

Project Acronym: **Me-Mind**

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## D5.2 - Final Report

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**Authors:** Irene Altaió Carné (DDS), Marta Handenawer (DDS), Natalia Santolaria (DDS)

**Reviewers:** Agnes Aljas (ERM), Marzia Cerrai (FST)

**Abstract:** This document provides creative and cultural organisations with a variety of reproducible examples of art products that can both creatively collect data, visualise them and make them understandable to their target audience through the two use cases.

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## Application area

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## Table of abbreviations

Abbreviations	Description
Dx.x	Deliverable x.x
Mx	Month x
v x.x	Version x.x
GA	Grant Agreement
FST	Fondazione Sistema Toscana
DDS	Domestic Data Streamers
UNIFI	Università di Pisa
ERM	Eesti Rahva Muuseum
WP	Work Package



## Table of Contents

<b>1.Introduction</b>	5
1.1 Me-Mind and Artistic Data Visualisation	5
1.2 Scope and goals of the deliverable	5
<b>2.The Node of Culture</b>	6
2.1 Challenge	6
2.2 Audiences	6
2.3 Unique Value Proposition	7
2.4 Description and User Experience	8
2.5 Impact and Data	10
<b>3.Number Fascination</b>	11
3.1 Challenge	11
3.2 Audiences	11
3.3 Unique Value Proposition	12
3.4 Description and User Experience	12
3.5 Impact and Data	20
<b>3.6 Web version of installation</b>	21
<b>4.Experience Data</b>	21
4.1. Challenge	21
4.2. Audiences	22
4.3 Unique Value Proposition	22
<b>5. Learnings</b>	23
5.1 Art is an efficient format to disseminate data	23
5.2 It is important to use local examples to contextualise a global narrative	24
5.3 Exhibitions can be an interesting learning space	24
5.4 The audience should be a determining factor when curating what data (and how) it should be shared	24
5.5 Being an active participant is essential to live a meaningful experience	25





## List of images

N.	Description	Page
1	The Culture Node	8
2	The inside of the piece	9
3	Digital interaction through a QR code	9
4 - 5	Analog interactions through stickers	10
6	Interaction at the entrance of the exhibition	13
7	Antique measuring tools	13
8	Using the body to measure our environment	14
9	Three data visualisations	15
10	New measuring units interaction	15
11	Data-based projects	16
12	Data was simultaneously presented as a promise and as a challenge	17
13	Interaction asking questions about data, its potential and its uses	17
14	Measuring culture	18
15	Visitors interacting and creating new forms of data	19
16	Interaction about the importance of measuring culture	19
17 - 18	Interaction using threads	20
19	Display of artists who offer a refreshing look on data	20
20	Number of physical & digital events and attendees during the Internet Festival editions from 2016 to 2021	22
21	The path of 5 visitors inside the ERM museum	23

# 1.Introduction

## 1.1 Me-Mind and Artistic Data Visualisation

The main goal of the Me-Mind project is to provide a methodology for Cultural and Creative Industries (CCIs) for making better business decisions based on the measurement and analysis of their activities' impact, combining several data sources, implementing Data/Computer Science to enrich the set of information and Data Visualisation.

Specifically, it aims to facilitate CCIs to have more efficient impact measurement and to make benefits more evident towards public administrations, potential public and private sponsors as well as the general audience.

Me-Mind identifies two main vertical groups into the cultural and creative sector: museums and events, representing two different models of the same phenomenon (Internet Festival of Pisa and the Estonian National Museum use cases).

Based on the two in-depth studies of cultural organisations, the project aspires to combine data analysis and quality principles creating a replicable pattern to transfer the acquired knowledge.

To help with the dissemination and impact communication of the project, and as it was described specifically in its Work Package 5 (WP5), the data gathered throughout the project and its extracted patterns were exploited for artistic Data Visualisation installations.

Data collected during the project, describing the social and economic impact of the two cultural use cases were processed and returned through a meaningful narrative and emotional storytelling, by resorting to the info-experiences and advanced data visualisation techniques. The project, as a result, has concretely delivered two installations that have taken place in the locations of the Partners' use cases.

## 1.2 Scope and goals of the deliverable

The goal of this deliverable is to provide creative and cultural organisations with a variety of reproducible examples (small-, medium-, and large-scale) of art products that can both creatively collect data and visualise them and make them understandable to their target audience.

