

DIGITAL AUDIENCE ANALYSIS
AUDIENCE SEGMENTATION BASED ON MOTIVATION

DI RS Digital Incubator
for Museums

A short report by Stiftung Neanderthal Museum on the
methods, challenges, results and learnings of the project.

"Digital Audience Analysis – Audience Segmentation based on Motivation",
a project by Stiftung Neanderthal Museum.

Information concerning the e-publication

This report is specifically designed as a booklet to illustrate the methods, challenges, results and learnings of the project "Digital Audience Analysis – Segmentation based on motivation".

The project was implemented with EU funding from DOORS – Digital Incubator of Museums and supported by the initiators Ars Electronica, MUSEUMSBOOSTER and Ecsite. During the implementation, the project team was advised by The Audience Agency.

Photo reference: The indication „© NM DOORS“ indicates photos of the DOORS project "Digital Audience Analysis – Audience Segmentation based on Motivation" by Stiftung Neanderthal Museum.

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General Information

Stiftung Neanderthal Museum

Foundation under public law

Found in 1992

Permanent exhibition space 1200 m²; temporary exhibition space 300 m²

Team size (in full time equivalents): 20

Approximately 170 000 visitors per year

1. Idea & cooperation

1.1 Why is audience analysis so important for us?

Like many other cultural institutions, the Neanderthal Museum (NM) struggled during 2020–2022 to create appealing digital content and new revenue models. Like many other institutions, we experimented with different content we offered and that we newly created.

- The problem was: we did not have knowledge about what digital content and services would work well for our audience during but also after the pandemic. By conducting a digital audience analysis, we gained insights into our audience's motivation and a better understanding of what it is that drives them to our website and to our museum.

1.2 Project steps and goals

The following goals were defined for the project:

1. Analysis of the museum website and digital offers using existing data from tracking and booking systems.
2. Online and onsite surveys to explore the motivation of the museum audience.
3. Segmentation of the audience based on visit motivation.

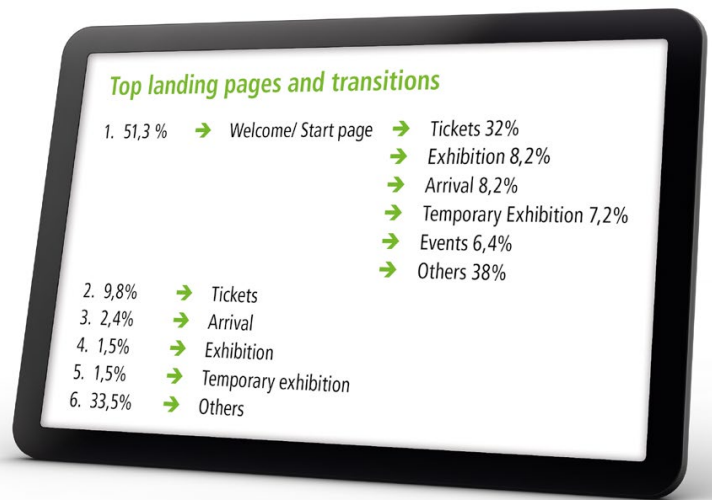
The following Key Performance Indicators (KPIs) had to be achieved within the project period:

1. Reviewing available data on the use of digital content and services and deduction of hypotheses on the following questions:
 - What motives drive visitors to visit the NM and the Neandertal?
 - What motives drive users to visit the NM website?
 - Which of the digital offers provided by the NM are used by visitors and non-visitors?
2. Segmentation of the NM's audience based on existing knowledge
 - 2 workshops with The Audience Agency on audience segmentation
 - 1 internal workshop with NM staff (including representatives from different departments)
 - Creation of at least 5 audience segments in terms of motivation
3. Implementation of onsite and online surveys
 - Development of a questionnaire, asking about the motivation to visit the Neanderthal Museum, the Neandertal and the motives for using the NM's digital content and services (max. 20 items)
- 3.1 Onsite survey, in and outside the NM
 - Implementation of an onsite survey inside the NM, in the Neandertal (between playground, hiking trail, game reserve) and at a public place (Düsseldorf, Schadowstraße)
 - At least 1 person for 2 days at each location
 - At least 150 responses
- 3.2 Online survey
 - Implementation of an online survey via the NM website, newsletters (cooperating schools, friends of the museum) and social media channels (Facebook, Instagram, Twitter)
 - At least 2 weeks (depending on feedback, extension to 4 weeks)
 - At least 150 responses
4. Evaluation of gathered data and dissemination of results
 - Presentation of project at Ecsite 2023
 - Summary and dissemination via e-publication

2. Digital Audit

First of all, we wanted to get a general overview over the usage of all our digital communication and mediation channels, which are our website, our newsletters, social media and our digital offers for our online audience. Since our website serves as a digital information hub, we analyzed its usage by our audience using the available tracking data and Matomo as analysis tool.

