**Lights, Camera, Action!**

Cineteca di Bologna - Cinema Lumière

**Project Management Report**

Usability & User experience 2019/2020

17/07/2020

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[**Introduction**](#_3l4h7pv9y0om) **4**

[1. Ethnographic research](#_j85rswnihe97) **4**

[1.1 Segmentation](#_dcf6h5vepw0c) 4

[1.2 User research](#_odocoy5e5pys) 6

[1.2.1 Survey](#_n4pyuweoixwr) 6

[1.2.2 Contextual inquiry](#_d3llli5dfufg) 8

[General questions](#_cx3a9pszbypa) 8

[Going to the cinema](#_xlxjz7gxhbgz) 9

[1.2.3 Task analysis](#_odl606zii83n) 10

[2. Assessment of existing resources](#_kytj6pr200k) **12**

[2.1 Expert Usability Review](#_vweoyjg699ks) 12

[2.1.1 Choice of guidelines](#_ayfkxyt7wo3) 12

[2.1.2 First Inspection of the System](#_s943n08aodeb) 12

[2.1.3 Direct analysis: system vs. guidelines](#_9wrhu9pe8lvy) 13

[2.1.4 Reverse analysis: guidelines vs. system](#_huxk4f8j7bmq) 14

[2.2 User testing](#_vweoyjg699ks) 15

[2.2.1 Definition of the testing protocol](#_ku8zawzgbypr) 15

[2.2.2 Tests summary](#_qbh87em329fg) 17

[2.2.2.1 User 1](#_ct6bnqyub5r4) 17

[Task 1](#_9l9zq5tmud3n) 17

[Task 2](#_e2uldy90k9) 17

[Task 3](#_zwgdp2w8vi8) 18

[2.2.2.2 User 2](#_qta42zwamh69) 18

[Task 1](#_qixkx8oi8tz6) 18

[Task 2](#_mf9ss2n11qkj) 18

[Task 3](#_gr8heol9ulej) 18

[2.2.2.3 User 3](#_kblmpd1nuex2) 19

[Task 1](#_olypkgeuyeoa) 19

[Task 2](#_q6hz24ufrcyh) 19

[Task 3](#_i0cr5xwtscvo) 19

[2.2.3 Analysis of subjective and objective data](#_fn7qcd600959) 20

[2.2.4 Urgency Curve](#_b87xivrjcvbd) 20

[3. Feasibility Study](#_xf6q9e1e9557) **21**

[3.1 Context of use](#_5ssa5pikq56g) 21

[3.1.1 Users](#_vfew746g95n) 21

[3.2 Scenarios](#_5ssa5pikq56g) 23

[3.2.1 First scenario](#_oh81qzq9o9h6) 23

[3.2.2 Second scenario](#_kam6csn141ui) 23

[3.2.3 Third scenario](#_1xzquoy0dwfb) 24

[3.3 Personas](#_5ssa5pikq56g) 25

[3.3.1 Giovanni Bruno: the romantic classicist](#_qj4m5gd0sz0p) 25

[3.3.2 Lucia Peruch: the plucky traveller](#_3kbo4ffhvz9b) 27

[3.3.3 Brenno Baldini: the bad guy](#_en9pqn263rde) 29

[3.3.4 Alma Mercuriali: the social intellectual](#_o7uj27mh2951) 31

[3.3.5 Lara Baldhi: the fierce queen](#_bn2zdytszw5d) 33

[**4. Design Proposal**](#_vyfyi8nlqgb) **36**

[4.1 Information Architecture](#_vkkc8uyqeygh) 36

[4.1.1 Information ecology](#_qmj347wqhn3y) 36

[Context](#_ohrjq96x42en) 37

[Content](#_z516vaph1j4z) 37

[User](#_1fz60qz8sc9m) 37

[4.1.2 Components](#_jdsuxyyqbrf) 37

[Browsing aids](#_zy4dvswrb1l) 38

[Search aids](#_ecxly7c1wjrx) 38

[Contents & Tasks](#_d9sjv32yve0y) 38

[Invisible components](#_5drl9j59yam3) 39

[4.2 CAO=S model](#_vkkc8uyqeygh) 39

[4.2.1 Concepts](#_8y29gw2h1p4e) 39

[4.2.2 Actors](#_2lvn2w4kc24v) 41

[4.2.3 Operations](#_8gqkqpc6rzpo) 42

[4.2.4 Structures](#_9jdzvuc4gw55) 42

[4.3 Interaction Design Approach](#_vkkc8uyqeygh) 43

[4.3.1 The dialogue](#_9cmwn5u2ogeg) 43

[4.3.2 Conceptual model and conventions](#_7unhxogs52uw) 45

[4.3.4 Handling errors](#_1d99jy2wv5zk) 46

[4.4 Structure Blueprint](#_vkkc8uyqeygh) 46

[4.5 Wireframes](#_vkkc8uyqeygh) 48

[5. Evaluation of design](#_czt6o8g7hf1b) **52**

[5.1 Inspection](#_rkpa0fxlmjt2) 52

[5.1.1 Cognitive walkthrough](#_d9542pbz3utr) 52

[5.1.1.1 CW 1](#_pqbwuxk9xj5j) 52

[5.1.1.2 CW 2](#_1ckqtysibxl4) 53

[5.1.2 Action analysis](#_9h6hula7f3dz) 54

[5.1.3 Heuristic analysis](#_wnx9iuee7qiu) 56

[5.2 User testing](#_wuws6fkkcf6q) 57

[5.2.1 Definition of the testing protocol](#_u5spyzvxj6un) 57

[5.2.2 Tests summary](#_mxeh2wguyza3) 58

[5.2.2.1 User 1](#_o5ektmssgqjx) 58

[Task 1](#_u1g1qn24lpqd) 58

[Task 2](#_yoq8qd6mz44m) 58

[Task 3](#_qyr72nx8vc72) 59

[Extra task](#_yiri5zeu5via) 59

[5.2.2.2 User 2](#_qzutdqv0vnux) 59

[Task 1](#_ina1ab49c20s) 59

[Task 2](#_wq8a23rw03lz) 59

[Task 3](#_gw0koz1hwn9d) 60

[Extra task](#_eiv5z3lvli63) 60

[5.2.2.3 User 3](#_xuh4dpw79jxg) 60

[Task 1](#_ruelhneub05w) 60

[Task 2](#_fkdxl6dqu2u) 60

[Task 3](#_x6hw5h4shyj5) 61

[Extra task](#_shcrqsadu1n2) 61

[5.2.3 Analysis of subjective and objective data](#_mnsyggl8s293) 61

[Conclusions](#_ck3md4g7uu4r) 62

[References](#_fzq0yiw90vg5) 64

[Data](#_48ag0vbm5ymb) 64

[Articles](#_x7atimelr4zm) 64

[Case studies](#_wy34a5e5yiye) 64

[Appendixes](#_ko1b4b2ps3ek) 64

[Appendix A](#_kkotod6am02l) 64

[Appendix B](#_djp5qg78yym3) 64

[Appendix C](#_x9wgrodslnmj) 64

[Appendix D](#_e6z3oegqt3aw) 64

# Introduction

We here present a user experience design project for the foundation Cineteca di Bologna, a leading institution in the field of film culture which encompasses archives, libraries, exhibitions, workshops, cinemas and offices. From 1963, their mission remains unchanged:

“the Fondazione Cineteca di Bologna is a place for archival conservation and restoration, film and audiovisual promotion and dissemination, training, research, and publishing. A multifaceted mission, a Cineteca ready for all the challenges of conserving and promoting the moving image in an era of immense technological, aesthetic and social change”.

The [Cineteca website](http://www.cinetecadibologna.it/) provides a wide variety of services, including an online ticket purchase service that is currently not used by a specific target of users. These users are very interested in going to the cinema and purchase tickets anyway, but struggles to use the website and prefers doing the activities without using digital tools.

We were asked to understand the reasons behind this lack of motivation and propose a solution to motivate them to actually enjoy the online services provided by our client, without upsetting the audience that the organization already reaches and addresses satisfactorily.

We identified the segment and a possible solution in designing a sub-site for the *Cinema Lumière*, the movie theater within the Cineteca. Our job will be to evaluate the most relevant services of the website for our users and optimize the subsite navigation and architecture in a way that answers their needs and brings them motivation, but without upsetting the whole structure with respect to a wide part of the audience that is actually satisfied and doing well.

# 1. Ethnographic research

We explored the users and the services associated to them identifying a specific segment that results poorly motivated in using the web application.

## 1.1 Segmentation

To identify the segment of interest we analysed the [ISTAT 2018 report “I cittadini e il cinema”](https://www.istat.it/it/files//2018/08/Report_I_cittadini_e_il_cinema.pdf).

According to the data, young people between 14-17 and 18-24 have the highest figures in going to the cinema at least once in a month (80-84%), without relevant differences between genders.

About location, there is a high attendance in metropolitan cities and the areas around them, and this percentage rises in the center of Italy especially in Emilia Romagna, the region with the second highest number (53%) of cinema goers. The region also records a major predisposition towards non-occasional goers.

67% of people going to the cinema has good economical sources and own a university degree (70%) or a high school diploma.

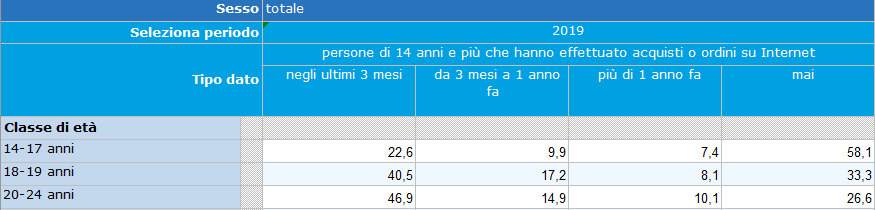
People who go to the cinema - and especially the mentioned age range - also attend related complementary events like film clubs, festivals etc.

The main reasons why people of the considered age range do not go to the cinema are:

* the absence of a cinema in the area where they live
* they prefer TV movies
* they don’t have the money
* they don’t have who to go with
* they prefer to download movies

We also considered the ability to actually make **online purchases** through credit cards or similar services, since it is not to be taken for granted for our segment (especially the younger one).

Legally, there are plenty of online payment methods for minors, in addition to the use of one of their parents or legal tutors cards. However, Istat data show that 58% of people between 14 and 17 years old have never made an online purchase. This figure rapidly decreases with the age as can be seen in the table below (full data can be consulted at this [link](http://dati.istat.it/Index.aspx?QueryId=23002)):



From this data we understood that we should give more importance to the opinion and necessities of the older target users for what concerns the online purchase, since there might be some limitations for the younger part that we cannot tackle through this project.

Our discoveries are summed up in the following table that points out both demographic and psychological characteristics of the subgroup identified as a relevant target for our design proposal.

|  |  |
| --- | --- |
| **Demographic** | |
| *Gender* | Not relevant |
| *Age* | 14-24 |
| *Residence* | Lives in a city in the center of Italy |
| *Income* | Good economical sources |
| *Marital status* | Not relevant, mainly single |
| *Education* | University degree or high school diploma |
| **Psychological** | |
| *Personality* | curious, not particularly active and propositional |
| *Attitudes* | mainly smartphone users, prefer carrying out activities online whenever possible, enjoys doing collective activities |
| *Interests* | likes spending time discovering new contents throughout different kind of media (e.g. audiovisual), playing video games, going out with friends, going to che cinema |

Given the particular age range considered, we expect to find relevant differences in users behavior but the overall necessities and goals should be consistent. This hypothesis shall be confirmed or rejected through user research methods.

## 1.2 User research

We conducted the user research through both indirect and direct sources of data, namely a [survey](#_n4pyuweoixwr) and [contextual inquiries](#_d3llli5dfufg). Finally, we identified the relevant tasks to be carried out in the [task analysis](#_odl606zii83n).

### 1.2.1 Survey

The survey (available in the [Appendix A](#_kkotod6am02l)) was useful to understand more deeply the market composition for our service and confirm or confute our hypothesis on the user segment under analysis.

The survey was shared on our social media and acquaintances. It is composed by 18 questions and we received feedback from 31 people.

It is organised in 3 sections with different functions:

* Explorative-introductory questions: in this section we collect preliminary data about the respondents, their age, where they live, their hobbies and passions, how much they are organised.
* Relation with cinema and cinema websites: how and how much they interact with cinema website, choice criteria regarding cinema.
* Questions about online purchase process and other resources: if they buy tickets online, success rate in the operation, alternative resources to cinema website.

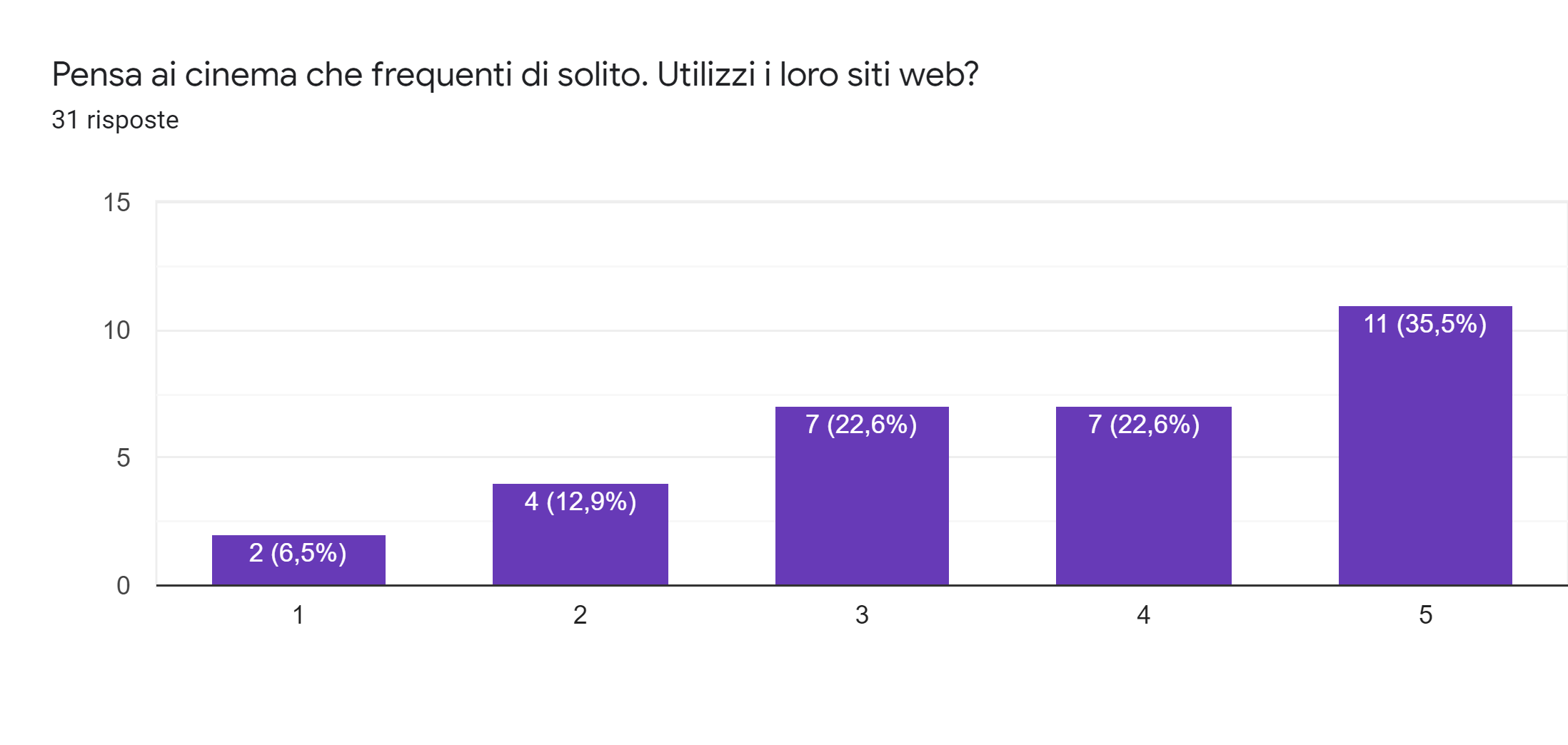
We used different kinds of questions to maximize the number of relevant answers, like Likert scale questions, open-ended questions, multiple-choice questions and close-ended questions.

