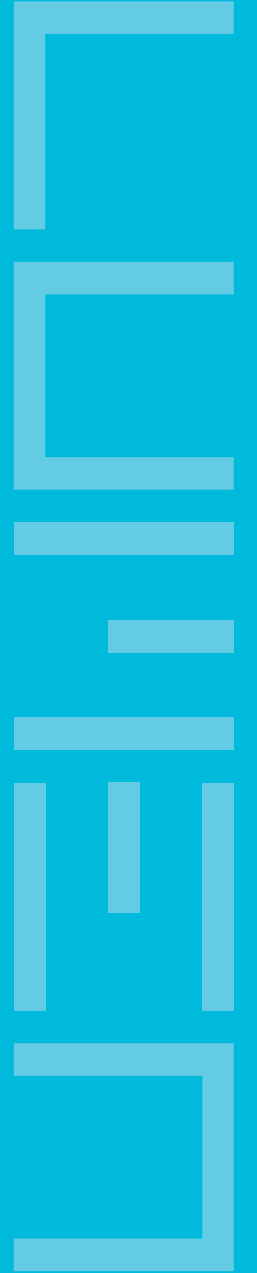


# Media Plurality Online: Attention to News on Social Media

Lumen Research

December 2023



# Agenda

1. Background and Methodology
2. Executive Summary
3. Attention to News Posts
4. Interaction with News Posts
5. Additional Findings
6. Appendix



*This report will be divided into the following sections...*



# Background & Objectives

In 2022 Ofcom found that 64% of online UK adults now claim to use online intermediaries for news and information regularly, with Facebook and X (formerly Twitter) most commonly cited as a source of news. While online intermediaries do not produce news articles, they can still influence the news diets of their users through the way that news articles are selected and presented.

Ofcom therefore wants to understand what influence a social media platform can have over the news diet of their users. The focus of this study will be to understand how the prominence of news content presented within a social media feed can influence how users pay attention and remember the content shown.

The central research question to be answered in this report is:

“What effect, if any, does the position (ranking) of news content on a social media feed have on their users’ attention to that content?”

In addition, we will also investigate:

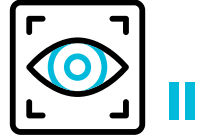
- Impact of attention on news story and news source recall;
- Impact of consumption levels and trust of the new sources on attention (*consumption and trust questions asked post exposure*).

# Research Methodology



10-minute online survey with **1000 respondents** from the UK (615 of those had valid eye tracking to use for analysis). All were 18+ and representative of people using social media for news.\*

Half the sample accessed Lumen software **via their mobile** and the other half **via their laptop**, turning their device into an eye tracking camera.



Respondents were then asked to browse a **mock social media feed** as they normally would. The feed included a mix of **randomised non-news and news content**. The news content was selected from a range of publishers and story types.

While respondents browsed the feed, Lumen were **tracking their eye movements** to measure attention to the posts.



Respondents then completed a **short distraction task** to ensure that any recall measured has been encoded to the long-term rather than short-term memory. They then **answered a questionnaire** to measure outcomes:

- **Spontaneous & prompted news story recall**
- **Level of interest in news story they recalled**
- **Spontaneous & prompted news source recall**
- **Consumption of news source, outside of study**
- **Trust in news source, outside of study.**

\* See appendix for full breakdown.

# Research Environment

**Lumen** specialises in creating ultra realistic in-context testing environments. In these environments every element, from the content to the ads, can be entirely manipulated by Lumen.

**For this study Lumen created a mock social media feed.**

Respondents were allowed to scroll through the feed and view posts at their own pace. After 3 minutes, a 'next' button appeared, allowing them to proceed to the next step or choose to carry on browsing until the end of the feed.

The **news content on the feed was interactive**, and users could click on the *post* to view the full *article*.



*Example from mobile feed*



# Social Media Feed Design

The social media feed was made up of a total of 60 posts.

We included a total of **12 news posts** which were selected from 6 publishers, with one article covering 'news on important topics for the public' and one article covering 'other news content'.\* News posts were **randomised** between every 5<sup>th</sup> position\*\* on the feed.

Non-news content made up the remaining 48 posts and was randomised amongst the remaining positions in the feed.

\* As defined in Appendix.

\*\* Starting at position 3.

Post Position	
1	
2	
3	News Content
4	
5	
6	
7	
8	News Content
9	
10	
11	
12	
13	News Content
14	
15	
16	
17	
18	News Content
Etc.	



# Metrics

## Attention

% Viewed

% of news posts viewed (*min 100ms dwell time*)

Avg. Viewed Time (s)

Avg. duration the news post was viewed for (*among those who view*)

Attention Score (s)

Average attention per news post = % Viewed \* Avg. Viewed Time

## Clicks

% Clicked

% of news posts that were clicked on to view the full news article

Avg. Article Viewed Time (s)

Avg. duration news article was viewed for (*among those who viewed the article*)

Attention Curve

% of viewers that reach 1, 5, 10 seconds etc. of attention on the news article

## Outcomes

News Story Recall

Spontaneous (free answer) and prompted (from a list) measures of story recall

News Source Recall

Spontaneous (free answer) and prompted (from a list) measures of news source recall

News Story Interest

Of those who recalled, how interesting did they find the news story (scale 1 – 5)

News Source Consumption

Level of awareness and consumption of the 6 news sources used in the feed

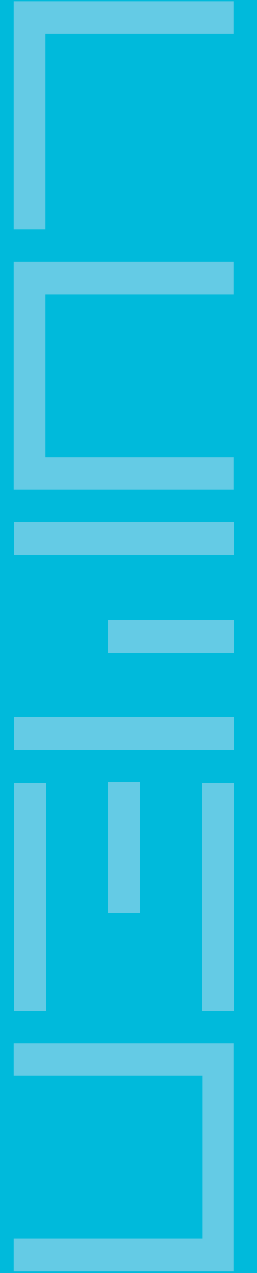
News Source Trust

Level of trust, on a scale of 1 – 10, for the 6 news sources used in the feed



**02**

# **Executive Summary**



# Executive Summary

## **Attention to News**

- News posts displayed higher in the user's social media feed received up to 14x as much attention in total (the combined attention to the feed *post* and the news *article*) compared to posts positioned at the bottom of the feed. This is because posts higher in the feed were significantly more likely to be viewed, to be viewed for longer and to be clicked on to view the full article, compared to news posts at the bottom of the feed. This pattern was consistent regardless of device or content type.
- Position in the feed also impacted recall of the news story, with users being 8x more likely to spontaneously recall the news story if served towards the top of the feed vs. the bottom. The longer users spent viewing a news post, the more likely they were to recall the story.

## **Interaction with News**

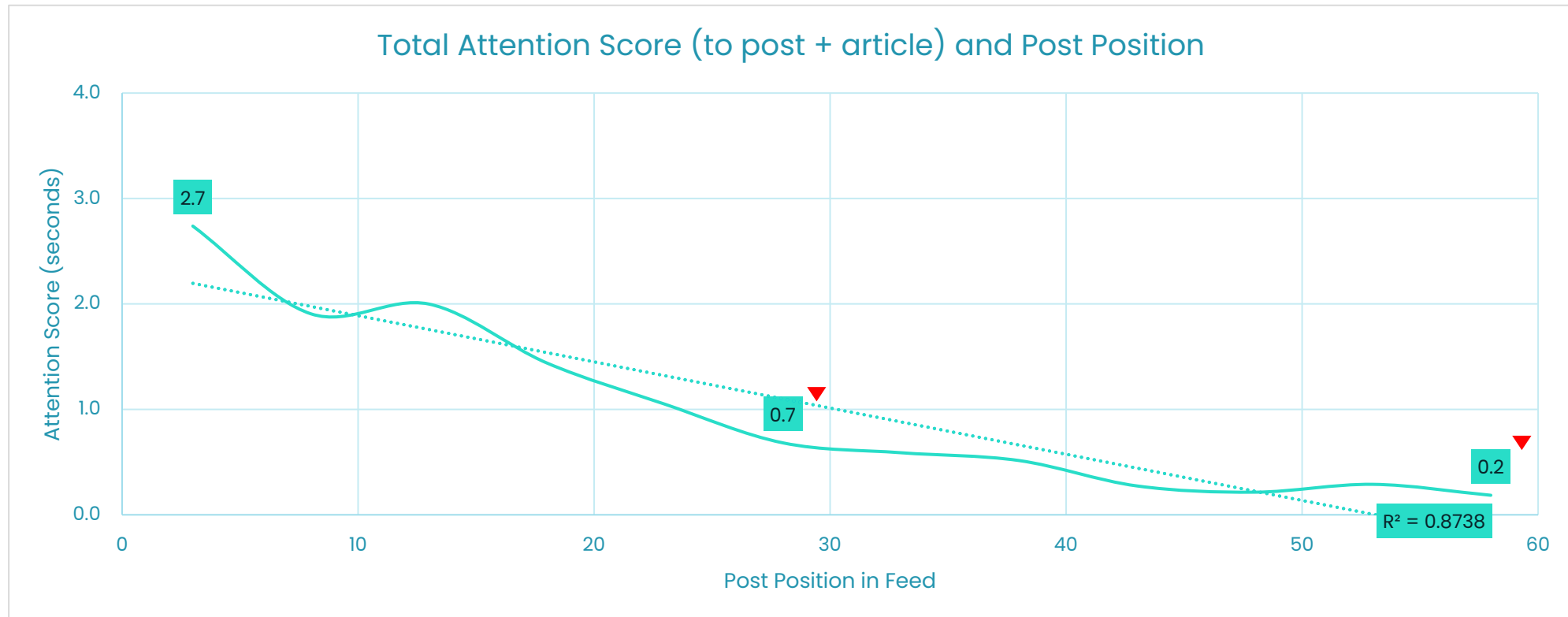
- News posts presented higher in the user's social media feed were also significantly more likely to be clicked on to expand the full article (up to 14x). This added an average of 9-10 seconds to the viewing time.
- Clicks had an impact on recall, with those who clicked to expand the news article being 5x more likely to spontaneously recall the news story, compared to those who just viewed the news post.

## **Other forms of influence on attention to news**

- After browsing the feed, users in the study were asked to give a trust score (1-10) and state their level of awareness/consumption of the news sources shown in the feed. Those who gave a higher trust score also viewed the news post for longer.
- Awareness/Consumption of the news source did not have a significant impact on attention; however, we did find that recall of the news source and news story was stronger if people were aware and consumed content from that source.

# Total attention to the news post and article was higher if the news post was positioned higher in the feed

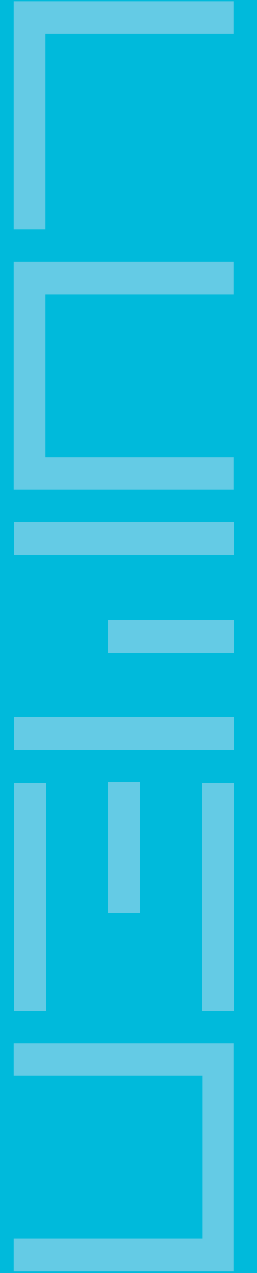
When combining the attention given to the news *post* and news *article*, we found that the news placed in the first position on the feed received 14x more attention than news placed in the last position on the feed.



▲▼ Significant difference at 95% CI against top feed position / middle feed position

**03**

# **Attention to News Posts**

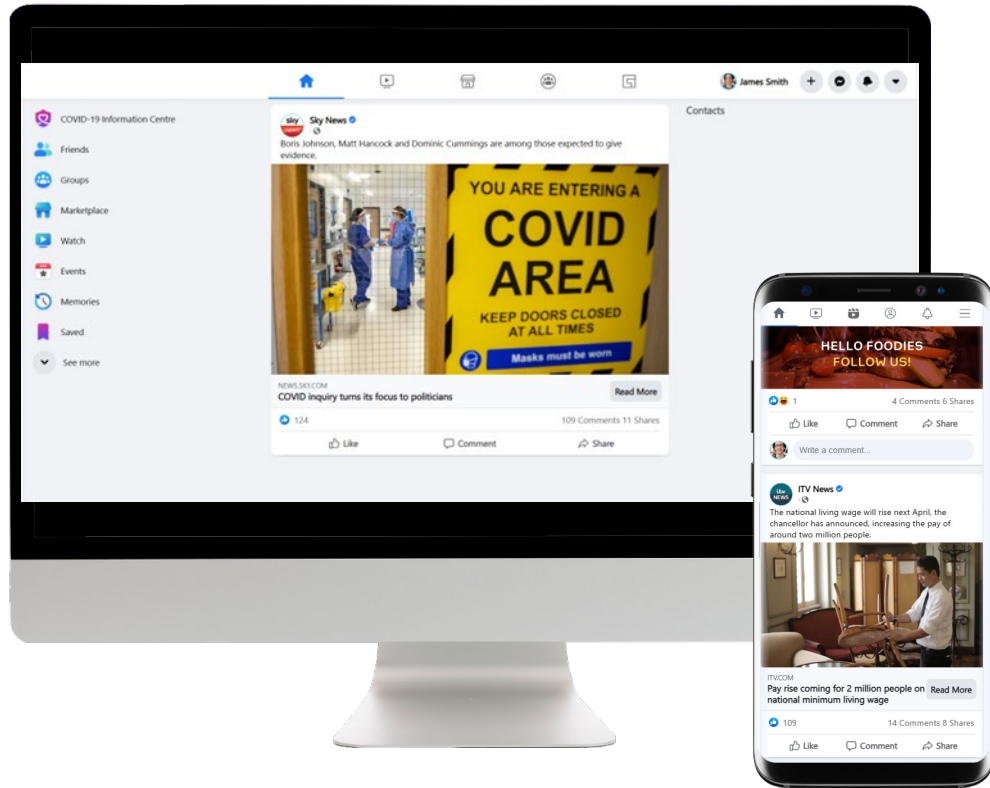


# Key Findings

1. On average, attention to the news post was 9x higher if the news post was displayed in the first position compared to the last position. We found that the news posts displayed higher in the user's social media feed were significantly more likely to be viewed and viewed for longer.
2. Position in the feed also impacted recall of the news story, with users being 8x more likely to spontaneously recall the story if served in the first news slot vs. the last. The longer users spent viewing a news post, the more likely they were to recall the story.
3. Attention was consistent regardless of device or content type ('news on important topics for the public' or 'other news content'). However, 'news on important topics for the public' was easier to recall and more likely to be rated as interesting compared to 'other news content.'