A great advantage for the NM is that the museum hosts its own servers, the data of our users is not passed on to third parties and we are not depended on users accepting cookie banners.



2.1 Website usage 2021 – 2023

July – December 2021		January – June 2023	
178 804	visits	232 061	visits
58 992	returning users	27 123	returning users
142 009	new users	204 938	new users
2 min 47 sec	Average visit duration	2 mins 30 sec	Average visit duration
41%	Drop off rate (after first page)	25%	Drop off rate (after first page)
3,4	Average actions per visit	5	Average actions per visit
26 202	Downloads	38 065	Downloads

How do they arrive?

2021	2022	2023
61% Smartphone	63% Smartphone	66% Smartphone
31,2 % PC screen	29,7 % PC screen	25,1 % PC screen
3,8% Tablet	3,6% Phablet	5% Phablet
2,6% Phablet	3,3% Tablet	3,7% Tablet

Access to NM's website in different languages

German	English	Dutch
89,8%	8,5%	1,7%

2.2 The NM's digital offers (2022)

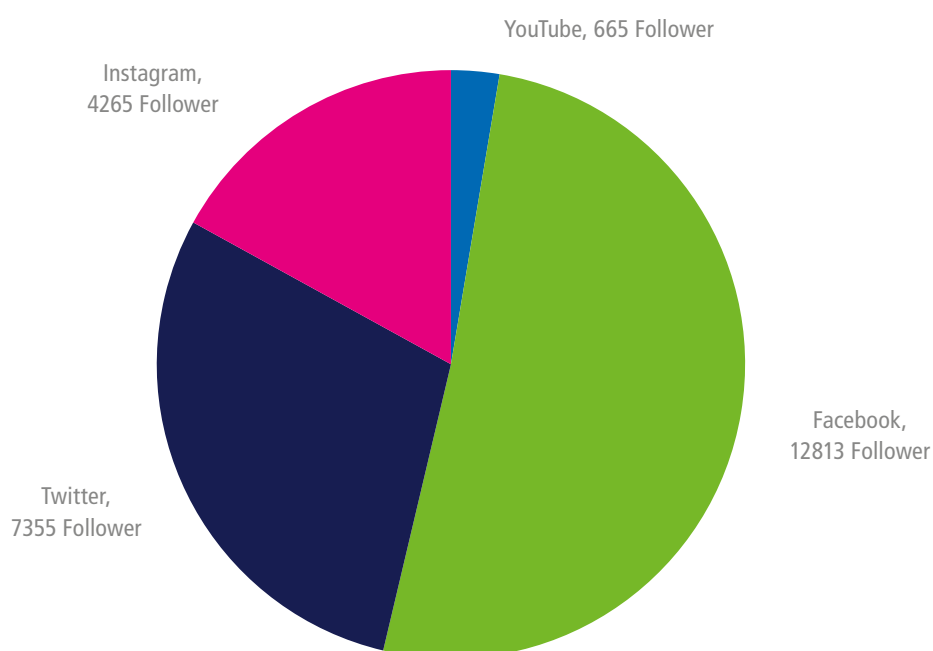
Format (amount)	Downloads/ Bookings
Downloadable content (including images, audio texts, informational and educational material)	57437
Museum app guide (1)	1398
Mobile game (1)	76
360°-Virtual museum tour	k.A.
Live online guided tours (5)	64
Live online workshops (1)	21
Videos on demand (2)	200
Temporary exhibitions trailers (6)	5094

2.3 Newsletter distribution (2022)

Newsletter	Receiving & accessing
Teacher 3807	42,41%
Customer 1381	No data available

2.4 Social Media

Following the NM on Social Media (2022)



3. Digital Audience Analysis – Segmentation based on motivation

The NM has conducted audience research in the past. In this project, we wanted to take a step back and ask which motives drive visitors to visit the NM and the Neandertal physically or digitally.

Assisted by The Audience Agency, we conducted three internal segmentation workshops, aiming to collect visitation motives and to group them in distinct segments. In the last workshop we tried to find indicators, which help us to detect these segments by asking the right questions.