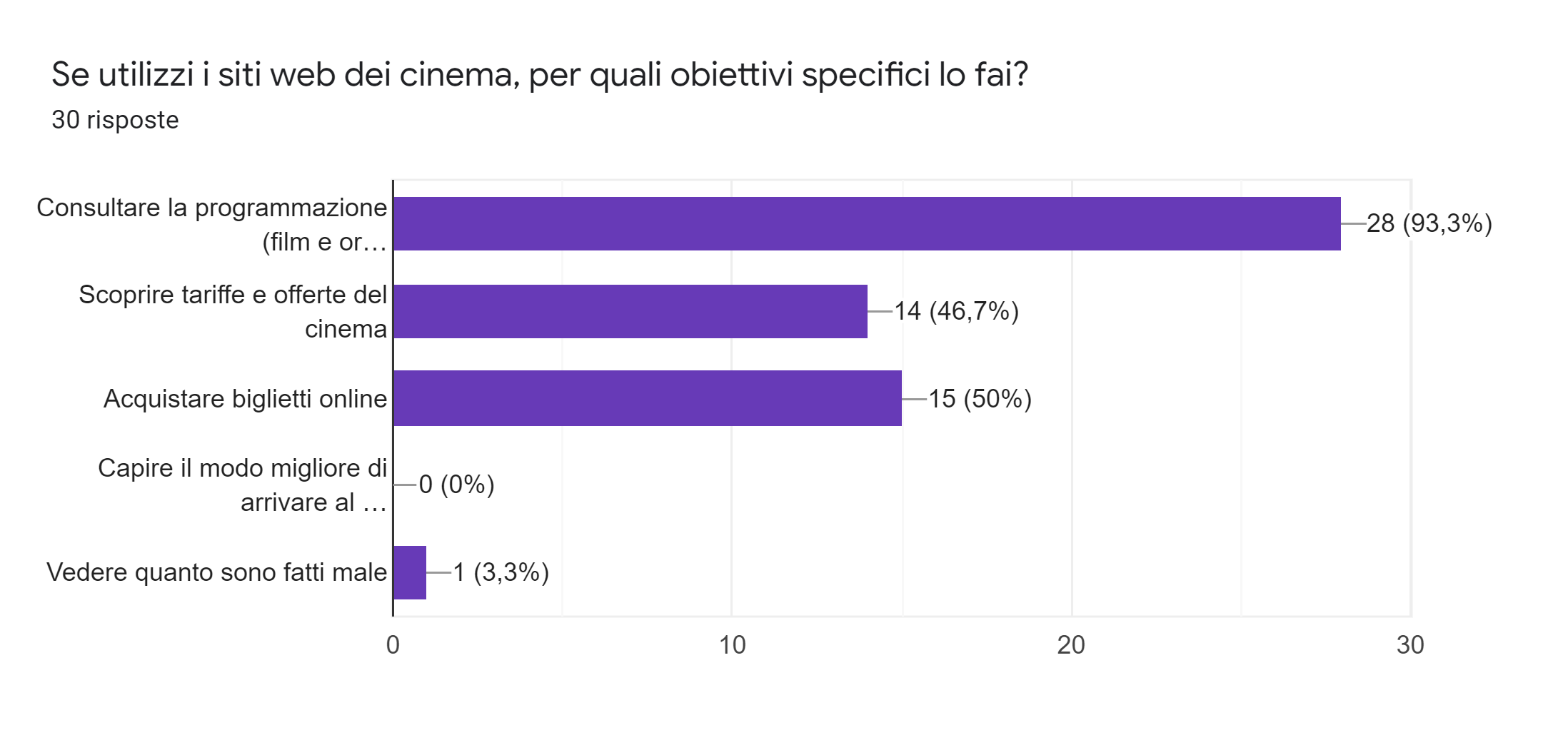
Here follows a summary of our questions with some precious insights:

*Do you plan your activities?* On average our user segment is **highly organised**, with nearly 70% of respondents scoring at least 4 on a 0 to 5 Likert. There is a **correlation** between planning activities in advance and using online reservation services, or being open to it if it was easy to do.

**Price and location** are main drivers of our segment. The presence of an updated offer is another major driver, but art house movies does not discourage our segment user from going to cinema.

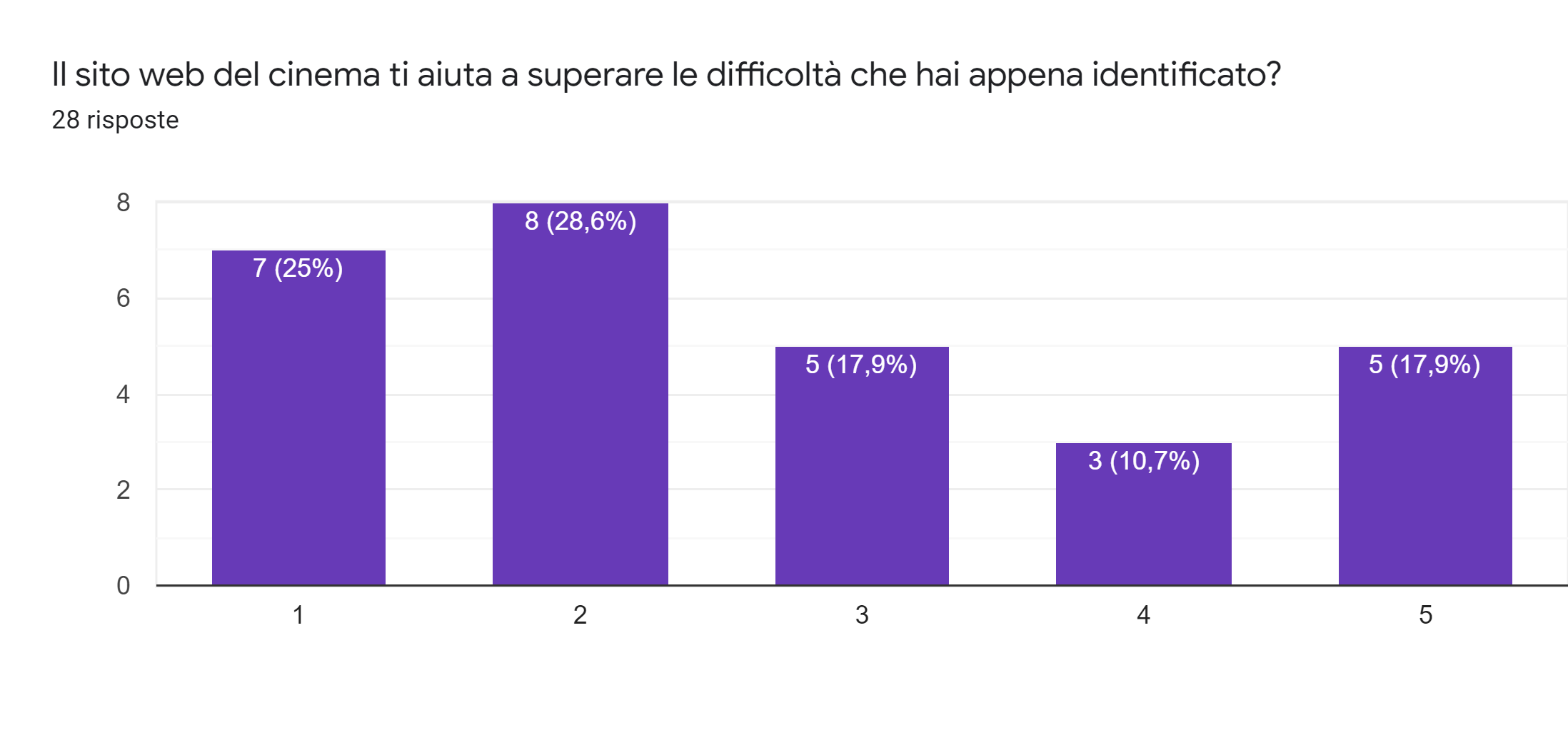
*Do you frequently use cinema websites?* On average they are highly used: 81% of respondents score at least 3 on a 0 to 5 Likert scale. Consulting **scheduling** is the major activity on cinema websites (93% of respondents do it), **purchasing** tickets and searching **costs** information are the second and third major activities with respectively 50% and 46% of respondents performing these actions.





*Perceived problems in organising a visit to a cinema.* Target users highlighted a set of specific activities that represent a problem in organising a visit to cinema. These are: purchasing tickets, finding price information, finding scheduling info, finding location information with respectively 40%, 30%, 25%, 22% of respondents signaling these problems.

*Does the cinema website helps you in satisfying your necessities?* On average cinema websites are not so helpful. 72% respondents score 3 or less on a 0 to 5 Likert scale.Besides location is a major interest of our segment, they usually do not use the cinema website to find the route to cinema.



The **lack of wanted services** and/or the **low clarity** of traditional cinema websites are main reasons behind not using cinema websites or not using their services.

An overwhelming majority of users (88% of respondents scoring at least 3 on a 0 to 5 Likert scale) would definitely buy tickets online **if it was easy** to do.

### 1.2.2 Contextual inquiry

We carried out the CI to understand how the user organizes and interacts with the services offered by cinemas in general, including offline and online tools that they use and issues that might rise. Then we asked for a comment on the Cineteca di Bologna website and the section about Cinema Lumière. The full report is in [Appendix B](#_djp5qg78yym3).

Our objectives for this inquiry were:

* discover how the user organizes the activity of going to the cinema in both physical and digital context and find relevant tasks connected
* to understand if the website is motivating the users to come back again
* find out the causes of their lack of motivation with respect to the digital services provided by our website
* understand what they would like to have in a cinema website (at content and architectural level)
* show the users the Cineteca website and get a first impression (if they get the website scope and the functions available)

We organised our questions into personal ones (related to occupation and interests) and cinema-related ones, asking first how the users plan their going to the cinema and a first impressions of the Cineteca website. We suggested two scenarios to help users imagine real context situations.

Our findings are summarized in the paragraphs below.

#### General questions

We had 3 subjects representing our segment (16, 20 and 23 years old). They are people with quite common and various interests that include both indoor and outdoor activities. They spend on the internet a minimum of 1 and maximum of 7 hours, and divide internet use in study-purpose and entertainment-purpose, mainly using pc for the first goal and the smartphone for the second.

#### Going to the cinema

They enjoy going to the cinema with friends because they enjoy sharing the social and emotional moments before and after the projection, but if they are really interested in the movie they are willing to go alone too.

They all use popular streaming services (eg. Netflix), but they are motivated in going to the cinema depending on:

* the presence of friends
* the kind of movie they are willing to see (eg. they might want to pause and rewind when watching complex or old movies, while cinema is for first visions or commercial movies)

They tend to plan the activity more carefully (eventually reserving the tickets) if they imagine the cinema will be filled with people or if they are with a group of friends, but they usually prefer going to the place in advance being confident to find the ticket (especially during weekdays or when they are alone, but also with friends).

We asked them to imagine a scenario where a movie that they are interested in comes out and they want to go and see it, to understand how they plan the activity.

They all start from googling the movie name and the specific cinema where to check the scheduling: at this age, people are conscious of the movie theaters around their location and look for them specifically. After going on the specific website, they look for times and prices and when they have selected the best option for them (based on these indicators) they share the information with their friends to see if they want to come (if not, they would go anyway alone).

When we showed them the Cineteca website, they all agreed that it was **confusing** and messy, also for one of the participants that is a usual user of the website. They identified different functions but not all of them: for one it was clear that there was a film library, but didn’t understand the presence of the cinema; another thought that the whole website serves to provide information about open air cinema.

We also found out that all respondents expressed a preference on using **mobile phone** in performing these activities.

The older part of our segment (19-24) shows a correlation between PC use for studying or work, and smartphone use for entertainment and relax. Cinema belongs to the latter category. The younger part of our segment (14-18) use the PC a lot less than the smartphone. In both cases mobile phones are the most used devices for cinema related activities or services. In addition to that, our users are not likely to **download apps** if they do not use the offered services frequently, which is generally not the case of cinema (users go to cinema around once in a month).

The key findings of our contextual analysis are summarised as follows.

* *Cinema in general:* Cinema is perceived as a moment of **relax** and escape from everyday life. Going to cinema is an highly **social activity**; in case someone goes alone to cinema is linked to a strong desire to watch a specific film. Genre of the film is rarely a driver for this segment.
* *Cinema websites:* **two main navigation paths** emerge from our segment user: one starting from browser landing directly on the singular film page, the other accessing the home page of the cinema and then starting to navigate it. They want to find what they need **quickly** because they do not want to lose too much time on that.
* *Cineteca website:* results quite **chaotic and inconsistent** to respondents.
* *Online tickets purchase:* When they do not use online ticket purchase it’s because they have an **emotional link** to the paper ticket or they feel like they would find seats even without using an online reservation service. This is not the case when they organise cinema activities within a **group of friends**: in this case, they feel the need to make a reservation.
* *Use of devices:* **smartphones** are preferred to other devices in performing Cinema related activities.
* *Apps use*: they do not use **apps** of things that they do not use frequently, and none of them owns a cinema app.

Something that we discovered indirectly after the contextual analysis is a legal issue within the Cineteca website. It requires registration before allowing the tickets purchase, and the system allows you to register with an email only if you have **16 years old** or more. But the system also gives the possibility to register with Facebook, where there could be people who have less than 16 yo since the legal registration age is 13 years old. This fact could represent a major inconsistency inside the Cineteca registration system.

### 1.2.3 Task analysis

We here identified the context of tasks where our target user might use the Cineteca website. The aim is to observe the sequence of steps and user interaction between the website and other resources (digital or physical).

|  |  |
| --- | --- |
| **Task** | **Sub-tasks** |
| Find a movie to watch | *If the user doesn't know the movie*   1. Open a browser from the phone 2. Search for a cinema 3. Open the cinema website 4. Explore the scheduling section to choose a movie 5. Consult external resources to validate the choice 6. Repeat with another movie or another cinema if not satisfied |
| *If the user already knows the movie*   1. Open a browser from the phone 2. Search for the movie title and a specific cinema 3. Open the movie page on the cinema website 4. Explore the scheduling options 5. Consult external resources to validate the choice 6. Repeat with another cinema if not satisfied |
| Purchase an online ticket | 1. Complete the task “Find a movie to watch” 2. Find the buying option on the movie page 3. Select the wanted number of ticket and time 4. Take credit card if not already saved on the device 5. Confirm the order 6. Register or login when necessary 7. Follow the proposed way to retain tickets (download, email) |
| Find information about films schedule | 1. Open a browser from the phone 2. Search on the browser the wanted cinema website 3. Use home page options to find the scheduling 4. Consult the schedule |
| Find information about cinema extra events | 1. Open a browser from the phone 2. Search for the name of the event 3. Follow the link to a specific website of the event or to the cinema website 4. Navigate the page to find information |
| Find information about how to reach the cinema | 1. Open the browser on the smartphone 2. search the cinema website 3. access the homepage 4. search in the menu the “Dove siamo”/”Location”/”Come raggiungerci” section 5. access the page 6. read information |
| Find information about prices | 1. Open a Browser from the phone 2. Search for the cinema website 3. Navigate the page to find the costs information 4. Disambiguate between different kinds of tickets and promotions |

We understand that not all the tasks identified will be **relevant** for our website design: for example, finding the location is something that is generally carried out without consulting the cinema website. We expect to further understand the the **key features** to include design through the next phase of assessment of existing resources ([Chapter 2.2.3](#_qbh87em329fg)).

# 2. Assessment of existing resources

The website chosen for the assessment is the website of [The Space Cinema](https://www.thespacecinema.it/al-cinema/bologna) Bologna. It is a popular cinema part of a franchise present all over Italy. It’s composed by many theater rooms and is up to date with the latest movies, representing therefore a competitor for Cinema Lumière considering the user target under analysis.

## 2.1 Expert Usability Review

We carried our a review on a possible competitor’s website that seemed to answer our segment needs. We couldn’t find any place that offers all the services that Cineteca has, so we decided to consider the cinema information and ticket purchase tasks as the most relevant for our users and evaluate a website that only offers those cinema services. We considered [UCI Meridiana Bologna](https://www.ucicinemas.it/cinema/emilia-romagna/bologna/uci-cinemas-meridiana-bologna/) and [The Space Cinema Bologna](https://www.thespacecinema.it/al-cinema/bologna). We chose the last one for two reasons:

* due to its location, it is more similar to the Cinema Lumière
* with a first inspection, it seemed to suit better the needs of our segment

After inspection and user testing, we filled in a table with a complete description of all the errors found (see [Appendix C](#_x9wgrodslnmj)).

#### 2.1.1 Choice of guidelines

We chose as guidelines for our review the 10 heuristics of Nielsen and Molich ([here](https://www.nngroup.com/articles/ten-usability-heuristics/) the references). They seemed to be most effective within the strict time constraints given by the client to carry out the project and offered us a very practical way to find the most relevant issues to tackle in our study.

The 10 heuristics are the following, numbered as follows:

1. Visibility of system status
2. Match between system and the real world
3. User control and freedom
4. Consistency and standards
5. Error prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use
8. Aesthetic and minimalist design
9. Help users recognize, diagnose, and recover from errors
10. Help and documentation

#### 2.1.2 First Inspection of the System

The website [The Space Cinema Bologna](https://www.thespacecinema.it/al-cinema/bologna) is owned by the firm “The Space Cinema” and has sub-sections for each specific cinema, identified with the name of the city where it is situated.

The website has a nice and standard structure, up to date with the current website design trends. At a first glance, looks minimal and easy to navigate, since the most relevant topics are highlighted in the navbars.

There are two **navbars** but it’s not very clear what they refer to: one is for the information that are common to all the cinemas of the firm, the other below is for the specific city cinema.

In the general navbar, there are prices, initiatives, links to the app, login, search bar.

In the specific navbar, there are three sections: Info Cinema, Contatti, Prezzi.

The main part of the screen is filled by a **carousel** which shows the most recent information (policies with covid situation), giving the impression that the website is frequently updated and reliable.

Under the carousel, there is a **grid** with schedules movies cards that changes according to a selected day of the week. Minimum information are provided, with the possibility to retrieve more in depth through buttons and link. Clicking on a specific **timing**, the user is immediately directed to the purchase page, which is something that is not semantically declared and might be confusing.

Clicking on the movie title, you end up in the specific **movie page**, which is complete with information like trailer, plot, week schedule and times, and below there is a section “**Film in evidenza**” which shows suggested movies available at the selected theater, which is useful since if you click on a movie and you eventually don’t like it, they immediately suggest what else you could see and avoid that in going back and forth the pages the user decides to abandon the idea to go to the cinema.

