A picture containing logo

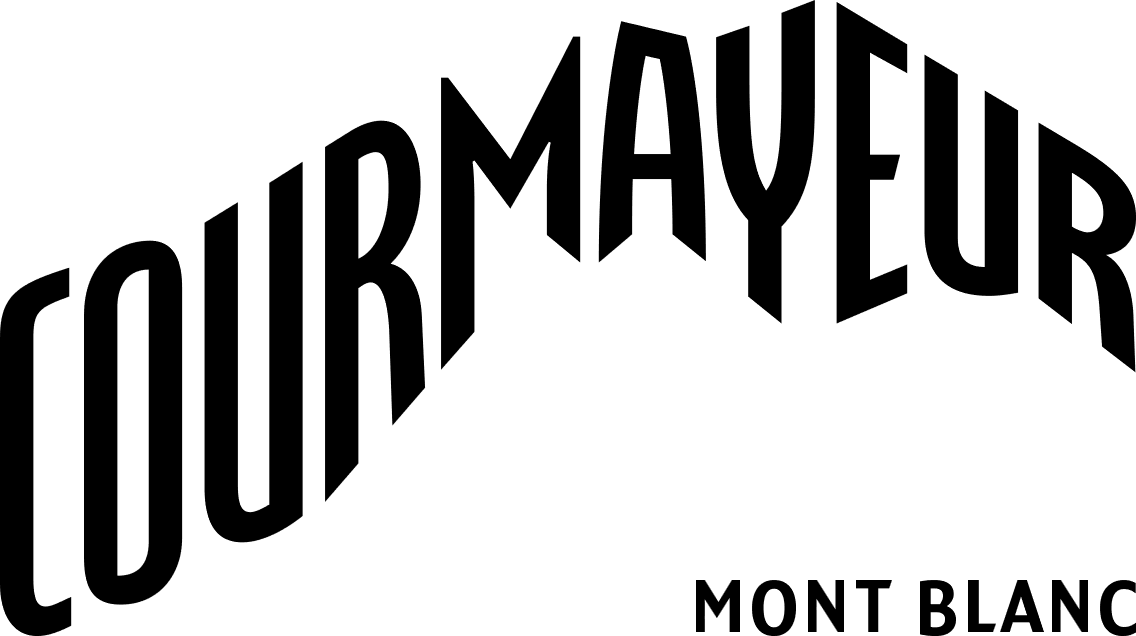
Description automatically generatedHYPERMEDIA APPLICATIONS

(WEB and MULTIMEDIA)

Prof: Franca Garzotto

USABILITY PROJECT

<https://www.courmayeurmontblanc.it>

[](https://www.courmayeurmontblanc.it)

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**Abstract**

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How is it possible to evaluate a website? The answer is the usability report. In detail, the usability report is used to describe all the aspects of a website and show the experience of chosen users to perform some actions in the site. In our case, the website subjected to review is the site of Courmayeur ([www.courmayeurmontblanc.it](http://www.courmayeurmontblanc.it)). The usability report consists of two parts: inspection method and the user testing method. In the first method we have rated the website according to some important heuristics (Nielsen and MILE heuristics). The user testing method instead consists of data collection and observation of how real users interact with the system. User behaviors are recorded and then analyzed. The goal is to find the possible difficulties encountered by users when interacting with the website and get some useful feedbacks from them. We have elaborated the extracted information to draw a final evaluation of the website with the support of tables and graphs. At the end of the study the results of the two different methodologies are combined and final conclusions about the usability properties of the website are explained.

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# Inspection

Usability inspection is the generic name for a set of methods that are all based on having evaluators inspect a user interface. Typically, usability inspection is aimed at finding usability problems in the design, though some methods also address issues like the severity of the usability problems and the overall usability of an entire system. Many inspection methods lend themselves to the inspection of user interface specifications that have not necessarily been implemented yet, meaning that inspection can be performed early in the usability engineering lifecycle.