# Around half of all news posts received attention

On average, across devices and all 12 news post placements, around half of the posts were viewed. If they were viewed, people spent an average of 1.4 seconds viewing. This means that on average each news post received 0.7 seconds of attention ( $\% \text{ viewed} * \text{avg. viewed time}$ ).



**49%**  
of news posts were viewed

**1.4 seconds**  
was the average time spent viewing a news post (*if viewed*)

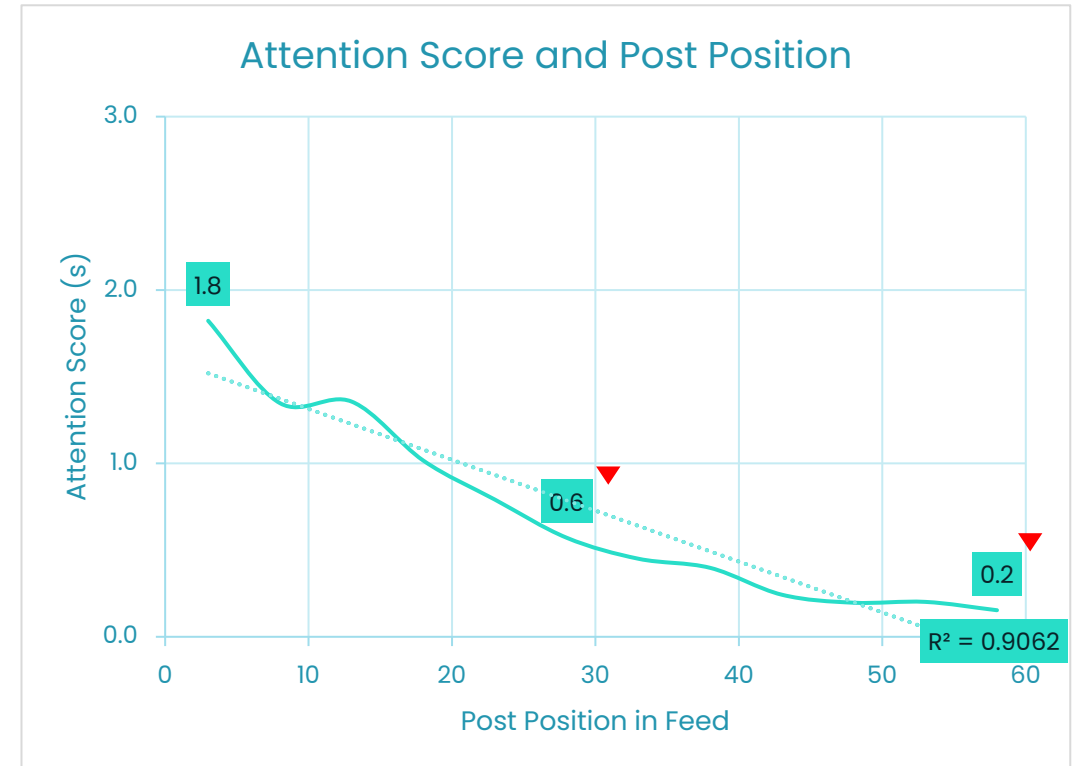
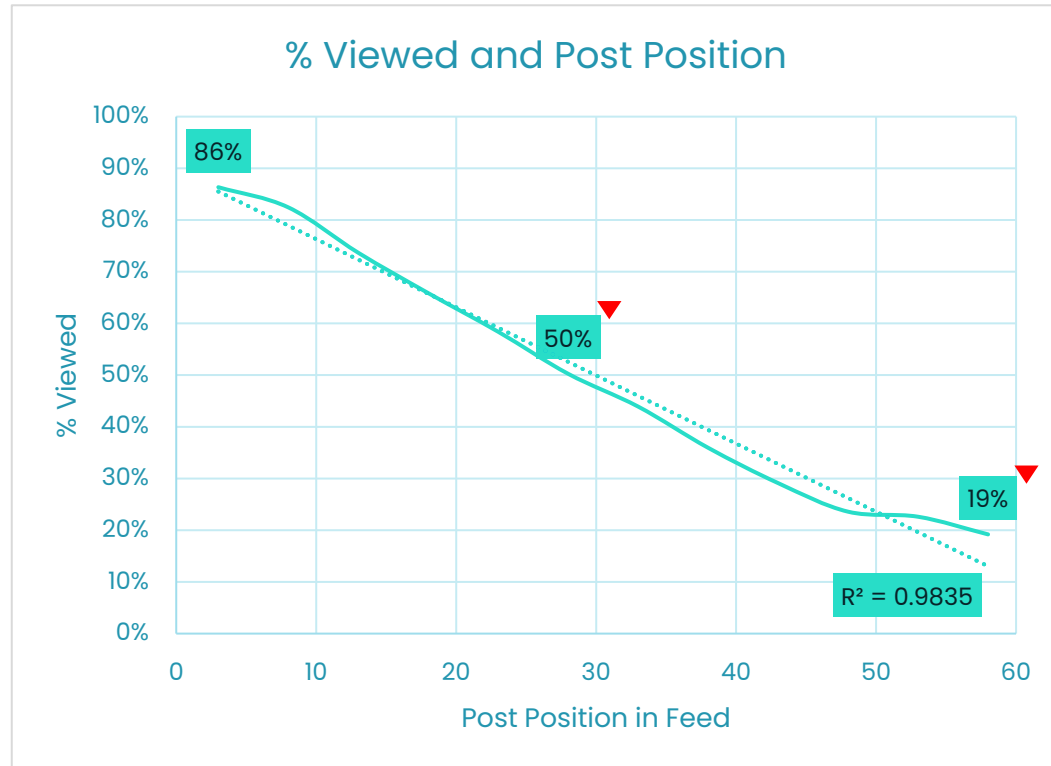
**0.7 seconds**  
was the average amount of attention given to each news post (*of all posts*)

Source: Lumen Research. December 2023  
Base (number of news posts): Total = 7,380

Attention metrics shown here only include attention to the *posts* and not the *articles*.

# Post position in the feed impacted attention levels

News posts presented higher in the user's feed were significantly more likely to be viewed and viewed for longer.



Attention Score = % Viewed \* Avg. Viewed Time

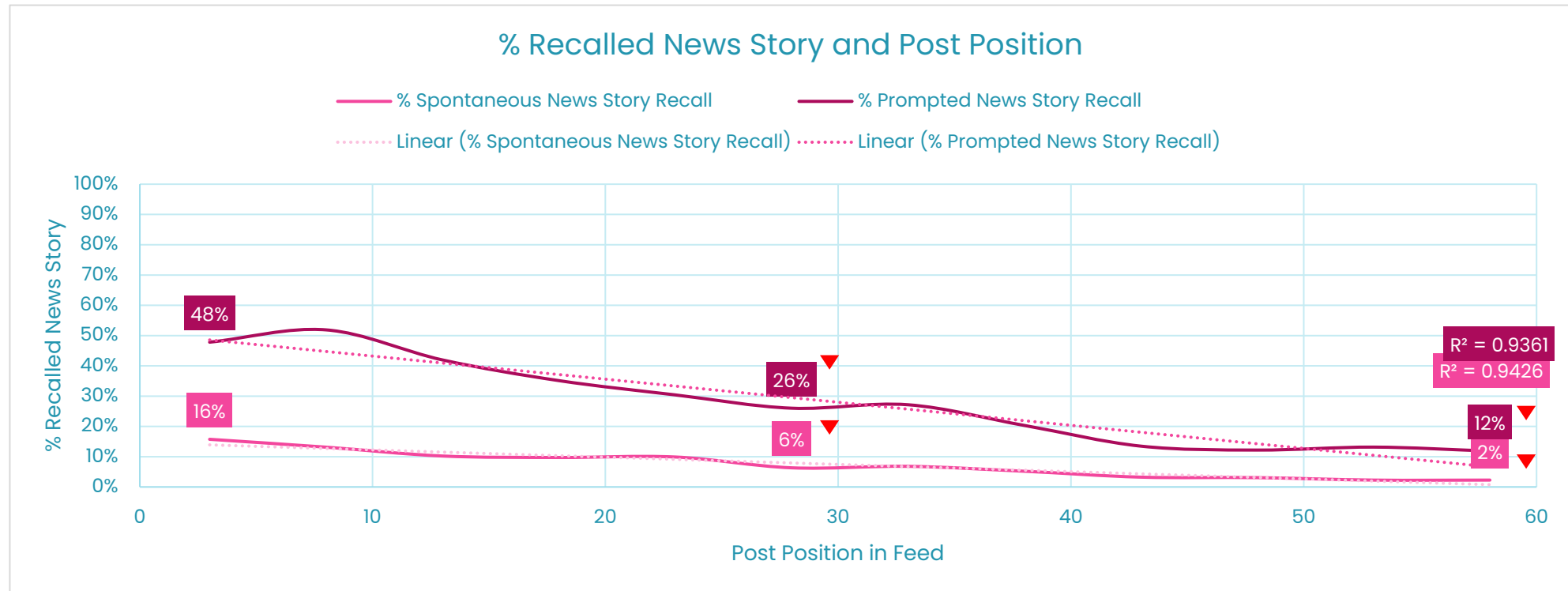
▲▼ Significant difference at 95% CI against top feed position / middle feed position

Attention metrics shown here only include attention to the *posts* and not the *articles*.

Source: Lumen Research. December 2023  
Base (number of news posts): Total = 7,380

# Position in the feed also impacted news story recall

Not only did attention increase when the post was served higher up the feed, but also the ability to recall the news story increased. This was significant both for spontaneous and prompted news story recall.



% that recalled news story when shown in recorded feed position out of total number of news posts available to be shown in that feed position.

▲▼ Significant difference at 95% CI against top feed position / middle feed position

Source: Lumen Research. December 2023

Base (number of news posts): Total = 7,380

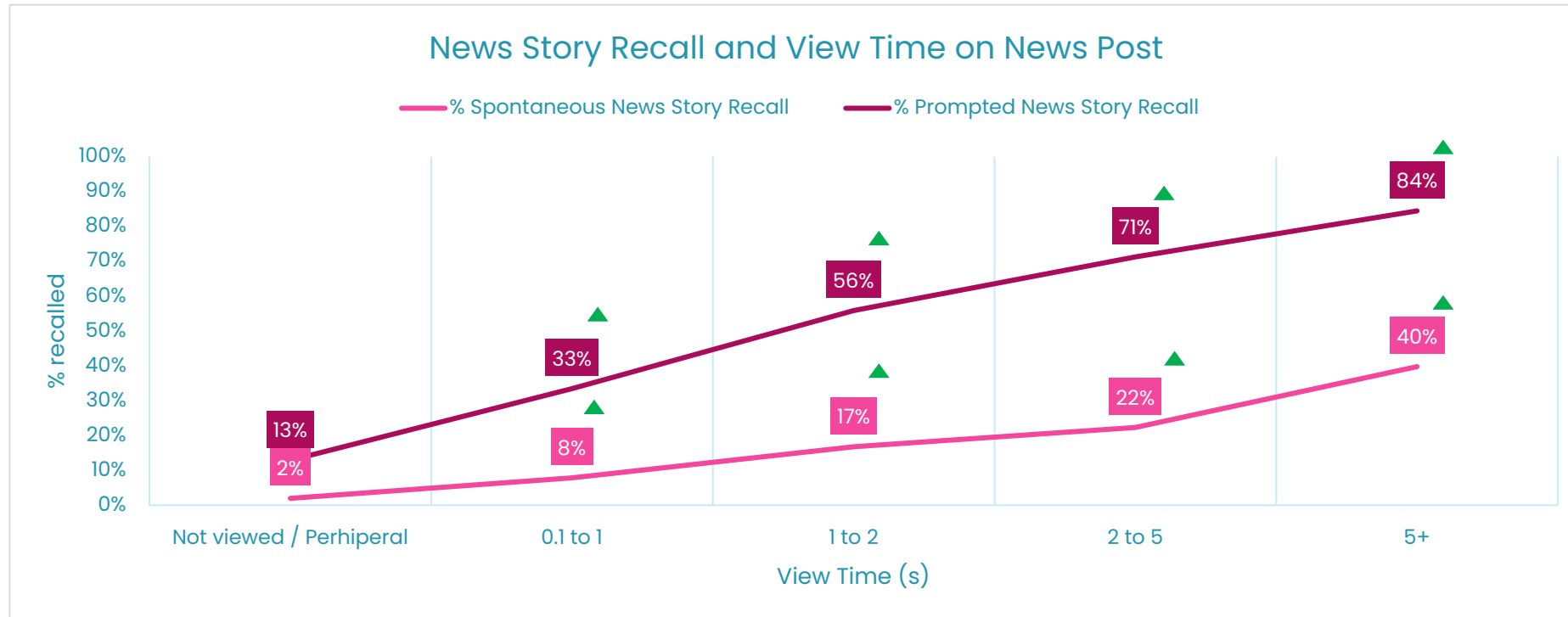
Q. Spontaneous Recall: What **news stories** do you recall seeing on the feed you just browsed?