To recap, the **functions** available within the system are:

* Tickets purchase
* Providing information about movies scheduling, plot, prices, subscriptions and initiatives
* Personal area through log in with personal information

The main usability **issues** that we identified here are:

* There is no clear and explicit path to buy the tickets
* To see the prices for a cinema you have to download a pdf file
* The filtering function for the movies in the home is not clear
* In the main navbar, *pass card* and *promo* sections are too similar and not clearly identifiable and can generate confusion

#### 2.1.3 Direct analysis: system vs. guidelines

We evaluated each single page of the application to see: violations of the guidelines we chose, how often and with what impact.

|  |  |
| --- | --- |
| **Page** | **Violated guidelines** |
| Homepage | * 2: missing icons and bad metaphor for week days * 3: when being in other pages, there are no buttons to redirect on the cinema homepage * 4: when clicking on the “Prezzi” you have to download a pdf while all the other information were directly readable on the page * 5: the presence of two navbars is confusing. Also, clicking on the upper navbar the user might think to find information related to the specific cinema they selected while they will find general information for the firm. * 7: missing a “Acquisto rapido” for expert users * 8: carousel is too invasive, it provides information and navigation that is not necessary to always have on the whole screen * 10: missing a section with complete information on how to use the website |
| Tickets purchase page | * 1: the timer in the page disappears with scrolling, nothing happens when clicking seats * 3, 5, 7, 9: there is no clear explanation of the correct sequence of steps that are propaedeutic for buying the ticket (eg. very violated when choosing number and place of seats) * 7: alert pop-up when going back slows down the process for expert users |
| Film information page | * 3, 4: if you click “read more” or “tutti gli orari” you can go back with an “x” but it’s not consistent because the user expects a “read less” * 2, 5: clicking on the time you are directed to the purchase page without declaring that * 2, 6: missing clear buttons to purchase and see cinema information, specifically prices |
| Pages in the main navbar | * 4: difference between pass and card is unclear and repetitive * 3, 5: after finding the information, it’s not possible to go back to the exact previous page but you are redirected on another general page * 8: format with big cards requires a lot of scrolling which is laborious |

#### 2.1.4 Reverse analysis: guidelines vs. system

Starting from each guideline, we looked for their violations within the website.

|  |  |
| --- | --- |
| **Guideline** | **Violation page** |
| 1 Visibility of system status | *Purchase page*: it lacks a sort of bar/element that says in which phase of the purchase you are.  *Homepage*: clicking on the carousel is confusing |
| 2 Match between system and the real world | *Page Iniziative*: from the “extra” click I’m not taken to a page with the full programming but to the homepage, I feel the lack of a page with only the movies schedule, without the carousel. |
| 3 User control and freedom | If the time of purchase ends the only thing you can do in the popup is to start again the purchase. Maybe if you don’t finish the operation it could mean that you want to do something else besides of retrying it. |
| 4 Consistency and standards | - |
| 5 (error prevention) | *Purchase page*: necessary to specify the order of the operations or bring together the selection of number of seats and specific seat in the room that can generate errors |
| 6 (recognition) | - |
| 7 (efficiency) | *Purchase page*: necessary to bring together the selection of number of seats and specific seat in the room to speed the process (which also can generate errors) |
| 8 (aesthetic) | - |
| 9 (help recover from errors) | *Purchase page*: there is no order in the selection of seats, if you click the “wrong” thing there is no support on how to exit from the sidebar |
| 10 (help and documentation) | - |

## 2.2 User testing

The object of the testing is the competitor’s website *The Space Cinema Bologna* that we chose for the reasons explained in Chapter 2.

However, we wanted to exploit the testing opportunity to confirm some thoughts about the *Cineteca di Bologna* website too, so at the end of the sessions we asked to perform the same tasks there. This choice was determined by the fact that when redesigning an application (or only a part of it like in our case), the previous version should not be thrown away but carefully analysed to drive the new design choices.

Our **goals** for these tests include to locate purchasing or browsing barriers while participants are performing a task, to determine if the user experience is satisfactory and to identify potential design concerns to be addressed in order to improve the user motivation to use our subsite.

#### 2.2.1 Definition of the testing protocol

We decided to use the so called *guerrilla testing* or ***discount testing*** due to the short amount of money and time available to deliver the project to our customer. This method is definitely less structured and controlled than the *deluxe testing*, however it is not to be taken as a less effective approach: as it will be presented below, it provided extremely significant insights for powerful and new design ideas.

We carried out the tests within the ***thinking aloud***methodology, which consists in asking participants to express their actions and thoughts while they try to complete the tasks within the testing.

These choices were validated after considering the Covid-19 situation, which also led us to conduct our tests exclusively using **remote** screen-sharing technology to avoid any issue with participants safety and necessities.

We will have 3 tests, one for each of the 3 **subjects** belonging to the critical user segment identified through our research. Here are their anonymous profiles:

|  |  |
| --- | --- |
| User 1 | a 24 years old university student of Languages who is very passionate about video editing and YouTube. He has impressive digital competences in this domain and enjoys doing his activities at the PC, however he is also very fond of entomology and spends much of his free time outdoor looking for rare insects. He likes going to the cinema with friends. |
| User 2 | a 20 years old student of Philosophy. His main interest is actually jazz music, and he has been playing for many years as a pianist and organist in various musical formations. He especially loves Netflix series, but he also likes going out to cinema with friends when he doesn’t have to study Plato’s dialogues or a John Coltrane’s solo. |
| User 3 | a 16 years old high school student specializing in Maths who likes playing football with his friends and enjoys reading english books. He watches online series with his younger brother but also likes going to the cinema, both with his friends or alone if he’s very interested in the movie. |

Our subjects will be **introduced** to our research and they will receive all the necessary information about content, structure and goals of the testing.

The interviewer will ask for **permission** to record audio and video of the session, and in the case of the minor (user 3) the consent will be asked in advance from his mother.

After asking some general questions to break the ice and make them comfortable with the situation, we will ask our users to perform the following **tasks**, which resulted from our research to be the most relevant for that specific user segment:

|  |  |
| --- | --- |
| Task 1 | Find information about time scheduling of a specific movie for 3 different days |
| Task 2 | Buy 4 tickets online for that same movie |
| Task 3 | Find information about prices, specifically looking for students discounts |

These tasks will be performed on *The Space Cinema Bologna* website, and after completion participants will be asked to fill in a System Usability Scale questionnaire.

Once this testing phase is concluded, they will be asked to perform the same 3 tasks previously mentioned on the Cineteca website.

Success will be measured through the following metrics:

* **Task completion rate higher than 75%**: completion will be considered as binary data: if the users completes the task successfully they score 1, otherwise they score 0. [Here](https://measuringu.com/task-completion/) some references
* **Error-free rate higher than 75%**: errors will be treated as binary data: the user either committed a least one error and scores 1, or committed no errors and scores 0. [Here](https://measuringu.com/errors-ux/) some references
* **SUS higher than 68%**: scores will be calculated following [this](https://measuringu.com/sus/) report

#### 2.2.2 Tests summary

##### 2.2.2.1 User 1

Hardware used: Macbook Air 13”, 2017

###### Task 1

First, the user consults from the dropdown menu the places where the cinemas affiliated to The Space are active. Then the user looks for the price of the tickets, checking whether it is necessary to download a pdf, but decides to postpone it later.

He then scrolls down to view the films scheduled that day. He uses the shortcut Ctrl + F to search for the title of the film of interest (*Parasite*). He clicks on the “Vedi gli orari di tutti i giorni” button to check that the film is present on the days required by the task (Monday, Wednesday and Saturday). The user realizes that the film is not available on all the requested days.

When asked where the user thinks to find more information regarding programming, he clicks on the box containing the time that leads him to the ticket booking screen.

The task was successfully completed.

###### Task 2

The user navigates the interfaces and reach the scheduling area. He clicks on the wanted time, doing so he accesses the buying area, he does not notice the time limit that the website impose to buyers. He immediately clicks on the option “aggiungi biglietto”. He is confused by the difference between “Vip” and “normal” tickets not understanding their difference. He chooses 4 tickets and clicks “Vai”. The seat selection is now open. After few time he now understands the difference between normal and VIP seats. Select 4 near seats. The user notices the system feedback on seats: each time you click on one of them, the system highlights the selection in the right of the screen with the seat name.  
After the choice he selects “Vai”. He reads the total amount of money skipping the voucher section because he has no discounts and he clicks “Verifica e Prosegui”. He notices the “Condizioni” pdf, he declares that He will not download nor read it. On the recap section he choose to proceeds without login. He put his email address in both the email and confirmation email and select the Card payment. We stops the experiment here because the meaningful part of the task end at this point.

The task was successfully completed

###### Task 3

The user goes directly on the search option, he searches “Studenti” not finding anything, he retries with “sconto” with the same result. Based on the results he think the search bar it used only to find film expressing a bit of dissatisfaction. On the search option there is a text making you think that the purpose of search option is not only limited to movies. After that he starts searching on “Card e Promo”. On the card section he doesn’t find anything interesting, so he visits the “Promo” section. From the 2 options there (Ikea and American Express) he understands that it is not the right section. He goes in the footer section searching for the FAQ section. In the FAQ he express dissatisfaction with the search option without the complete list of FAQs, this fact avoids him to use the CTRL+F option. He spends some time reading all elements but not finding anything that convinces him. He goes on “Iniziative” section but he finds no useful results. After that he goes out of the website to find more information through google. This determines the end of the task that could be considered “not achieved”.

The task was not completed

##### 2.2.2.2 User 2

Hardware used: Huawei P Smart 2019

###### Task 1

He uses the search bar to search for the chosen film (*Parasite*). The user then clicks on the “Vedi gli orari di tutti i giorni” button. The user does not understand why he cannot find scheduling for other days in addition to the two on the page dedicated to the chosen film. He notes also that the site does not have intuitive functions to go back to previous pages.

The task was completed

###### Task 2

He uses the link provided to return to the home page of the site. To find the film, he uses the same approach shown in Task 1. The user then selects an available date by opening the ticket booking page. He easily clicks in the section to add / remove tickets and finally arrives on the section to select seats. The graphical interface for selecting places is not clear to him and the user says he does not understand which places are available. Interacts with the interface and then click on the “Vai” button. In the next section, he chooses to continue without registration by entering his e-mail address. He then completes the verification steps successfully.

The task was successfully completed

###### Task 3

The user clicks on the hamburger menu, then selecting the “Card e Promo” item. Quickly reads the descriptions but sees nothing in reference to the task object. Return to the menu and select the “Iniziative” item. Finally, he uses the site's search bar by entering the “Student discount” query without finding any results. The user declares that he is unable to complete the task.

The task was not completed.

##### 2.2.2.3 User 3

Hardware used: iPhone 7

###### Task 1

From the **homepage**, he scrolls and looks for the movie. He finds it, clicks on “Vedi gli orari di tutti i giorni” and goes on the specific **movie page**. He sees it’s on only today and tomorrow. Not finding the other requested days, he tries to find the information somewhere else, not understanding whether the movie is actually only available today and tomorrow. So he clicks on “**Acquista ora**” to find the timings, and gets anxious for the message “Stiamo preparando la tua transazione”. He comments that the page has some lag. He cannot find the timings and confirms that he cannot complete the task. He says he would contact the cinema to get these information.

The task cannot be completed due to the following errors:

* clicking on “Acquista ora” to find information about timings is a desperate jest

###### Task 2

The user follows the same procedure as the first task to find the movie. Once he arrives on the **movie page**, he understands that clicking on the timing he will be able to purchase the tickets. He is concerned for the message “Stiamo preparando la transazione”. He clicks on the second action available “Scegli i tuoi posti” on the interactive map, skipping the selection of “Quanti biglietti”. The button to confirm the selection “Vai” confuses him because he thinks that he will be directed to the payment page. Scared by this, he goes back to the purchase page, but in the meantime the time for the purchase is finished so he has to start all over again.

He repeats the action “Seleziona posti” but he feels frustrated, he clicks on the seats but the selection in not accepted and he doesn't understand why. He tries for other 2 minutes and then gets stuck. Then he goes back to the purchase page and selects 4 of them. The “Scegli i tuoi posti” map appears but he thinks it will not work and would contact the client service. Then he tries to select the seats anyway and proceeds with “Verifica e prosegui”. He changes his mind on contacting the client service. To go on, he feels more safe through a login with a registered profile but he doesn't feel like doing it now and he proceeds “Senza registrazione”.

He can complete the task with an excessive amount of time and some errors:

* skipping the first action suggested in the order
* misunderstanding the function of the “Vai” button

###### Task 3

From the homepage, he clicks on the hamburger menu and then on “Card e Promo”. He scrolls and skips “Card” but clicks on “Promo”. He understands that the page is not useful. He clicks again on the hamburger menu and then on “Iniziative”, where after scrolling he doesn't find anything related to students discounts.

He then tries to use the Search button but it doesn't work. He says it’s not possible to find this information.

He cannot complete the task due to the errors:

* In the smartphone view, the navbar with “Tariffe” disappears and there is no other path to get there

#### 2.2.3 Analysis of subjective and objective data

From these interactions we derived the following key features to include in the website design:

* Utility navigation (hamburger menu with more information)
* Search bar
* Select directly movie seats
* Sign in / login
* Promo section

Task-completion rate is 44%

|  |  |  |  |
| --- | --- | --- | --- |
|  | User 1 | User 2 | User 3 |
| Task 1 | Completed | Completed | not completed |
| Task 2 | Not completed | Completed | completed |
| Task 3 | Not Completed | Not Completed | not completed |

Error-free rate is 33%

|  |  |  |  |
| --- | --- | --- | --- |
|  | User 1 | User 2 | User 3 |
| Task 1 | no errors | no errors | critical errors |
| Task 2 | critical errors | no errors | non-critical errors |
| Task 3 | critical errors | critical errors | critical errors |

SUS is 63% ([here](https://docs.google.com/spreadsheets/d/1QFDmmGPaBsofcTOV9gt7QxS1L1-roYzvON68xTpLGpE/edit#gid=1819742989) all the scores)

#### 2.2.4 Urgency Curve

We used an urgency curve to understand how to prioritize system usability issues. The curve was determined after user testing and considers only those errors that are relevant for tasks made by the users: we will not consider all of the inspection errors identified in the expert usability review. The complete list of errors is presented in the [Appendix C](#_x9wgrodslnmj).

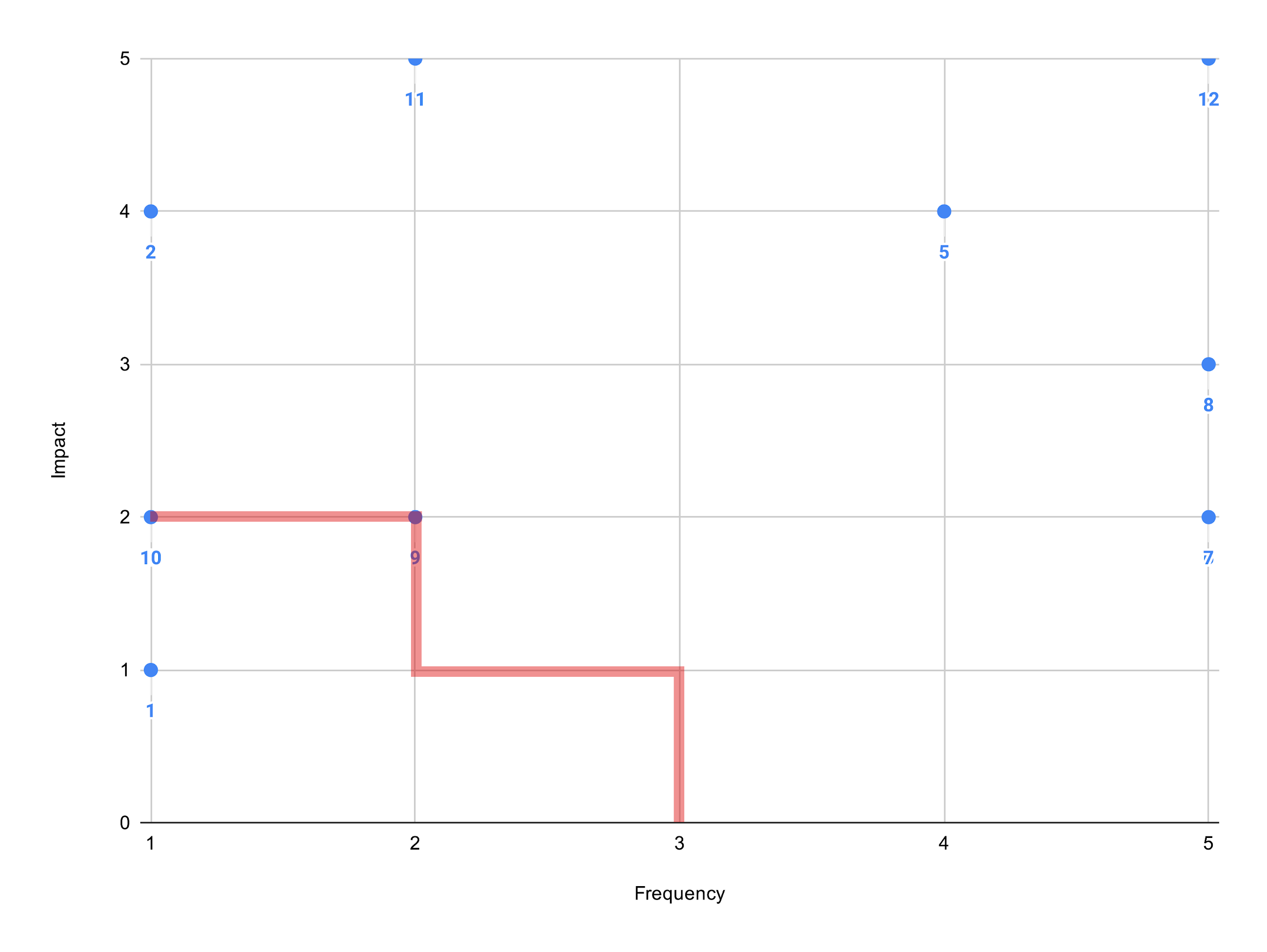
Errors were evaluated through both the Nielsen Severity Scale and individual factor scale to provide reliable data.