Jakob Nielsen on November 1, 1994

## Inspection Design

In this section it is introduced the concept of heuristics with the focus on the Nielsen and MILE heuristics used in our report.

### Nielsen Heuristics

Jakob Nielsen's heuristics is probably the most-used usability heuristics for user interface design. Nielsen developed the heuristics based on work together with Rolf Molich in 1990.The final set of heuristics that are still used today were released by Nielsen in 1994. Also known as ''Usability Heuristics', 'Nielsen heuristics'. They define the following principles:

* **Visibility of system status**: the design should always keep users informed about what is going on, through appropriate feedback within a reasonable time.
* **Match between system and the real world**: the system should speak the users’ language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.
* **User control and freedom**: users often choose system functions by mistake and will need a clearly marked “emergency exit” to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.
* **Consistency and standards**: users should not have to wonder whether different words, situations, or actions mean the same thing. Follow “platform” conventions.
* **Error prevention**: even better than good error messages is a careful design that prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.
* **Recognition rather than recall**: minimize the user’s memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.
* **Flexibility and efficiency of use**: accelerators - unseen by the novice user - may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.
* **Aesthetic and minimalist design**: dialogues should not contain information that is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.
* **Help users recognize, diagnose and recover from errors**: error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.
* **Help and documentation**: even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user’s task, list concrete steps to be carried out, and not be too large.

### MILE Heuristics

MILE (Milano Lugano) is an alternative usability evaluation method. It contains more than 40 heuristics (large number!). For the execution of the inspection analysis, only the following subset is considered:

**Navigation heuristics**

* **Interaction consistency**: do pages of the same type have the same links and interaction capability?
* **Group navigation**: is it easy to navigate from and among groups of “items”? E.g., from the “List of items” of a group to its “members” (and the other way around); among different “groups”; among members of the same group (next/previous).
* **Structural Navigation**: is it easy to navigate among the “components” (parts) of a topic?
* **Semantic Navigation**: is it easy to navigate from a topic to a related one (in both directions)?
* **Landmarks**: are “landmarks” useful to reach the key parts of the web site?

**Content heuristics**

* **Information overload**: is the information in a page too much/too little?

**Presentation heuristics**

* **Text layout**: is the text readable? Is font size appropriate?
* **Interaction placeholders-semiotics** are textual or visual labels of interactive elements “expressive”? i.e., do they reflect the meaning of the interaction and its effects?
* **Interaction placeholders-consistency** are textual or visual labels of interactive elements consistent in terms of wording, icon, position, etc.?
* **Spatial allocation**: is the on-screen allocation of contents and visual elements appropriate for their relevance? Are “semantically related” elements close and “semantically distant” element far away?
* **Consistency of Page Structure**: do pages of the same type have the same layout (same visual properties of each component and similar organization and layout of the various elements)?

### Metrics

The metrics used for the inspection are the following:

|  |  |
| --- | --- |
| Metrics | Description |
| N/A \* | Not applicable. |
| 0 | The heuristic is not satisfied; severe violations have been detected. |
| 1 | The heuristic is partly satisfied, the website is structured adequately according to the heuristics, but they are implemented in the wrong way. |
| 2 | The heuristic is partly satisfied but it can be massively improved. |
| 3 | The heuristic is almost satisfied. There are several imperfections. |
| 4 | The heuristic is almost fully satisfied but there are some imperfections. |
| 5 | The heuristic is fully satisfied; no violation has been detected. |

\* N/A is assigned when an evaluated feature of the website is not present, and it is not a necessary condition its presence on the site.

