

Design Brief of the project "The Real Tour"

Designed for the exam "Digital Heritage and Multimedia"

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# The context: University Museum Network

The aim of this project is to design an interactive application for children to help them explore the museums of the University of Bologna while learning through entertaining games to distinguish what is real from what is Al-generated. The University Museum network (SMA-Sistema Museale di Ateneo<sup>1</sup>) is made up of fifteen museums, collections, and a digital museum. The network is diverse and offers an opportunity for exploring the scientific research carried out by the University over the years. Most of the museums are situated in the "university district" of Bologna.

As written in the *ABOUT US* section<sup>2</sup> of the website, the University of Bologna is committed to fulfilling its **social** and **educational function** by organizing entertaining and informative activities for children, an important audience for the museum. This ensures the relationship between the University of Bologna and the local community, also an important **institutional goal** for the museum network. The SMA does indeed offer experiences for family and children, as stated in the *VISIT* section <sup>3</sup> of the website, with laboratories and events. The SMA has already leveraged the network organization of the museums by offering a passport called *Il mio viaggio tra i Musei*, where at each laboratory, the children receive a stamp. After 5 stamps, they can participate for free in another lab. This laboratory experience has some limitations: the labs are offered only in Italian, they require a booking and a participation fee and are available only on the weekends. An interactive application could help the SMA network to fulfill its educational goals while offering a **free** and **customizable** experience for children and their families, both in **English** and **Italian**.

The **cognitive goals** to meet to engage children (**our target audience**) are various, such as avoiding distraction and designing for attention, by including tasks, adding rewards and gamification, familiar types of interaction, and sparking curiosity.

The **star assets** of the SMA that the application tries to leverage and spotlight are the **locations** of the museums and their already established **laboratory experiences** for kids. Most of the museums of the network are close together, concentrated in a small area of just a few kilometers known as the university district. Given the proximity of the museums to each other, offering an interactive experience that invites the children to visit more than one museum and explore the variety of the network itself will increase engagement, ensuring an increase in visitors. The application also offers an opportunity to create a connection

<sup>&</sup>lt;sup>1</sup> https://sma.unibo.it/en

<sup>&</sup>lt;sup>2</sup> https://sma.unibo.it/en/about-us

<sup>&</sup>lt;sup>3</sup> https://sma.unibo.it/en/visit

between the virtual experience and the laboratories already offered by the SMA, to guarantee a continuum between the digital and in-person experiences.

# The audience: children and families living in Bologna

The chosen target audience for the project is children and their families living in Bologna. We believe that this application could spark **curiosity** in children. They are invited to interact with a game that offers the possibility to select a museum, based just on the name and the building's images. The chosen museums are then added to the map, and to finish the game, the children must visit the museums and complete the task required. Once visited all the selected museums, they will receive a reward. The families will be interested in providing an interactive experience that **stimulates the children** and offers learning opportunities while completing the "realness" task and visiting the museum itself.

A real **limitation** to the use of the application is the **lack of a smartphone**. A possible solution could be to provide each museum with a tablet so that the families and children could set up their account and choose the museums at their first visit, complete the task at the end and moving onto the next museum knowing they would find a tablet where they could log in their account and continue playing.

We took into consideration the fact that children and families who are not the usual audience of the SMA museums **wouldn't be able to find out about the app**. A possible solution would be to advertise the app in the schools of the city, making sure that all the children have the opportunity to find out about it.

**Budget limitation** could also represent a barrier to the use of the application since it requires the user to be in the museum. The app itself is free, as well as the museum's entrance for kids under 19 years old; nevertheless, paying the ticket for the adult who takes the children to the museum and for the bus rides could be a struggle for some. The museum could offer a free entrance ticket for one adult (as they do for the in-person laboratory), and it could offer a reimbursement for the bus rides for the children and families living far from the city center upon showing the completed map. This last incentive would require a collaboration with the local transport company.

Deciding to prototype an interactive mobile app comes from the belief that most children nowadays **play video games** either on their smartphones or on their consoles, and it wouldn't be difficult for them to engage in **a game-like experience**. In Italy, 32,3% of kids between the ages of 6 and 10 use **smartphones every day**. Even if this data provided by

ISTAT for Save the Children <sup>4</sup> could appear alarming, leveraging this fact to design an application that provides a cultural experience and increases museum visits could be an educational alternative to offer in the app stores. The app would offer a step-by-step guide to help the children and their families understand the tasks to satisfy, but the aim is to offer a very visual, game-like experience with the belief that most children nowadays would be able to use it easily. Furthermore, the experience is thought as a shared family experience for both children and adults with them, so that the use of the app could be itself a bonding experience if any usability issues arise. In addition, the museum staff should be properly prepared in order to offer help in the use of the app.