Nielsen Severity Scale is a unidimensional scale that has a range of 5 points from 0-4:

* 0 = I don't agree that this is a usability problem at all
* 1 = Cosmetic problem only: need not be fixed unless extra time is available on project
* 2 = Minor usability problem: fixing this should be given low priority
* 3 = Major usability problem: important to fix, so should be given high priority
* 4 = Usability catastrophe: imperative to fix this before product can be released

However, severity is a multidimensional construct, and this is poorly addressed in the scale: even if Nielsen advises to take the three factors of frequency, impact and persistence, the tendency is to provide only one overall rating. For this reason, we also assigned a 5-point range value to frequency, impact and persistence specifically, from very low to very high.

We then created the urgency curve based on **frequency** and **impact** and we placed the **threshold** very low, because the tasks are so simple that we want them all to be completed successfully.



# 3. Feasibility Study

### 3.1 Context of use

#### 3.1.1 Users

Our users are young people between 14 and 24 years (gender is not relevant) who go to the cinema between 1 and 3 times per year. They live in the metropolitan area of Bologna, they are university students, high schools students or even workers. These users, as pointed out by the Google Forms results ([Chapter 1.2.1](#_n4pyuweoixwr)), strongly rely on the cinema website and the most important factors affecting their decision to go to the cinema (*motivation*), are ticket **prices** and the company of **friends** to go with. Going to cinema is an activity to break the routine off and stay with other people, but also as a way to feel new experiences and makes new thoughts thank to the film. These users also value the cinema location and easiness of reaching it and the presence of a bar or a restaurant.

The presence of **art house** films or film in original version are not attractors, but there is no evidence that they move away users from the cinema.

These users tend to be organised and consult the **website** at least sometimes primarily to check the film schedule, find prices information and to buy tickets online. Unfortunately, many of them cannot find solutions to their problems through those websites. For this reason, they often rely on social networks, apps and specialised website to achieve their objectives.

About online tickets **purchase**, many of them already tried it with successful results while others have never tried because the service was not available, but they would do that if the process was easy and intuitive.

Their **desire** is to be able to get complete information about prices and scheduling through a website with a clear architecture and features.

They prefer to use the phone to search information about the film and they decide quite quickly if to go to cinema and they search immediately clear information. If they have already the film in mind they search directly on the browser its name with the city or the wanted cinema. Otherwise they first go on the cinema homepage to see what’s available.

From al these elements we thought that our users wants mainly 3 types of information:

* Finding film scheduling
* Finding costs and prices
* Finding film plot and related information

They express the desire of finding wanted information quickly and not spending too much time in searching nested elements.

Even if they are not art house-focused users, 14-24 years old category shows to be very curious and willing to understand their world through movies, cinema has a fundamental social role that is generally a stronger attractor than the movie genre.

They mainly uses smartphone to search these information, due to the social and relaxation role of cinema they don’t like spending too much time in understanding the system. They don't have a special place or time to perform the above activities, they could do it in a study break at home or even during lessons at university. The organisational pipeline is typically made of some steps:

* they find an interesting film or they feel the desire to go out
* they search information about the film (plot, schedule, price of the ticket)
* they contact their friends to organise
* if noone is interested but they are they go alone
* They purchase the ticket online or decide to buy it on-site

There are not particular technical constraints besides the presence of a stable internet connection and the payment method. There are no relevant **environmental constraints** because the service is usable both in a domestic environment and outside.

There is finally a **legal constraint** to be aged more than 16 years old to register on the website. However, users between 14 and 15 years old are still to be considered in our design: they could be able to carry out the purchase process with the approval and/or help of an adult who owns a profile.

### 3.2 Scenarios

#### 3.2.1 First scenario

*Who*: Claudia

*Where*: in her room

*With whom*: with her friends on WhatsApp

*Device*: Android smartphone

It’s September, Friday 18/09/2020, Claudia has just learned that her friends will be back in Bologna in a week at least.  
She is a young 22 years old students coming from Bologna. She is waiting the return of her friends from their home to begin the new academic year. Sometimes (2-3 times per year) they go to the cinema. Claudia comes from a working class family so even if her family is not poor they rely on scholarship to pay university expenses. Claudia is very careful in not throwing away money.  
She knows from her mother that the film *Piccole Donne* is actually on Lumière Schedule. Before proposing her friends to see the film she wants to understand if there are students and/or group discounts. She knows the cinema, but **she has never gone there** to watch a film so she doesn’t know the prices.

She browses on her phone “Cinema Lumière”in order to find more information. She goes inside the website, she looks at various options of the homepage and then she choose to visualise the costs option. After a quick look on the phone she reads that Lumiere provides a discounts for students, but also a special lower price for art house films on wednesday. **Happy with the results** she exits the website and she writes to her friends on Whatsapp proposing to go to Lumière to see *Piccole Donne* saying that there is the students discount, she also suggests to go there on wednesday pointing out that the ticket will be even cheaper.

#### 3.2.2 Second scenario

*Who*: Giovanni

*Where*: around the city center

*With whom*: alone

*Device*: iPhone

About half December 2020: Giovanni is a 19 years old offsite student of DAMS at university of Bologna, he comes from Marche (Pesaro Province) and he is at the first year. He is very interested in art house film genre, some of his friends at university told him that Lumière is known to be a very good art house cinema. He doesn’t like to go to cinema with his friends, he considers the film experience a personal one to be carried out alone.   
When he looks for a film he looks for detailed information about the author, the subject, the plot and even the review of the film from various cinema blogs like ComingSoon. If the film convinces him he is able to buy it on the fly due to the moment excitement.

Walking in the streets of the city center of Bologna, he reads a poster about Cinema Lumière initiatives. Curious about Lumiere he searches the website on the web and visits the website of the cinema. In the homepage he founds preliminary information about the scheduling, then he decides to visit a specific film section that intrigued him, *Casinò* by Martin Scorsese. He learns about the plot, the length and, through a subsection, more technical information. Excited by the film he quickly decides to buy on ticket for the after dinner of the same day. He **uses the purchase function** integrated in the film information page.

#### 3.2.3 Third scenario

*Who*: Carlo

*Where*: at home

*With whom*: his girlfriend

*Device*: Windows PC

Beginning of February 2021.

Carlo is a young 17 years old guy from Bologna. He lives in the Bolognina area and he is doing the third year of an informatic ITIS. He comes from a working class family: his mother is a OSS and his father is an electrician. His family has not a strong cultural background and Carlo himself is not particularly interested in art house cinema. Even if he is open minded and curious, he would never go on his own to a theater like Lumière.

However, Carlo has a girlfriend, Malena, of 17 years old. She goes to Liceo Classico and she reads a lot, especially classics and romance novels. Carlo wants to buy a special St. Valentine's present to her, so he thinks to book two tickets for a film (sono in treno, trovate voi il film) aired at Lumière. He doesn't know anything about the domain of cinema, but he wants to make her happy choosing the something that reflects her interests.

He starts browsing on the web in order to find the website of Cinema Lumière. From the homepage, starts exploring the film schedule. He hasn't a deep knowledge of cinema so he doesn't read too much information and is mostly captured by the movie poster. He clicks on one image to find more information, he is not satisfied with this film, so he select the "go back option" to return to the previous page. He finds another film and when he reads the description he thinks it could be the right one. He choose the purchasing option and select 2 tickets, one for him and one for her girlfriend. After the selection he finishes the operation paying the tickets.

### 3.3 Personas

#### 3.3.1 Giovanni Bruno: the romantic classicist



|  |  |
| --- | --- |
| **Name** | Giovanni Bruno |
| **Age** | 19 |
| **Favourite movie** | *The Passion of the Christ* |
| **Family and financial situation** | Upper middle class family  Elder Brother: Francesco, 23, studying biotechnology at Fano  Mother: Cristina, 50, accountant diploma. Working part-time for a fashion firm as accountant.  Father: Federico, 55, Master degree in Economic Science, mid level employee at “Agenzia delle Entrate”. |
| **Occupation** | Off-site student of Humanities at University of Bologna |
| **Location** | Bologna (for University), Rimini (birthplace) |
| **Personality** | Introvert, he has few very loyal friends  He doesn’t like **crowded places**, he could choose to not going somewhere if he knew that there would be chaos. He is a very quiet person.  He is **very organised**, he schedules each sunday his week making. He makes a lot of pressure on his friends to be organized too.  Very emotional in romantic relationships: he is traditional.  Very jealous of his spaces and things.  He is a bit unconsciously classist. |
| **Interests** | Ancient Literature  Romance Novels (he tries to hide this passion to everyone else)  Music (Franco Battiato and Dire Straits)  **Cinema (amateur interest)**  Idealist philosophy  Cars (unexpected)  Museums and exhibitions |
| **Typical day** | He wakes up early in the morning to enjoy the loneliness and the silence of the house, where he lives with other 5 students. Then he goes at the university by foot, listening to his favourite Dire Straits playlist. It takes 35 min to arrive. Then he sits alone in the last row of the seats, keeping the headphones on to avoid contacts. For lunch he decides to meet a friend from another faculty in a garden close to the building and eat the food he brought from home. They have some small talk on exams, housemates issues and future careers. He is quite scared of the future. In the afternoon he decides to escape the romance philology lesson and have a tea in a bar reading a book. After some time, a group of noisy people interrupts his flow, so he decides to call a friend to spend the rest of the day before dinner. His friend René is a cinema lover and wants to see an horror old movie. Even if in the afternoon there is very few people at the cinema, Giovanni **books the tickets** because he doesn't want to worry about anything. Since they already have the tickets, they wait until the very end to enter the theater room and spend some time drinking beer at the cinema bar. Giovanni gets bored with the movie, but some scenes really capture his attention and later in the night haunt him. |
| **User goals and necessities** | He wants to become a high school teacher and buy a Volkswagen. But his wildest dream is to find a girlfriend with his mindset. He always wants to have an **ordered schedule** and **avoid** any kind of **confusion**, but he also wants to break the routine off 1-2 times a week.  When using cinema websites, he needs to **find information quickly** and wants **advanced filtering options**. |
| **Frustrations** | Not being able to connect with other people physically, find others to be not organised as well as him, be forced to stay in crowded areas, unexpected events.  He hates when movie websites have **poor information about movies**. |
| **Tech skills** | Good ability in **internet navigation,** expert in **online purchase,** no programming skills but knows some markup languages |

#### 3.3.2 Lucia Peruch: the plucky traveller



|  |  |
| --- | --- |
| **Name** | Lucia Peruch |
| **Age** | 23 |
| **Favourite movie** | Dragon Trainer |
| **Family and financial situation** | Only child  Motherless: she died due to cancer 5 years ago  Father: Luigi, 50 years. employee in private sector.  Their economical situation is jeopardized by the death of the mother. Their Isee is between 15000 and 20000. They use Ergo scholarship to pay university expenses |
| **Occupation** | In site master Student of “Finanza, intermediari, mercati” at University of Bologna, during summer she works in the Riviera Romagnola |
| **Location** | Bologna, Via Leonetto Cipriani |
| **Personality** | She loves quarrels and discussions where destroy her opponents with strict logic and facts. She could defend arguments that she doesn’t share only to discuss.  She is very **open minded** from sexual and individual rights point of view. She is **curious** and loves to try new experiences, places, food and games  She loves extreme sports and defines herself as “meme queen” (she loves black humor, but she doesn’t admit it is a way to exorcise the death of her mother).  She has a simple and **linear way of thinking**, and she is also very honest: she hates doing things behind someone back.  Besides acting independently she doesn’t like individualism and she’s not competitive at all. |
| **Interests** | She likes music (trap) and **going to the cinema** with her friends (even if she doesn't really have a structured culture about it).  She is interested in international economy and geopolitics and she loves travelling to new places to exercise her foreign language competences. She enjoys jogging and other kinds of physical activity. |
| **Typical day** | She wakes up at 8 a.m., she has breakfast, at the same time she usually watches video on youtube or listen news of the day.  She goes to university by bus reading posts on Irreverent Italian Community meme group. She starts a quarrel if she see someone saying what she think being a bullshit. At university her focus changes a lot based on the subject of the lesson. She is very focused during math lessons in order to understand everything, during law lessons she makes meme on her PC or she reads new articles from Rethinking economics or other economical heterodox blogs. During lunch break she goes back home, she is alone because her father is at work. She goes back to university where she stay until 6 p.m. If it’s friday she goes with friends to *Lupulus* where there is cheap spritz, during other days she goes back home where she helps her father cooking and reorder house. She usually doesn’t go out with friends during week preferring the weekend, but sometimes she goes at cinema on **Wednesdays** when **cinema** is cheaper. She doesn’t have a preferred Cinema. She always looks for **discounts**. When she stay at home she refines her memes or makes new ones or she search new trap tracks or she reads economy books. She goes to bed usually between 11 p.m. and 12:30 pm. During weekends she goes back home at 2-3 a.m. |
| **User goals and needs** | In the future she wants to have some financial stability to travel around the world: her next trip will be the Transiberiana railroad.  At the same time, she also wants to have a family (but without giving up a possible career in university) with a dog and a housemaid that does the houseworks. She will keep studying to fight inequality  **Needs motivation from friends and family to catch a movie, unless there is a promotion.** She wants to find clear and immediate information about **prices** and **discounts** and less information about movies and cast. |
| **Frustrations** | She hates doing houseworks and generally doing something that makes no sense for her.  She hates close minded people, especially boomers who have prejudices about young people.  She also struggles with financial problems, and is frustrated when she finds too expensive things that she likes.  **Movie websites have online booking fees** |
| **Tech skills** | She has no hard technical skills: she has good **proficiency** in using **browser** and some amateur graphic skills: Illustrator, indesign, Photoshop (cracked) |

#### 3.3.3 Brenno Baldini: the bad guy



|  |  |
| --- | --- |
| **Name** | Brenno Baldini |
| **Age** | 15 |
| **Favourite movie** | Ip Man (series) |
| **Family and financial situation** | Simona (mother), 35, secretary in a dental office; Elena (grandmother), 72, tailor in retirement. Due to economic hardship, they live in a popular house. Grandma takes care of all the household chores. |
| **Occupation** | Student in a vocational school. |
| **Location** | Bologna, Pilastro |
| **Personality** | Brenno is an impulsive and abrupt boy. It is very difficult for him to express his feelings and thoughts in an orderly way, and he often prefers to resort to striking and aggressive gestures. Despite this, he can be very sincere and outspoken (even too much) with both his peers and adults. This behavior causes him many troubles, most of them in his school environment. |
| **Interests** | Brenno's main passion is martial arts in all their forms, but mainly MMA and Jujutsu, of which he follows lessons in a gym in his neighborhood.  Despite the constant difficulties in the school environment, Brenno is secretly passionate about fantasy and science fiction. he is in fact an avid reader of pulp novels and comics and loves to watch animes. Unable to afford the purchase of these items, Brenno often resorts to neighborhood libraries or piracy sites.  He is also very involved in the rap, hip hop and trap local scene, which he follows in person or through social networks. It seems to him that the messages conveyed by these musical genres speak directly of his existence, of the brutality of neighborhood life, hardships and of broken dreams. His favourite artists are Noyz Narcos and Massimo Pericolo. |
| **Typical day** | When he doesn't skip school with his few friends to go graffiti, skate or smoke marijuana, Brenno leaves home at 7.40, after having a bitter coffee. He takes his bike and heads for school. At school Brenno is irrepressible: he is hyperactive and has attention disorders. It often happens that he is sent out the door or takes disciplinary notes because of his short temper and insults directed at other students or teachers. Everyone fears Brenno. The only lesson in which he seems to return quietly is Literature, which he listens to with deep and drawn participation. After school he often stops to eat at the home of his dearest friend, Nabil. Nabil's mother prepares delicious typical Moroccan dishes. Nabil is a reserved and silent type, but a real hot head. In fact, after lunch Brenno and Nabil often go out to make disasters for the neighborhood, other times they spend silent afternoons smoking and talking about rap music. On Monday, Wednesday and Friday he follows MMA training in the gym with Nabil. The coach, Franco, featherweight boxing champion and ex-truck driver, is like a father figure for Brenno. In these days he is having late dinner with his mother, otherwise he eats dinner with his grandmother Elena. In the evening, he often watches martial arts movies or anime in streaming, or writes lyrics for his own songs. In the **weekend** he often goes to rap concerts or to the **cinema** with Nabil when there are **discounts**. |
| **User goals and needs** | * Be recognized as a rap and martial artist with the moniker of Samurai Champloo. * Be rich and buy a huge house with swimming pool for himself and his family. * **Retrieve information about movies** and gigs through unofficial channels (e.g. social network advertising). * Catching all the last-minute **discount** for events. * He relies on **others** to get tickets for events, he doesn't like to do it in first person |
| **Frustrations** | * Due to **attention disorders**, Brenno has always been followed by a support teacher during his school career and this has always made him feel different and uncomfortable compared to his peers. * For the same reason, he grows angry when he’s unable to **complete a task** that is connected to reading or writing (e.g. texting, searching for something on the Web). * Demonstrations of weakness. He hates his mother when she cries. For the same reason, he hates losing a spar. * Talking in public (e.g. in front of the class), **by telephone**, or expressing his own point of view in front of **unknown people**. |
| **Tech skills** | Average proficiencies in using smartphones. He **doesn’t own a PC**, and so is unable to solve the most basic tasks with it. Basic knowledge in software for audio recording. |