Q. Prompted Recall: Which of the following **news stories** do you recall seeing on the feed you just browsed?



# Attention significantly increases ability to recall news

The longer participants spent viewing the news post, the more likely they were to spontaneously mention the news story or select it from a list when prompted. Recall levels were significantly stronger than those who did not pay attention to the post.



▲ Significant difference at 95% CI against previous view time threshold

Source: Lumen Research. December 2023

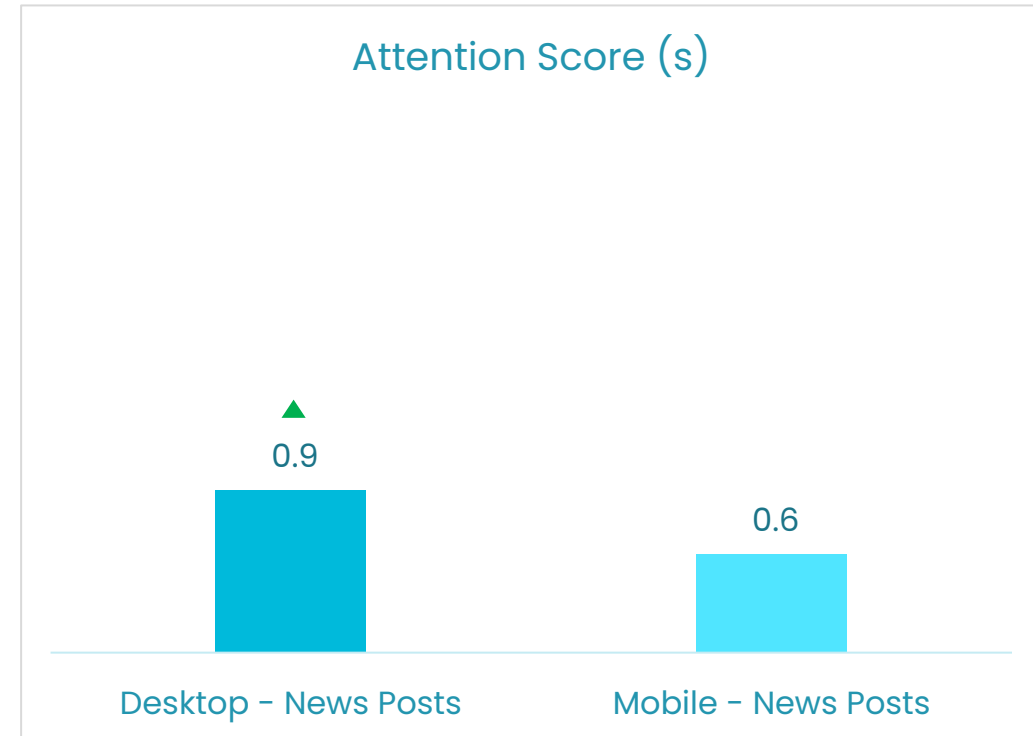
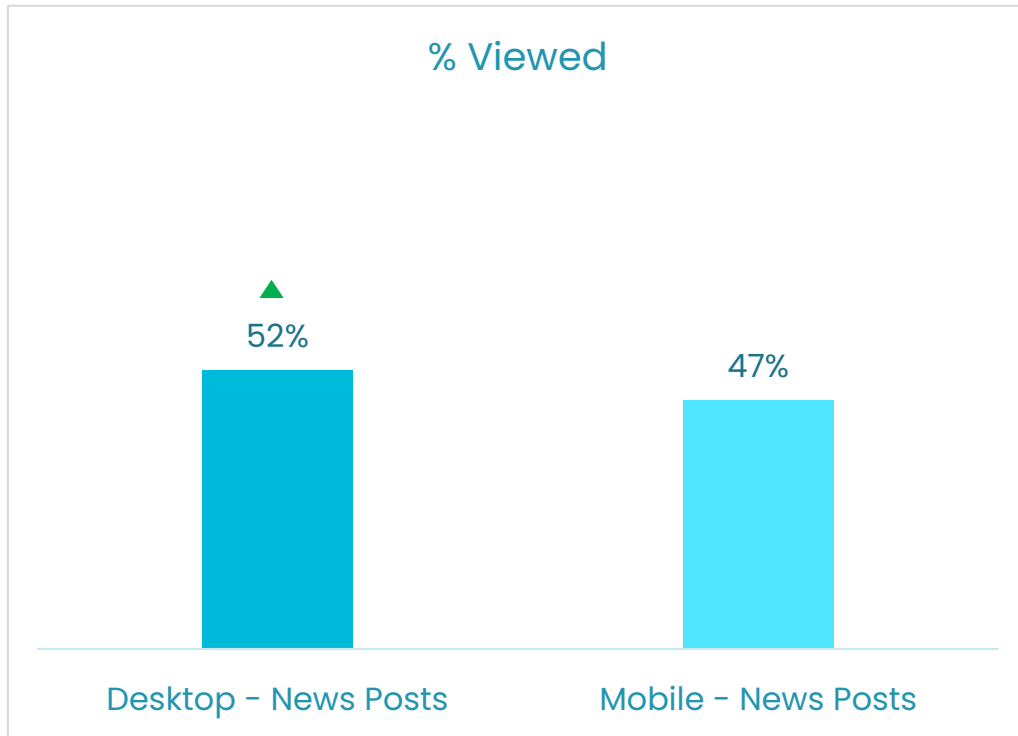
Base (number of news posts): Not viewed / Perhiperal = 3,744, 0 to 1 seconds = 2,248, 1 to 2 seconds = 698, 2 to 5 seconds = 529, 5+ seconds = 161

Q. Spontaneous Recall: What **news stories** do you recall seeing on the feed you just browsed?

Q. Prompted Recall: Which of the following **news stories** do you recall seeing on the feed you just browsed?

# Attention to news posts was stronger on desktop

Attention did differ significantly by device, with people more likely to view and spend time viewing news posts when browsing on a desktop device.



Attention Score = % Viewed \* Avg. Viewed Time

▲ Significant difference at 95% CI against Mobile

Attention metrics shown here only include attention to the *posts* and not the *articles*.

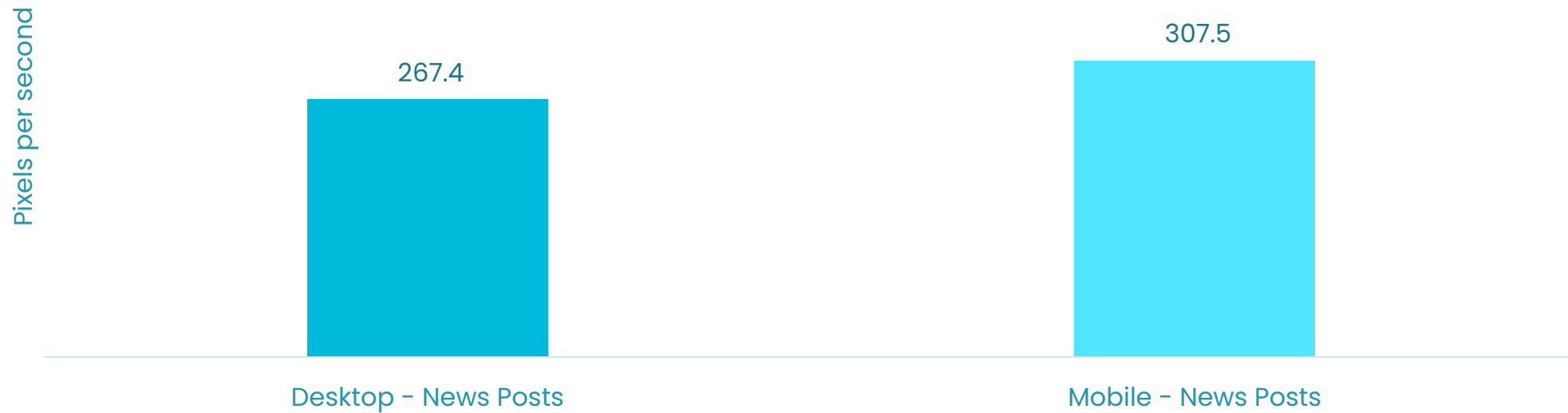
Source: Lumen Research. December 2023

Base (number of news posts): Desktop = 3,300, Mobile = 4,080

# People scroll faster when browsing on mobile

On average, people were likely to scroll 1.2x times faster on mobile compared to desktop.

Average scroll speeds by device

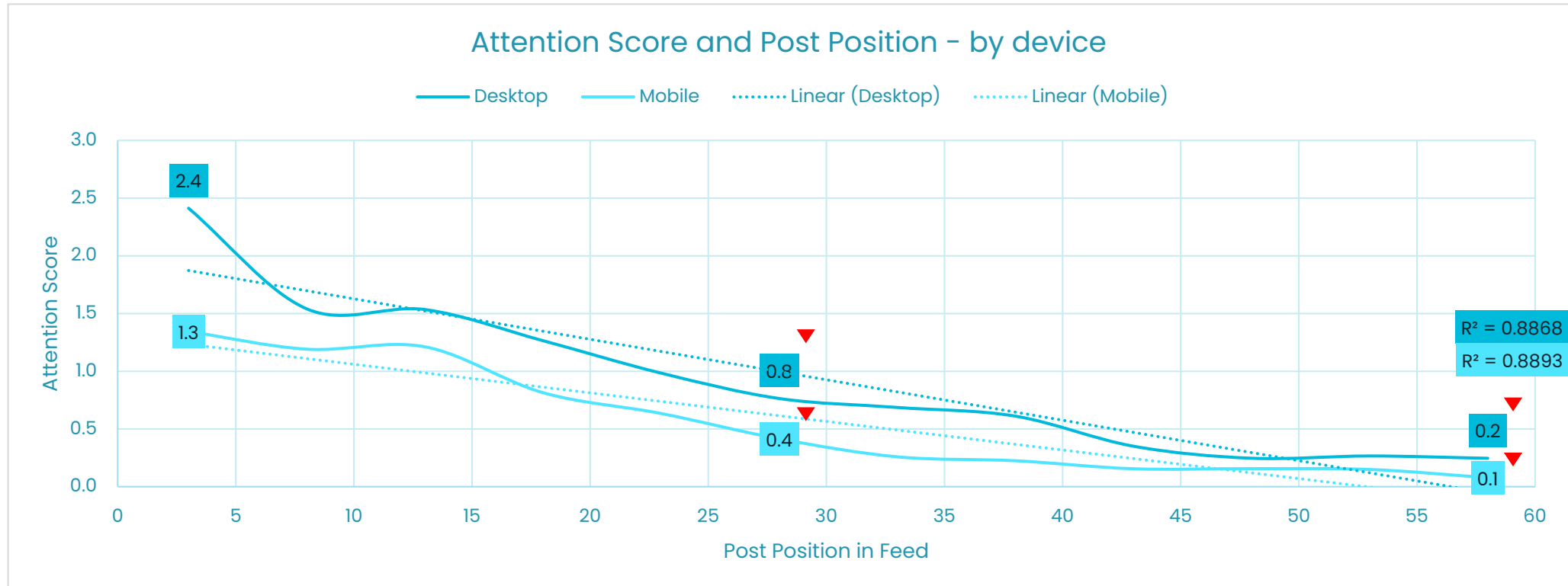


Source: Lumen Research. December 2023

Base (number of news posts): Desktop = 3,300, Mobile = 4,080

# Impact of position on attention was the same across devices

Across desktop and mobile, we saw a significant impact of post position on attention, with posts that were higher up in the feed having a higher average attention score (in seconds) than posts lower in the feed.



▲▼ Significant difference at 95% CI against top feed position / middle feed position

Attention Score = % Viewed \* Avg. Viewed Time

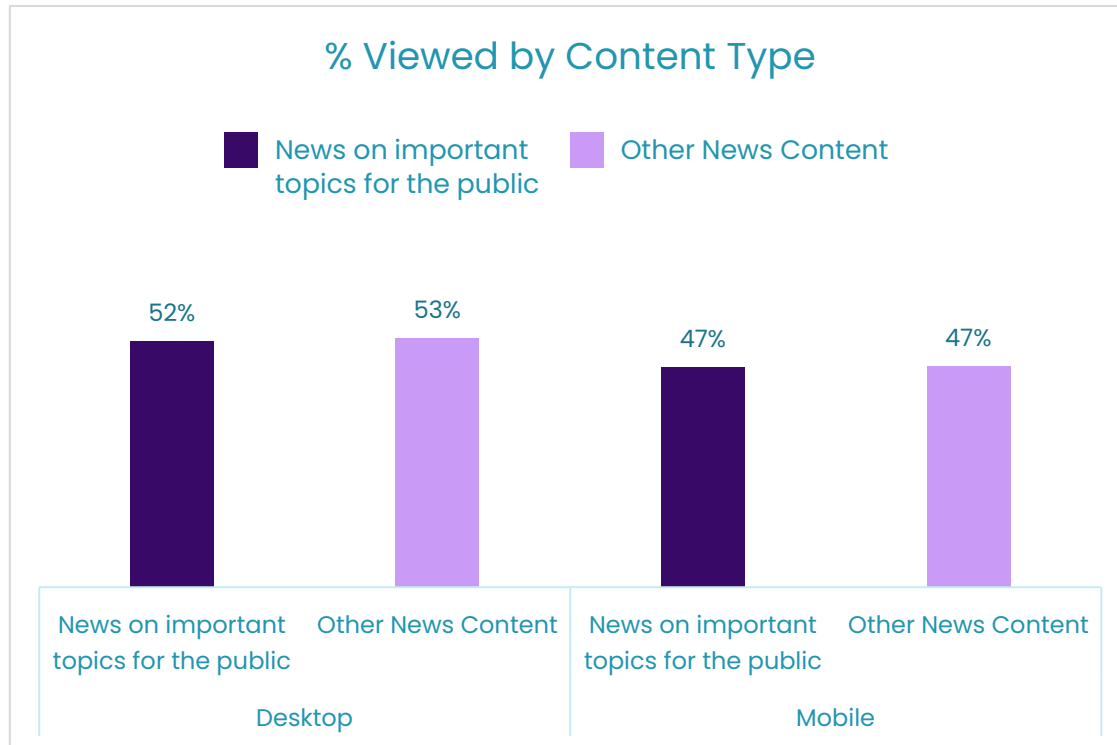
Attention metrics shown here only include attention to the *posts* and not the *articles*.