Prototype segments

Within the workshops we looked at existing segmentation models. Together with our knowledge about our audience, we created 8 segments from which we picked 5 for further analysis:

- **1. Recharger***

Motivation: relaxation; recharge; no obligations for 1–2 hours; change of routine

- **2. Entertainment seeker***

Motivation: easy entertainment; a fun excursion for a whole day; doing something out of the ordinary on a bad weather day

- **3. New experience seeker**

Motivation: seeing the site, where the first identified Neanderthal was found; being the first to know, what is going on in prehistory and paleogenetics; sharing experiences with friends by taking pictures

- **4. Quality timer***

Motivation: ensuring everybody (especially kids) has a good time; seek joyful and meaningful experiences; fun and active group activities

- **5. Social seeker***

Motivation: social experience; contact to family, friends, strangers; want to know more about their home and their origins

- **6. Curious**

Motivation: want to learn and educate themselves; seek personal growth; want to be immersed in a different world

- **7. Nature lover***

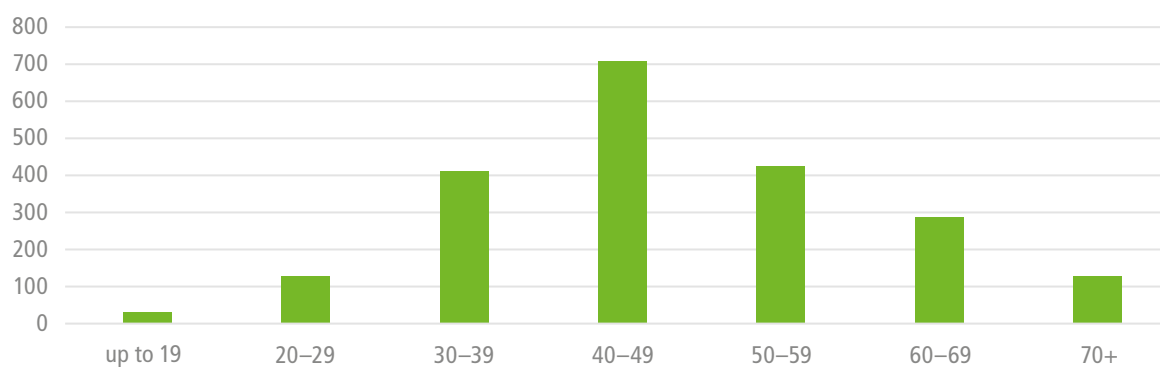
Motivation: spend time in nature; a break from everyday life; enjoy hiking, riding their bike, visiting playgrounds, zoos and game reserves

- **8. Experts**

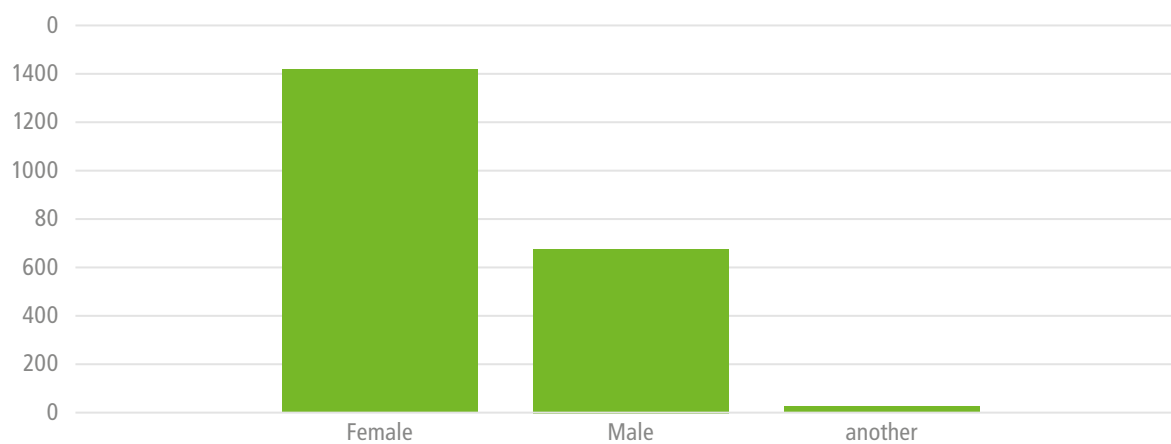
Motivation: professional exchange; research; scientific information on archaeology, biology or paleogenetics