# The concept: a game experience to explore the museum

One of the main issues that we faced in the design of the application was ideating the museum's task, which satisfies the requirement of the project work ("Detective of the Past") and encourages the children to explore the museum and learn.

We brainstormed some ideas and referred to the laboratory experiences organized by the SMA. Ideally, in the developing stage of the application, a team of experts in pedagogy with knowledge of the effect of the use of AI in both children and museology experts is needed to create a bulletproof application. For the sake of the exam, we have designed four tasks for four different museums that we believe could be more appealing for children (most likely to be selected for the game map). The defined tasks can be read in the user experience section.

The idea to develop an application for children that help them explore more than one museum by creating a game-like experience follows one of **Tilden's interpretative principles**<sup>5</sup>: "Interpretation for children must be designed specifically for children, and not simply a dilution of programs and information for adults.".

We were also inspired by the concept of **hybrid museum experiences**. A hybrid experience can have multiple dimensions, both physical and digital. The children are invited to use an app to explore the physical museum and will be rewarded with a physical museum experience, such as the laboratory offered by the SMA.

<sup>&</sup>lt;sup>4</sup> https://www.savethechildren.it/press/infanzia-e-digitale-circa-un-bambino-su-3-tra-i-6-e-i-10-anni-usa-lo-smartphone-tutti-i#\_ftn1

<sup>&</sup>lt;sup>5</sup> Freeman Tilden was one of the first people to set down the principles and theories of heritage interpretation in his 1957 book, *Interpreting Our Heritage*.

# The requirements

Following the MoSCoW method<sup>6</sup> we decide on the priorities of the interactive application, shown below.

The application **must** encourage the families to visit the completion of the University Museal Network by inviting them to select at least two of the museums and suggesting other museums to be added according to their vicinity and similarity. It also **must** provide games to keep children engaged while visiting and **must** provide a reward at the end.

The application **should** provide explanations about the role of Artificial Intelligence in our world, helping children to understand the consequences of improper use of this kind of technology. It **should** also give the user tools to distinguish what is a creation of the human mind and what is Al-generated as to teach them how not to be deceived, in the game but also in real life.

The application **could** further develop the game system and **could** propose more than one game for each museum to guarantee a unique experience every time the user visits a museum. In this perspective, based on the user's age, the designers **could** decrease or increase the level of the game to satisfy both the needs of the youngest players and the older ones.

The application wants to have, but won't have this time around, a design that allows more than one user to play the game at the same time. This offers the opportunity for families or groups of students to visualize a shared map in which multiple accounts could play one against the other.

# Ideation: The Real Tour experience

We provided a few visualization tools to better understand the design: a conceptual map following the PACT framework, a digital storyboard to represent the user journey using a persona, a description of the interaction with the application through a User Flow Diagram, a prototype of the application developed with Figma and a UX scenario via Twine. All this is available in the GitHub repository of the project: <a href="https://github.com/metamuses/the-real-tour">https://github.com/metamuses/the-real-tour</a> and browsable from the project website: <a href="https://metamuses.github.io/the-real-tour/">https://metamuses.github.io/the-real-tour/</a>.

<sup>&</sup>lt;sup>6</sup> The MoSCoW method is a prioritization technique. It is used in software development, management, business analysis, and project management.

### The Real Tour experience: a summary

The experience from the user's perspective starts with downloading the application. If the children don't have a smartphone, they will be provided with a tablet, with the application already installed, at the beginning of the museum visit.

The first step is to select the museums from the SMA network list that they want to visit: they must select at least two museums to encourage the children and their families to visit more than one museum in the University network.

After the first selection the app will propose to add others museum based on vicinity to the chosen ones and/or similarity of collection (for example providing the user has chosen the zoological collection, the app would propose, if not selected, the chemistry collection given its location or the botanic garden and herbarium because the user could be interested in the biological domain).

After the museums are selected, the user needs to fill out a sign-in form with name, e-mail or phone number, and password. Creating an account allows the user to save the progress: the completed task and the museum already visited; it also allows each museum to have its own tablet so that the user can login at every new museum he is visiting. At the last step of the account creation, the user is asked to select an avatar that will be used in the account button.

Upon finalizing the account, the user can see their personalized map, where the chosen museums are represented with black and white icons that need to be unlocked (game-like interaction). The user then needs to tap the museum icon they want to visit to start the game. If the user wants to add a new museum to the map, they can do so at any moment from the museum's map.