## 2.The Node of Culture

### 2.1 Challenge

The challenge of this installation was getting it to serve as a hook to answer a 34-question survey amidst a festival where many other events and proposals were offered to the visitors at once. Therefore, the design of the experience had to take into consideration the fact that the installation needed to coexist with different interesting experiences that the audience had to choose from.

Another element to take into account was having enough elements in the experience to make up for a rich content and interaction proposal but not as many to distract the crowd, causing them to lose sight of the main purpose: answering the project's survey.

At the same time, the way in which the piece spoke and reflected about culture needed to be taken into consideration not only in the design of the experience and the user journey but also in the style and tone of the questions posed to the attendees. This experience aimed to specifically talk about the impact of cultural experiences or products (e.g. books, museums, or music festivals) requiring a direct yet invitational tone in its contents.

In addition to this, since it was physically located in one of the festival venues (the festival is widespread and uses more than 10 locations) the installation would receive a certain type of audience (perhaps a more general audience and not those interested in attending lectures or nightly performances). To overcome this problem, we promoted the online questionnaire that could be filled out by anyone at any time through the festival channels.

### 2.2 Audiences

The first edition of the festival was in 2011. Since then, the festival's audience has grown larger every year until the 2020 setback. Despite the COVID, the festival never stopped. On the contrary, since 2020 Internet festival has been an event offering both in-person (during the 4 days in October) and online (from October to December) events.

The festival talks about the Web and digital innovation in every field: culture, finance, music, food, legal field, etc.

In addition, the festival uses different event formats: lectures, hands-on workshops, interactive installations, concerts, tastings, contests, etc...

Like many other festivals, it targets audiences of all ages, and through a collaboration with schools in the area of Tuscany and beyond, the Internet festival involves a large number of students of all grades who actively participate in workshops, both in presence and online.

The audience is absolutely varied also in interests and skills as heterogeneous and varied are the people interested in the Web and digital innovation.

The festival organises training events (providing training credits) for teachers of all levels, journalists and jurists.

Due to its widespread nature throughout the city (in all, the festival has 13 venues), the festival manages each year to engage people who casually come into contact with its offerings.

## 2.3 Unique Value Proposition

The installation's value proposition was to convert a survey into an experience that would feel closer to people. This was possible thanks to the pavilion's user experience, designed to speak directly to the audience, using questions as a trigger to collect visitors' experiences and, ultimately, extracting valuable information.

Another key element was the data visualisation proposal for the piece, which moved away from a traditional data visualisation format and highlighted its fundamental purpose: helping in the communication of extremely relevant and insightful realities around the topic of culture. To do this, three fundamental pillars served to transform data into an experience:

- **Art:** Using its ability to arouse emotions and raise questions that work on a universal level.
- **Design:** Generating dialogue and debate systems as well as different pieces that adapt to the learning needs of different users.
- **Storytelling:** Disseminating data in a human way, relating it to people and turning it into concrete units that a person can imagine and compare.
- **Engagement:** The role of the two volunteers who explained and invited people to answer the questionnaire was crucial. Without the two people, the questionnaire would have not succeeded likewise.

## 2.4 Description and User Experience



*Figure 1: The Culture Node*

The installation consisted in 3 main elements: A blue pavilion designed to stand out amidst the architecture of the Internet Festival, a set of thermal printers that would print the interactions of the visitors with the Me-Mind survey, and a set of graphic panels with engaging questions around the topic of culture.

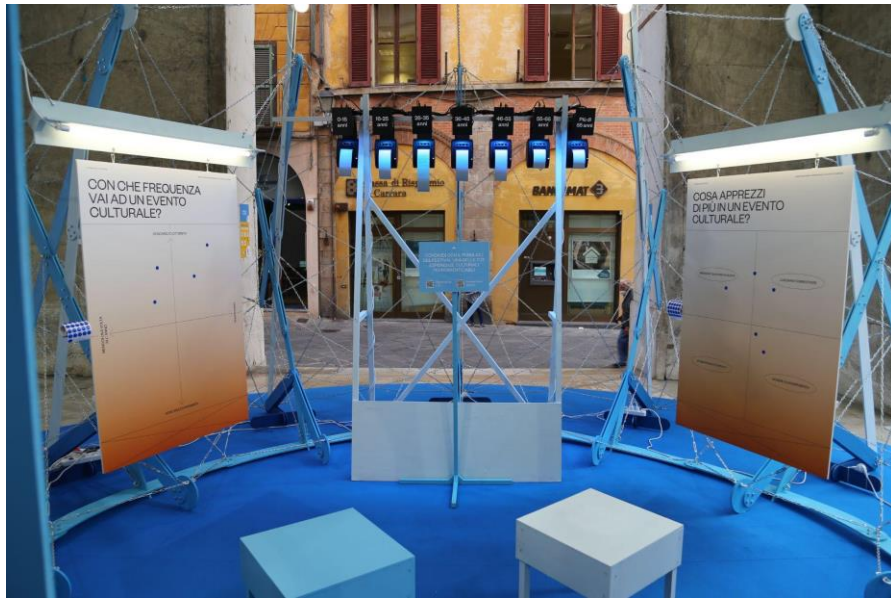
The blue pavilion created by the DDS in collaboration with the Barcelona-based architecture studio TAKK played an important role. It was based on Fuller’s concept of “tensegrity” and aimed to achieve maximum space with a minimum number of elements and weight in order to be easily shipped. It made the installation stand out, both those who came specifically to the festival and those passing by who walked in the street. On the other hand, the printers and the analog panels became simple visualisation systems that allowed people to see where their experience is in relation to others, and to understand if there are patterns.