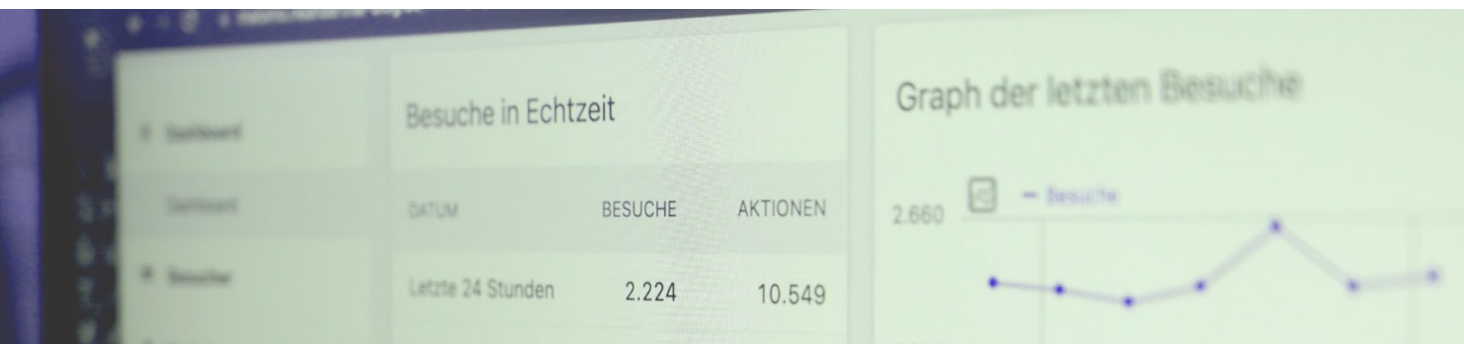
Age of survey participants (N=2112)



Gender identity of survey participants (N=2112)



4. Online and onsite survey



Following the segmentation, we tested if the different motives we defined for our prototype segments are actually important to our audience and how the segments correlate to one another¹. Therefore, a questionnaire was created on Google Forms in German and English to generate quantitative and qualitative data on visitor motivation.

4.1 Online survey and onsite survey

The questionnaire featured 13 questions, 5 covering demographic information, 3 regarding past visits and visitation motivation to the NM and the Neandertal², 4 considering motivation and usage of the NM's digital services and content and 1 to give contact information to be eligible for a price lottery. Both surveys were conducted in German and English.

The online survey was launched for the whole month of April³ and was distributed via newsletters, on our website⁴ and through our social media channels (Facebook, Instagram, Twitter).

The onsite surveys were conducted on three days. For each day, one person was conducting the surveys at one of the following locations:

- In the museum
- Next to the museum at the playground, at a hiking trail and at the entrance to the Neandertal's game reserve
- In Düsseldorf at a public square next to the subway station Schadowstraße

4.2 Output of surveys

1989 users participated in the online and 123 in the onsite surveys. We were overwhelmed by the 2112 responses, since we calculated with a lot less at the beginning of the project. After the surveys, the generated feedback was cleansed⁵, joint in one dataset and evaluated in regard to the motivation segments.

1. Since this project was conducted within the timeframe of half a year and with a limited budget, the relationship between the segments could not be quantified through a correlation analysis. For the purpose of getting to know the different visitation motives and how often they are represented in our audience, this analysis can serve as a basis for further research.
2. The NM's website also offers information about outdoor activities in the Neandertal, such as a stone age-themed playground, hiking trails and a game reserve. Therefore, we wanted to know how many of our digital visitors come to our website to find information about these activities.
3. We planned to launch it for two weeks. After we saw that there are still a lot of new participants after the initial period, we decided to extend the online survey over the whole month of April 2023.
4. The survey popped up as a banner to all users once, so returning users were not asked twice to participate.
5. Only responses, which could not be clearly interpreted, were not considered in the evaluation.

5. Evaluation and results

Within the survey we asked 2 questions in regard to visitation motivation. We wanted to know the main motivation for the last visit and we followed up by asking what other motivations were relevant for their physical visit.