### 1.1.4 Evaluation Process Definition

Each expert evaluator did his individual inspection and every single inspection can be found in the annex section at the end of the report. At the end of this process the evaluators have discussed about each heuristics to reach a shared agreement on comments and scores. The usability evaluation is done on the entire website which a particular attention to the following pages and sections:

* Home
* Sport
* Sci and Snowboard
* Food
* Entertainment
* Wishlist
* Info Request
* Piste ed Impianti
* Events Calendar
* Accommodation
* How to get to Courmayeur

## Inspection Execution

In this section are reported the main aspects detected by the 4 expert evaluators and for each heuristic is assigned an overall score and there are screenshots in support of it. The score is not the real average of the 4 individual inspections but is an agreed score based on the motivation that each inspector has argued.

### Visibility of System Status

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Visibility of System Status | 1 |
| Comment | The breadcrumb is not enough visible and it’s difficult for the user to find it in the page (it is not in a strategic point).  Another problem is that it’s difficult to understand when the user is in the homepage because there isn’t nothing that show it.  In certain cases, the breadcrumbs are too synthetics (in the screenshot 1 the page “cinema” is under the page “Entertainment” but it is attached to the homepage).  The breadcrumb is barely visible: scrolling the page It disappears.  Often it is not clear in which section of the website you are because the corresponding landmark is not underlined.  Graphical user interface  Description automatically generated  Screenshot 1: <https://www.courmayeurmontblanc.it/en/beat/cinema> | |

### Match between System and the Real World

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Match between System and the Real World | 4 |
| Comment | The matching is almost fully satisfied but using the website in another language several sections are not properly translated (see screenshot 2).  Nevertheless, the photos used on the website describe well the page in which are put in.  Immagine che contiene testo  Descrizione generata automaticamente  Screenshot 2: <https://www.courmayeurmontblanc.it/en/entertainment> | |

### User control and Freedom

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | User control and freedom | 3 |
| Comment | The website is mainly a website about information so doesn’t need to provide specific control functions to the user. The webpage permits the user to save an interesting page in the Wishlist (see screenshot 3). The user can also delete the element that it’s added to the list (see screenshot 4). However, it is possible delete an element only from “Wishlist” page since there isn’t any undo and redo provided to the user immediately (see screenshots 5, 6).  Graphical user interface, website  Description automatically generated  Screenshot 3: Button to save the page in the Wishlist  Graphical user interface  Description automatically generated with medium confidence  Screenshot 4: <https://www.courmayeurmontblanc.it/it/wishlist>  Graphical user interface, website  Description automatically generated  Screenshot 5: <https://www.courmayeurmontblanc.it/it/sport>  Graphical user interface, website  Description automatically generated  Screenshot 6: <https://www.courmayeurmontblanc.it/it/sport> | |

### Consistency and standards

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Consistency and standards | 3 |
| Comment | A small problem is showed in the screenshot 7. In this case the significant of the icons are not so intuitive. For instance, the geolocation symbol could let think about the function “How to reach us”, instead it opens a map with random point of interest. The same for the cloud symbol that nowadays could let thinking about cloud services and not about the weather and surely about webcams that are in the same page. The other standards are all respected (search box, back-to-top indicator, exit button, share icons, etc.)  A picture containing icon  Description automatically generated  Screenshot 7: icons panel | |

### Error prevention

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Error prevention | 3 |
| Comment | In the module to compile for receiving information the check of the correctness of the email structure and the filling of all fields is done only after the user clicks on the “send request” button (screenshot 8). Moreover, the breadcrumb makes impossible to go back at the exact point of the previous page; for instance, browsing on the event section and clicking on a particular event, there is no way then going back at the previous point. There are some buttons bringing to other section of the same page or “CALENDARIO EVENTI” button brings to the starting point of the section, making the entire research useless (Screenshot 9).  Graphical user interface, application, email  Description automatically generated  Screenshot 8: <https://www.courmayeurmontblanc.it/en#section-form-info>  Immagine che contiene testo  Descrizione generata automaticamente  Screenshot 9: <https://www.courmayeurmontblanc.it/en/pilates-winter-45> | |