The purpose of splitting the public’s interaction between different elements was to lead them through a journey towards their personal relation with culture. That is why the space aims to map people’s experiences and connect them to those of others in order to create a wider picture of how cultural events leave a mark.

The User Experience went as follows: The questions guided the visitors (four of them could be answered in an analogical way, using stickers on panels), and the central question could be answered on an online survey. Once the survey had been completed, answers were printed in real-time by thermal printers inside the installation. The data gathered would then be used in the

context of the Me-Mind project to allow diverse agents of the cultural sector to have more tools on how to increase their impact.

The printers were organised by age: 0-15; 16-25; 26-35; 36-45; 46-55; 56-65; more than 65 years old. This organisation by age allowed the festival to have an immediate glimpse of the distribution of the audience by age and days. As an example, it was immediately noticed that most people over 65 years old answered the questionnaires on Thursday and Friday, while on Saturday and Sunday the age distribution was much more balanced.



*Figure 2: The inside of the piece*



*Figure 3: Digital interaction through a QR code*



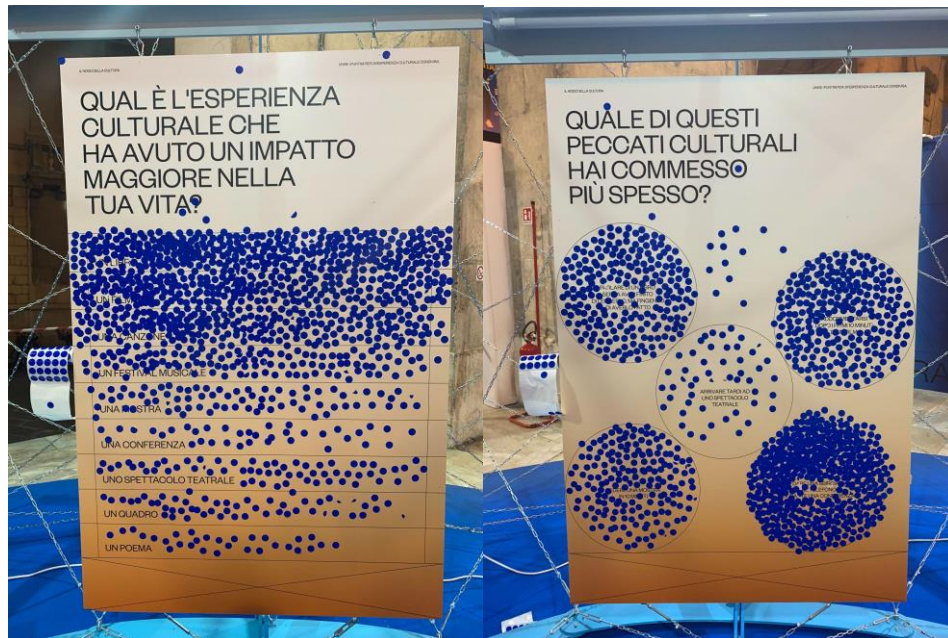


Figure 4 and 5: Analogical interactions through stickers

## 2.5 Impact and Data

In order to draw relevant conclusions, Me-Mind's goal was to obtain at least 200 responses to their survey. Throughout the festival days the installation managed to receive 545.

The survey contained questions that gathered the following information: the audience's reason behind their visit at the festival, their level of enjoyment in the event, their interests, their perception of the festival, personal data (age, city of origin, gender) among others.