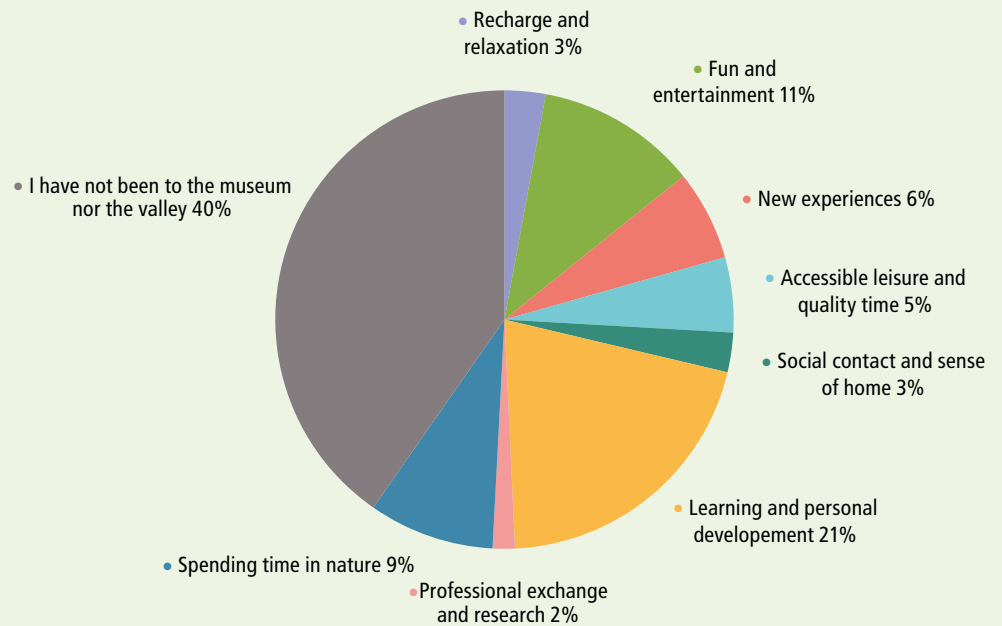
5.1 Motivation segments for visitors of the NM and the Neandertal

MAIN MOTIVATION FOR VISITING THE NEANDERTAL

VISITORS AND NON-VISITORS (N=2042)

From 2112 survey participants, 2042 could name a main motivation for their visit.

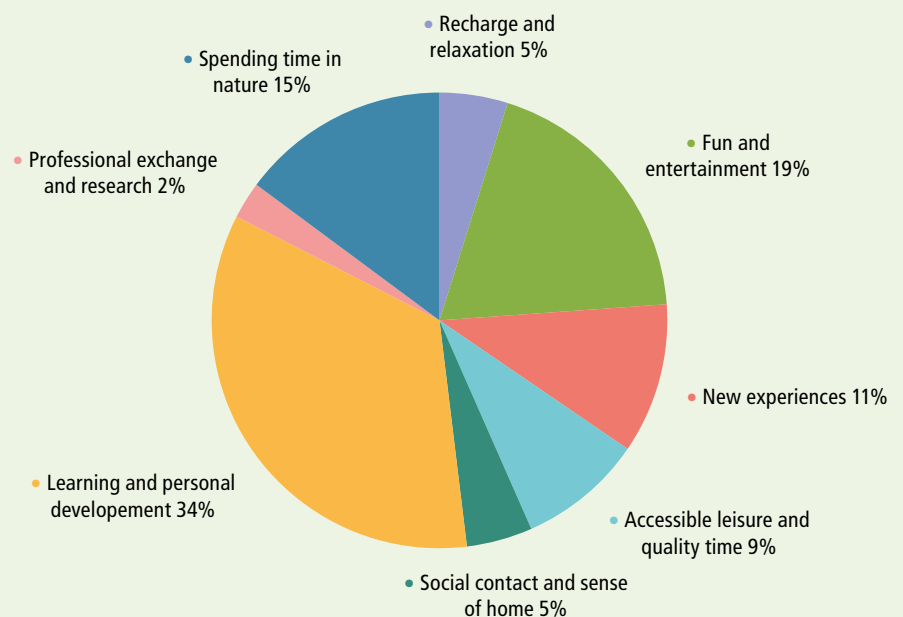
64 could either not answer the question or visited as pupils during a school excursion.



MAIN MOTIVATION FOR VISITING THE NEANDERTAL

VISITORS ONLY (N=1219)