### Recognition rather than recall

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Recognition rather than recall | 2 |
| Comment | When the user writes in the search textbox is not provided any suggestions that minimize the user’s memory (screenshot 10). The same thing happens in the request information form. For example, during the insertion of the city there is not a list that helps the user (see screenshot 11).  A positive aspect is that in the “Ospitalità” section it is possible to select the date of the visiting, the numbers of rooms and of people, in order to filter the accommodations showed up (see screenshot 12).    Screenshot 10: search textbox  Graphical user interface  Description automatically generated  Screenshot 11: [https://www.courmayeurmontblanc.it/en#section-form-info](https://www.courmayeurmontblanc.it/en%23section-form-info)  Graphical user interface, application, website  Description automatically generated  Screenshot 12: <https://www.courmayeurmontblanc.it/en/accommodation> | |

### Flexibility and efficiency of use

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Flexibility and efficiency of use | 4 |
| Comment | The landmarks, once well understood where they bring, could speed up the navigation of a user that visited the website a few times. Also, the “AGGIUNGI ALLA WISHLIST” button, present in every page, allow to rapidly add a page to the own Wishlist for the experienced user but a suggestion about it for the inexperienced user also appears sometimes (screenshot 12). The user can navigate with the top menu bar. There is the problem of too many repetitions (see screenshot 13) that can disorient the user. The page is not flexible or more customizable by an advanced user that is limited to the base functionality.  Immagine che contiene testo  Descrizione generata automaticamente  Screenshot 12: <https://www.courmayeurmontblanc.it/en/hiking-snowshoeing>  Graphical user interface, website  Description automatically generated  Screenshot 13: menu top bar and menu panel | |

### Aesthetic and minimalist design

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Aesthetic and minimalist design | 2 |
| Comment | The homepage is too dense of information that can confuse users that visit the webpage. There are too many different elements put together. Another big problem is the menu panel that is too long and complex (see screenshot 14).  All the pages of the website have on the bottom part the RICHIESTA INFORMAZIONI module and a map showing how to reach the place by different means. They are clearly not always needed by the user and make the page messier and longer, even worse the users that need them may not find them right away (Screenshot 15). Also, the button GOOD TO KNOW is always present in every page and it could be useful if only said something useful: it only shows a link to the RICHIESTA INFORMAZIONI section, again. (Screenshot 16). The only thing well described is the text that is coincided and really clear.  Graphical user interface, application  Description automatically generated  Screenshot 14 : menu panel  Immagine che contiene mappa  Descrizione generata automaticamente  Screenshot 15: how to get to Courmayeur  Immagine che contiene testo  Descrizione generata automaticamente  Screenshot 16: good to know box | |

### Help users recognize, diagnose and recover from errors

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Help users recognize, diagnose and recover from errors | 2 |
| Coment | The diagnostic of the error is not well implemented. In the “request information” form when the user types the email incorrectly it does not understand what the type of error is. Neither the search box provides support to the user.  If the user uses the search function, and makes a typo, the feature does not recognize the error and it does not provide any suggestion (screenshot 17).  It’s important to note instead, a good handling of exception in case of the classic “page not found”(see screenshot 18).  Logo, company name  Description automatically generated  Screenshot 17: <https://www.courmayeurmontblanc.it/cerca/ricerca_avanzata/sciiare>  Graphical user interface, application  Description automatically generated  Screenshot 18: Error page | |

### Help and documentation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Help and documentation | N/A |
| Comment | The heuristic does not apply to this system. | |

### Interaction consistency

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Interaction consistency | 5 |
| Comment | Pages of the same type have the same links thanks to the menu panel that it’s very useful to this scope.  Thanks to the landmarks, from each page the user is able to reach other sections of the website. Each page has links to the related pages.  Each restaurant/service page has a module to require information directly to the provider and links to the provider’s social network page (see screenshot 19).  Graphical user interface, application, website  Description automatically generated  Screenshot 19: <https://www.courmayeurmontblanc.it/it/servizi/ristorante-pr%C3%A9-de-pascal> | |

