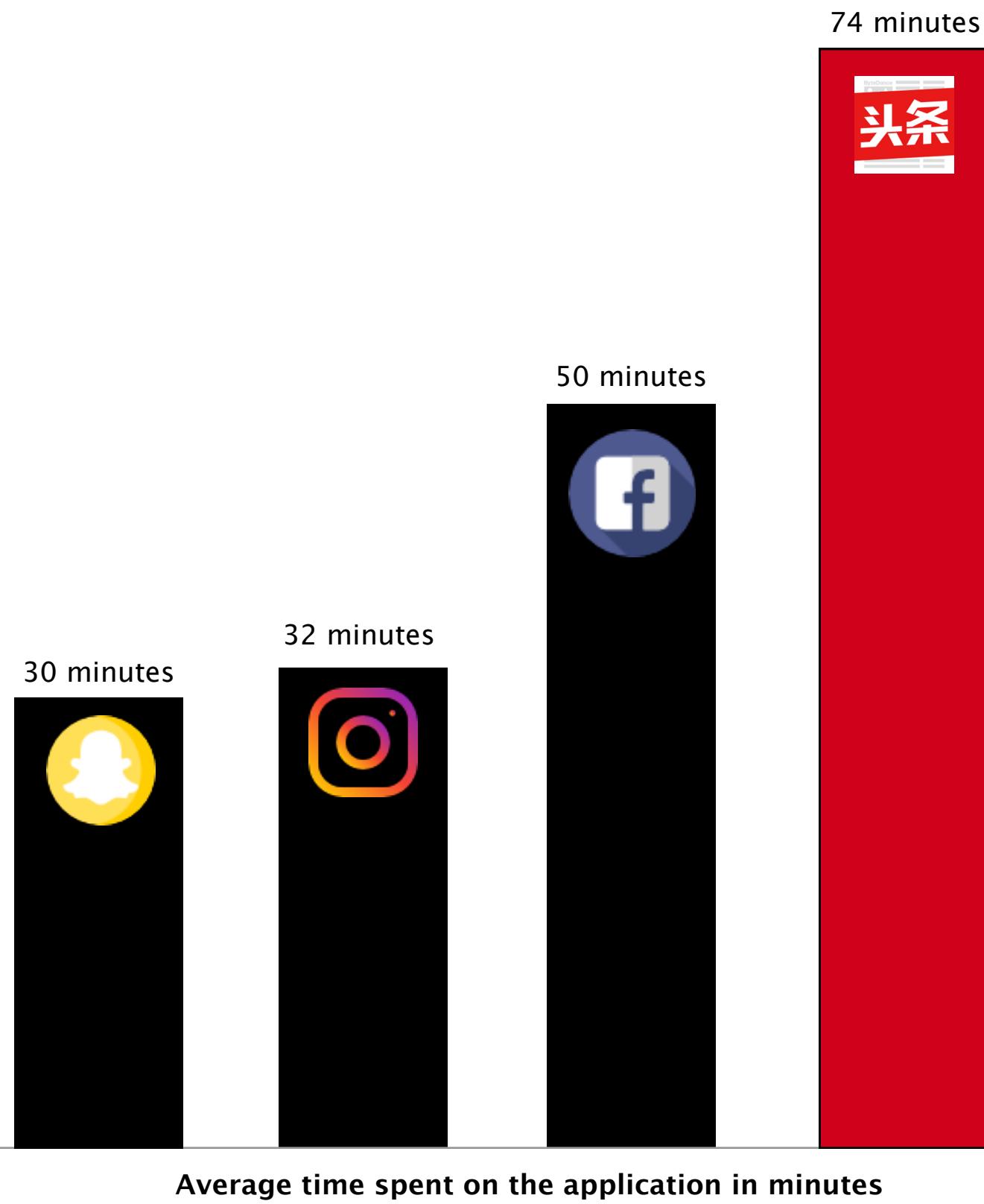
5. Using images supports persuasion and call-to-action

According to a study conducted by the University of Minnesota School of Management and the 3M corporation, presentation with images are **43% more likely** at converting users to agree to their point of view.

KEY TAKEAWAY: PERSONALIZED CONTENT LEADS TO INCREASED USER ENGAGEMENT AND RETENTION

The world's most engaging news application

Toutiao users spend 74 minutes on the app everyday



Consumer appetite for hyper-relevance

■ U.S. consumers
■ Global consumers

More likely to buy from companies that personalize experiences



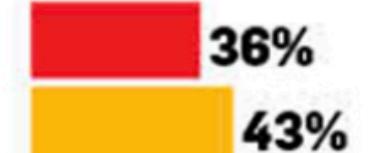
Find value in services that learn their needs for personalization



Would use smart reordering services via in-home sensors



Use digital assistants



Are satisfied with digital assistants



Source: Accenture Strategy

Attitudes toward personal data

40%

of U.S. consumers would provide it to companies online to get more tailored, experiences.

37%

of U.S. consumers would allow it to be collected via smart devices if it's used to provide them with financial benefits.

Source: Accenture, Global Consumer Pulse, 2016

Would share shopping preferences to improve service:

Millennials



Gen Xers



Boomers



Source: Salesforce, August 2017

Features used for content personalization



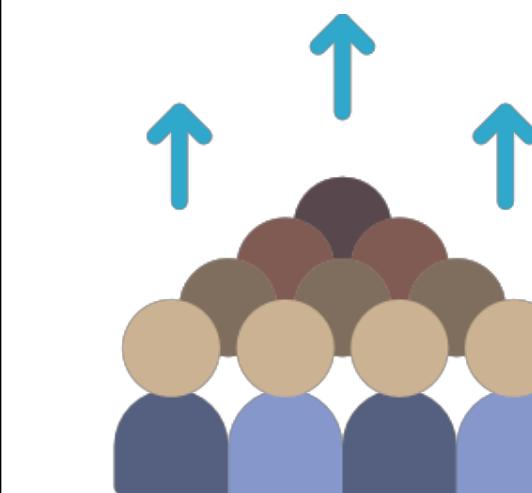
55%

of companies use page views and clicks for personalizing content



47%

of companies use the location of the user for personalizing content



43%

of companies use the demographics of the user for personalizing content



Recommendations

RECOMMENDATIONS

RECOMMENDATION 1

Build an AI-powered Digital Voice Assistant for the mobile phone focusing on drivers

The assistant can provide the user with:

- Driving directions (through integrated Waze API)**
- Weather information (through the Weather Channel API)**
- Personalized news**

PROBLEMS SOLVED ?

Targeting the mobile phone user base

Drivers can use the application while driving

Content Personalization – The application can constantly learn the user's tastes and provide news based on it

RECOMMENDATIONS

RECOMMENDATION 2

Partner with Waze/Google Maps to show real-time data for road constructions/disasters

Show drivers where a construction is currently being done and where constructions might begin soon

Provide real-time data during natural disasters about routes which are safe/unsafe

PROBLEMS SOLVED ?

Improvement of brand perception and credibility

Unique offering for drivers

RECOMMENDATIONS

RECOMMENDATION 3

Run ads to constantly expose the ‘Texas Department of Transportation’ brand to viewers – painting the brand in a positive light

Utilize social media platforms to interact with potential users and improve brand recognition

PROBLEMS SOLVED ?

Gaining the public’s trust

Improving the brand’s reach

RECOMMENDATIONS

RECOMMENDATION 4

Add header images which are related to the article at hand.

Add images and videos within the article.

Write articles on trending topics

PROBLEMS SOLVED ?

Improved user engagement

Improved user retention

Improved Click-through rate on articles