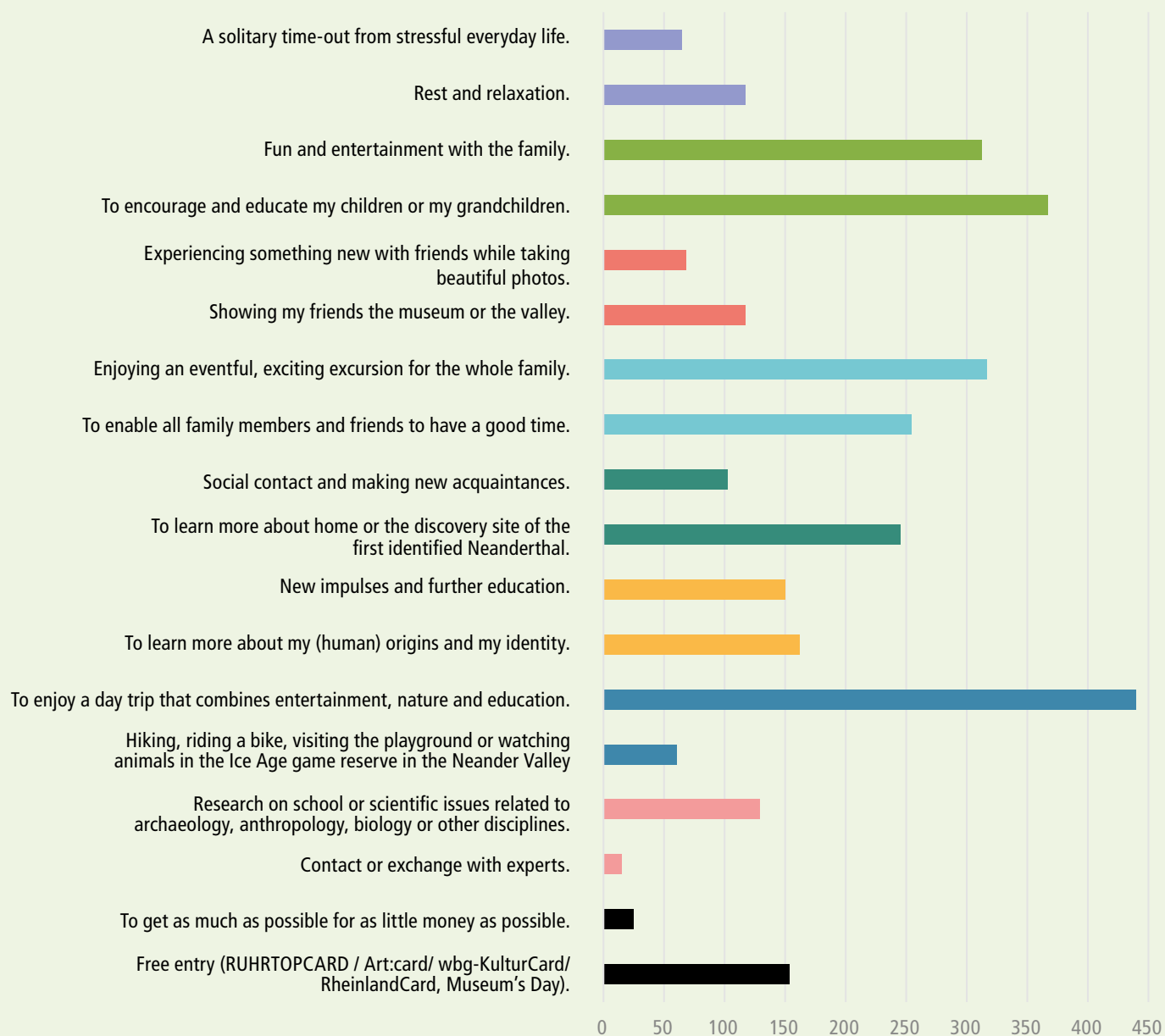
From 2042 survey participants, 1219 said they visited the NM or the Neander valley prior to the survey.



5.2 Secondary motives

We wanted to know which other aspects were important to our visitors when they decided to visit. Other than before, participants did not have to pick one answer but could choose multiple motives.

Secondary motivation of visitors (N=1219)



5.3 Motivation segments

5.3.1 • Recharger

Recharger motives for visiting the NM and the Neandertal (N=59)



From all survey participants who said they visited the NM or Neandertal, only 59 (5%) said they did so to relax and to recharge.