For each museum, there is a task that the user needs to complete to finish the "level". This task varies based on the museum to guarantee variety and engagement and requires the user to be in the museum to increase on-site visitors.

Once the related task at the museum is completed, the icon on the map changes to indicate completion by turning colored, and a new museum can be selected. Progress is automatically saved, allowing the user to visit the museum whenever they want and continue the game during their next museum visit.

Once the game is completed, the user has the possibility to receive a poster of the map with the museum visited as a token of the experience and access for free one of the laboratories offered by SMA.

### The Real Tour experience: the games

For the sake of the design brief, we thought of a few different games that satisfy the requirements of the project specifications and ensure that the user engages in the museum visits.

#### **Zoological collection**

The game proposes a carousel of anatomical parts of various animals, which are mashed together thanks to AI into a mixed part of an animal. The user must recognize which animal the anatomical parts belong to from those displayed in the museum. For each element of the mixed animal, the user must click on it, and the camera will automatically open to let the user take a photo of the corresponding animal. To complete the game, the user must resolve all parts of the AI-generated mixed animal.

#### **Physics instrument collection**

The game proposes some AI-modified pictures of the instrument contained in the collection. For each instrument's AI-modified picture, the user must explore the museum to find it and tap in the app on the parts that are not real in the instrument's image, proposed by comparing it to the actual object in front of them.

#### Specola museum of astronomy

On top of the museum, in the Specola tower, it's possible to see the Bologna skyline. The application proposes to the user a puzzle game in which some pieces are AI-generated and some are real images of the skyline. The user has to choose the pieces of the puzzle with the reality of the view and discard the ones that are AI-generated. The user must drag and drop the right pieces onto the empty puzzle board.

#### Mineralogical collection

The game proposes a carousel of minerals from the collection and four possible names, 3 are Al-generated, and one is real. The user must look for the mineral in the collection and read the label, and select the correct option in the app.

# The conceptual map

The conceptual map (Figure 1) illustrates the ideation process following the PACT framework $^{7}$ .

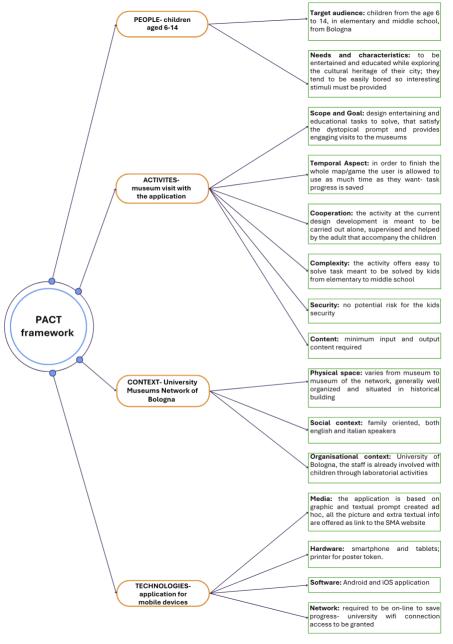


Figure 1- PACT framework

<sup>&</sup>lt;sup>7</sup> A PACT analysis is a user-centered design framework that considers the four key components of an interactive system: People, Activities, Context, and Technology.

# The story: The Real Tour journey

In this section, we have described a plausible **user journey** and then represented it through a **storyboard**. This allows us to provide an overview of the user's **interactions** and expected **emotions** throughout the experience. We preferred this visualization tool rather than the user journey map because we believed it could offer a more visually effective representation of our design idea and offered us the opportunity to work with a tool that has been mentioned throughout our course. Also, it gave us the occasion to think about our design choices based on potential users, thanks to the definition of **personas** 8 (Figure 2) and **user scenarios** 9. Based on these potential users, we decided to storyboard Paolo's user journey (Figure 3).

### The user discovers The Real Tour experience and tells their family

Let's imagine that Paolo's journey starts when he receives an advertisement for the real tour experience at school. He gets **excited** about trying a new game application and takes the flyer home to his family. The parents are **happy** to know that their child displays interest in visiting new museums and downloading the app on their phones.

#### The user plans their visit

That same night, the family gathers and opens the app. After assisting their child in choosing a museum by browsing the linked museum website, they plan to visit four different museums over two different weekends. Paolo creates his account and begins exploring the personalized map. The **curiosity** settles in; he can't wait to see what each museum game will be like.