### Group navigation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Group navigation | 2 |
| Comment | Using the landmarks, it is easy to navigate belong the main groups of the website. However, some sections are not so easy to be found, like for instance the “Ristoranti and servizi”, “Calendario eventi” and “Ospitalità” sections. In these sections, it is possible to browse all the proposed solutions and opportunities; but the browsing could be improved: only one filter per time can be applied and going back after visiting a specific item the previous filters are deleted and the search must begin again from the start (Screenshot 20).  In the “Ospitalità” section, there is the possibility to filter the results according to the date, the numbers of people and the numbers of required rooms, but this option is not so visible since the button says only “Imposta una data” and says nothing about the number of hosts; only after setting a date it also shows the option to choose the number of rooms and people. (Screenshot 21)  Graphical user interface, application  Description automatically generated  Screenshot 20: <https://www.courmayeurmontblanc.it/it/ospitalita-7>  Graphical user interface, application  Description automatically generated  Chart  Description automatically generated  Screenshot 21: <https://www.courmayeurmontblanc.it/it/ospitalita-7> | |

### Structural Navigation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Structural Navigation | 4 |
| Comment | In main pages of the website there is, in the bottom of the page, the “Ed altro” part which consists of links to other pages of the same section. The links provide the title, an image and a brief description. Nevertheless, it does not provide any order of the pages (previous/next), so the user has to remember which page has already visited and which not. (Screenshot 22).  In some pages, such as the home (screenshot 23), present too many components that makes more difficult the navigation and finding what you are looking for.  Graphical user interface, website  Description automatically generated  Screenshot 22: <https://www.courmayeurmontblanc.it/it/food>  Graphical user interface, website  Description automatically generated  Screenshot 23: [https://www.courmayeurmontblanc.it/](https://www.courmayeurmontblanc.it/it) | |

### Semantic Navigation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Semantic Navigation | 5 |
| Comment | Browsing the website is common to see some referments to topics related to the current page: for instance, in the “Sci e snowboard” page is present a referment to the weather and prices pages (Screenshot 24); When the heuristic is applicable it is easy to move from one topic to another. For example, in the screenshot 25 when the user is on a restaurant it can easily move to another one.  Graphical user interface, text, application, email  Description automatically generated  Screenshot 24: <https://www.courmayeurmontblanc.it/it/sci-e-snowboard>  A picture containing text, person, mammal, male  Description automatically generated  Screenshot 25: <https://www.courmayeurmontblanc.it/en/servizi/-bar-ristorante-le-vieux-grenier> | |

### Landmarks

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Landmarks | 3 |
| Comment | The landmarks accomplish their function allowing the user to jump from one section to another. In particular, the Courmayeur main symbol is useful to return to the homepage from any page.  The problem of this useful landmark is that it’s not very visible because it is a small logo (see screenshot 26) place on the left of the menu bar. Incomprehensible the choice to use as landmark to the homepage the small logo rather than the big logo placed at the center page.  Also, the “Menu” landmark could be better: it opens a quite messy window in which all the other landmarks are repeated uselessly.    Screenshot 26: <https://www.courmayeurmontblanc.it/en> | |

### Information overload

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE content | Information overload | 1 |
| Comment | Big pictures and huge amount of (not required) information are present in all the page, which worsens the experience of the user.  The weather page has too many messy webcams window and the Menu window can confuse the user (see screenshot 27).  Graphical user interface, website  Description automatically generated  Screenshot 27: <https://www.courmayeurmontblanc.it/it/good-to-know/webcams-meteo> | |

### Text-Layout

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Text-Layout | 5 |
| Comment | The text is always clear and visible also when it has a photo as background (see screenshot 28).  A picture containing text, snow, outdoor, mountain  Description automatically generated  Screenshot 28: <https://www.courmayeurmontblanc.it/en/sport> | |