One of the reasons behind its success was probably related to the decision made by the team of merging the physical and the digital: only if you answered the survey, accessed via a QR code on-site, you were able to leave your mark and see your answer printed.

The installation created curiosity. Many people approached it because they were captured by its form. Many of them also asked about the artistic references behind the installation's design. On Thursday and Friday many people, who were interested in answering the questions contained in the installation (both the analogical and digital parts), would stop in front of the "Il Nodo della Cultura" installation. And the two volunteers had time to spend with them. In this way, many spontaneous conversations arose with the festival audience on the topic of culture, art and entertainment. And everyone had something to say, even quite strong opinions. One thing that many people told during their experience was that they felt that their opinion, their voice, was considered important by the festival.

## 3. Number Fascination

### 3.1 Challenge

Throughout the development of the Me-Mind project (including the creation of the survey and the Node of Culture installation), extremely interesting questions were posed about the role and importance of counting and measuring today. Specifically, when exploring the concept of culture through data, the team was exposed to the challenge of understanding the effect that the Me-Mind project would have on cultural institutions and their public.

That is why, as the final artistic delivery of WP5, aside from an installation that would reuse data from the previous experiment, the team's reflections on how to use data and in which ways were shared in the form of an exhibition.

As a form of data experimentation, the exhibition asked its visitors to be critical about their relationship with data and culture as they were going through the different rooms of the exhibition, putting special attention to the results of the Me-Mind investigation that were presented digitally in the last section of the journey.

By doing so, the visitors' participation became data in the physical environment and represented an added value that went beyond simply being a form of measurement impact. In other words, to have a better understanding of the CCI, a combination of qualitative and quantitative data was implemented.

The challenge of disseminating Me-Mind's insights using an artistic format was successfully achieved by treating cultural data as a raw material to be questioned and reworked by as many minds as possible. A space to not only share part of the research created during the process of shaping the Me-Mind project but also to gather more information on people and their relationship with culture. In the context of the exhibition, these new forms of data collection were combined with questions about the importance of data and the relevance of visualisation.

### 3.2 Audiences

As mentioned in the previous section of this report, one of the main needs of the exhibition was to allow the general public to answer questions about their own personal relationship with culture, numbers and data. Having a good understanding of the museum audiences was particularly necessary in the construction of the exhibition's approach and contents: since the experiment was going to take place in the Do It Yourself Hall at the Estonian National Museum (and be visited mainly by Estonians) the curatorial team had to use site-specific data when possible, while keeping a broad universal approach to ensure anyone could empathise with its contents.



### 3.3 Unique Value Proposition

The exhibition communicated some reflections, concerns and ideas but, overall, it acted as a data-collection point where the visitors' experiences became part of a more significant experience. The visitors were actively participating in a cultural experience and, meanwhile, they were expanding our current knowledge of their relationship with culture itself.

The exhibition prototype offered a guide that other creative and cultural institutions could follow to better communicate collected data and make better decisions based on them. The communication was directed to the general public, a group of people that might not be necessarily interested in reading reports but whose everyday actions and choices related to culture were part of the data presented to them.

### 3.4 Description and User Experience

The exhibition consisted of four chapters following a journey through the relationship that humans have historically built with numbers. Beginning with the first measurement tools and numerical systems, the showcase progressed by exploring how the obsession with counting and measuring the environment around us arose. Since the 16th century with the "boom" of statistics, humans have opted for data as a universal tool to measure the world, and this has only grown thanks to the digital possibilities offered by big data. This works on two different levels: as a promise that allows data to reach more people helping transparency and democracy, but also as a challenge. At the end of the exhibition, alternatives to using data coldly were explained and the public was invited to rethink how to measure something as large and complex as culture.

Throughout the journey the visitor can find the answer to questions such as: How have we been counting and measuring the world around us since the 16th century? How is our culture and daily life related to measuring? What does the data we generate say about us? What's the value of open data and social media? How can visitors' values and perceptions be transformed into data? How does data allow for a better understanding of the world (and the people in it)?

#### Chapter one: Origins of counting and measuring

In this section of the exhibition three different elements could be found. An invitation for the public to measure themselves, a collection of antique measurement tools and a wall depicting ancient measurement units that depend on the body. These three pieces worked together to tell the story of the first forms of counting and measuring the environment, intrinsically linked with human beings and their bodies: the length of the foot, the length of the stride, the breath of the thumb and many other such measures originally related to human anatomy. The final reflection of the room invited the public to rethink the way external instruments to measure our bodily behaviours are used, evidencing the shift that went from measuring things with our bodies to actually measuring our bodies.