#### The first visits

On Saturday, after arriving at the first museum, Paolo selects the icon on the map and starts the games to be solved. He explores the museum through the proposed app game. At the end of the game, Paolo feels one step closer to obtaining the final reward. He moves to the next museum. Luckily, all the museums are within walking distance, and the next one is just a few minutes away. In the next museum, Paolo starts the game quickly, he is now feeling competitive. Playing the game already feels smooth; he knows now that its aim is to distinguish AI from reality. Once the second museum game is finished, the experience for the first weekend is over. Paolo feels sad but also enthusiastic about next weekend's visits

<sup>&</sup>lt;sup>8</sup> User personas are an integral part of user experience (UX) design, serving as a foundation for designing products that deliver optimal user experiences.

<sup>&</sup>lt;sup>9</sup> User Scenarios helps to understand how the users interact with your application.

### Second weekend's visit and map completion

Finally, the next weekend has come, and Paolo can finish the map: he is **eager** to get his reward. On the same day, Paolo visits the last two museums and plays the games proposed by the application. Ultimately, he can access the final reward. Paolo is **happy** to find out that they can go back to one of his favorite museums to participate in the laboratory experience. He quickly rushes to the main desk at the museum to enroll in the activities offered by the museum and get the poster of their map! He can't wait to hang it in his bedroom.

#### **PAOLO**



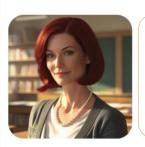
Age: 7 years
Work: student
Family: lives with his parents and his little sister
Location: Bologna, Italy

# **Goals:**to have fun with his friends to become a doctor

Frustration: hates to wait hates long explanation texts

Paolo is a 7 years old child. He attends elementary school and he is very curious. Alberto lives with his parents and his little sister in Bologna. Alberto enjoys school and gets along with his classmates. They are going on a school trip in the city to visit the Zoological collection and the Botanic Garden and Herbarium. He discovered The Real Tour application thanks to the flyers distributed at school that encouraged its use to keep children engaged during the visit. Paolo really appreciates the possibility to play a game after completing the visit and he manages to be more focused to get all the right scores in the end. His desire is to finish his tour and continue playing while learning to finally get his "Real Explorer Map" and brag about it with his friends.

#### MARA



Age: 43 years Work: middle school teacher Family: married Location: Bologna, Italy

# **Goals:** to be updated on latest trends being informed visiting many cities

**Frustration:** poor sense of direction hates distractions

Mara is a middle school teacher, she is 43 years old and she teaches history. She is married and lives in Milan with his husband but she studied in Bologna while she was a university student. Mara remembered visiting the collections of the University Museum Network while she was living in the city. She is coming back to Bologna to visit her parent and for the occasion she is considering to revisit a few of her favorites museums. Mara discovers about The Real Tour Application while navigating the University Museum Network website. Since she likes being updated on latest trends she downloads it. She then tries it to test its functionality and since she finds the games interesting as they encourage the use of critical spirit in children she is considering to suggest the app to the kids she teaches to.

#### PERSONA:

Paolo, age 7, from Bologna, likes science museum.



Receive an advertisement for the real tour experience at school. Paolo gets excited about trying a new game application.



After arriving at the first museum Paolo selects the icon on the map and starts the game. He explores the museum, and at the end of the game, he feels one step closer to the final reward.



Finally, is the next weekend, Paolo can finish the map. On the same day he visits the last two museums and plays the games proposed by the application.

#### **USER STORY/SCENARIO:**

Paolo finds out about the The Real Tour app at school.



Takes the flyer home to his family. The parents are happy to know that their child displays interest in visiting new museums.



Paolo runs to the next museum, that is just a few minutes away. He starts the museum's game quickly, he is feeling competitive.



Paolo is happy to find out that he can go back to his favorite museums to participate in the laboratory experience. He quickly rushes to the main desk at the museum to enroll.



The family sit down that same night and download the app. Paolo selects the museum he wants to visit, they organize the visits of four different museum, in two different weekends.



Once the second museum game is finished, the experience for the first weekend is over. Paolo feels sad but also enthusiastic for next weekend visits.



Paolo also has received the poster of the map experience and hangs it in their bedroom as a token of the experience.

# **Graphic identity**

Inspired by the "Why I brought Pac-Man to MoMa" TED speech by Paola Antonelli<sup>10</sup>, we decided to create an application based on one of the most famous examples of interaction media design: the videogames.

Our inspiration was Mario's games, in particular the Super Mario Bros from 1985 that inspired our graphic identity and color palette (figure 4) and the Super Mario Bros 3 from 1988 that inspired the map-like experience (figure 5).