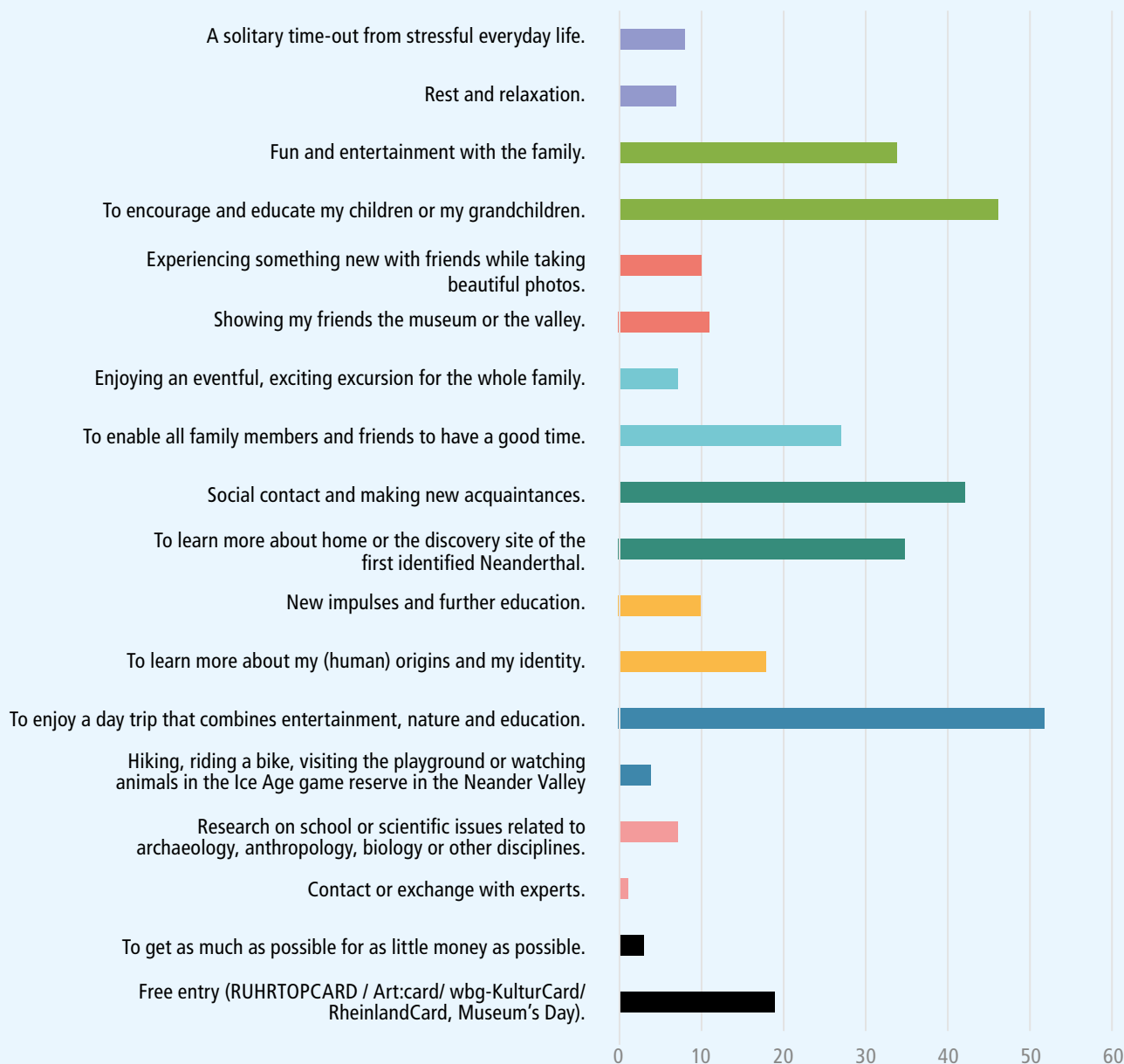
5.3.2 • Entertainment seeker

Entertainment seeker motives for visiting the NM and the Neandertal (N=232)



5.3.4 • Social seeker

Quality timer motives for visiting the NM and the Neandertal (N=108)



5.3.5 • Nature lover

We assumed that there would be a strong correlation between the Nature Lover and other segments. For the future development and refinement of these prototype segments, the motivation of spending time in nature needs further clarification. For now, it seems that this cannot be clearly distinguished from other segments.

Social seeker motives for visiting the NM and the Neander valley (N=57)



5.3.3 • Quality timer

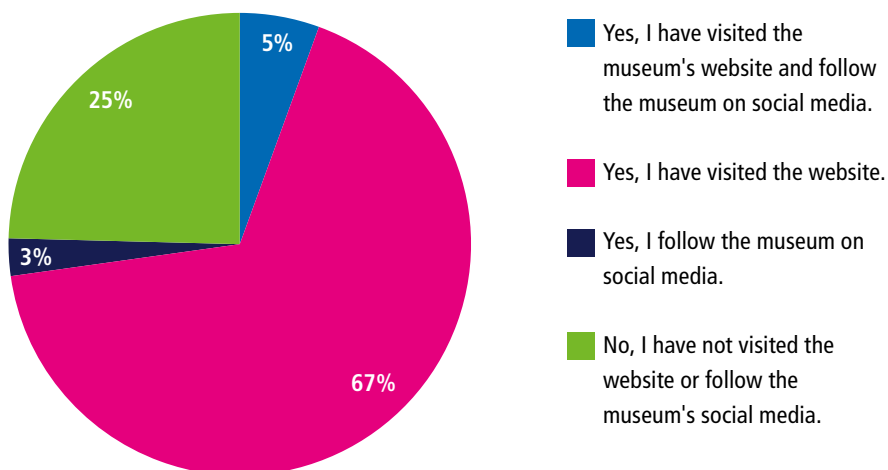
Nature lover motives for visiting the NM and the Neandertal (N=181)