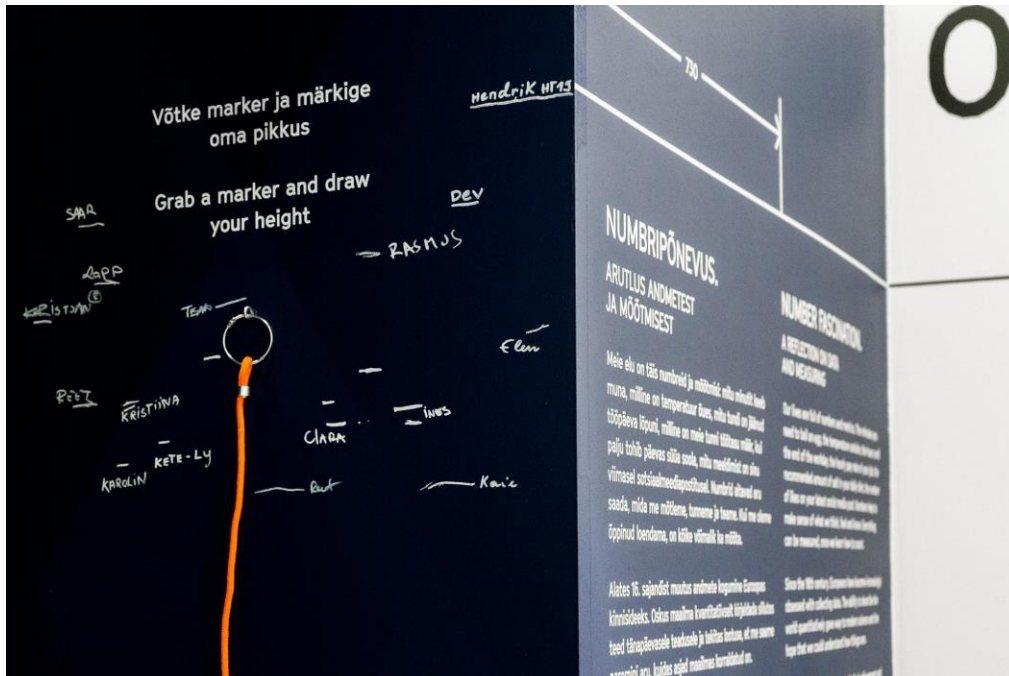


Figure 6: Interaction at the entrance of the exhibition

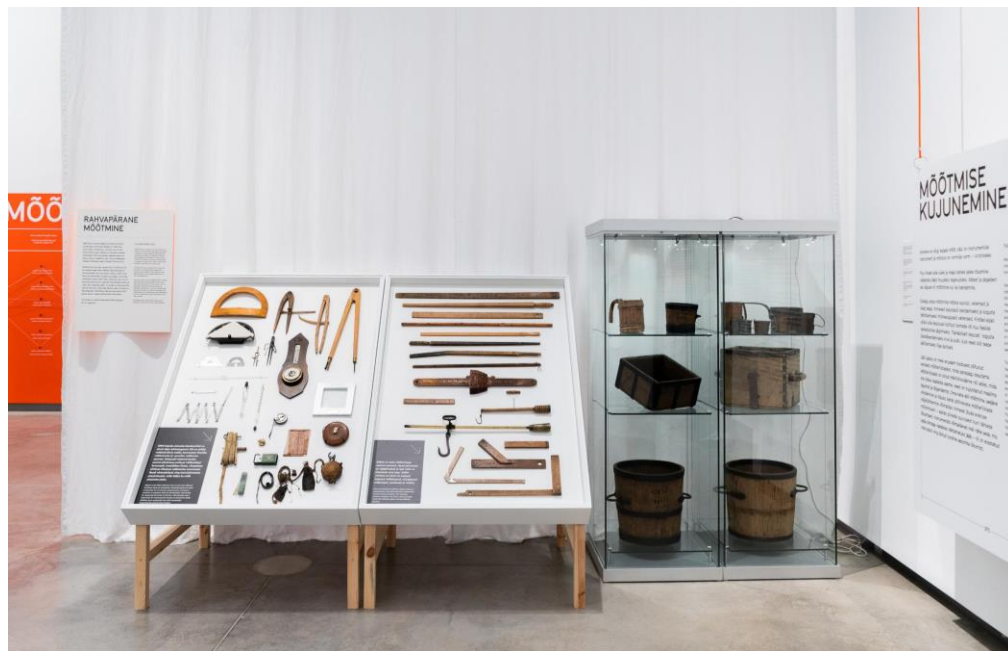


Figure 7: Antique measuring tools



Figure 8: Using the body to measure our environment

## Chapter two: (Ac)counting

This chapter dove deep into contemporary data collection and asked a fundamental question to the public: “What should we measure?”. Approximately around the 16th century, Europeans became obsessed with data collection. That era was the beginning of counting and tracking citizens, keeping track of flows of money and goods on the level of states. This advanced in the 19th century, when states started systematically collecting statistics about their people. These ideas were gathered in the second space in the exhibition, which was an invitation to reflect upon whether we track and gather data about the right things for the right purposes. In this context, three data visualisations centred on existing data from Estonia were displayed: number of startups, energy independence and amount of forests and green spaces. The visualisations contrasted with an installation that invited the public to propose new forms of measuring that moved away from the typical measuring systems and units.



Figure 9: Three data visualisations



Figure 10: New measuring units interaction

### Chapter three: The promise and the challenge of big data

The next chapter invited the visitors to reflect on a current contradiction of big data: while it can help democracies and transparency, it can also be used to overtrack and control populations. To tell that story, the room was divided in two, showcasing examples of good and not so good examples of data use. On the screens, some of the great Estonian, European and Global data projects that help understand the surrounding world in better ways were exhibited. On the other side of the room, two examples of the ways numbers on social media platforms have an impact on people.

The final interaction in the room asked questions to the public about data, its potential and its uses.



*Figure 11: Data-based projects*





Figure 12: Data was simultaneously presented as a promise and as a challenge



Figure 13: Interaction asking questions about data, its potential and its uses

#### Chapter four: Refreshing data

The final chapter was a reflection on how everyone can be a part of any cultural statistic by asking the visitors to mark down their cultural spending, their books in progress and their latest cinema

visits. The purpose was to rethink people's relationship with data and exploring how cultural institutions could engage its public in the process of gathering insights on their public's thoughts and behaviours.

In the same room, five examples of artists and designers who offer a refreshing look at data in cultural institutions were showcased.