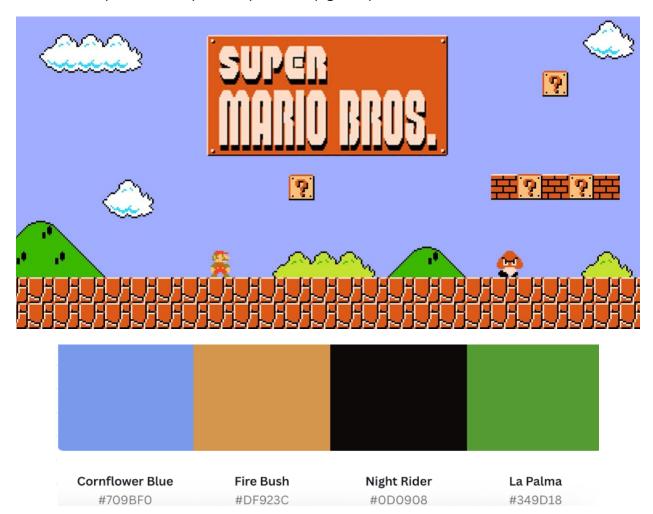


Figure 4- Super Mario Bros 1 graphics and chosen color palette for the application

<sup>10</sup> https://www.youtube.com/watch?v=YzGjO5aHShQ



Figure 5- Map frame from Super Mario Bros 3

The font used in the app is also inspired by 80s and 90s video games. We selected the Pixelify Sans from the Figma environment.

The name of the experience, "The Real Tour," is based on the main task of distinguishing Algenerated content from reality. For the logo (figure 6), we referred to the title of the experience and integrated the most symbolic museum of the university network: the Specola Tower. The chosen color refers both to the videogame's palette and also reminds one of the typical color of the walls of the building in the city of Bologna.



# The interaction: The Real Tour application

The interaction between the user and the application is a natural (NUI), gesture-based interaction that works with a touch user interface (tablet, smartphone). The application has been designed to satisfy the principle of interaction design:

- **Affordance**: the buttons are always round and with the shadow effect to look clickable, and the form fields let the user know what should be typed.
- **Feedback**: the user knows when they finished the game successfully or not; in case the user has made some mistakes, the app would let them know; the user knows the already visited museum because the icons change color in the map.
- **Learnability**: the app is based on the common mental models already used by other applications, in order to help the user interact with the system intuitively.
- **Predictability**: the app is designed to ensure consistency by offering the same navigation for every museum stop and predictably by providing guidance text on the button before navigating to the next page.
- **Efficiency**: navigation is ensured through minimizing choices to reduce unnecessary clicks or interactions.
- **Accessibility**: for the sake of the design brief, the app hasn't been designed successfully to provide full accessibility; this has been addressed in the foreseen work section.

The user flow, meaning the interaction with the application to complete the game, is made up of eight different steps.

- Onboarding;
- Registration;
- Map introduction;
- Museum entry and context introduction;
- Museum game page;
- Progression and reward;
- Profile page.

The description of the interaction will be accompanied by a few exemplary frames from the Figma prototype to help visualize the application experience. The Figma prototype is linked in the *Tools and public links* section as well as the design interface.

### Onboarding

In the first step, the user can select the language of the app by tapping on the UK or Italy flag. The user taps the *start* button on the **welcome page** to enter the experience. The user selects the museum they want to visit by tapping on the museum card shown in the **selection page**. Through the icon. The user can find extra information on the museum website. After pressing the button to *create account*, the user receives an **additional museum** card based on their vicinity or similarity to the ones already chosen. The user can decide whether to add it to the map or not by pressing the buttons *SURE!* or *NOT REALLY*.

If the user is already registered, on the **welcome page**, they can **log-in** to be redirected to their personal map page.





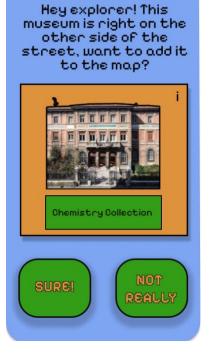


Figure 7- Figma: onboarding frames

### Registration

The user **creates the account** by compiling the fields: name, e-mail or phone number, and password. The user then taps the button *choose your avatar* and has to **select the avatar** from a carousel of four fun character options. To finish the registration process, the user taps the button *REGISTER*.



Figure 8- Figma: registration frames

### Map introduction

The avatar walks through the screen with the message "Your explorer map is loading". The personalized map with the selected museums is loaded, and the message "Tap on the museum icon on the map to start playing" is shown. The user taps on the B&W museum icon to enter the museum's game experience. In the map page of the app, the user can always add a museum by tapping the button *Add museum*. They will be navigating to a logged in user's selection page that will show them only the museum they haven't selected before.