#### 3.3.4 Alma Mercuriali: the social intellectual



|  |  |
| --- | --- |
| **Name** | Alma Mercuriali |
| **Age** | 21 |
| **Favourite movie** | Stalker - Andrej Tarkovskij |
| **Family and financial situation** | Carlo (father), 67, civil engineer in retirement; Cristina (mother), 61, housewife; Giacomo (twin brother), 21, student at University of Forlì in Intercultural and Linguistic Mediation; Diego (brother), 31, film restorer at Cinema Ritrovato. In a relationship with Pietro, 27, a new media artist based in Milan.  Thanks to Carlo's retirement benefits, the family's economic situation is medium-high. In addition to the residence house, located in a beautiful village near Forlì, they also own an estate in the hills where the father invests most of the savings. |
| **Occupation** | Student at the University of Bologna in Humanities, babysitter, private lessons |
| **Location** | Bologna |
| **Personality** | Extremely intelligent and rational, she has a very **analytical and critical mind**. Despite this, she often gets entangled in her own thoughts, ending up becoming hypercritical with herself. She often feels guilty for other people choices and blame herself for what goes wrong around her.  She discovered a form of attraction towards cinema thanks to his older brother, Diego, who works as a film restorer at the Cineteca di Bologna. She is also very patient, and this allows her to appreciate "slow" art forms such as **authorial cinema** and poetry, which require precise and constant interpretation. |
| **Interests** | * Russian poetry and films * Fashion * Writing poetries * Probably because of the Catholic heritage of the family, she has developed an ambiguous form of attraction for all cultural forms of connection with transcendence. * She loves to study Christian writers and apologists and is making her dissertation on the life of san Francesco. |
| **Typical day** | Suffering from insomnia problems, she cannot sleep more than 5-6 hours a night and this allows her to wake up almost always around 6 in the morning. When she is at home and is not in Bologna for university, she loves to prepare breakfast for her family in absolute silence. She leaves home at 8 to go to the faculty by choosing a longer but scenic and peaceful path that allows her to sink into her thoughts without being disturbed. After morning classes, she often meets a group of student friends in a small park, with whom she discusses about the latest readings, foreign politics or the latest underground fashions. In the afternoon, before returning to class in the afternoon or going to study, she calls her grandmother with whom she has a very close relationship on the phone. After a dinner or a quick drink with friends, she loves to reach his brother Diego in **Cineteca**, when he has the night shift. She often spends the whole night with him watching him while restoring the films, learning silently. Alternatively, she often organizes cine forums at her apartment or goes to the Cineteca if there are **films that are particularly interesting** or that he has never seen before. |
| **User goals and needs** | Moving to Milan and work as a screenwriter for indie movies while writing movies reviews with Morandini. She wants to be recognised as an **intellectual** by an inner circle of people she has in great esteem.  She always needs sources of information and **unusual stimuli** regarding movies and literature connected to them. She also looks for a cinema that holds different kinds of **events** to network with people with same interests. She also wants a clear understanding of **weekly movie programming** and a fast way to book seats for events. |
| **Frustrations** | * Appear trivial when expressing her own thought about something. * She tends to blame herself when she fails in something. * Feeling bad living with her own body; she suffers for food disorders and her parents doesn’t know that. |
| **Tech Skills** | Basic knowledge of MacOS and iOS environment, mainly **Android user**. Proficiency in using Adobe Suite. |

#### 3.3.5 Lara Baldhi: the fierce queen



|  |  |
| --- | --- |
| **Name** | Lara Baldhi |
| **Age** | 17 |
| **Favourite movie** | Lady Bird |
| **Family and economical situation** | Her family moved from Lebanon before she was born and started a catering activity in Modena. Her father and mother (very young, around 40) work night and day to provide pastries to most bars of the city and are very nice and beloved people. Lara has a younger brother and an older sister: they fight all the time and make their parents angry. |
| **Occupation** | Language high school student |
| **Location** | Modena |
| **Personality** | She was victim of racism when she was younger, and this condition eventually put her on a path to positive self-consciousness. Now she is fierce, strong and has developed a leading personality. |
| **Interests** | * Trap music * Netflix binge worthy series * Partys * Play tennis * Memes |
| **Typical day** | She goes out early to get the bus to school. She meets outside with her friends and they sometimes have breakfast at the bar and smoke a cigarette. During classes Lara has her head in the clouds and is often scolded by the teachers. After school her father or mother arrives to bring her home, where Lara has to cook for her brother. She doesn’t enjoy cooking so she goes for a pasta al pomodoro. In the afternoon she does some of her assignments for the following day with a friend on the phone. When they finish, they decide to get a train and go to Bologna. But when they arrive it starts raining and they have to sit inside a bar. They eventually get bored but they don't want to go home, so they decide to check for the schedule of the nearest cinema and go there to spend the rest of the evening. Lara **carefully chooses the movie**. |
| **User goals and needs** | Be independent from her family and go to live in Germany, where she will find a guy that loves and respects her. She needs someone to help her pass school exams with minimum effort  She always needs to **eat** when she’s at the **cinema** and before going, she looks for every possible **review** of the movies on popular platforms. She gets captured by the cinema website when it has **complete information about movies**. |
| **Frustrations** | She carries the weight of inheriting the family activity, the boys around her are silly and only care about physical appearance. Has difficulties in reading the legends when **booking seats** and in selecting seats due to availability. |
| **Tech Skills** | Social media expert |

# 

# 4. Design Proposal

In adopting a design model, we preferred the approach suggested by CAO=S model, as appropriate in relation to the resources available for the project and in order to embed goal oriented design within the system.

## 4.1 Information Architecture

In this phase we will analyse how relevant information items are related to each other: we want the users to be able to find the information they seek through a clear pathway. We will structure and organize information, classify and label them so as they will be findable, and connect them through a navigation system.

In particular, from the results emerged from the Expert Usability Review conducted on the competitor service The Space Cinema, the tests highlighted these major problems that need to be solved:

* The ticket booking function is accessible only through an item (i.e. a button with programming date and time) that is not representative of the service and can therefore make the execution difficult and less efficient for users.
* The interaction with the graphic interface for seat reservations is not explicitly linked to the previous selection of the number of tickets. Explaining this constraint in a clear information item would make the process more immediate and less frustrating.
* Pricings are not clearly visible, and become accessible only through a series of very specific and consequential operations. Furthermore, the price list cannot be consulted directly on the site, but via a .pdf document, which may not be easily consulted by all users.

Our design proposal should tackle these problems first of all, based on some general assumptions:

* **Structuring and classify information**: Some of the information on the site is pretty specific, e.g. movie pages. The main categories in which information can be semantically divided are Scheduling, Pricings, Bookings and Events.
* **Findability**: most of the problems emerged from the EUR concerned findability. In our design we will develop strategies for make contents easily findable and manageable, also encouraging serendipity.

### 4.1.1 Information ecology

We have chosen to integrate the information ecology model of Davenport and Prusak so as to take context, content and users into consideration in the information architecture design process.

#### Context

The social context of our service is located within a cultural domain whose focus is on proposing a curated selection of filmographic content within isolated projections and/or events. The information contained in the subsite must therefore be organized around the definition of a strong identity message on the mission of the Cineteca as a cultural institution.

The institution's specific business context revolves around the presale of tickets for the shows it offers, as well as the dissemination and promotion of the events and shows that are part of the programming. The vocabulary and structure of the ancillary site will therefore be conditioned by these factors: the style will be concise in the sections concerning ticket booking, rates and programming, while it may be more narrative and articulated in the sections regarding films or events.

#### Content

The contents of the ancillary site are provided by the Cineteca itself, starting from the programming, pricings and film files. Any additional material (such as reviews, billboards for events, etc.) will be produced by domain experts on behalf of Cineteca. The ticket booking system may rely on a third-party server-side platform.

The main formats for the transmission of information will consist of a large textual part, accompanied by images for descriptive purposes (e.g. film files) and videos in the case of film trailers.

The level of granularity of the information is medium, since although the request for information is easily satisfied and available, a degree of specificity is still required to provide adequate content for the film files.

The volume follows a constant trend provided by seasonal and weekly calendar determined by the programming and choice of films. Extra events could increase the volume significantly. Moreover, content is constantly updated with respect to the aforementioned calendar.

#### User

Our users, given the results obtained from ethnographic research, are divided into regular and occasional users. The former, driven by a specific interest in the domain, are mainly interested in the ecosystem offered by Cineteca and Cinema Lumière, while the latter use the services of the Cinema Lumière platform on an ongoing basis to meet extemporaneous needs.

The information need of our users can therefore be divided into two main categories:

* On one hand, we have users who are looking for particular information regarding the programming of a specific film or event promoted by the Cineteca and the Cinema Lumière in particular;
* On the other hand, we have users interested in exploring the system driven by a general curiosity (e.g. regarding the films being programmed, without a particular object in mind). Occasional users or new users also fall into this category.

### 4.1.2 Components

We have chosen to adopt a **top-down information architecture design approach** as it reflects the conceptual categories contained in the tasks we have outlined. In this approach, each thematic category will respond to a specific user need, which will find more and more specific content as it selects the items concerned, up to the atomic elements.

#### Browsing aids

The navigation system of the mobile device will consist of an hamburger icon without text support. This icon has the function of calling up a window containing the items concerning the outlined macro-categories. The contents of the site will be grouped by thematic areas and each of them will respond to one of the main functions outlined in the tasks. The hamburger icon in the top navbar will also be accompanied by a useful icon to access the user profile and, finally, the company logo, in charge of redirecting the user to the homepage.

#### Search aids

First of all, we’ve built two search paths starting from different user perspective. On one hand, an user may want to look at the available movies only knowing a date or a time slot in which he can manage to go to the cinema. On the other hand, a user knows a precise movie he wants to see but he doesn’t know scheduling time.

We’ve built a two-level search aids system that allows modular management of the different needs of the two type of users profiled.

1. A *filter system* tackles the first kind of user: this system works in consecutive steps and concerns the selection of the day and time slot, which will then return a refined list of objects (the films). A further advanced filter system allows the user to limit the selection based on the rooms, the presence of subtitles or events.
2. A *search bar*, placed in the top navigation bar, allows a user to perform a query based on the movie’s title. Technically speaking, the search methods for contents are simple, because they would have required an unjustified cost for development. The search result is not boolean, but based on assigning a score based on the similarity between the query and the data, in order to prevent typing errors, therefore an attempt is made to increase tolerance for errors. The platform, it is assumed, will not boast a very high number of articles, so a search will never produce too many results. In any case, the number of results shown is limited based on the score, of a fixed value, of similarity with the query. In case the query produced only one result, it would be directly shown. If the comparison based on the score does not produce results, an error is returned (e.g. “Nessun risultato trovato”). Moreover, recent searches and autocompletion functions are implemented to ease the user query formulation.

#### Contents & Tasks

* *Images and icons:* the icons use universal and immediately understandable symbols regardless of the context of use, such as the hamburger menu, the user profile icon and those concerning the filters and searching functions.
* *Titles and subtitles:* the typography of the site uses hierarchical formatting (titles, subtitles, paragraphs and links). The line spacing is sufficiently abundant to allow easy reading, while it has been chosen to use a font without graces to ensure maximum usability.
* *Text chunks*: the text is divided into atomic (paragraphs) and responsive elements that never overflow from the interface of the device on which the site is displayed through a retractable dropdown system (where necessary).
* *Identifiers*: Orientation is managed through a simple system of labels containing the page title and a button to go back.

#### Invisible components

* In the final implementation, a back-end server and database or API will be required to manage and archive the ticket booking transactions and user profiles.

### 4.2 CAO=S model

We decided to use CAO=S model, which is a simple goal-oriented approach to UX design that allows us to integrate personas and use case scenarios with the information architecture concepts. CAO=S brings together 4 different components:

* **Concepts** are the types of information as perceived by the user. Issues emerge when the concept and the structures do not adhere.
  + **Problems and solutions**:
    - *standardization*: direct actors choice is more important than others,
    - *lexical*: find term acceptable to all, clarify differences,
    - *conceptual*: not use that word, disambiguate,
    - *polysemy*: never use that word, use synonyms.
* **Actors** are users defined through 6 simple universal criteria: technical competence, domain, linguistic, physical ability, motivation, concentration. Actors are not personas, in that they are not differentiated for their own characteristics but for the type of interaction that they have with the system.
* **Operations** are the actions that users would like to do with the concepts. There are 4 types of operations: *create*, *view*, *update*, *remove*.
* **Structures** puts together these concepts to understand the best structure to use for the interface and navigation design. It will be possible to use:
  + *Views*: display screens of properties of the concepts;
  + *Data Structures*: patterns for the persistent storage of concepts properties;
  + *Navigation*: mechanisms for navigating from one view to another.

#### 4.2.1 Concepts

The concepts identified in this design proposal are:

|  |  |  |  |
| --- | --- | --- | --- |
| **Concepts** | **Explanations** | **Italian words** | **Misunderstanding** |
| *Schedule* | The set of movies that the user expects to find available in the cinema rooms with related information about title, day, time, room. It is a set of **movie showings**. | Programmazione | No |
| *Movie showing* | A movie programmed projection with title, date, hour and a room. | Proiezione | No |
| *Movie record* | An instance of a movie. Contains the typical information related to a single movie: trailer, plot, genre, cast, year, director, nationality, language. It includes **movie showing**. | Scheda del film | No |
| *Ticket* | The online ticket for a selected movie showing | Biglietto | No |
| *Seats* | The number and place of seats in the theater room that can be booked by the user | Posto a sedere | No |
| *Rooms* | Location where users expect to watch a **movie showing** (both inside or outside the Cinema Lumière) | Sala | Is the room within the Cinema Lumière or not? |
| *Prices* | The concept of prices also includes discounts, promotions and membership cards | Tariffe e sconti | No |
| *Contacts* | The telephone number, email and address of the institution | Contatti | Does this include the location of the theater rooms? |
| *Extra events* | The events that are extra with respect to the ordinary schedule carried out by the cinema institution | Rassegne | The term has different meanings and might generate misunderstandings. For this reason we suggest our client to rethink the use of the term. |
| *Personal profile* | A profile with personal information of the user, including the purchased tickets | Profilo personale | No |

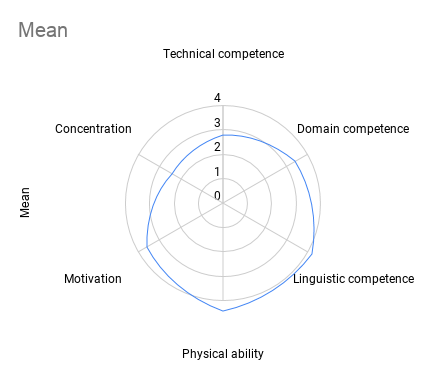
It’s fundamental to define these concepts precisely and avoid any possible ambiguity on different levels: lexical and conceptual differences, polysemy, and standardisation problems.

We identified a major issue with the lexical choices made by cinema websites, in that they don't consider adequately our users linguistic background.

We will try to create funcional paths that can avoid any linguistic misunderstanding, inspired by popular online streaming platforms, and propose a predefined path to follow. This will also bring an implicit call to action that could help with motivation and concentration issues that will be explored in the following chapters.

#### 4.2.2 Actors

The actors involved in our design proposal reflect the insights of our ethnographic research ([Chapter 1](#_j85rswnihe97)). We decided to exploit the personas ([Chapter 3.3](#_5ssa5pikq56g)) and represent only some of their characteristics which were useful for the design proposal. [Here](https://docs.google.com/spreadsheets/d/1RzgrqOtYuf8u0PLkMWoGkL3GzPNhGDSQPjZ13wBE9E8/edit#gid=1696378908) is possible to check all the scores for our personas; below, the mean scores graph of our users competences.



Analysing the mean scores for the characteristics, we understood that we really need to focus on helping our users with the **technical components** required to complete the tasks, since even if they are so called “digital natives” they struggle with this.

We will also need to help them **concentrate** through the task processes, since distraction is the second lowest mean value we found, and for this we will help them with clear and concise textual chunks and no unnecessary information that might distract them.

Finally, it’s imperative that we find a way to entertain the users and let them find the **motivation** they need to carry on the tasks once and again. We structured the navigation with a step by step model that allows the user to avoid thinking too much about how to solve their problems, following a predefined flow that is enjoyable through simple and interactive components and answers perfectly their needs. We identified two main paths: one for those who already know which movie to watch but are not sure about the date, and another for who knows the date but still has to choose a movie. The paths are deliberately different as we will present more adequately in our wireframes: we understood that those already interested in a movie have a higher motivation than the ones who don't, and therefore the navigation starting from the week days is more guided than the one starting from the search of a movie.