The final outcome was a highly interactive exhibition that experimented with formats of participation and ways of bridging the gap between cultural institutions and their publics. Number fascination is a first step towards making every learning of the Me-Mind project available to a wide audience. Through a combination of digital and analog pieces, the showcase sparked debate about the use of data (and the specific case of cultural data) and created materials that were easily adapted to different audiences, locations and formats.



Figure 14: Measuring culture



*Figure 15: Visitors interacting and creating new forms of data*



*Figure 16: Interaction about the importance of measuring culture*





Figures 17 and 18: Interaction using threads



Figure 19: Display of artists who offer a refreshing look on data

### 3.5 Impact and Data

The visitors of the exhibition from May to October were around 20.000, from which a large proportion of visitors were groups of families and friends. The physical interaction with data was designed as the most important part of the exhibition and from the visitor research this was also used by visitors the most. Mostly all the physical interaction installations were in use - depending

on age groups which were more relevant and most of the photos were made on the last Me-Mind project text with QR-code to exhibition materials.

The exhibition was also open and part of the programme of 2 target group events in the museum. In May - museum professionals from Europe with European Museum of the Year Awards events week and European Cultural Capital conference, organised by Tartu2024 cultural capital team were visiting the exhibitions and had discussions on the project outcomes.

## 3.6 Web version of installation

The interactive exhibition, centering on physical participation in the exhibition hall, also got the web version to preserve the content, data gathering methods and information from participants. The web version's purpose was also to preserve the data gathering possibilities as examples for CCIs, who struggle to find innovative, visual and physical ways to gather data from audiences. Also to keep the use of data gathering methods active after the end of the project from audiences, to be used in museum school programmes (on topics on measurement and data).

Links: <https://www.erm.ee/en/web-exhibition-number-fascination-a-reflection-on-data-and-measuring> and <https://www.erm.ee/et/veebinaitus-numbriponevus-arutlus-andmetest-ja-mootmisest>.

## 4.Experience Data

In addition to the two physical art productions, Me-Mind created a third digital product, with which to exemplify how to creatively deal with data to tell the story of the impact of a cultural activity. On the [Experience Data](#) page, two examples of data visualisation were offered to the project target audience.