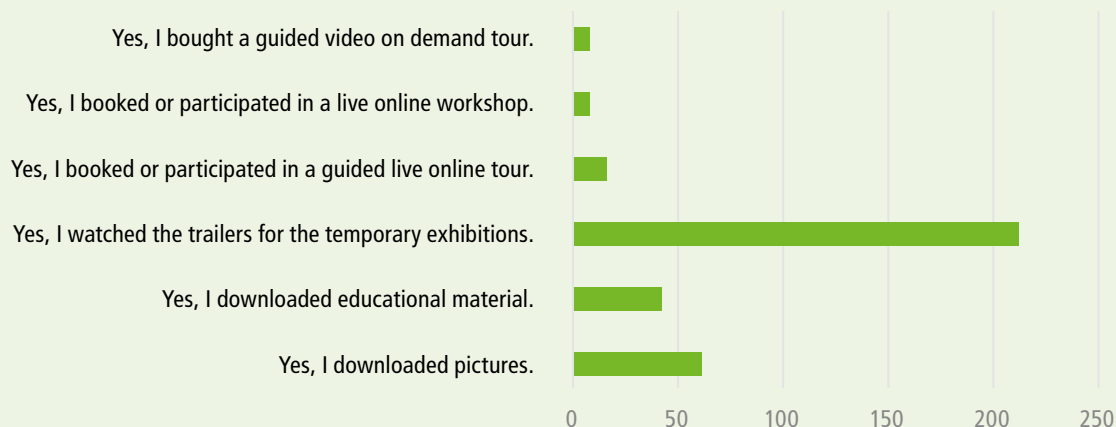
6. Usage of website, digital content and services

Next to the motives of visiting the NM and the Neandertal, we wanted to know if and how visitors and non-visitors use our website and our digital offers and services. Therefore, we asked them if and how they used the NM's digital offers in the past.

Usage of website & social media (N=2112)

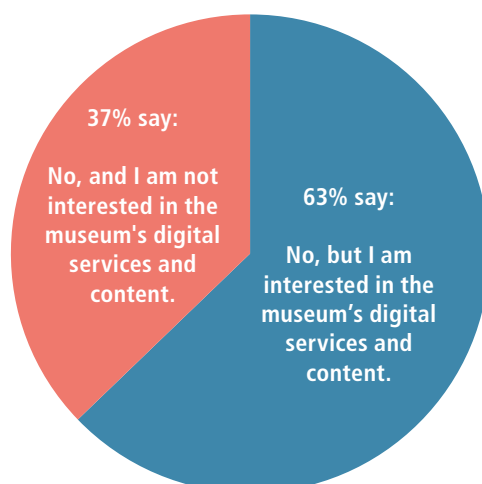


Users of NM's digital content and services (N=343)



Interest in digital content & services (N=1723)

Do you use the NM's digital offers?



7. Summary

Our work on audience analysis and segmentation has used existing and newly acquired data to create a basis for further research and for the general strategic direction of the museum in the digital realm.

7.1 Short term impacts

Website

Since the museum has its own servers, it was possible to work with representative data in the first place. Nevertheless, a digital audit of our actions was necessary to illustrate that our website is not user-friendly, especially for users of mobile devices. The audit revealed that about 60% of all digital visitors access the website via smartphone. Tracking visit cycles and user journeys helped to determine which are the most popular and most visited subpages and which information is most relevant to our visitors. These findings will flow into the medium-term development of a new website, which will be created under the motto “mobile first”.

Analysis of tracking data

With regard to the data that is being collected on the usage of the NM website, new methods have been found within the framework of the project to be able to understand the visit motivation of digital visitors. Segments were created within the tracking software Matomo which can automatically divide the digital audience into specific segments. Although the definition of these segments is not yet complete, the prototypes are already helping to retrieve information on specific audience segments, for example which subpages are particularly helpful for certain groups of users.

7.2 Long term impacts

Digital strategy

For the NM and the Neandertal, but also for its visitors, the museum’s website is a beacon in the digital realm. Therefore, the constant development of the website is essential for the NM and for the Neandertal. To this end, digital visitor research, as conducted within this project, will be repeated on an adapted scale annually. There is the possibility of building on the existing motivation segments, of which 5 in particular have proven to be especially relevant for the organisation.

- Learning & personal growth (34%)
- Fun & entertainment (19%)
- Spending time in nature (15%)
- New experiences (11%)
- Accessible leisure & quality time (9%)

Digital literacy

The knowledge gained through the DOORS project was shared within the team through workshops and joint meetings and increase digital competence within the entire institution especially within the research department and the marketing and communication department.



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