#### 4.2.3 Operations

Here are the most relevant operations that actors would like to perform on the previously mentioned concepts:

|  |  |
| --- | --- |
| **Create** | * Personal profile: manual, unique, persistent * Ticket: manual, multiple, persistent |
| **View** | * Schedule: multiple view (list) * Room: multiple view (list) * Movie record: full individual view * Movie showing: Multiple view list * Ticket: multiple view (summary), full individual view * Prices: full individual view * Seats: individual reduced view * Contacts: full individual view * Personal profile: full individual view * Extra events: full individual view, multiple view (list) |
| **Update** | * Movies: automatic update with respect to the filters applied * Ticket: automatic update with respect to the sequence of choices * Seats: manual |
| **Remove** | * Personal profile: elimination. * Seats: deselection |

#### 4.2.4 Structures

Here we put together concepts, actors and operations to further explore the relations between them and finally understand the best structures to use for the interface and navigation design.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Movie record** | **Ticket** | **Scheduling** | **Seats** |
| **Create** | NO | Complex, common, manual | NO | NO |
| **View** | Full individual view | Multiple view (summary),  Full individual view (personal profile) | Multiple view (list), use filters | Individual reduced view |
| **Update** | NO | Automatic update (number of seats, total) | Automatic update with respect to the filters applied | Manual through selection |
| **Remove** | NO | Abandon | NO | Deselection |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Rooms** | **Prices** | **Contacts** | **Personal profile** |
| **Create** | NO | NO | NO | Complex, manual, common |
| **View** | Full individual view  Multiple in movies information (list), use interactive map to filter | Full  Multiple in ticket (summary) | Full individual view | Full individual view |
| **Update** | NO | NO | NO | Specific, updates |
| **Remove** | NO | NO | NO | Elimination |

### 4.3 Interaction Design Approach

Interaction design is with describing possible user behavior and defining how the system will accommodate and respond to that behavior.

#### 4.3.1 The dialogue

Generally speaking, the kind of dialogue that we want to build in our website strongly relies on **menu and navigation** with organizational mechanisms that hide some commands (hierarchical menu). This type of interaction is great for simple tasks like the ones that our users most commonly would like to carry out. We also include **natural language** through a search bar for a very specific task which is to find a movie in the schedule. A major role is played by **direct manipulation**, in that many actions rely on scrolling the page. A small glimpse of **Q/A navigation** will be used at the beginning of ticket purchase/consult schedule task in order to help non expert users in the first interaction with the system.

In any moment, we will focus on reducing the users cognitive load.

In terms of the sensory stimuli, we will always use few simple, well-differentiated elements in appearance, stably positioned in the interface.

**Example:** the purchase operation will be broken in 3 steps: *Access-Selection of tickets/seats-confirmation*. With this ideal structure users will always have steps with few elements to check, reducing the overall required cognitive load.

For what concerns the short-term memory, we kept the number of interactive elements present on the screen to a maximum of 7.

**Example:** the browsing aids will not have more than 7 elements inside it reducing the stress for the short-term memory. Breaking longers tasks in little steps responds to the same need. Ideally the system will display as much information as possible in order to avoid recurring to memory.

It is also possible to always recover previous information thanks to the go back button and the always present upper navigation menu.

Long-term memory will be only marginally accessed since we preferred a narrative step by step approach supported by the use of meaningful icons.  
**Example:** the global navigation inside the homepage will allow to start a guided and narrative navigation through the longer task of ticket purchasing. Long term memory will not be stressed due to the reduction of textual information to the minimum necessary amount. Applied filters will have a label remembering their meaning.

We also base our design approach on the **8 golden rules** of dialogue:

1. **Consistency** is respected boht in the inside of the application (in that we studied which are the best terms to refer to concepts and are always consistent with them) and with respect to other applications, in that we want to be creative and original but in the limits of what is commonly expected and accepted by our users when using a website.
2. **Information feedback** is fundamental especially in the purchase process: for this reason we want to implement several ways to tell the user that their actions were correct and that they could go on with the process: the check symbol, a specific screen for purchase completion, different moments in which we remind them the recap of the order.
3. **Closure** is fundamental in providing a sense of completion and therefore drive motivation. We want to give the feeling of passing levels and reaching a clear final page both in purchase process and in information retrieval about schedule.
4. **Simple error management** strategies will be further explained in [Chapter 4.3.4](#_1d99jy2wv5zk)
5. **Reversibility to actions** will be further explained in [Chapter 4.3.4](#_1d99jy2wv5zk)
6. **Shortcuts for expert**. The website structure itself will be pretty easy with low need of shortcuts. Besides this fact the use of search aid will represent the shortcut in retrieving film information allowing expert users to avoid some steps.
7. **User's sense of control** will be provided asking them to do things on the website: we will guide them, but they will be the initiators of the suggested actions.
8. **Short-term memory load** will be always preserved in that we will not use any unnecessary content or structure.

Here we provide some examples of the dialogue styles that we adopted, exemplifying the main paths that a user could follow starting from the Cineteca homepage and clicking the “Al cinema” option in the website.

1. *Follow the link to Cinema Lumière information*: this first action is pretty simple and not deep.
2. *Click the option to schedule*: the second one brings to the opening of the schedule options. Through choosing the wanted option the user could reach the purchase option to buy a ticket. Here the dialogues are: direct manipulation+Q/A. Here an example of a linear path starting from the home and reaching the final step:
   1. Google search of Cineteca di Bologna\* > Click on “in Sala section” of the Cineteca\* > accessing the Subsite of cineteca Cinema Service > Select the starting option on the home > consult the schedule > consult the single film page > click on a specific projection > make a purchase.

*Actions marked with the “ \* “ could be avoided just searching the subsite on google search*

1. *Open the hamburger menu for more information*: the third action is also quite linear and simple: the user on the homepage opens the hamburger menu to check costs and discounts. Here an example of an ideal and linear path of the third action:
   1. Google search of Cineteca di Bologna\* > Click on “in Sala section” of the Cineteca\* > accessing the Subsite of cineteca Cinema Service > using browsing aids to reach the price section > consult the price section finding the wanted information.   
      *Actions marked with the “ \* “ could be avoided just searching the subsite on google search*

Generally speaking, in each step the user will be provided with the possibility to **go back** without using the browser/smartphone button. A user that commits an error through clicking the wrong option will be able to recover from it.

This elastic organisation results in making each page reachable from a simple google search not forcing the user to start from the home page.

The first example of this is the possibility of accessing directly the *Subsite homepage.*Other ways are going inside directly on the costs section, a single film page or the clean film scheduling (with no filters applied) like in the following examples:

Browsing aids, on the other side, are placed on the navbar (in an hamburger menu) allowing the user to go in other website sections if needed.

Two examples of internal and linear paths are:

* Google search > Price section
* Google search > Single film page.
* Google search > Film scheduling without applied filters.

Starting from the possibility of accessing the website in a page different from the homepage we provide the possibility of a non linear navigation inside the website. We find this possibility a crucial one, our data suggests that users often do not follow a path starting from the main page. To avoid any problem we design the implementation of a navbar with the possibility of accessing to each fundamental feature of the website: *go back to home, accessing the personal area, find information about prices, find film scheduling and information, buying a ticket.*

The use of a Navbar is pretty known in our user target in consequence of this we choose to use the same idea.

The following are two examples of a nonlinear use of the website, each path results from a possible ramification of another task:

* Google search > Price section > schedule section > film page > purchase a ticket.
* Google search > Single film page >location information

#### 4.3.2 Conceptual model and conventions

Having a precise model of the site helps in giving it consistency.

We decide to adopt a **hierarchical model** to structure services and information inside the website, an **utility navigation** helps to sweeten the strict hierarchy making the user available to go back to the home page or jump to other website sections.

This hierarchical organisation is very common in the Web and adherent to users **conventions** and standards. This fact together with the absence of really complex and structured information results in a pretty linear and not convoluted structure.

Besides the linear structure more possibilities should be given to the user in order to sweeten the rigidity of a hierarchical organisation.

The icons use universal and immediately understandable symbols regardless of the context of use, such as the hamburger menu, the user profile icon and those concerning the filters and sorting.

#### 4.3.4 Handling errors

In order to prevent users from making errors the first measure we adopted the use of a **standard** and recognizable structure that they will use in an intuitive manner, as described above.

Another error prevention measure is including in the home page only the very necessary and **minimum required elements** to start the different tasks, avoiding the creation of an overcrowded homepage that might confuse users.

Elements and sections belonging to different tasks are **clearly divided** one from the other in order to avoid crossing among actions that could cause confusion in the user.

Longer tasks are also divided in **little steps** to reduce the cognitive load, maintain concentration and therefore avoiding errors. This is clearly visible in the purchase process, where we provide a three-steps validation process that is both smooth but also demanding in terms of control on the action: the user is required to check the validity of the information any time to avoid wrong or accidental purchases.

Besides these precautions, errors could still happen, so we provided methods to recover from them. A **go back** function of the website will be always available in almost every page, allowing users to go back to previous sections undoing their moves without using the browser/smartphone one.

Another way to recover from errors is the presence of the **utility menu**. If users go in the wrong website section, they can go back to the home or access different areas of the website through the navbar always present at the top of the screen.

In case users start the buying process with wrong data there will be the possibility to **modify** previously selected data with an ad hoc function to modify data.

### 4.4 Structure Blueprint

In the following images we provide a basic website blueprint and a more advanced one that implement the function of seeing the navigation possibilities.

**Legenda**

*Yellow*: section of mother site

*Red:* Utility menu options

*Blue:* Cinema information

*Black line*: direct links between sections

*Solid squares*: atomic content.

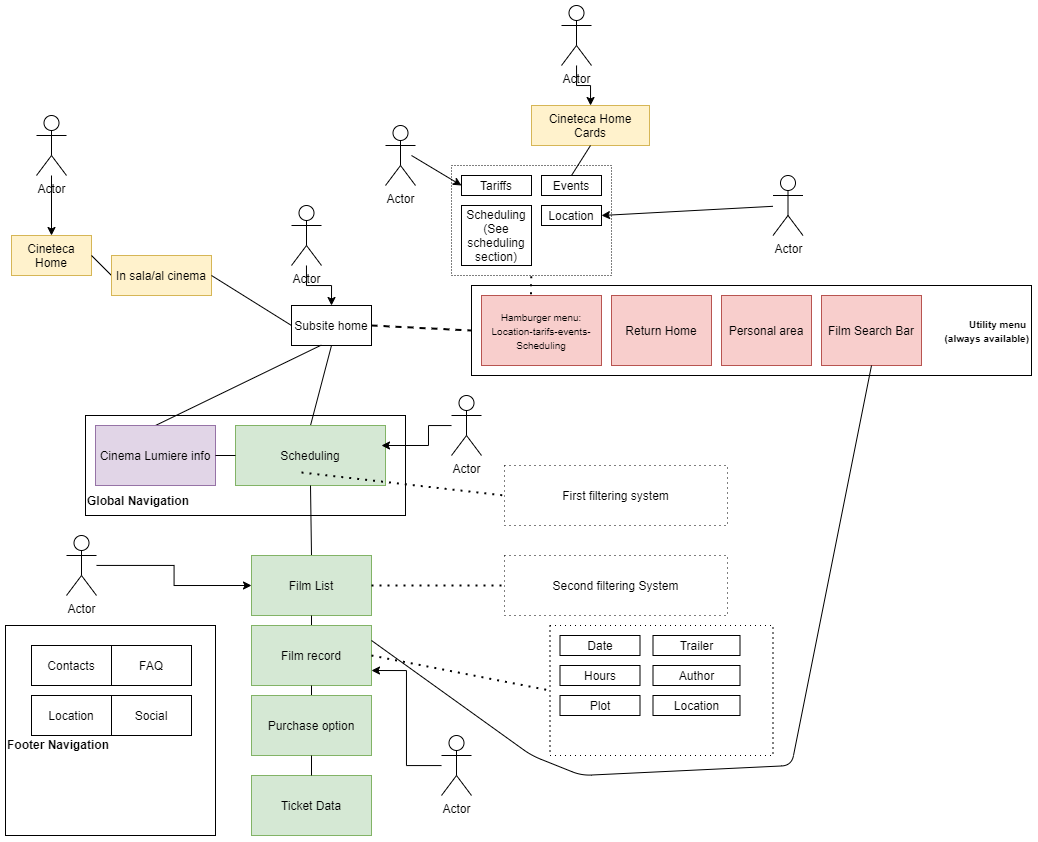
*Dotted squares*: abstract/functionality/group content

*Dotted line*: explanation of section content.

*Segmented line*: Link to Utility menu that is always available, not only in the home.

### 

[Link to the basic blueprint](https://app.diagrams.net/?lightbox=1&highlight=0000ff&layers=1&nav=1&title=BluePrintFinale.drawio#R5VzbcpswEP2azLQP7nC%2FPCbOrZ20k9TpJX3pyCDbTDFyhZw4%2FfpKNtggyTYhAuP2ybAIjM7u2ZVWK07M%2FnRxhcFs8hGFMD4xtHBxYp6fGIaumR79YZLnTOJq%2BkoyxlGYyTaCQfQH5rdm0nkUwrTUkCAUk2hWFgYoSWBASjKAMXoqNxuhuPyvMzCGgmAQgFiUfotCMllJPcPdyK9hNJ7k%2F6w7%2FurKFOSNs56kExCip4LIvDgx%2BxghsjqaLvowZujluKzuu9xydf1iGCakyg2jjx%2Fm34yfZxc3%2BvXnr64%2FTN%2Ff9bKnPIJ4nnW4HyWQwABQ6TWawuzdyXMOCEbzJITsmdqJefY0iQgczEDArj5RG6CyCZnG9Eynh6MojvsoRnh5rzkajYwgoPKUYPQLFq6EztCxHXpF7FX%2BihATuCiIsl5eQfqWBD%2FTJtnVHPDM5Hp6bktPBQVmoklBd1YmA5nJjNdP3qBKDzJgXwCyIYAsoAqT8JRZKz1LUALLKMJFRL4Xjh8Y%2BO%2Fs7Ox8keliefKcnyT0zb8XTwp3sdPNbcuz%2FL6t%2BKdojgO435QIwGNIdrQzV%2B1gWCKeqM2CtmyJtnIZhjEg0WOZrjIVZv9wiyLas7Wx6B6n9VU%2Fs1ZFOnE3rj1UbmYG96AVEMKDlha07mZ9ozIFo3qfMDWBmFL3ErD7A0rlKThCBus8tr7IYF1rk8L2f0FhsyKFnU5R2LT2MLEqpU1feNA7u1VSO4KZDebDlBKUIffqaKwitvLB1T1wbHVfS8w1yTa8eihe20KynNAbEj8UOSwldH1iekdJTMsuG4vOW0FVYloO9yCtWqylagfPhWYz1iBtgrieSNxgAsN5HCVjpQE4tKEXWrIA7BlD01EVgDlPaEnir8xwnKZo7qujuema5Xjq%2B%2Fu4zs5uIY5oXyA%2BiAPIB0RH5gH4iLo2mhd7AC7G%2B%2B0OtnP4uXkyG1xrN%2FNpBDGL0FEyQkrJDnVKd1dGdt9xTaCI7PZ%2Brhttcl0XkxInhhPTvz0b0oMxWXY7E2DVkqsYDZezp0%2FgMRpT40dJ3oj2pvACqvScOSsQR%2BOEnsZwRNToVeeDpqDX9ci5qFfdbEyxr06EHMVgTa86jfI65attzy7Zi8kPsqr6atvTdj%2BoaWctpkYuo3jKXHWUkiMcjRnc8Hc9CWvDRV%2FfWvNfZ%2B%2B%2FXFzhT%2BCpf2l8eOhJ0sZHTmRpL42KPNa7ldLkiWzVJbLDRRCTtyd1RN6Fv8hjDAOEw3%2BBybLEZqtMFn3lv8hkS2TyLovrKJHturMnh8va2c1F5F3wF4zslr74BKRs1oRmqzH20ZN57R4PRmYxGXofBb8gs4RzQNSuBB0GY6vN2akUYzHT9y86TLeiw7Q65jCtd5zLrJtyljxKr%2BY0G0k6y0fhsvn0OlFSsEjn95xVmZyNUEJ66bLG5pQ20LXZYnMxz2x8IVEcEdaDKUzmVAqmzBMkw3QmTZi8AfETeE5Zjx9BFINhDN9uT7S0kkPBK8tS4YCENQzR%2F9iyLAqfoFQ39RKDaY4tUy8DNC%2BiyjWri0q%2BBtPhnJovztXMDILX2Q0KlvmvHrX0aJT24CPFMe2JDYtrHTsUv3o%2F1bpnVQleAOVVCUPPZhpUYwr84L1iKHIbMwWxKuEzJHPM6kDU1261grHt78dYVvjRHMbikvwtxClKljli2lXF9TWtoOxqe1H2WwVZNqiqkfG%2FRIgsXdrR5%2B65CZtsUWYdiooqMvhBijodiUuwferPQZCNbVTiqcJZcwDaIoBN1anIMwviCuLl6V0XkdN52zs4dGK2OR%2BZdBE%2FzvLWqx8Hg0%2BcJQxQELH41T3weOM7PHq1EqQhSCdLIPUyaKuonm8kMErpgGIyYH%2BRZ52C0q362bukmQ2C9qYD8hlpV%2FIB3AIGP4CpnD%2FVdj%2Bn6XUQ2ZSvtg0y%2BS0gdKCULCWGZh6xZUoqI%2BUY2p2yTJPzczo%2FbqtcGMUttgsVVk3bpjgHvYwwW2bXaISgRrZMCmjpc0rgVHnEKdm4aNiWoohuchibYlAy8kDRShLaqFX2%2FH94BFn5jRzEbtXfOFY532z4Pr%2F7oKpT8LikpeRRTbsFSUE0DFAScn5hcNR%2BgRteyPIo7fqF3DG17Be6trmpajWPHEO9U27BdctGZtUdKXhcFDObq6Heiesu2zxO3ssmqVLeKymtlYMrTvLPAVG4AqAwP8JP8Stuz%2BZ39anDTpziX1NOdTOtyYMnSQy3C56ktidGCqtsG8Su4t7F5rAT5073GEQxW8LoHnx2PrDexVu3TfjEpbnTOZmg40BPRtyG0PuOnZsRvr%2F5YSE%2FudIeH93rU0kJt5qkehNYyYjaEFYPN3cf0CKwfpsP4C4YRhS0oaR%2B8Z5VRIxeGSJU%2BDTb4cqUerLshNuQW5OiJXq1Yn2I9mYAWdlnWpSlMGCW97aTeEpGdzI8VUzqpHiKbu5iWYhzcLBss5LxOW0an5gY645bk8Alsa1W4apQzfoimPZMwIzmBncScCUL17qMuUqmZVJ4JfuGBXybzNO%2BrMR4qxr25lbyosRicmWXvXUkt2LrPmc0dT8dYwsfHWssuXL747w%2F%2F%2FOVfO79TL%2F4X8%2Bxrf3cvlVqAAEOJvTgDCgcF7%2BkUk3gsMTEttLa21%2Bp1lg9oBToQ%2B%2BXKuZY8%2BNdKygc05Rtn9puhYciM79KZ9XdLeVxGdeKedLtdf9b3pcz7Xxry9aVXv47Dfbu9g6%2Fdabcnh6s3lipH6pVqSClR1tLjC8lyOs%2Bz%2BIdkiG6s9uw6376kC%2B%2Bqh3r6Onme6ir5pvPypoXfwE%3D)