### 4.1. Challenge

We wanted to share insights on the data collected during the two cultural events that are part of the project: the Internet Festival and the Estonian National Museum. Since the exhibition spoke about the project's data and results from a global perspective, specific assets and stories were created to directly disseminate the work the Me-Mind project was developing with the data it gathered.

The main challenge we faced when sharing the results in a digital environment was that professionals in the sector do not necessarily have high data literacy. Therefore, a technical report wasn't suitable to share the results. We had to think of a more pedagogical approach that would serve teams in cultural institutions and understand, through practical examples, how data can make a difference in their space.

## 4.2. Audiences

Staff in cultural institutions that are not necessarily familiar with data collection and analysis, and have a low data literacy.

## 4.3 Unique Value Proposition

Me-Mind already has detailed guidelines for small and medium-sized organisations at the crossroads of culture, creativity and entrepreneurship on how data helps to understand the impact of the CCIs.

Giving specific guidelines on how to implement a data collection system was covered. That's why the team decided on creating an article with a pedagogical approach rather than technical, explaining Me-Mind's vision of data: how data can be an ally for cultural institutions to find answers and generate new questions that allows the sector to rethink the shape and role of cultural institutions today. This vision was illustrated in a practical way through 2 case studies (a festival and a museum) where a specific piece of data was analysed. The article was accompanied by a list of learnings and new questions that emerged thanks to the learnings.

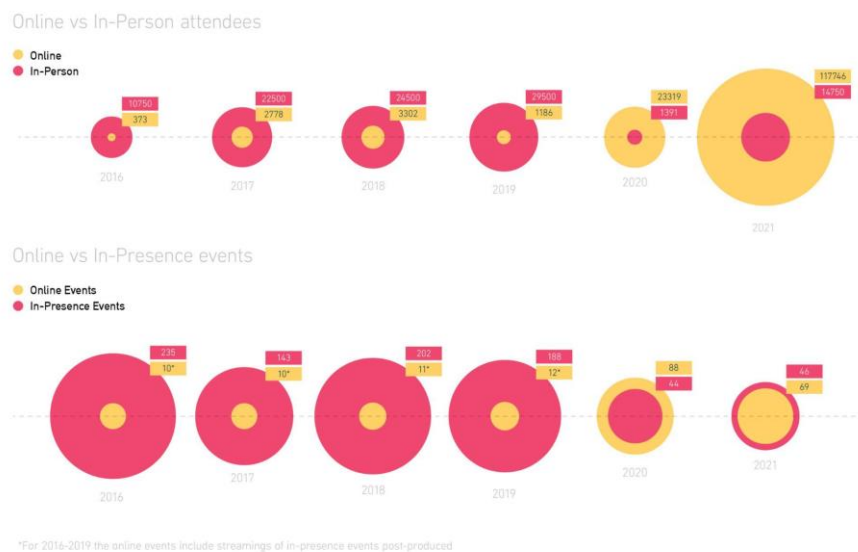


Figure 20: Number of physical & digital events and attendees during the Internet Festival editions from 2016 to 2021