Source: Lumen Research. December 2023

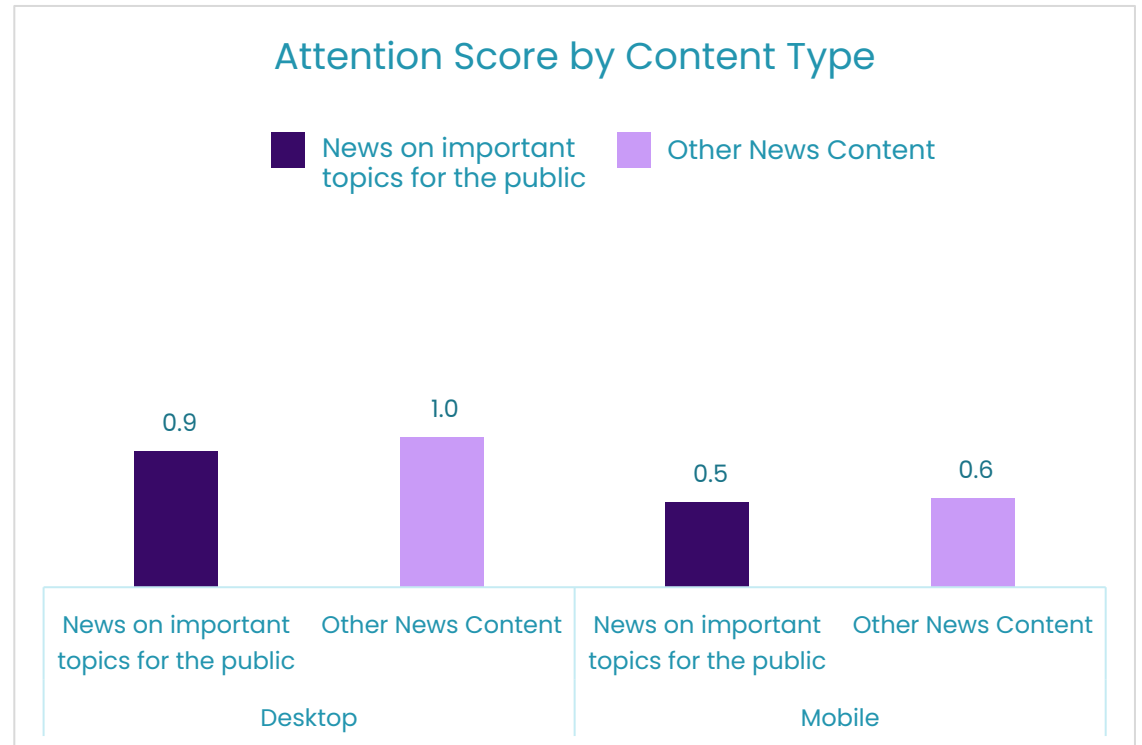
Base (number of news posts): Desktop = 3,300, Mobile = 4,080

# Attention was stable across news type

On average across all the news posts in the study, the 'news on important topics for the public' and 'other news content' gained similar levels of attention. There were no differences in the number of posts viewed, and very minimal differences in the average amount of attention given to each type of post in seconds.



No significant difference at 95% CI against Other News Content



Attention Score = % Viewed \* Avg. Viewed Time

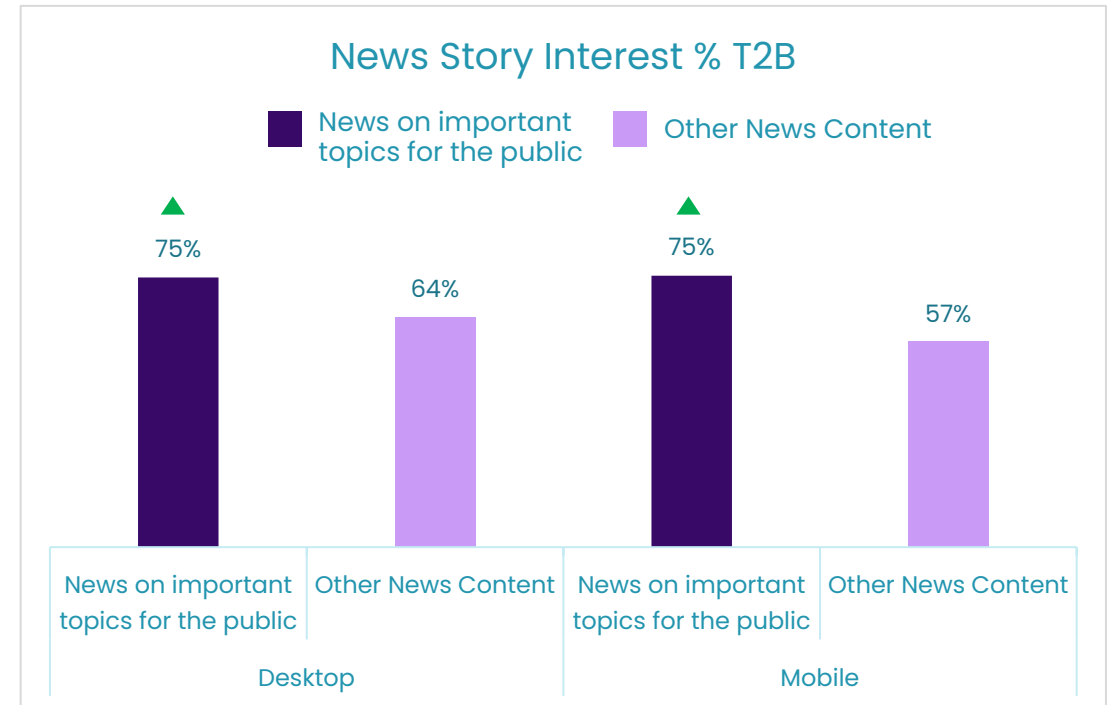
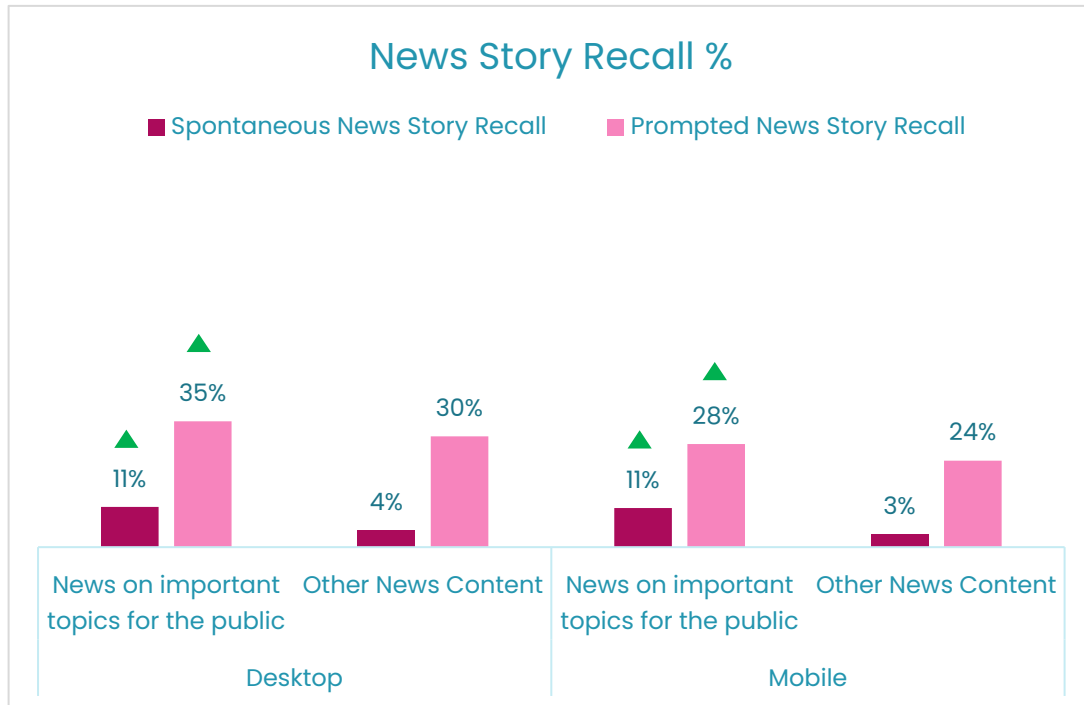
Attention metrics shown here only include attention to the *posts* and not the *articles*.

Source: Lumen Research. December 2023

Base (number of news posts): Desktop – News on important topics for the public = 1,650, Other News Content = 1,650, Mobile – News on important topics for the public = 2,040, Other News Content = 2,040

# Recall and interest was higher for 'news on important topics for the public'

Despite attention being consistent across 'news on important topics for the public' and 'other news content,' recall of the news story and level of interest in the story was significantly stronger for 'news on important topics for the public.'



▲ Significant difference at 95% CI against Other News Content

T2B = Very Interesting & Somewhat Interesting

Source: Lumen Research. December 2023

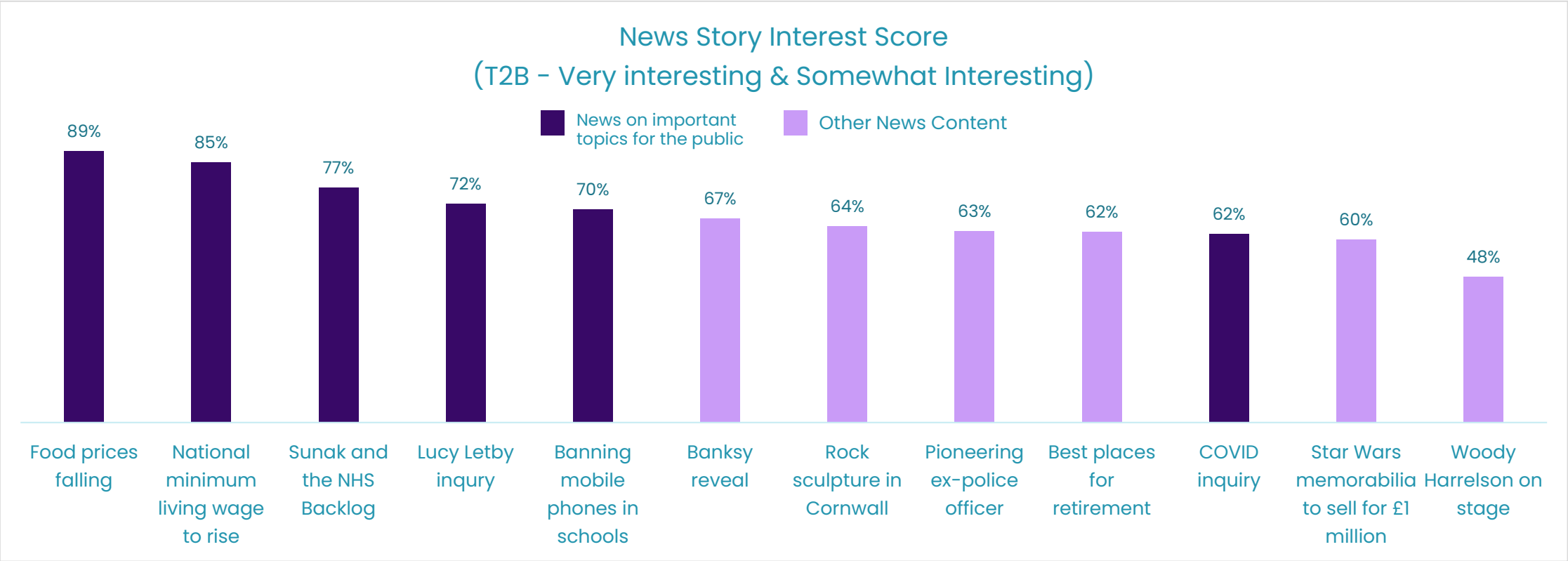
Base (number of news posts): Desktop – News on important topics for the public = 1,650, Other News Content = 1,650, Mobile – News on important topics for the public = 2,040, Other News Content = 2,040

Q. Spontaneous Recall: What **news stories** do you recall seeing on the feed you just browsed?

Q. Prompted Recall: Which of the following **news stories** do you recall seeing on the feed you just browsed?

Q. News Story Interest: You said you recalled seeing the following news stories. How interesting were these stories to you personally? (of those who recalled)

# 5 out of 6 posts showing 'news on important topics for the public' were rated as more interesting than the 'other news content' in the feed



Source: Lumen Research. December 2023

Base (those who recalled the news story with a prompt): Total = 2,133

Q. News Story Interest: You said you recalled seeing the following news stories. How interesting were these stories to you personally? (of those who recalled)

**04**

# **Interaction with News Posts**



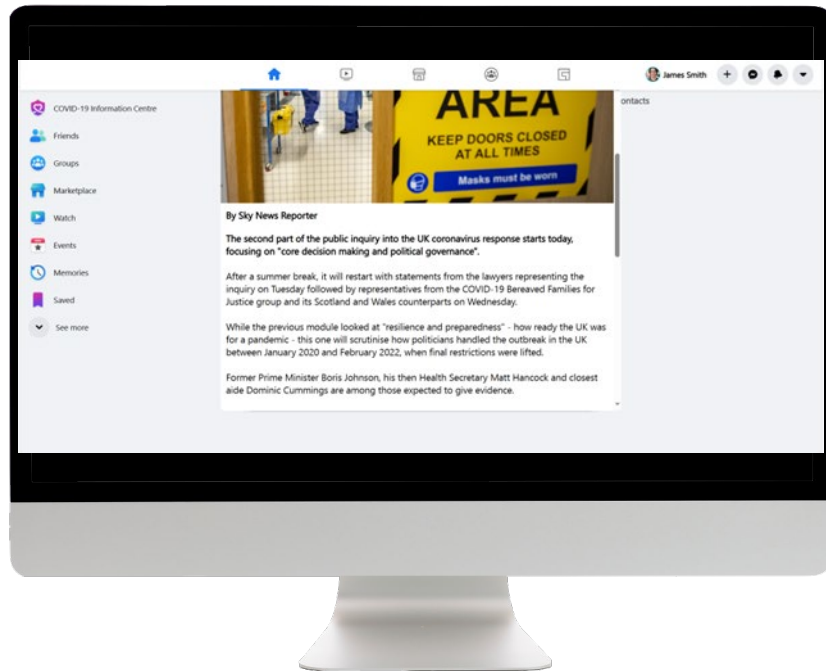


# Key Findings

1. Position of the news post in the feed also had a correlation with clicks, with posts placed at the top of the feed being 14x more likely to receive clicks than posts at the bottom of the feed. This had an impact on recall, as those who clicked to view the article were also significantly more likely to recall the news story. These recall scores were far greater than those who only viewed the post (5x higher spontaneous recall).
2. Interaction with the news articles was consistent across devices, with 3% of news posts being clicked on. Once clicked, people spent an average of 9 – 10 seconds engaging. Although most viewers looked for 10 seconds or less, there was 14-17% of users who clicked that engaged with the articles for longer (20 seconds or more).