[Link to the blueprint with access points](https://app.diagrams.net/?lightbox=1&highlight=0000ff&layers=1&nav=1&title=BluePrint%20with%20access.drawio#R5V1bd6O2Fv41Wat9cBYgro%2BJc3GmaZupM6cz56VLBtnmDEYuyEncX1%2FJBgySbDO2wNjnKUZcgj7tb2vfJK5Af%2FbxmMD59FccoOjK0IKPK3B3ZRi6Blz6h7UssxZH09ctkyQMsrZNwzD8B%2BW3Zq2LMEBp5UKCcUTCebXRx3GMfFJpg0mC36uXjXFU%2Fa9zOEFCw9CHkdj6ZxiQ6brVNZxN%2BwCFk2n%2Bn3XbW5%2BZwfzirCfpFAb4vdQE7q9AP8GYrH%2FNPvooYujluKzve9hytnixBMWkzg3jXz8t%2FjT%2Bur1%2F1gd%2F%2FMfxRunT5172lDcYLbIO98MYEeRD2jrAM5S9O1nmgCR4EQeIPVO7Arfv05Cg4Rz67Ow7lQHaNiWziB7p9Oc4jKI%2BjnCyuheMx2PD92l7ShL8HZXOBPbItmx6RuxV%2FoooIeij1JT18hHRtyTJkl6Snc0Bz0Sup2tZw3tpALOmaWnszKwNZiIzKZ68QZX%2ByID9AZANAWQBVRQHN0xa6VGMY1RFEX2E5Gvp9zcG%2FrWVHd19ZGOxOljmBzF986%2Flg9Jd7HBz2%2Boov28r%2FileJD7aL0oEJhNEdlwH1tehoEI8cTRLo2VJRitvS1AESfhWpatsCLP%2F8IJD2rNCWHS3Ki0uJwTrbmc3ldnFPadQWNlzbO45a1iE56zkqej04SIGBBF7itmgwYgS%2BQGy%2B31K7Bk8Qz7rPKFdkc8Fx1shtPV%2FQWhQk9B2pwgNzN1ErEto4FWfY3nXVquUtgUhGy5GKaUnw%2B3omVkBL4HG8RKceJ51jqVlQbENq76Vz22hWE7nDYW%2FlRkspfPhtHTPkpamVRUWnZeCurw0be5BWr2Zlg47XJYum7ML0iaI64rE9acoWERhPFE6%2FQYWcgNTNv26xgjYqsxp06wA7klmX5ng8IpXGc09dTQHDqjOpp63j%2Bvs6AUlIe0LSk6iAHJL88w0AD%2BhFkLzwxqAm%2BG9dk3tHH7OZ2amtfa8mIUoYTN0GI%2BxUrIjndLdkZHdsx0AVdna2n6yG22SXRcjFFeGHdF%2FezuiPyZk1e%2BsIVHd8hjh0cp5%2Bg2%2BhRMq%2FTjOL6K9Kb2AqoHOtBWMwklMDyM0JmoG1quOq8SFArJxFWZXdQN7dFTkLKw1va4X5XZKWVuuVZEXwMtBXWVtcfEV4UFNa2sxMvIQRjOmq8OUnKM5xtm%2FRbizDRU9eDEX32%2Bfvtw%2FJr%2FB9%2F6D8elbTxJDPnMiS3tp1OSx3q34Jk9k81Ai21yAEzQX4dyFv8jjBPk4CS6ByW0aW1KMRV15iUw2RSbvkriOEtk61H2yuXC61dyMvAv%2BkpC90BefwpS5TXi%2BtrHPnsyFejwZmcVo6Gvof0dMEu4gUZsIOg3GRSDgZBiLob5LVJhOTYVpdkxhmtecyjw05ix5lF5PaTYSdZZb4TJ%2FugiUlCTS%2FnvBSk5uxzgmvXRVcHNDL9C1%2BcfmZB7Z%2BELCKCSsBzMUL2grnDFNEI%2FSuTRg8hOM3uEyZT1%2Bg2EERxH6eXugpZUYSrKWLBUKyOSc2Z4lKiDLlog0H6JU53uJs2kOLhtfhmheUpUPrS6O8gDORgsqv0k%2Bzkwi%2BEF7xv4qANajoh6O0x56o0CmPfHCcrZjx8iv30%2F14LOqBNdH8qqEkWuxPJQaWeDC2b26k5HTmCyIZQl%2FILJIWCGI%2BlKuVkDmbVUpyLLSj%2BZAFtPyLyhJcbwKE9O%2BKq6waQVmB%2ByH2WsVZZlhdUDU%2FwFjstJqZx%2B%2F16vxe1msoChBKw%2BRwRsq6sZIzMP2qUqHfmbfqMRThb7m%2FDNdBLCpYhV5dEFMIz7cfO4icnz93emhEyPOuXHSRfx4yZNEBtqFT%2FQUhtgP2QTWPfAE4Ts5egcFSQOYTldA6lXQ1tN6vrLAqIQEygGB%2FXWeh9SUbh2fvWnNzAraGxLIvdKuxAS4JAZvwNSOoWq7n9N0LkTm9R0sg6z9BRJqKMWrFkMDSiVzq5Ttj8BbnZIewEmPDpzDxIePIwilUE3Lj%2BgpPoQJS4drVItTQVj57lq6TAmaKZ8VKnIoCp%2BpZuKw8kRsMVgSizlX5q0Ei42D6pNPxdp25xNZmYwcxG7VydhmNS5seMIygbpKweUqpCWPalotSCqXkY%2FjgNMLw0vSC7L6mXb1AhA9wTb0QtfWINWtupFjqHdKLThOlcsmH4WprRS4yBxorth5J667ZPNMeG%2B517yursn8wnRQT33RFb%2BDRGGkXp0jbtk8fqDmumqjMfREV3xAedXJ8KMEvprL5ZqDT1KJE2GFNbGNolczDtQceqIP9ZrAMGLphu4BaNt6HfY6bQIoZtJuFmSKzwU%2FGX0bwu9rYj%2BPk9fn%2F5rYix%2B1tzdncCMpu1YTBG8GLRldG0LrNbS1Dxh7Lrr59GUQucsnbyhZTS2g1JyNrV2bOijZ2T3tWtOd3aY2PeCXGW4dmb1mdJ49LNvRUpiyIemIGW1xqZMeLx61C7j4BzVnRu%2BCVZkVvcdkNhQlrrh6y57uiCzWZfVOuoqssxRJMen8ysqRxkcafSrQcni0JDrPachEkWIlWalars3SfhoiVnOdlttS5LMp5OcOwimZcGVwqojTyOEUZ9z7VQ3cybGyrBqiJ%2BNpc6InOradsU5EtCSS1S5aoiN74xOJJZxO4Zz9XMyi9QXglvU79GH0DEcoesFpuMIY3I0wIXhWuuAmq0kimIMULwglP%2BoXO%2BipqipzeStQKpegVQ7%2F2NZNfgTTNPSv5EX7xYHCKOhO%2BdhrvnUs3W7zdYW82VU7384XXgvbxzRswEnKPi%2BAoYDbFaBnSEq72uXnj%2BVIpfzcCkxHWGEKG1QeuumgaCM1V0ggHa5Cg5VGh4I8zA5xQqZ4wmqj7zett9X5fnPNM2ZyvxrC%2FyFCltlmsHBB8BYFzK2a0ppTwHU33aorabVF6Dg2iQndC9BaXMq9J8vgtqq08pzRpbMg18XKNp5qhwX5a18WC4TdF2VeTLs0cE5MA8%2BoEuEa7KGCdDO3I%2FghqYrdualVVwhykcYtH708tetpeKelR1vOqlHbVqq7U05LLLhIY8nhal4kWd9WWQBO6zFwIRunORrkqCrbZuZYr5OzF0DLrqKkyvEC6MVva2yenF9iKFn4oofWh0mgsEqqtS8BiPlgic2r516v6uVgcryP%2FhZA17aA2Zn72huBBt3a%2Fs7mJUao5awdgub3exCidk0r0JO4V0dMgBJv6DiRaccOlNWlnf9EZfGhYln9WlMz1ZvvecT%2Fy%2Fo9cP%2F5%2FWnQ%2BzQ3f5HUr2UbOg4RTPwp%2FXELRdBb2UxDgFUC%2Flak%2BZL9VvcskSItxr%2FanaKqS0yMOmvIOF2gbPHIdkk8WTaIX%2BFx6CZlHpdWqrkmefsOZfJ%2Fw9tgeTZra%2BkdN2%2Fmm%2FZtXfHC%2BSk5PhsCrN%2F40LlVKgEHradWUBJQGHEVhjRBkKM%2BJbPOCp%2BKIfwH%2FQ7%2BcITBzYFtfjqGHm4%2B9bi%2BfPPFTHD%2FLw%3D%3D)

### 4.5 Wireframes

Following our **mobile first** approach, we created a smartphone directed fairly working prototype of our website through **Balsamiq**, a software for wireframe creation. The prototype is in interactive PDF format but has some implementation limits for smartphone devices and also other limitations for smartphone testing. In particular, there it was not possible to implement the scroll functions and the go back function works on PC but not on smartphone testing.

A complete explanation of all the wireframes is available in our [Final Design Report](https://drive.google.com/open?id=1wYvQ4AHVudN3OzONpUMWBY9QRddNalUtc-2hNHMAAto) and the interactive pdf wireframe is also present in our documents to be tested directly.

|  |  |
| --- | --- |
| Cineteca homepage | Cinema Lumière homepage |
| Filters | Film schedule |

|  |  |
| --- | --- |
| Movie record | Ticket purchase |
| Ticket purchase - Three steps process | |

|  |  |
| --- | --- |
| Hamburger menu | Tariffe e sconti |
| Rassegne | Events information |

# 5. Evaluation of design

In order to evaluate our design proposal, two phases of evaluation have been conducted to provide an analysis within the internal team of development ([Chapter 5.1](#_rkpa0fxlmjt2)) and with real users ([Chapter 5.2](#_wuws6fkkcf6q)).

### 5.1 Inspection

#### 5.1.1 Cognitive walkthrough

A cognitive walkthrough is a fictional and step by step execution of a task, and an empirical evaluation of the performance. To create a CW it’s necessary to have a user (persona) who carries out a predefined task of which we already know the ideal sequence of steps to performing the task (called the happy path) and finally a prototype to perform the actions required (which was created as an interactive wireframe in [Chapter 4.5](#_vkkc8uyqeygh)).

Here we propose two different walkthrough created with 2 iterations within our team.

##### 5.1.1.1 CW 1

*Persona*: Alma

*Task*: book 2 tickets online for a special showing

*Happy path*:

1. Access the Cineteca website
2. Find the event sponsored in the homepage
3. Reach directly the dedicated Cinema Lumière website
4. Click on “Scopri le proiezioni della rassegna”
5. If there are few showings scroll, otherwise use the advanced filters
6. Click on the movie
7. *Optional*: read the description expanding the box
8. Click on the showing to purchase the ticket
9. Follow the steps to complete the order
10. Log in or register
11. Select the number of seats clicking on the map
12. Confirm the selection
13. Read the recap of the order
14. Confirm the order
15. Go to an external payment page
16. Once transaction is concluded, read the success page

Alma’s brother Diego works at the Cineteca. He told her that the major event of Cinema all’aperto in Piazza Maggiore will be held, having taken all the safety measures and precautions for the Covid-19 situation.

Some days later, Alma remembers of this conversation and thinks to look for more information: she would love to go there with her fiancè and possibly attend a talk before or after the movie showing.

While cooking the dinner, Alma takes her phone and searches “cinema all’aperto piazza maggiore” but the results are unreliable news articles, while she directly wants the official site or a reliable one.

So she goes on the Cineteca website and despite it’s not phone responsive, she is able to find directly on the homepage a reference to the event. When she clicks on it, she finds a responsive page with the description of the initiative and a button “Scopri le proiezioni della rassegna”, which is exactly what she wanted.

She clicks and reaches a page with all the movies available in the Cineteca that are already filtered for “Tutti i giorni” and “Fuori sala”. She also adds the filter for Sera tardi since her boyfriend stops working very late.

Once filters are applied, she finds several interesting options and also discovers other festivals held by the Cineteca, like BarcArena: this knowledge satisfies her curiosity and her need to share with friends exclusive and uncommon events.

After some back and forth to decide, possible thanks to the always present back button, she finally chooses a showing and goes for the ticket purchase by clicking on the showing as mentioned on the screen “Clicca su una proiezione per acquistare il biglietto”.

She finds 3 clear steps to follow for the purchase: first she has to login, and she already has an account; then she selects the seats and she is happy to have an interactive map that lets her choose the exact place and has a textual recap with the number and code of the seats. She confirms the 2 selected seats and is brought back on the purchase page, where there is only one step left that is the purchase recap. She likes that none of the steps got her anxious with asking things related to “transactions” or “money” specifically. The recap is correct, so she confirms the order and is redirected on the payment method, which is owned by a bank and not by the website itself. She recognises this and thinks it’s totally reliable. She finally gets to a success page and observes that there is a button to let her see her tickets, “Vedi il tuo biglietto”. She clicks on it to see where the tickets are stored, to be faster when she will have to show it before the showing. The tickets are in her user profile, which is reachable very fast thanks to the always present icon.

##### 5.1.1.2 CW 2

*Persona*: Brenno

*Task*: consult the scheduling to decide which movie to watch with his friends based on the movie characteristics and the most convenient price

*Happy path*:

1. Look for cinemas on google maps
2. Access the Cinema Lumière website
3. Click on the hamburger
4. Click on “Tariffe e sconti”
5. Read that today there is a student promotion
6. Click on the homepage button “Scopri la programmazione”
7. Select Oggi
8. Select Sera tardi
9. Scroll the movie showings until an interesting movie is found reading the card in the page
10. *Optional*: use filters at any moment when necessary
11. Click on the showing
12. Select the down arrow to expand movie description
13. *Optional*: if not satisfied with the movie, go back and repeat from 6

After the gym session, Brenno and his friend Ferdinando want to go out to the cinema. While Ferdinando showers, Brenno has to choose which movie to watch. He takes his smartphone and sits on a bench in the gym dressing room. The gym is not near to his home so he is not sure of which cinema are around. He searches on maps for “cinema”: the first result brings him to a cinema that only has 2 projections in the carousel homepage, so he tries the second one which is from Cinema Lumière.

First of all he clicks on the hamburger menu to see how much is the price for a ticket on that night. He finds the option “Tariffe e sconti”, clicks on it, and finds a table with all the prices. He sees that students always pay 4.50 so he decides to go tonight. he goes back on the homepage where he finds a huge button to discover the scheduling. He clicks on it and arrives on a page that lets him choose the day, “oggi”, and after he arrives on another page where he already sees the scheduling but sees also other useful filters like “sera tardi”.

He likes one of the movies even if it’s an old one, but he sees it’s an original version with subtitles and his friend does not like reading subtitles. He clicks the filter icon to see if something could help him with this. He finds a button to deselect the original version movies and applies the filter. Now he scrolls again the scheduling and finds that the same movie is also airing in italian, so he clicks on it and explores the information related clicking on the dropdown arrow.