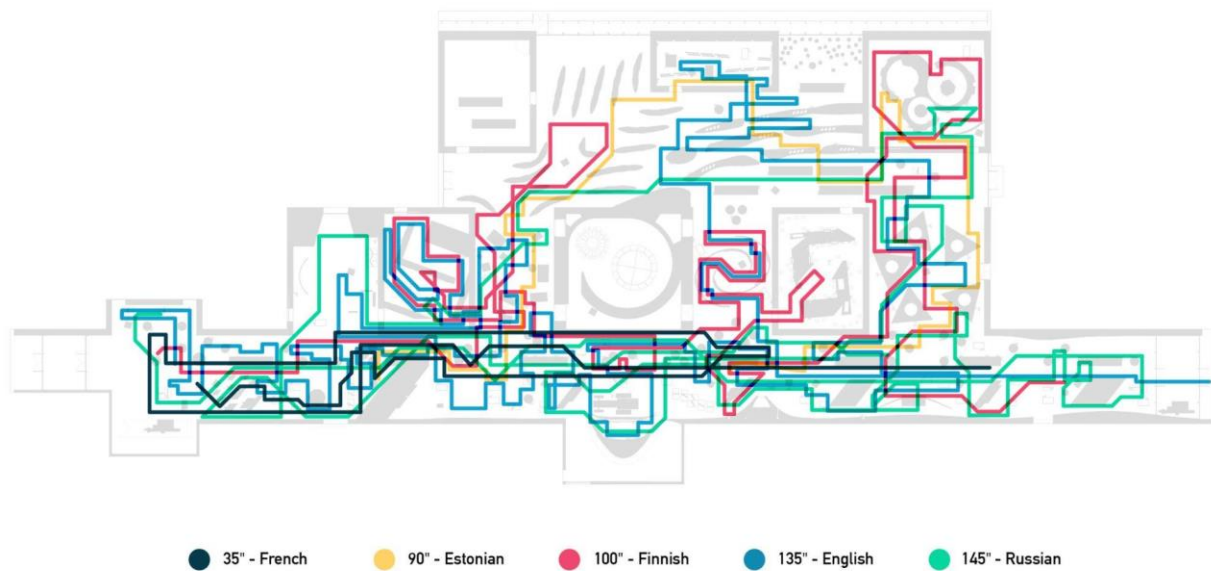


Figure 21: The path of 5 visitors inside ERM

## 5. Learnings

### 5.1 Art is an efficient format to disseminate data

Along the Me-Mind process there has been multiple evidence that using artistic formats does make a difference when it comes to attracting an audience. An example of this would be the blue pavilion in Pisa's Internet Festival, which served as a powerful call to action and drew people's attention. Once they were inside the installation, the creative displays of data -the physical panels and the thermal printers- provided for a unique experience.

The story repeated itself at the Estonian National Museum: by organising the narrative in the form of an exhibition, where every idea and dataset was supported by an artistic piece, we maximise the impact that the contents in the exhibition had on people.

Data has long lived in long, tedious reports and endless spreadsheets that feel cold and disconnected from people's everyday lives. Art, on the other hand, has the power to connect and start conversations. Combining both could be a start into bringing people closer to data and having them work together to create it collectively.

## 5.2 It is important to use local examples to contextualise a global narrative

As a rule of thumb, people care about what they know. That's why, sometimes people need unit conversions. A good example of this would be translating hectares of forest to its equivalent in football pitches. Metaphors help bring data closer to people, they speak about specific realities that can be scaled up to represent the global scope of a problem. First comes the detail, then the conversation about the general topic.

This idea was put into practice specifically in the Number Fascination exhibition. The team curated local data from Estonia, used Estonia National Museum's object collection and focused on data projects that explored their own governmental practices. It was only when the conceptual basis of the curatorial approach was laid that we could zoom out and introduce other realities: Europe and the rest of the world.

In the end, this scaling exercise helped us to focus on the most important idea: Regardless of where you are from, data is a powerful tool to understand your surroundings and the impact of - in our case- culture.

## 5.3 Exhibitions can be an interesting learning space

Exhibitions tend to be understood as closed cultural products that end when the production phase comes to fruition. Instead, in the Me-Mind project, the team has experimented with the idea of an exhibition as a work in progress, where the curatorial approach is just the start for more knowledge to be generated and more conversations to be had.

Creating layouts that the audience can repurpose and interact with creates new spaces for learning and dialogue which, ultimately, lead to a deeper connection to the topics presented.

## 5.4 The audience should be a determining factor when curating what data (and how) it should be shared

When in need to communicate a certain dataset to a specific public, it is of vital importance to strategise the impact that different formats can have on them. In the case of the Me-Mind project, where cultural institutions were our target audience, there were several occasions when we had to go back to the drawing board and rethink whether simply putting the data out there for everyone to see would be meaningful enough.

Before starting any visualisation or linking endless spreadsheets to a website it is always relevant to ask the following questions: Is it necessary to share an overload of data to make a point? Can a practical case and a selection of data be used to tell the story? Will people be able to empathise with my project if the results are shown in this particular format?

These questions made the team question some of the initial proposals but helped the general outcome of the project by experimenting and creating new, innovative ways of blending data and art.

## 5.5 Being an active participant is essential to live a meaningful experience

One of the big successes of the Me-Mind project has been the great amount of participation that both of our phygital experiences have had. A key decision was that both installations requested some kind of participation from the public. Even if traditional processes of data collection aren't that exciting or interesting to the people, bringing in a different participatory element to the user experience was a good way to maximise the project results and reach.

Throughout the Me-Mind project, physical and digital interactions were implemented to ensure data collection was never a tedious moment for the public, but an opportunity to try something new or to learn something about themselves. After this project the team can conclude that all audiences appreciate thought-provoking questions, hands-on interactions and the possibility of an interesting dialogue.