Figure 9- Figma: map introduction frames

### Museum entry and context introduction

The user is met with a **museum welcome screen** with the message "Welcome to the [museum name]! Here you'll discover [museum's item]" and the possibility to tap on the *photo* icon to see pictures from the museum website. The user has the possibility to go back to the map by tapping on the — icon or start the game by pressing the button *Let's play*. With this button, the user navigates to the **context introduction page** with the text "Are you ready for the challenge?". This page is the same for all museums and explains the topic of the challenges with a text "Dear explorer, as you may know, nowadays we are dealing with a powerful but deceptive technology...". The user presses the button *Ready!* to start the game.

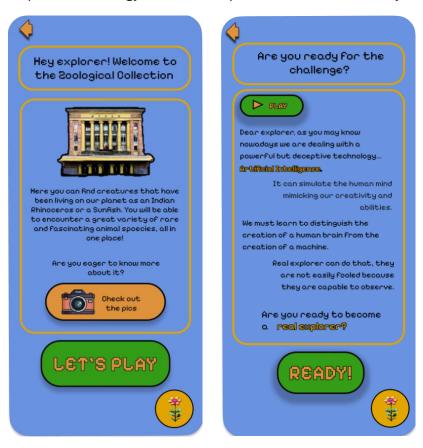


Figure 10- Figma: museum entry and context introduction frames

### Museum game page

The user navigates to the **museum's game page**. The interaction required is based on the museum's game: picture taking, drag and drop, tap the differences, select the right option. When the game is finished, the user taps the button *Done!* to record the progress.







Figure 11- Figma: museum page frames

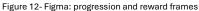
### Progression and reward

When the user has successfully finished the game, they navigate to the **progress page** with text "CONGRATULATIONS! You have completed the task. Continue to explore to win your REAL EXPLORER MAP". The user can select the next museum from the carousel or go back to the map with the button *BACK TO THE MAP*. The museum icon on the map will appear colored to show the finished museum.

If the user has failed the game, they will navigate to the **try again page**, where they will receive an explanation on the mistakes made and with the button *TRY AGAIN*, they will navigate again to the **museum game page**.

If the user has finished the last museum game on the map, the **final progress page** will display the text "CONGRATULATIONS! You have completed your tour!" and the buttons to obtain the rewards. The buttons are *GET YOUR REAL EXPLORER MAP* or *COUPON FOR A FREE LABORATORY AT YOUR FAVOURITE MUSEUM*, both let the user navigate respectively to the **poster QR page** and the **laboratory QR page**. The pages have a QR code that the user can show to the main desk at the museum entrance to request the map and register for a free laboratory.









### Profile page

In various stages of the application, the user can access their **account info** by tapping their avatar button, where they can modify the fields: name, family name, e-mail or phone number, password, and their avatar. With the button *CHECK TASKS PROGRESS*, the user can navigate to the **progress page**.

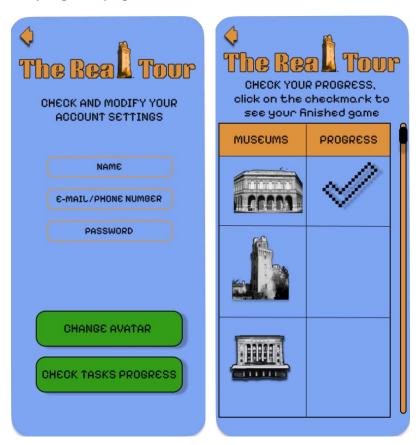
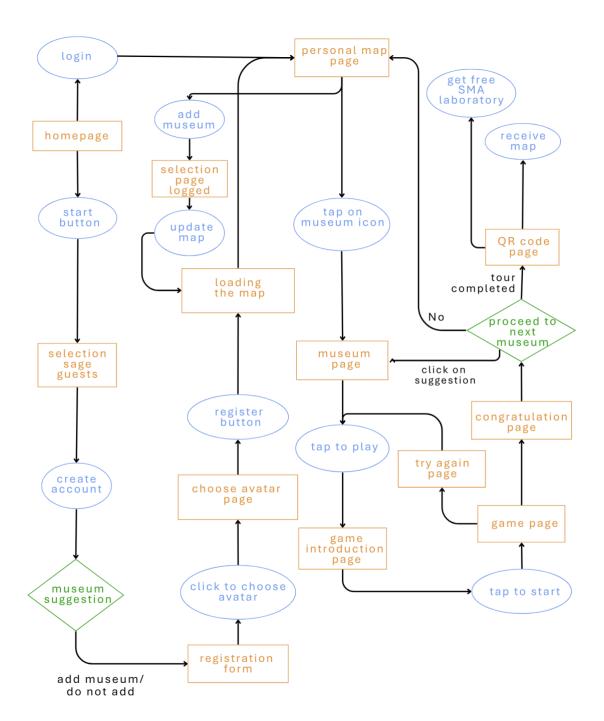


Figure 13- Figma: profile page frames

### User flow diagram

To represent the user's interaction with the application, we also developed a user flow diagram (Figure 14).