#### 5.1.2 Action analysis

An action analysis is a quantitative analysis of the specific sequence of actions that must be performed to complete a task. Our goal is to verify the idea that easier tasks require fewer actions, otherwise there is a usability problem.

We adopted an informal action analysis which considers the number of atomic actions to perform. We decided which is a reasonable number of actions that the user performs on the interface to complete a task and evaluate globally in a case by case analysis.

|  |  |  |
| --- | --- | --- |
| Task | Actions |  |
| Read the complete scheduling of all movies  (simple task, common) | 1. Click the central button in the homepage 2. Click on “tutti i giorni” | The task can be executed easily from the homepage |
| 1. Click on the hamburger menu 2. Click on “Programmazione” | The task can be executed easily at any time from the hamburger menu |
| Consult costs for simple projections (prime visioni)  (simple task, common) | 1. Open hamburger menu 2. Click on “Tariffe e sconti” | The task can be executed very easily and fast |
| Read full information on a movie which is part of a rassegna  (less simple task, less common) | 1. Click homepage button 2. Click on tutti i giorni 3. Click on the filters 4. Select “Rassegna” button on 5. Scroll the list 6. Click on the movie 7. Click on the arrow to expand information | The task is not executed directly because two actions of the initial navigation are about the day, something not relevant for the task. |
| 1. Open the hamburger menu 2. Click on “Rassegne” 3. Scroll the page 4. Click on “Scopri le proiezioni delle rassegne 5. Scroll the list 6. Click on the movie 7. Click on the arrow to expand information | Although being the same number of actions as before, this path could be less demanding cognitively since it requires more **scrolling** than clicking and filters are already put |
| Read scheduling information of tomorrow evening only in “Sala Scorsese”  (less simple task, less common) | 1. Click homepage button 2. Click “Domani” option 3. Click “sera” option 4. Click on filters 5. Click the circle for “Sala Scorsese” 6. Click apply filter 7. Scroll the page to read scheduling | This task is quite smooth and direct. An issue could be understanding the filter icon. |
| Buy a ticket for one of the available rassegne today afternoon (difficult task, uncommon) | 1. Click on the hamburger 2. click rassegne 3. click one Rassegne option 4. click “Scopri le proiezioni della rassegna” 5. Click on “Tutti i giorni” 6. Choose “Today” 7. Choose “Pomeriggio” 8. Click the single events 9. Click the projection 10. Click “Accedi” 11. Log in 12. open “Seleziona biglietti” 13. Choose seats 14. Click Conferma ordine 15. Click final conferma ordine | It’s a very long task, it takes about 1-2 minutes reading all stuff, the critical passage is the filter of the day. |
| Change seats number after reaching the purchase confirmation page (difficult task, common) | 1. Go back through the specific button in the order recap 2. Click on the Step 2 button called seats selection 3. Click on the interactive map to choose the desired seats 4. Click on confirm | The number of actions required to complete a fairly complex task is very low. |

#### 5.1.3 Heuristic analysis

The 10 heuristics are the following, numbered as follows:

1. Visibility of system status
2. Match between system and the real world
3. User control and freedom
4. Consistency and standards
5. Error prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use
8. Aesthetic and minimalist design
9. Help users recognize, diagnose, and recover from errors
10. Help and documentation

As a disclaimer, we must say that the wireframe does not implement all the possible paths that a user might want to explore in that it is only a **prototype**. We implemented the minimum amount of functions to test the prototype with our users to be more agile and be able to modify quickly issues between tests.

The following table reports both the issues that only affect the prototype (and of which we have always been aware of) and the ones that are instead affecting the design on a conceptual and functional level.

|  |  |  |
| --- | --- | --- |
|  | **Prototype level** | **Conceptual level** |
| 2-4 | Clicking on the various weekdays the user is always directed on today’s schedule. |  |
| 4 | All the daytime filters bring on Sera tardi. |  |
| 4 | Not all cinema room filters are not clickable |  |
| 4 |  | Calendar option is missing in the filters |
| 10 |  | In the Tariffe e sconti section, the meaning of the upper filters (Prime visioni, Cineclub…) is unclear. |

### 5.2 User testing

We conducted several user tests to understand the positive and negative impact of our decision choices on the users motivation and ability to complete relevant tasks for them. Here follows the complete description of our testing methodology and key findings to drive design updates.

#### 5.2.1 Definition of the testing protocol

We decided to use again the ***discount testing*** method and have multiple iterations, to be fast and agile in discovering issues and solve them immediately before the next test.

We carried out the tests within the ***thinking aloud***methodology, which consists in asking participants to express their actions and thoughts while they try to complete the tasks within the testing.

Once again, everything was conducted exclusively using **remote** screen-sharing technology to avoid any issue with participants safety and necessities.

We will test 3 **subjects** belonging to the critical user segment identified through our research. Here are their anonymous profiles:

|  |  |
| --- | --- |
| User 1 | 23 years old student of Economics in Trento. She enjoys music and online streaming. She goes to the cinema once every two months and enjoys open air cinema and other kinds of collective events. She loves going with friends rather than alone. She is expert in online purchasing, but she generally finds the experience of purchasing cinema tickets quite difficult. |
| User 2 | 18 anni years old high school student from Ancona, specializing in Arts, Cinema and Photography. She likes being outside with friends, the scouts and do sports. She goes to the cinema with her friends especially during the week just to have something to do, even if she is not interested in a specific movie. She never used an online booking service. |
| User 3 | 15 years old high school student specialising in Mathematics in Forlì. He is pretty self confident and loves to argue with people about mathematics and history. He considers himself a nerd and he loves to play strategy games or third person shooter streaming on Twitch and YouTube. He goes to the cinema with friends at least once a month and enjoys Marvel movies. |

Our subjects will be **introduced** to our research and they will receive all the necessary information about content, structure and goals of the testing.

The interviewer will ask for **permission** to record audio and video of the session, and in the case of the minor (user 3) the consent will be asked in advance from his legal tutor.

After asking some general questions to break the ice and make them comfortable with the situation, we will ask our users to perform the following **tasks**, which resulted from our research to be the most relevant for that specific user segment:

|  |  |
| --- | --- |
| **Task 1** | Find information about time scheduling of a specific movie for today and saturday |
| **Task 2** | Buy 4 tickets online for that same movie |
| **Task 3** | Find information about prices, specifically looking for students discounts |

These tasks will be performed on our prototype wireframe, that will be updated between iterations when necessary. After completion, participants will be asked to fill in a System Usability Scale questionnaire.

The metrics of task completion rate, error free rate and SUS will drive us in the definition of the most urgent errors to fix.

#### 5.2.2 Tests summary

##### 5.2.2.1 User 1

Hardware used: Samsung s10 +

###### Task 1

She clicks on the hamburger menu and sees Programmazione, what she is looking for. She wants Sera, she finds the movie in the list below. She is sure she found the information.

Due to an implementation error she cannot find the information about saturday.

She is not sure the first movie she consulted was today, so she makes the same procedure to check this but using the Oggi filter.

The task was successfully completed.

###### Task 2

She goes on Programmazione, selects Oggi and Sera. Clicks on the movie and then on the projection to purchase as written. After login, she goes on step 2 without selecting the seats because the function is not implemented in the wireframe. She confirms both the seats and the recap. She would have liked to go back with the navigation error. She misses a clear option about how many tickets to purchase, in terms of the number. But this is due to our implementation error. She confirms the order and sees the ticket.

The task was successfully completed with some minor mistakes related to implementation errors.

###### Task 3

She is very fast in clicking on the hamburger menu, then Tariffe e sconti, she finds the students promotion and also reads the side note. She would have clicked on the other filters to compare the promotions.

The task was successfully completed.

###### Extra task

Look for the Rassegne.

She remembers it was in the hamburger menu, she directly clicks it and finds the list of rassegne.

##### 5.2.2.2 User 2

Hardware used: Huawei P Smart

###### Task 1

She uses the central button “pronti per il cinema” and clicks “oggi”, she finds the movie directly on the new page. She clicks on the movie and opens the information box through the down arrow even if it wasn’t necessary to complete the task. She also clicks on buying the ticket even if it wasn’t necessary for the task (from this we understood that the flow is well thought and pushes the user to go on).

Then she would want to go back through the navigation button but it doesn't work due to prototype implementation errors.

Now she wants to look for the scheduling information for saturday.

She explores the website and clicks casually to understand the structure and the functions of the app.

We guide her to start from the home again, she clicks “Pronti per il cinema”, she is not sure what to click because there is not a specific button for “Sabato”. she clicks on tutti i giorni. she filters at night even if not required (again, sign that the flow is good). she scrolls the movie list and finds saturday.

The task was successfully completed.

###### Task 2

From the homepage, she clicks “Pronti per il cinema” and then “tutti i giorni”. She remembers from the previous action that the purchase is something that will come after some action on this page. She clicks on the filters to see what was there but she is not interested. She clicks on the movie, then on the scheduled movie. She skips the accedi step. She goes directly on step 2 and selects the seats. Confirms, she checks the recap. She confirms the order and comments that the confirmation page is very pretty. She clicks to see her ticket even if the task was concluded.

The task was successfully completed.

###### Task 3

From the homepage, she clicks on the hamburger and then on “Tariffe e sconti” and she immediately finds the prices. She notices the upper filters and is confused by their meaning.

The task was successfully completed.

###### Extra task

Find information about theater rooms. Find the address of BarcArena.

She remembers having read about the rooms in the scheduling. She clicks on Pronti per il cinema and reads the theater rooms for each projection.

She clicks on the hamburger menu, has some doubts if click contatti or dove siamo. She clicks programmazione again but she says she was mistaken. She clicks on Rassegne but is wrong. She clicks dove siamo and discovers the theater rooms are in different places. She reads the cards with the address.

##### 5.2.2.3 User 3

Hardware used: IPhone 7

###### Task 1

He first thinks to go on Archivi film from the Cineteca homepage. He scrolls and then clicks Cinema Lumière.

He arrives on the homepage. He clicks Scopri il Cinema Lumière. Then scopri la programmazione (it goes on “Tutti i giorni”). He immediately finds the movie since even if there are all the movies in the list, they are sorted from the most recent. He clicks on the showing, and sees the information in the list below the movie. He also finds the information for saturday’s projections scrolling down the list in the movie page, he says this in words because the prototype has a functioning problem with this.

The task was successfully completed.

###### Task 2

We ask him to start from the homepage. He remembers that the purchase option is possible following the same flow as before, but he doesn't remember how he reached it. Then he remembers, he scrolls down, doesn't pay attention to days and filters. He reaches the purchase page. He understands that he first has to log in since there is an order in the steps to take. We assume he is already registered and goes on with the second step, seats selection. He says it’s missing the information of where is the screen with respect to the seats. He completes the step. In the third step “Riepilogo ordine” he notices there is a problem with the date, which was an implementation error. He confirms anyway after our approval. He proceeds with the purchase. He doesn't want to modify anything. He completes the purchase and finally clicks on “Vedi il tuo biglietto”.

The task was successfully completed.

###### Task 3

He opens the Programmazione but immediately realizes he is not going to find the information needed. He then opens the menu and clicks on Tariffe e sconti and finds the table with all the prices. He asks what does the filters mean, he is confused by Prime visioni but still thinks that is the right place where to read the information.

The task was successfully completed.

###### Extra task

Find which films are in Sala Mastroianni, any day.

He goes on “Programmazione” from the hamburger. He would scroll until found the place in the descriptions of movies in the list. When asked for an alternate path, he clicks on the hamburger to find something but then comes back again on Programmazione. He finds the filter option and clicks the Sala Mastroianni button. He asks what does “v.o. con sottotitoli” mean.

#### 5.2.3 Analysis of subjective and objective data

Error-free rate is 33% with the following errors

|  |  |  |  |
| --- | --- | --- | --- |
|  | User 1 | User 2 | User 3 |
| Task 1 | Cosmetic error (not using the central button), implementation error (Saturday option not available) | Implementation error (Balsamiq problem with go back) | critical errors (going from Cineteca site to our subsite), implementation errors (scrolling on scheduling not working) |
| Task 2 | non-critical errors, implementation errors | No errors | Critical error (not understanding display position) |
| Task 3 | No errors | No errors | Non critical error (first looking in the scheduling option) |

SUS is 96% ([here](https://docs.google.com/spreadsheets/d/1QFDmmGPaBsofcTOV9gt7QxS1L1-roYzvON68xTpLGpE/edit#gid=1819742989) all the scores)

Even if there were several errors, many of them were implementation errors caused by limitations of the software used to create the prototype with respect to smartphone related functions and features (no scrolling, no go back available).

The most important thing to notice is that no error made impossible to the user to complete successfully the tasks, for which we have a **100% of success rate**.

After this testing, we reflected on the following issues and made the modifications to our wireframe.

|  |  |
| --- | --- |
| **Issue** | **Solution** |
| The purchase process is not consistent: between the three steps to necessarily carry out, pages change or change layout. | The user remains on the purchase page for the whole process and opens scroll down boxes which all share the same action mechanism.  Remaining on the same purchase page, we give users the feeling of order and control |
| The prototype does not include enough movie instances | Create more frames which give the idea of scrolling |
| The homepage button “Pronti per il cinema” looks like an advertisement | We change the words inside from “Scopri i film” to “Trova il film che fa per te” so that the message feels more reliable and authoritative.  We change the appearance of the button to look more tridimensional. |
| The filter icon is intuitive but is too close to the Tutti i giorni filter and looks like is only about the days. | We move the filter icon below the days filters and add the text “Tutti i filtri” |

## Conclusions

The present document reports punctually all the steps carried out by our team to the final design proposal for our client.

We wanted to find a solution for our client to address and increase impact of its online presence on a specific mass of potential users that is currently not able to convince nor to reach well. The population segment identified (young people between 14 and 24 years old) is unresponsive in that they prefer to carry out the ticket purchase in real life **without the use of a digital tool**.

We achieved a feasible solution that satisfies our users and makes them want to use the services provided, not only the ones that they already use the most (consulting information) but also those ones that they do not carry out for issues with the tools (online tickets purchase).

We designed a user experience that is mobile first and answers all the needs of the users through a step by step approach which guides and motivates them, helping to get into a flow when carrying out a task, and even bringing them to places they wouldn’t have looked for (the online purchase option).

Both internal and external evaluations through qualitative and quantitative data confirm the success of our proposal. The internal evaluation has been conducted in a very smooth way, meaning that our premises to build the user experience were consistent and effective. The action analysis in particular showed how extremely simple would be for the users to carry out tasks, since only 1 or 2 steps are required for the easiest and most common ones.

For what concerns the external evaluation, even if our tests were conducted on a not fully implemented prototype, **100%** of the tested users were able to carry out relevant tasks: this result is impressive when compared to the metrics collected for our competitor analysis, that only reached 44%. The error-free rate is good (33%) but could be easily improved by overcoming the implementation limitation connected to the wireframing software, that is not optimal for mobile testing. But the most positive feedback is the users satisfaction, something that we could directly see with our own eyes while they were using the prototype in such an engaging way and showing a behavior directed to discover more. They also filled in a system usability scale questionnaire where they rated the website with the most positive votes.

We believe that this project can be further expanded with research and development in other significant components of our client’s online presence. For example, we would love to design the UX for the desktop application too, or even to design the whole Cineteca website to integrate in the best way the Cinema Lumière subsite within the one of the Foundation. We would also propose to conduct a specific research on the younger user segment to understand why they are less performing in the tasks, since we saw in the tests a correlation between age and performance.

We finally have some suggestions for our client, something that we weren’t able to tackle directly because influences their identity.

From our user research, it emerged an interest in consuming food and drinks before/while/after the cinema. Adding something about food and beverage within the cinema and places around the cinema could drive people to come, since groups of friends could enjoy this kind of activity to complete the night out.

We also suggest to implement the possibility to purchase without having to register or log in (like The Space Cinema does, only through email) and to update the registration conditions for only >16 years old or remove the Facebook login for consistency.

Users would benefit of a favorites saving system that allows them to keep track of several movies while they consult the schedule and put them in the same place to evaluate later only between them. This system could ease the decision process.

Another small proposal is the possibility for users to purchase tickets online, but then to stamp them on site in order to satisfy the emotional link that some of them show with the cinema ticket.

Finally, to further ease the purchase process, this user segment would love to have an automatic application of discounts automatically based on their profile credentials.

## 

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### Case studies

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[Village Cinemas website redesign — a UX case study](https://uxdesign.cc/village-cinemas-website-redesign-cd8fabb8e248)

[Learning UX Design: A Cinema App Revamp](https://uxplanet.org/learning-ux-design-a-cinema-app-revamp-f0e661d7d830)

## Appendixes

### Appendix A

[Ethnographic research survey](https://forms.gle/YtHeBP3ofvd8rN4m8)

### Appendix B

[Contextual Inquiry Script](https://docs.google.com/document/d/1rwg5QsAaA13r3X3-_QpY2S6y9imle4XZhIK_vg272cY/edit#heading=h.vqamddctlfgt)

### Appendix C

[Errors description](https://docs.google.com/spreadsheets/d/1Zl-gRbQ-Hx4Q6q1FG81_utRRgcWkLrf17cUkPdGFhH0/edit#gid=0)

### Appendix D

[User Testing Template](https://docs.google.com/document/d/1UteO3tSbeaYA4d5VL1pEeooI59jZ6pJtZ_WJDcnKfiU/edit)