# Interaction with articles was consistent across devices

Across mobile and desktop, 3% of the news posts were clicked on to expand to the news article. Once clicked, people spent between 9 – 10 seconds on average viewing the article content.



**3%**  
of news posts clicked

**9.7s**  
avg. time viewing the article



**3%**  
of news posts clicked

**9.0s**  
avg. time viewing the article

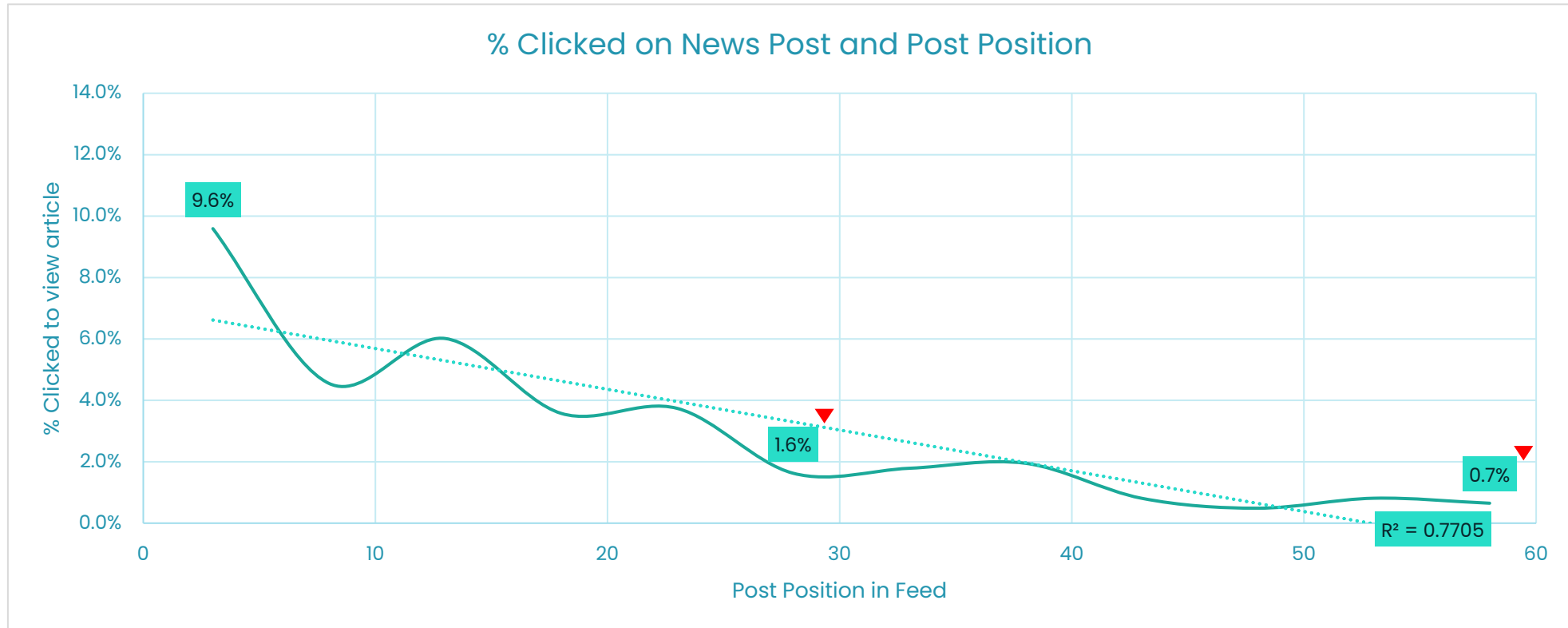
Attention metrics shown here only include attention to the *articles* and not the *posts*.

Source: Lumen Research. December 2023

Base (number of news posts): Desktop = 3,300, Mobile = 4,080

# Feed position had an impact on clicks

The percentage of clicks on news posts were low overall. However, news stories positioned in the first post position were 14x more likely to be clicked on than news stories in the last post position.



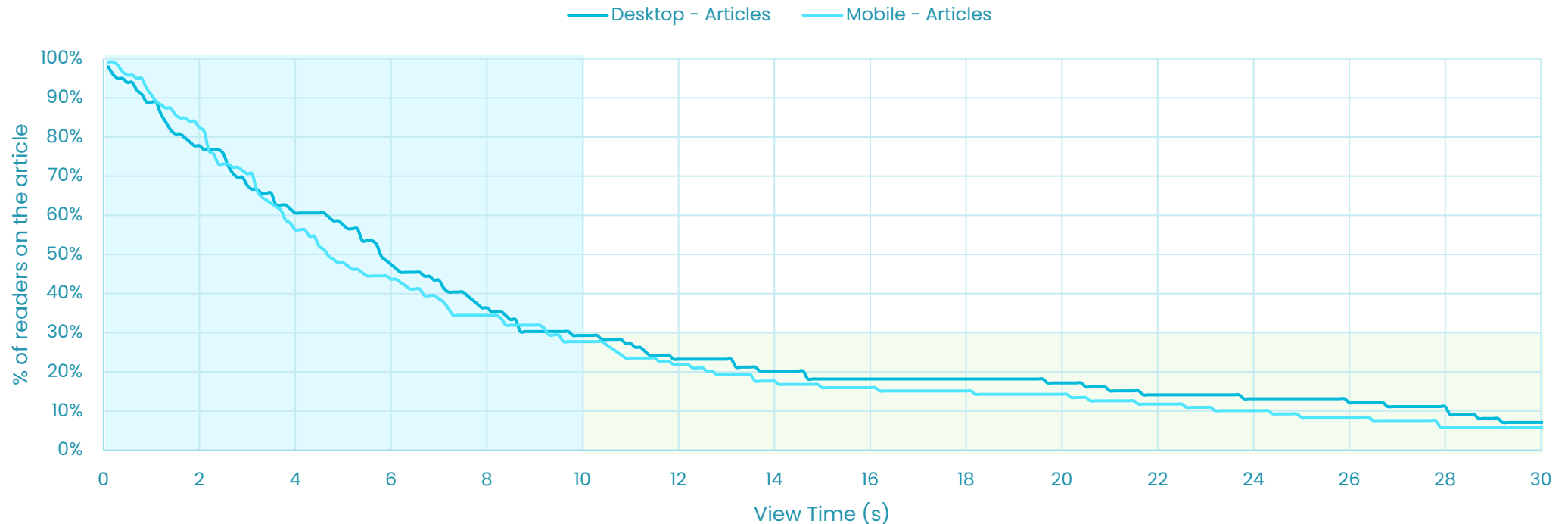
▲▼ Significant difference at 95% CI against top feed position only

Source: Lumen Research. December 2023  
Base (number of news posts): Total = 7,380

# When engaging with articles, behaviour was mixed

A large proportion of people briefly glanced or scanned through the articles in under 10 seconds. However, 17% on desktop and 14% on mobile engaged more deeply than this, spending at least 20 seconds reading the article they clicked on.

Attention Curve when Viewing the News Article



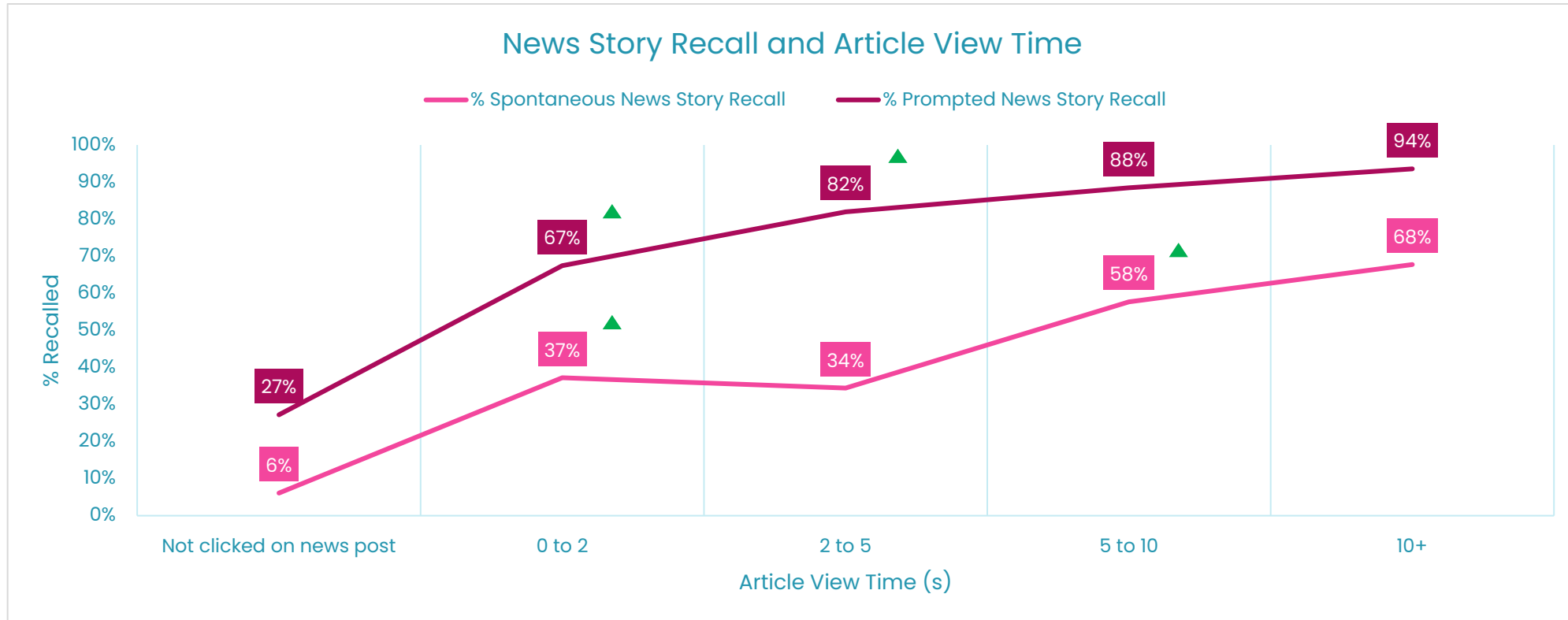
Attention metrics shown here only include attention to the *articles* and not the *posts*.

Source: Lumen Research. December 2023

Base (number of expanded article impressions): Desktop = 99, Mobile = 119

# Interaction with the article was correlated with recall

Those who clicked to view the news article were significantly more likely to remember the news story compared to those who did not click or view the post. The chart also shows the longer people spent viewing the article the more likely they were to remember the new story.



▲ Significant difference at 90% CI against previous view time threshold – please note lower base sizes

Source: Lumen Research. December 2023

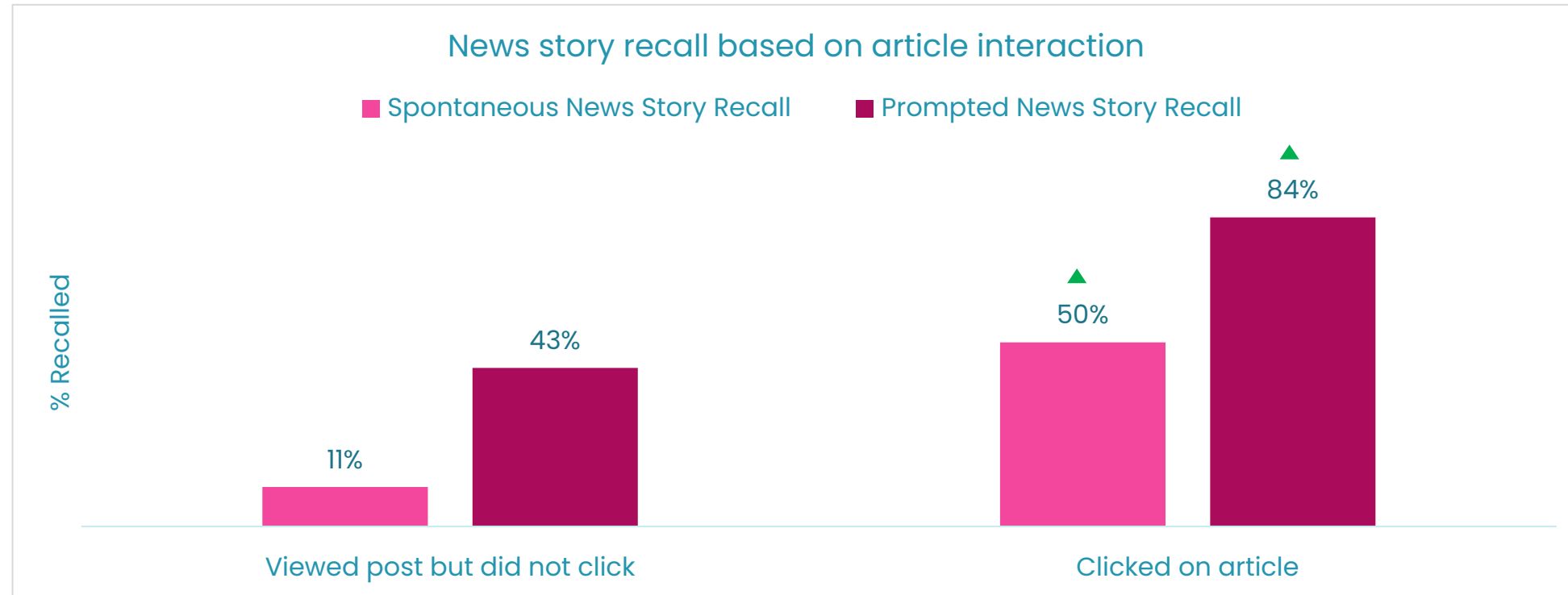
Base (number of news posts): Not viewed / Peripheral = 7,162, 0 to 2 seconds = 43, 1 to 2 seconds = 61, 2 to 5 seconds = 52, 5+ seconds = 62

Q. Spontaneous Recall: What **news stories** do you recall seeing on the feed you just browsed?

Q. Prompted Recall: Which of the following **news stories** do you recall seeing on the feed you just browsed?

# Recall significantly increased amongst those who clicked, compared to those who just viewed the post while scrolling

Ability to recall the news post increased significantly if the user clicked to view the article, compared to just viewing the news post within the feed, with spontaneous recall of the news story being nearly 5x stronger.