### Foreseen work

Once the idea is approved by the SMA, a multidisciplinary team needs to be set up, including developers, museology experts, pedagogy experts, and communication professionals. Developers will handle both the front-end and back-end, while museology and pedagogy experts will ensure educational quality and alignment with museum content. The design and interaction team will finalize the avatar animations, transitions, and game feedback mechanisms, while PR experts will oversee communication with schools and families.

The development process will follow standard interaction design stages:

- wireframing and prototyping (already covered for the exam);
- user testing with children and families;
- iteration and visual fine-tuning;
- final development and testing;
- multilingual content integration (Italian and English);
- deployment and public launch via SMA platforms and in-person museum promotion (QR codes, school flyers).

In future development stages, two additional areas are foreseen to improve inclusivity and adaptability:

- Accessibility support: While not yet implemented, the experience could be enhanced by training museum staff to assist children with special needs in navigating and interpreting the app-based activities, ensuring all visitors can engage with the content;
- **Environmental adaptability**: For museums like the Botanical Garden or the Specola tower, where some games may depend on weather or visibility, an "indoor mode" with simulated views or pre-recorded content could be developed to allow gameplay regardless of environmental conditions.

To ensure broader device compatibility, the app should be tested and optimized for both Android and iOS smartphones and tablets, including those used by museums and schools.

Additionally, anonymous in-app analytics could be integrated to track metrics such as museum/game completion rates, user engagement time, or drop-off points. This data can help SMA monitor the educational impact and improve future content, adapting the experience based on real usage patterns.

Maintenance responsibilities should be defined with a clear long-term plan for technical updates, museum content refreshes, and educational adaptations.

# **Disruptions**

The design process has considered several potential disruptions and limitations, including:

- **Passive engagement**: To prevent disengagement or boredom, the app uses short, varied challenges, animated avatars, colorful museum maps, and direct positive feedback to maintain attention and reward effort.
- Visitor flexibility: The app is designed for families using a shared smartphone or a museum-provided tablet. It supports multiple profile log ins and saves progress across museums to support visits at different times.
- **GIFT**: To ensure the experience leaves a lasting impression, children can revisit the finished game on the progress page and unlock a printed "Real Explorer" poster by museum as a final reward. A free museum lab session or workshop is offered upon full map completion, reinforcing the physical-digital connection.
- **Limited access to email accounts**: Some families or children may not have an active email address to create an account. For this reason, the app offers registration using a phone number as an alternative login method, making the experience more inclusive and accessible.
- **Language barriers**: The experience will be available in both Italian and English, expanding its reach to foreign families, bilingual children, and international residents.
- Maintenance risk: Without regular updates, the app may become obsolete. A
  designated team or agreement with SMA should cover future content updates,
  compatibility checks with new devices, and optional expansion to new museums or
  collections.

### Team's roles and work

The team actively worked together on the ideation of the experience and writing the design brief. The Twine UX scenario was taken care of by Tommaso Barbato and Maryam Dadras Razi and the Figma prototype was designed by Alice Spadavecchia and Martina Uccheddu.

# User experience scenario

We created a UX scenario using Twine as an initial step to visualize the user journey. This prototype was helpful for the development of the final user experience, which was designed in Figma.

The HTML is available at the following link: <a href="https://metamuses.github.io/the-real-tour/twine">https://metamuses.github.io/the-real-tour/twine</a>. In the *Tools and public link* section, we provided the link to the source code.

# Sitography

"A Guide to creating UX Personas", available at: <a href="https://medium.com/@mahimadahekar/a-guide-to-creating-ux-personas-677ad5bbdc8a">https://medium.com/@mahimadahekar/a-guide-to-creating-ux-personas-677ad5bbdc8a</a> (last visited June 28th, 2025)

"How do you integrate journey mapping and storyboarding with other experience design methods and techniques?", available at: <a href="https://www.linkedin.com/advice/0/how-do-you-integrate-journey-mapping-storyboarding">https://www.linkedin.com/advice/0/how-do-you-integrate-journey-mapping-storyboarding</a> (last visited June 28th, 2025)

"Infanzia e digitale: circa un bambino su 3, tra i 6 e i 10 anni, usa lo smartphone tutti i giorni.[...]", available at: https://www.savethechildren.it/press/infanzia-e-digitale-circa-un-bambino-su-3-tra-i-6-e-i-10-anni-usa-lo-smartphone-tutti-i# ftn1 (last visited June 28th, 2025)

MoSCoW method, available at: <a href="https://en.wikipedia.org/wiki/MoSCoW\_method">https://en.wikipedia.org/wiki/MoSCoW\_method</a> (last visited June 28th, 2025)

"PACT Analysis: Unlocking the Power of User Interface Design", available at: <a href="https://techxnomad.medium.com/pact-analysis-unlocking-the-power-of-user-interface-design-2543623c0d8e">https://techxnomad.medium.com/pact-analysis-unlocking-the-power-of-user-interface-design-2543623c0d8e</a> (last visited June 28th, 2025)

"Paola Antonelli: Why I brought Pac-Man to MoMa", youtube TED talk, available at: <a href="https://www.youtube.com/watch?v=YzGjO5aHShQ">https://www.youtube.com/watch?v=YzGjO5aHShQ</a> (last visited June 29<sup>th</sup>, 2025)

SMA website, available at: <a href="https://sma.unibo.it/en/about-us/about-us">https://sma.unibo.it/en/about-us/about-us</a> (last visited June 28th, 2025)

"Storyboarding in UX: Visualizing User Journeys", available at: <a href="https://arounda.agency/blog/storyboarding-in-ux-visualizing-user-journeys">https://arounda.agency/blog/storyboarding-in-ux-visualizing-user-journeys</a> (last visited June 28th, 2025)

"Storyboards Help Visualize UX Ideas", available at: <a href="https://www.nngroup.com/articles/storyboards-visualize-ideas/">https://www.nngroup.com/articles/storyboards-visualize-ideas/</a> (last visited June 28<sup>th</sup>, 2025)

"The PACT Analysis: A Human-Centered Design Framework", available at: https://bornoe.org/blog/2023/04/the-pact-analysis-a-human-centered-design-framework/ (last visited June 28<sup>th</sup>, 2025)

"User journey map: Definition, details & 5 steps to make one", available at: <a href="https://slickplan.com/blog/user-journey-map">https://slickplan.com/blog/user-journey-map</a> (last visited June 28th, 2025)

# Tools and public links

**Canva**, personas, available at: <a href="https://github.com/metamuses/the-real-tour/blob/main/design-assets/personas.pdf">https://github.com/metamuses/the-real-tour/blob/main/design-assets/personas.pdf</a> (last updated June 28<sup>th</sup>, 2025)

**Canva**, storyboard, available at: <a href="https://github.com/metamuses/the-real-tour/blob/main/design-assets/userjourney\_storyboard.pdf">https://github.com/metamuses/the-real-tour/blob/main/design-assets/userjourney\_storyboard.pdf</a> (last updated June 28th, 2025)

**Canva**, pact framework, available at: <a href="https://github.com/metamuses/the-real-tour/blob/main/design-assets/PACT\_framework\_map.pdf">https://github.com/metamuses/the-real-tour/blob/main/design-assets/PACT\_framework\_map.pdf</a> (last updated June 28<sup>th</sup>, 2025)

Canva, user flow diagram, available at: <a href="https://github.com/metamuses/the-real-tour/blob/main/design-assets/userflow\_diagram.pdf">https://github.com/metamuses/the-real-tour/blob/main/design-assets/userflow\_diagram.pdf</a> (last updated June 28th, 2025)

**Figma**, application prototype, available at: https://www.figma.com/proto/RccfStKLGNZekvEVB7vfth/The-Real-Tour-main?node-id=80-354&p=f&t=zeyg4lUfUzVtola-1&scaling=scale-down&content-scaling=fixed&page-id=0%3A1&starting-point-node-id=80%3A354 (last updated June 29<sup>th</sup>, 2025)

**Figma**, prototype source, available at: <a href="https://www.figma.com/design/RccfStKLGNZekvEVB7vfth/The-Real-Tour-main?node-id=0-1&t=P1m9Ot6Lpw31l6H1-1">https://www.figma.com/design/RccfStKLGNZekvEVB7vfth/The-Real-Tour-main?node-id=0-1&t=P1m9Ot6Lpw31l6H1-1</a> (last updated June 29<sup>th</sup>, 2025)

**Twine**, user experience source code, available at: <a href="https://github.com/metamuses/the-real-tour/blob/main/twine/the-real-tour.twee">https://github.com/metamuses/the-real-tour/blob/main/twine/the-real-tour.twee</a> (last updated June 30<sup>th</sup>, 2025)