▲▼ Significant difference at 90% CI against viewed post but did not click

Source: Lumen Research. December 2023

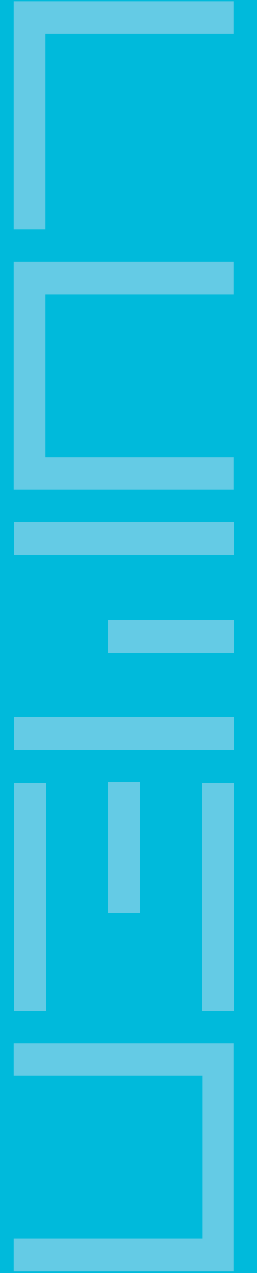
Base (number of news posts): Viewed but did not click = 3,418, Clicked to expand article = 218

Q. Spontaneous Recall: What **news stories** do you recall seeing on the feed you just browsed?

Q. Prompted Recall: Which of the following **news stories** do you recall seeing on the feed you just browsed?

**05**

# **Additional influences on attention**



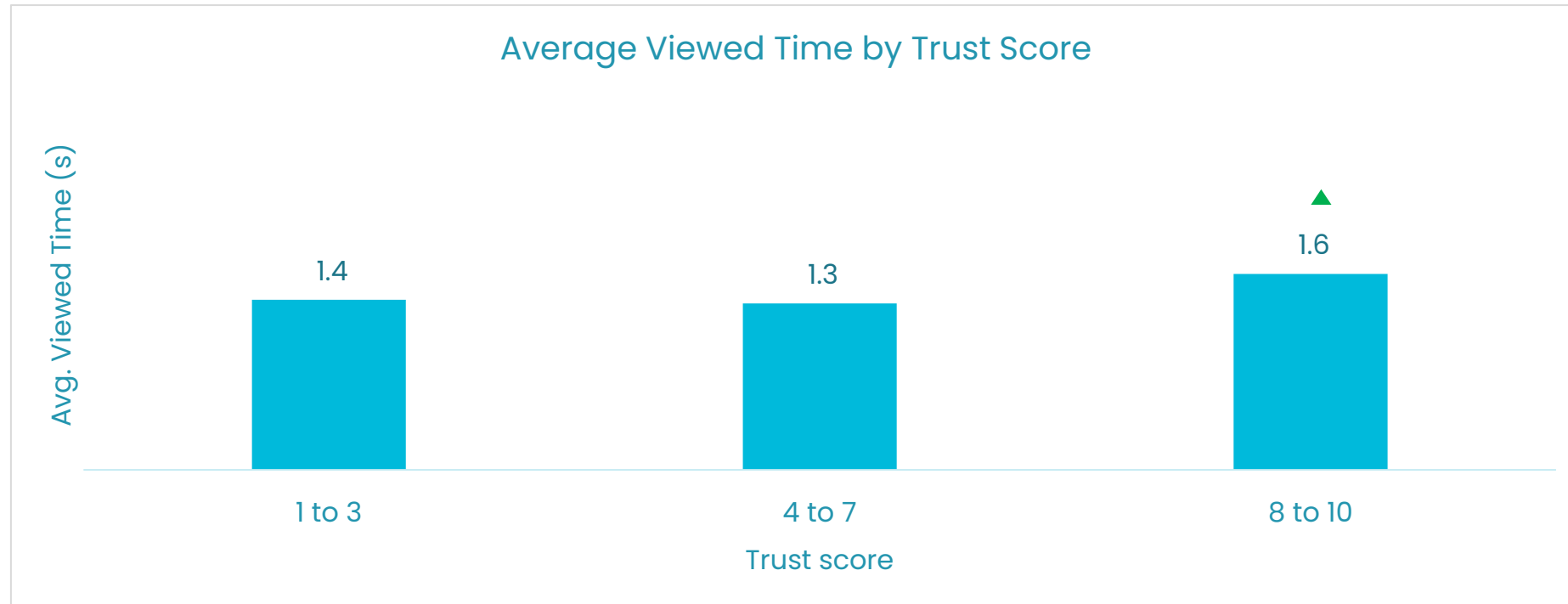
# Key Findings

1. Participants in the study rated their trust in each of the 6 news sources shown in the feed on a scale of 1 (not at all) – 10 (completely). The study showed that people spent longer viewing the news posts from sources that they trusted (a score of 8, 9 or 10), which in turn led to higher levels of recall for the news source and news story.
2. Users in the study also stated their levels of prior consumption of each of the 6 news sources shown in the feed. Attention to the news posts did not appear to be significantly affected by the users' familiarity with the news source. However, it did increase their ability to recall seeing the news source and news story in the feed.



# Attention to the new posts was affected by users' trust in the news source

Once viewed, participants spent more time looking at those news posts that came from a news source that they scored as highly trusted (scoring 8, 9 or 10).



▲ Significant difference at 95% CI against 4 to 7 / at 90% CI against 1 to 3

Attention metrics shown here only include attention to the *posts* and not the *articles*.

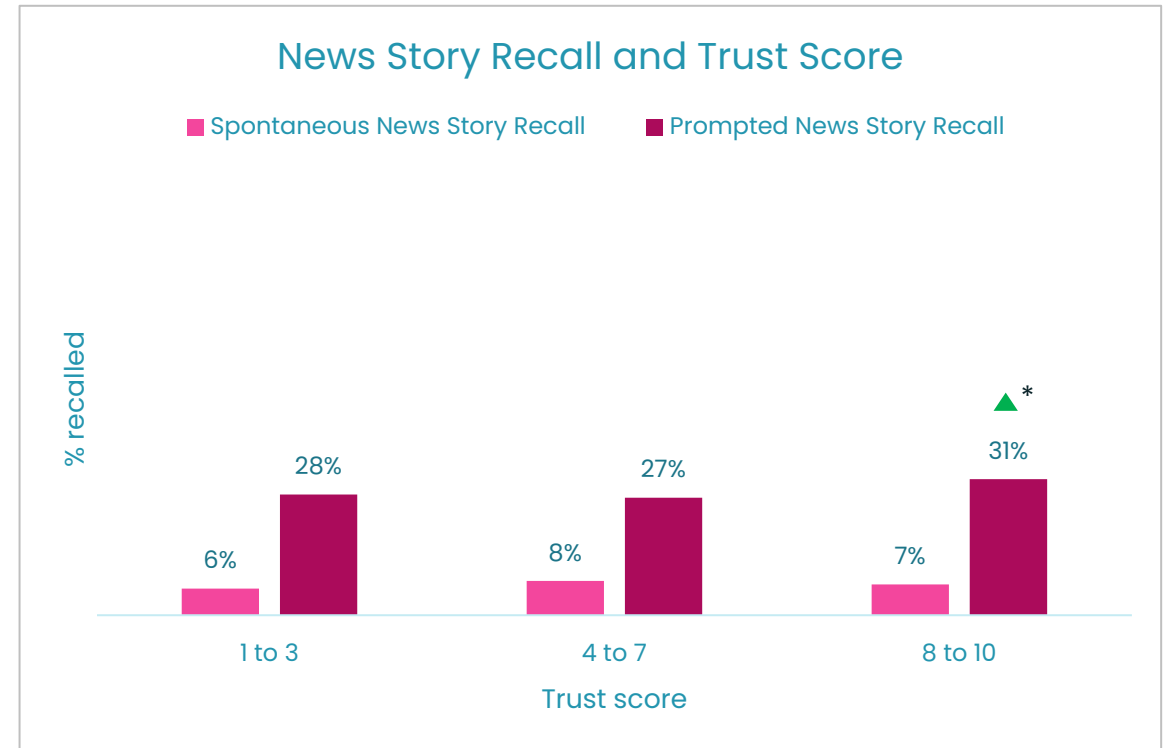
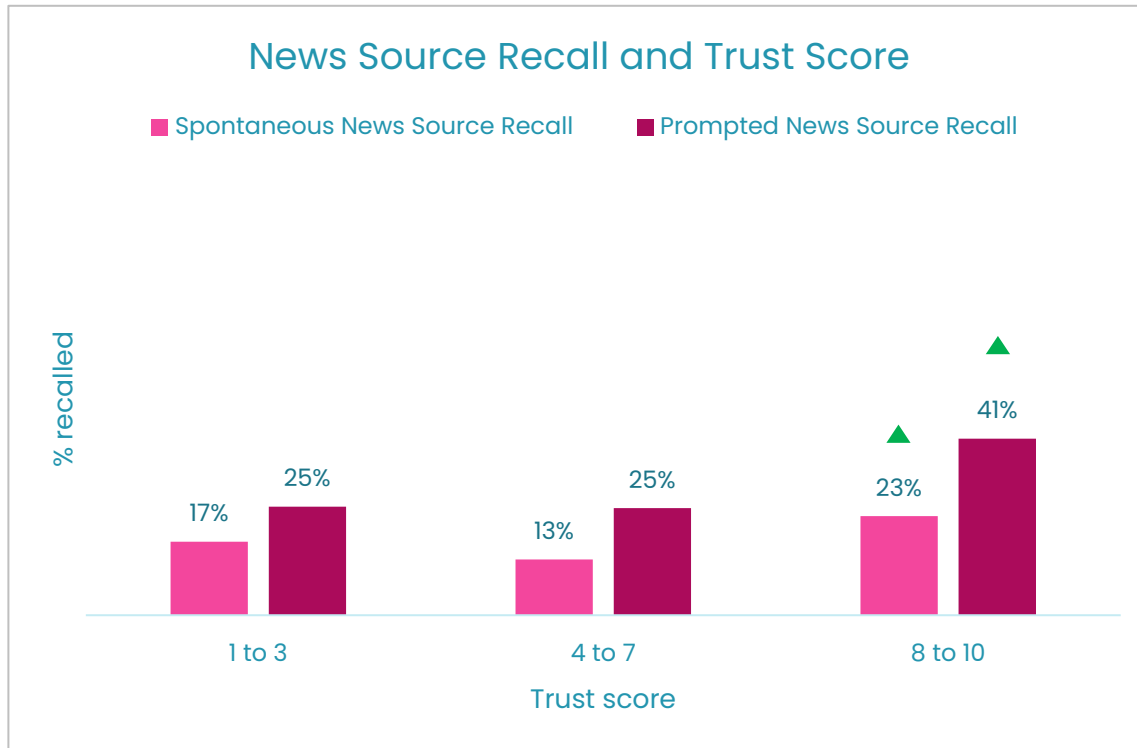
Source: Lumen Research. December 2023

Base (number of viewed news posts): 1 to 3 = 458, 4 to 7 = 1,738, 8 to 10 = 1,440

Q. News Source Trust: Thinking about the following news sources, to what extent do you think they are trustworthy? 1 = NOT AT ALL – 10 = COMPLETELY

# Higher trust was also correlated with higher recall of the news source

High trust in the news source (scoring 8, 9 or 10) was also correlated with people later being able to remember seeing a post for that news source in the feed. There was less of an impact on recall of the news story.



▲ Significant difference at 95% CI against ratings 1 to 3 and 4 to 7 (\*against 4 to 7 only)

Source: Lumen Research. December 2023

Base (number of news posts): 1 to 3 = 860, 4 to 7 = 3,674, 8 to 10 = 2,846

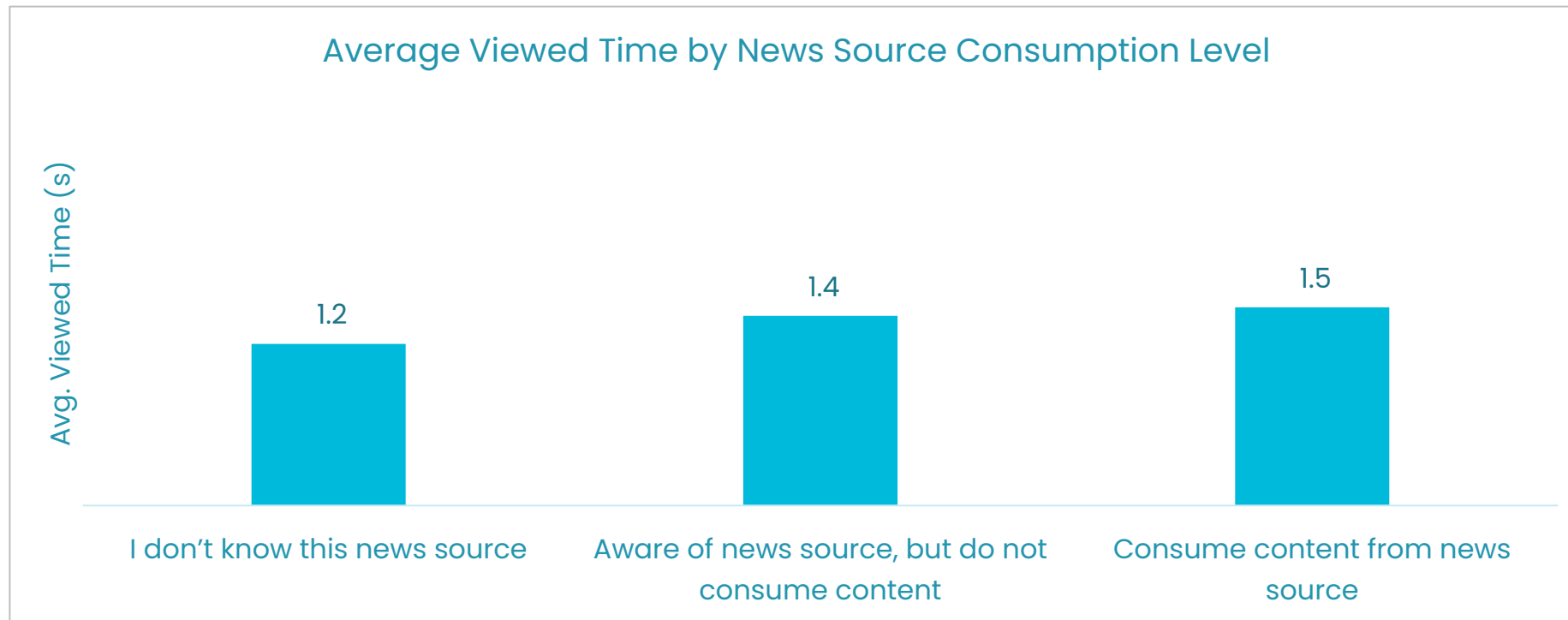
Q. News Source Trust: Thinking about the following news sources, to what extent do you think they are trustworthy? 1 = NOT AT ALL – 10 = COMPLETELY

Q. Spontaneous Recall: What **news stories / websites** do you recall seeing on the feed you just browsed?

Q. Prompted Recall: Which of the following **news stories / websites** do you recall seeing on the feed you just browsed?

# Attention to the news posts does not appear to be affected by users' familiarity with the news source

Once viewed, the amount of time spent viewing the news posts was higher the more familiar people were with that news source. However, this change in attention was not significant.



No significant difference at 95% CI

Attention metrics shown here only include attention to the *posts* and not the *articles*.

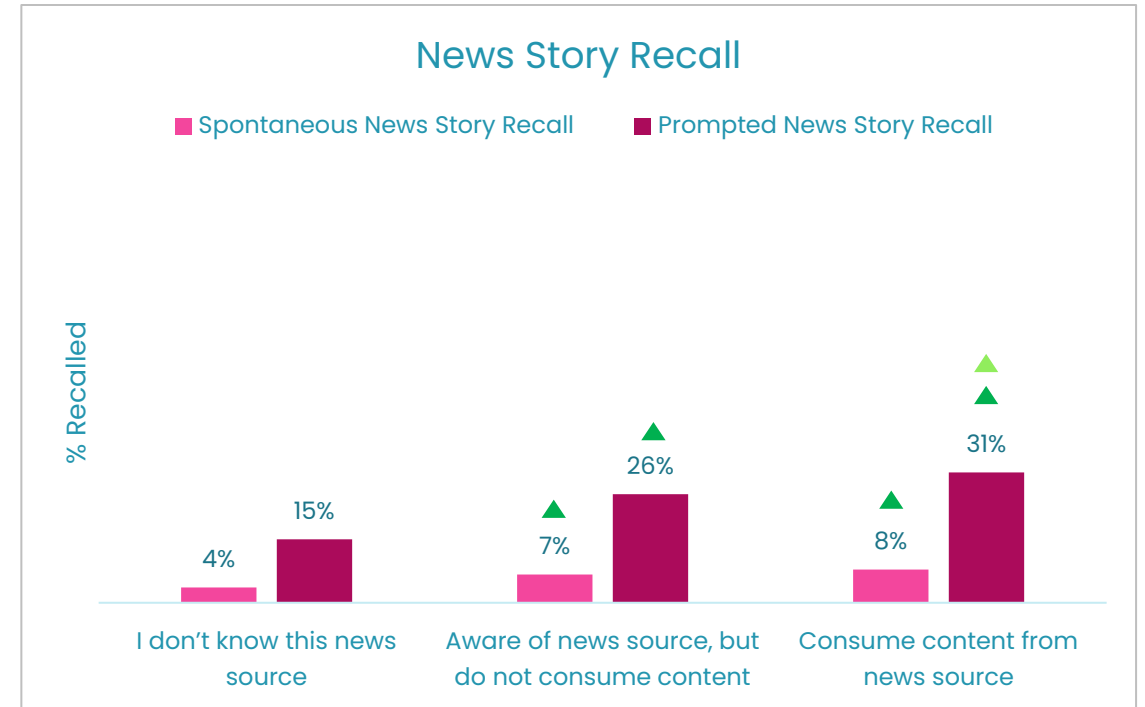
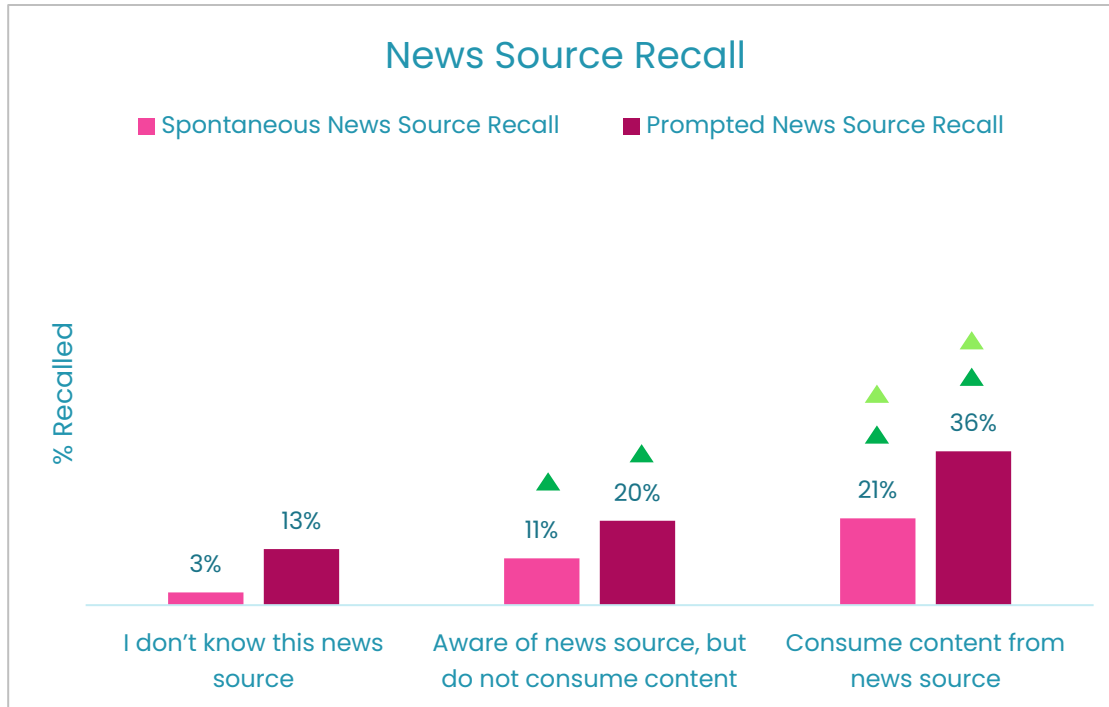
Source: Lumen Research. December 2023

Base (number of viewed news posts): I don't know this news source = 119, Aware of news source, but do not consume content = 936, Consume content from news source = 2,581

Q. News Source Consumption: How often do you use each of the news sources listed below? When answering, think about any format including website, app, TV, radio, or newspaper.

# However, news source consumption did impact recall

Prior awareness of the news source led to higher ability to recall seeing both the source and its story on the feed; and prior consumption of that source increased recall even more.



- ▲ Significant difference at 95% CI against I don't know this news source
- ▲ Significant difference at 95% CI against aware of news source, but do not consume content

Source: Lumen Research. December 2023

Base (number of news posts): I don't know this news source = 332, Aware of news source, but do not consume content = 1,938, Consume content from news source = 5,110

Q. News Source Consumption: How often do you use each of the news sources listed below? When answering, think about any format including website, app, TV, radio, or newspaper.

Q. Spontaneous Recall: What **news stories / websites** do you recall seeing on the feed you just browsed?

Q. Prompted Recall: Which of the following **news stories / websites** do you recall seeing on the feed you just browsed?

# 07 Appendix



# Why don't we keep all the eye tracking sample?

For effective webcam eye tracking it is important to evaluate the accuracy and precision of the data collected and discard invalid data. After viewing a stimulus, participants see a validation page allowing us to assess the accuracy & precision of their data. In addition to this we also assess how frequently the eye tracking is recording gaze data.

Respondents with slower devices may record data too infrequently to give good data. The standard thresholds we use to clean the data are as follows.

## Data is retained if:

Accuracy  $\leq$  300 pixels

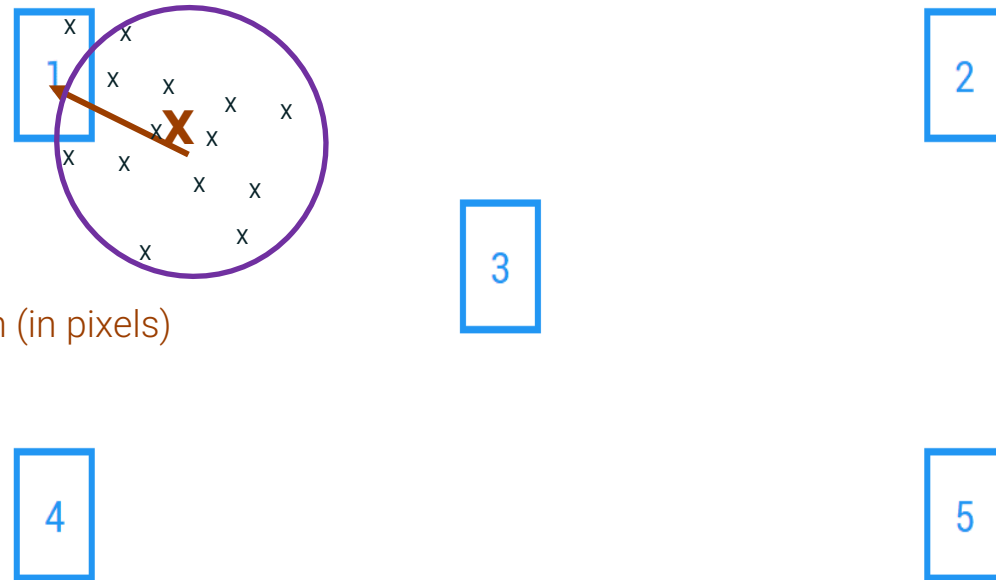
Precision  $\leq$  300 pixels +

Gaze duration  $\leq$  100 ms

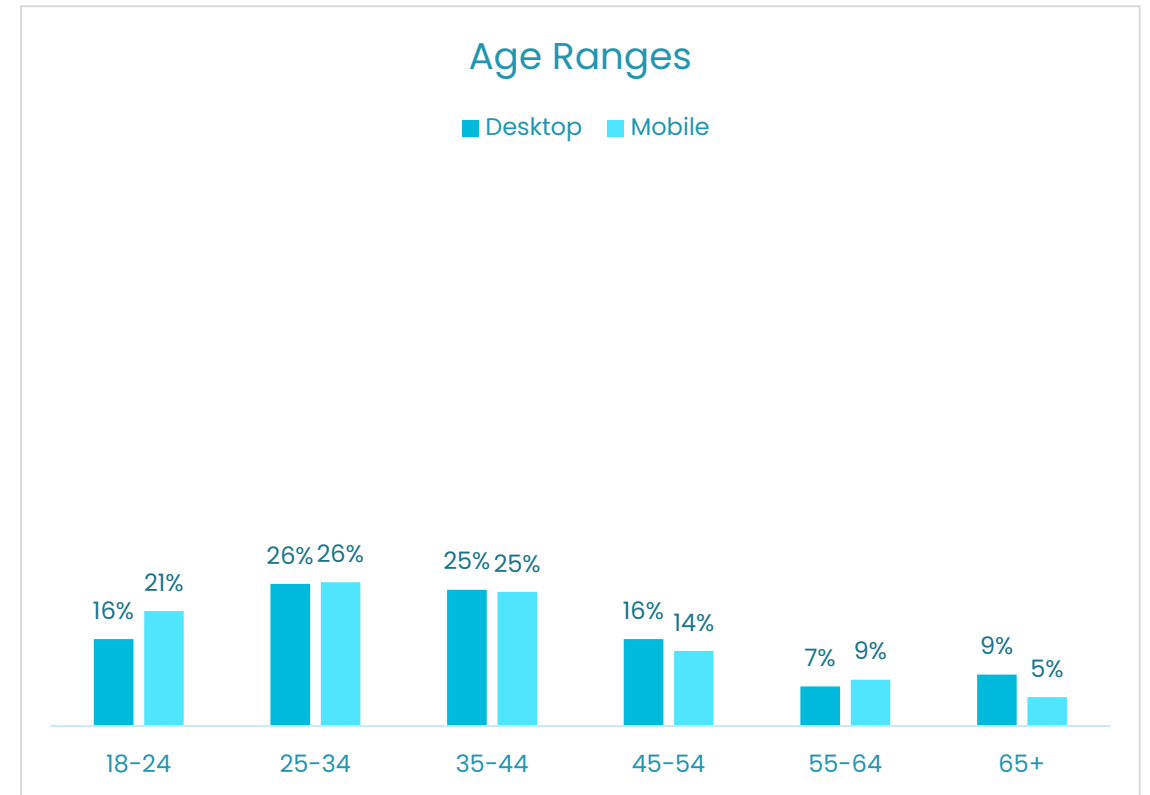
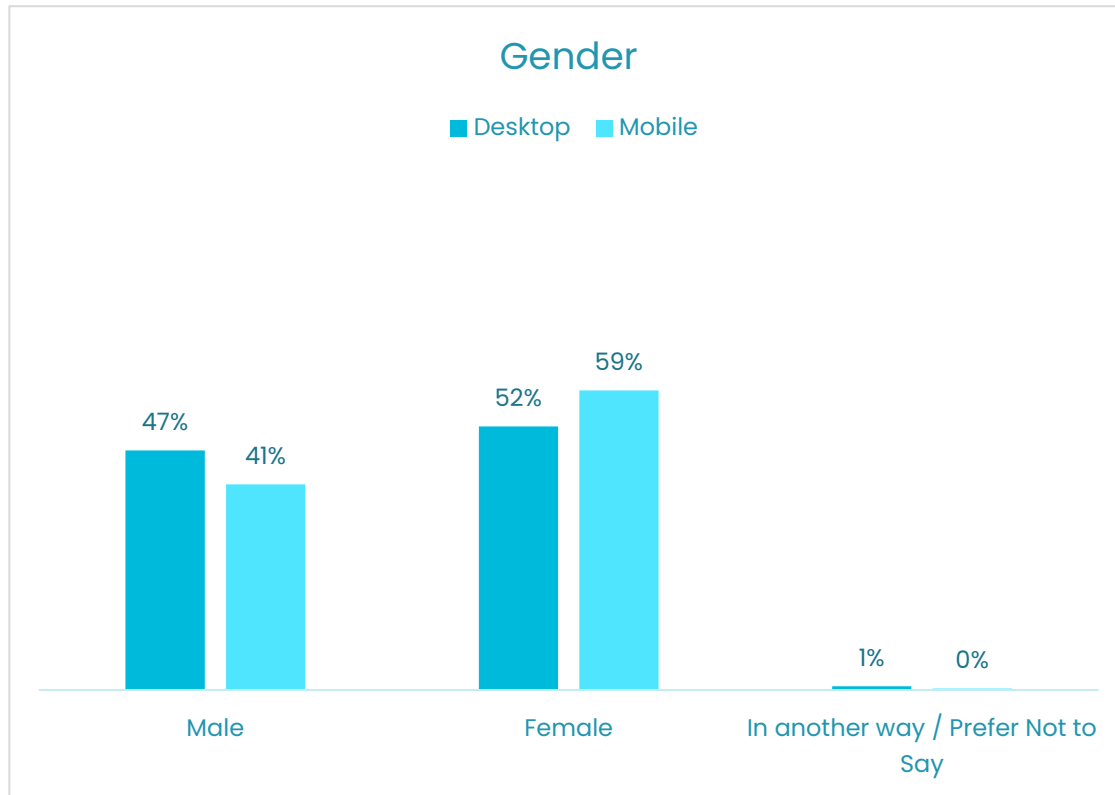
Precision:

Standard deviation around mean (in pixels)

Accuracy:  
distance to truth (in pixels)



# Demographics



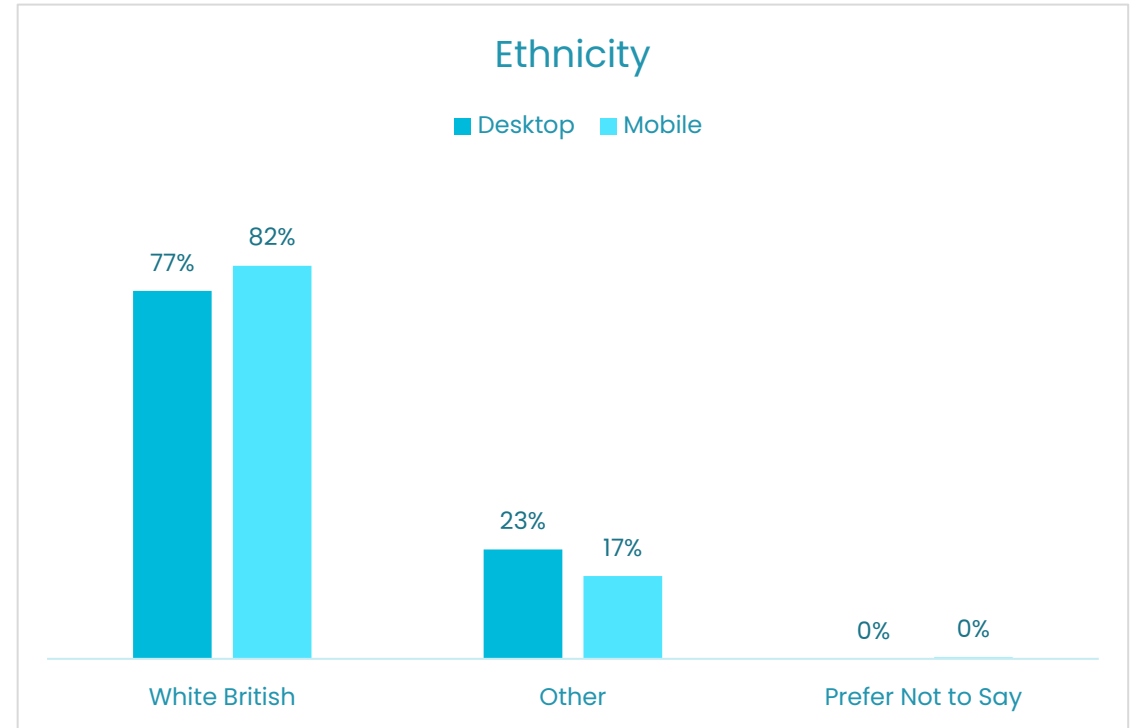
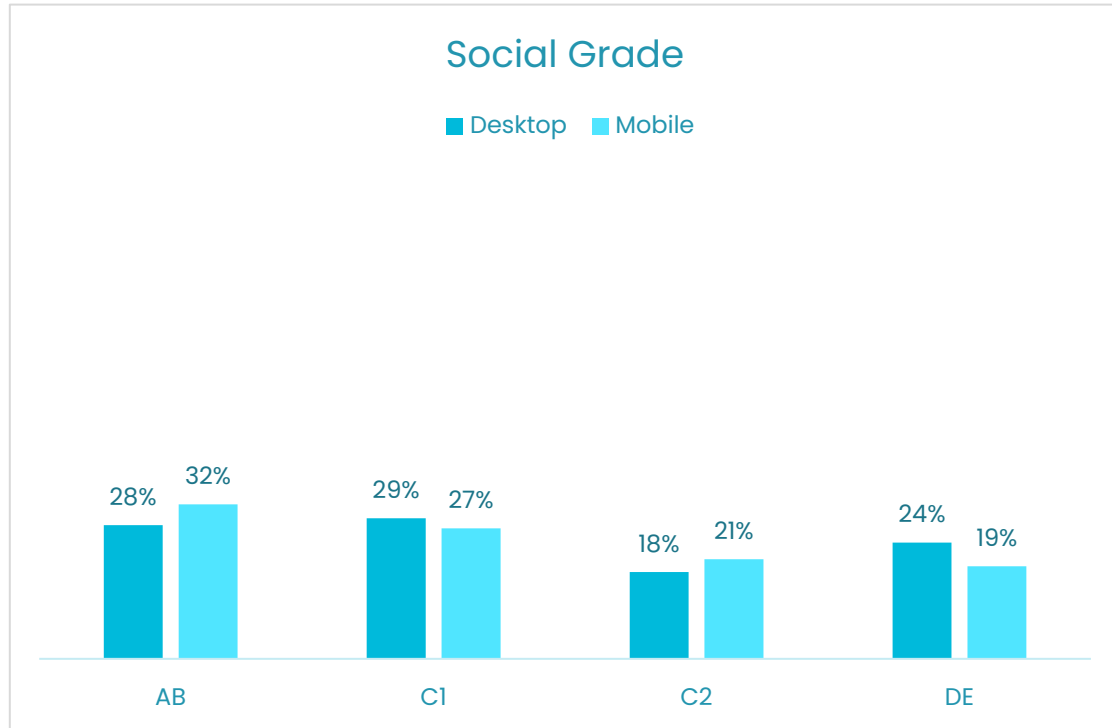
Source: Lumen Research. December 2023

Base (number of valid eye tracking respondents): Desktop = 275, Mobile = 340

Q Gender: Which of the following best describes how you think of yourself?

Q Age: What is your age range?

# Demographics



Source: Lumen Research. December 2023

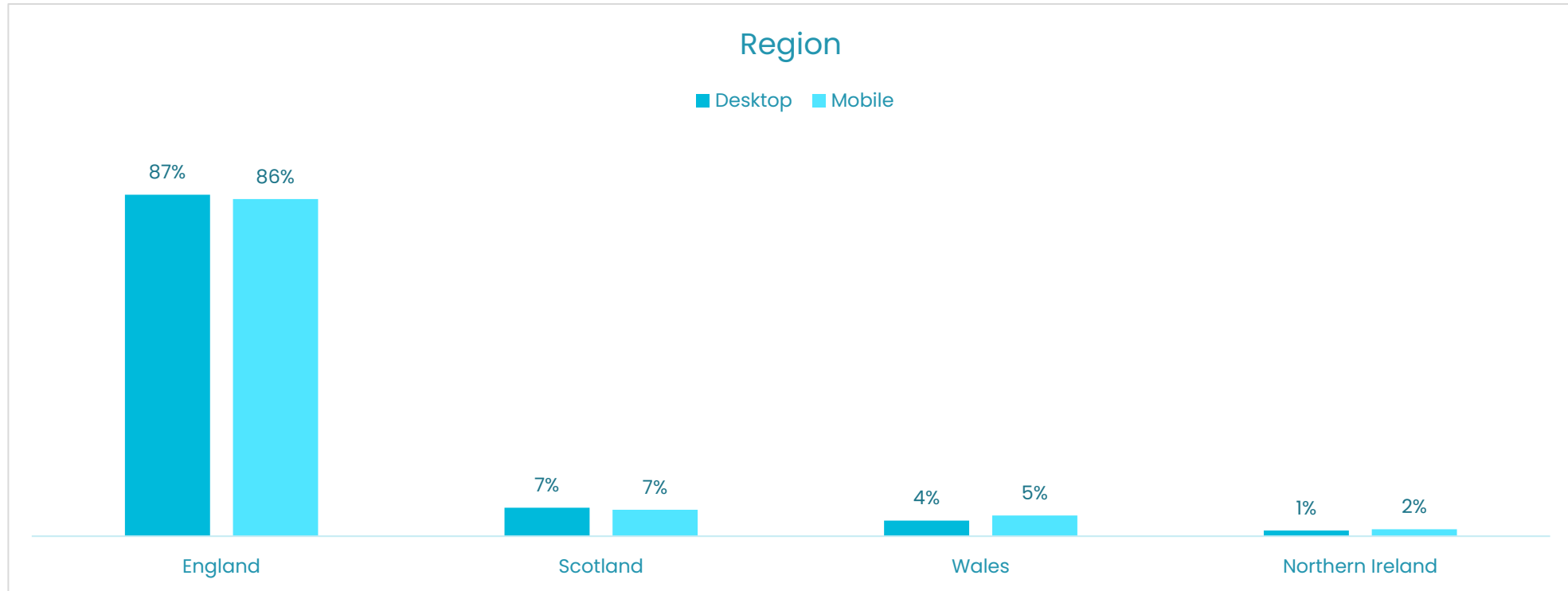
Base (number of valid eye tracking respondents): Desktop = 275, Mobile = 340

Q Social Grade: Which of these best describes the job of the main income earner in your household? If retired, please indicate the one that best describes the job before they retired.

Q Ethnicity: Please select one of these races/ethnicities that best describes you.



# Demographics



Source: Lumen Research. December 2023

Base (number of valid eye tracking respondents): Desktop = 275, Mobile = 340

Q Region: Where do you currently reside?

# Results by News Post

News Source	News Type	News Article Topic & Link to Full Article	% Viewed	Avg. Viewed Time (s)	Attention Score (s)	CTR %	Time Spent on Article (s)	News Story Recall %	News Story Interest % T2B
Daily Mail	Other News Content	<a href="#">Banksy reveal</a>	51%	1.9	1.0	4%	18.1	28%	67%
Sky News	Other News Content	<a href="#">Best places for retirement</a>	49%	1.7	0.8	7%	8.9	29%	62%
Guardian	News on important topics for the public	<a href="#">Lucy Letby inquiry</a>	50%	1.5	0.8	3%	13.7	37%	72%
BBC News	News on important topics for the public	<a href="#">Food prices falling</a>	48%	1.5	0.7	5%	5.7	33%	89%
The Independent	Other News Content	<a href="#">Pioneering ex-police officer</a>	52%	1.4	0.7	2%	5.7	18%	63%
Daily Mail	News on important topics for the public	<a href="#">Banning mobile phones in schools</a>	48%	1.4	0.7	4%	8.4	30%	70%
The Independent	News on important topics for the public	<a href="#">Sunak and the NHS Backlog</a>	52%	1.3	0.7	1%	8.5	20%	77%
Guardian	Other News Content	<a href="#">Woody Harrelson on stage</a>	47%	1.4	0.7	1%	11.5	29%	48%
BBC News	Other News Content	<a href="#">Rock sculpture in Cornwall</a>	49%	1.3	0.7	2%	5.6	31%	64%
Sky News	News on important topics for the public	<a href="#">COVID inquiry</a>	50%	1.3	0.6	3%	10.1	38%	62%
ITV News	News on important topics for the public	<a href="#">National minimum living wage to rise</a>	46%	1.3	0.6	2%	7.2	29%	85%
ITV News	Other News Content	<a href="#">Star Wars memorabilia to sell for £1 million</a>	48%	1.2	0.6	1%	5.0	25%	60%

Source: Lumen Research. December 2023  
 Base (number of news posts): Total = 7,380

# Selection process and definitions of news content

To select the variety of articles for this research, Ofcom identified a range of important issues that were topical in the UK at the time of the research. Similarly to what was done as part of its 2022 research (See discussion document on [‘Media plurality and online news’](#), p. 26), these topics concerned the economy, healthcare and politics in the UK. In this study, this range of news articles are referred to as ‘news on important topics for the public’.

Under the category of ‘other news content’, we refer to the other news articles included in the study that concerned broader topics (e.g., arts and culture) and were selected to achieve a more realistic-looking mix of news content presented in the feed.