### Interaction placeholders-semiotics

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Interaction placeholders-semiotics | 3 |
| Comment | Besides the upper right landmarks, there are not so many symbols around the website. Somewhere the are arrows that are rightly used to navigate among the items in a page. However, there are some symbols which meaning could be misunderstood: the plus symbol on correlated items of a page (Screenshot 29) could let think about adding the items to a certain kind of list, instead it is only a link to that item’s page; the geolocation symbol near the Request Information (Screenshot 30) has nothing to do with position, it wrongly opens in another panel of the browser the exact identical page; to identify the link to an external website is used a symbol figuring a square with an outcoming arrow (Screenshot 31) its meaning and function could be not so immediate to understand for every user and could be misunderstood with “share” button.  Graphical user interface  Description automatically generated  Screenshot 29: <https://www.courmayeurmontblanc.it/it/food>  Immagine che contiene testo  Descrizione generata automaticamente  Screenshot 30  Immagine che contiene testo  Descrizione generata automaticamente  Screenshot 31 | |

### Interaction placeholders-consistency

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Interaction placeholders-consistency | 3 |
| Comment | In “sport” page there are 2 buttons called “events calendar” and the lowest is linked to the correct page but the highest redirects the user to an error page (screenshot 32). There is a problem also in “Tariffe e impianti” link that doesn’t related to a correct link (screenshot 33). In some pages the 2 buttons “Service” and “Request Info” are connected to the same form (screenshot 34). Some symbols position could be improved; for instance, the arrow to navigate among the correlated items of a page are put below the items instead of next to and not scrolling enough the page could let miss them (see screenshot 35).  Background pattern  Description automatically generated with medium confidence  Screenshot 32: [https://www.courmayeurmontblanc.it/en/sport#section-events-cluster-list](https://www.courmayeurmontblanc.it/en/sport%23section-events-cluster-list)  Graphical user interface, text, application  Description automatically generated  Screenshot 33: <https://www.courmayeurmontblanc.it/en/undefined>  Graphical user interface, application  Description automatically generated  Screenshot 34: <https://www.courmayeurmontblanc.it/en/servizi/ristorante-les-dames-anglaises>  Graphical user interface, application, website  Description automatically generated  Screenshot 35: <https://www.courmayeurmontblanc.it/it/sport/scopri-il-comprensorio> | |

### Spatial allocation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Spatial allocation | 4 |
| Comment | The initial big photo can impress the user and it can attract potential visitors to visit Courmayeur that is the main purpose of the website. There are spatial problems in some sections of pages. For example, in screenshot 36 it’s reported the footer that is too big for what it contains.  A picture containing background pattern  Description automatically generated  Screenshot 36: <https://www.courmayeurmontblanc.it/en> | |

### Consistency of Page Structure

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Consistency of Page Structure | 5 |
| Comment | All the pages of the website share the same skeleton composed of a big picture that appears immediately to the user, a text for explanation and a footer that is always the same.  Also in the Events section, every event page has the same coherent design. | |

## Inspection Results

In this section of the report are reported the results of the collective evaluation enriched with graphs and table that highlight the strengths and weaknesses of the three main category: navigation, content and presentation.

* **Navigation Heuristics**

The navigation on the site is fairly straightforward with some hiccups. That’s why it was rated positively but couldn’t reach high scores. The “Interaction Consistency” heuristic is pretty indicative of the fact that the site is very coherent but lacks flow and usability in this category. “Visibility of System Status” got the worst results among the different heuristics. One of the causes of those problem could be attributed to the lack of proper breadcrumbs, which are even difficult to spot on the web pages.



Table 1

Chart, bar chart

Description automatically generated

Graph 1: Navigation Heuristic Results

* **Content Heuristics**

This is the section where the highest number of criticalities were found. Courmayeur’s website offers too much information, which is most of the times difficult to decipher, and this could create confusion among the users. Another problem pointed out during the inspection is the lack of indication while encountering errors. This issue creates confusion because users could did not know which page would give them problems. The recollected data can be found below.



Table 2

Chart, bar chart

Description automatically generated

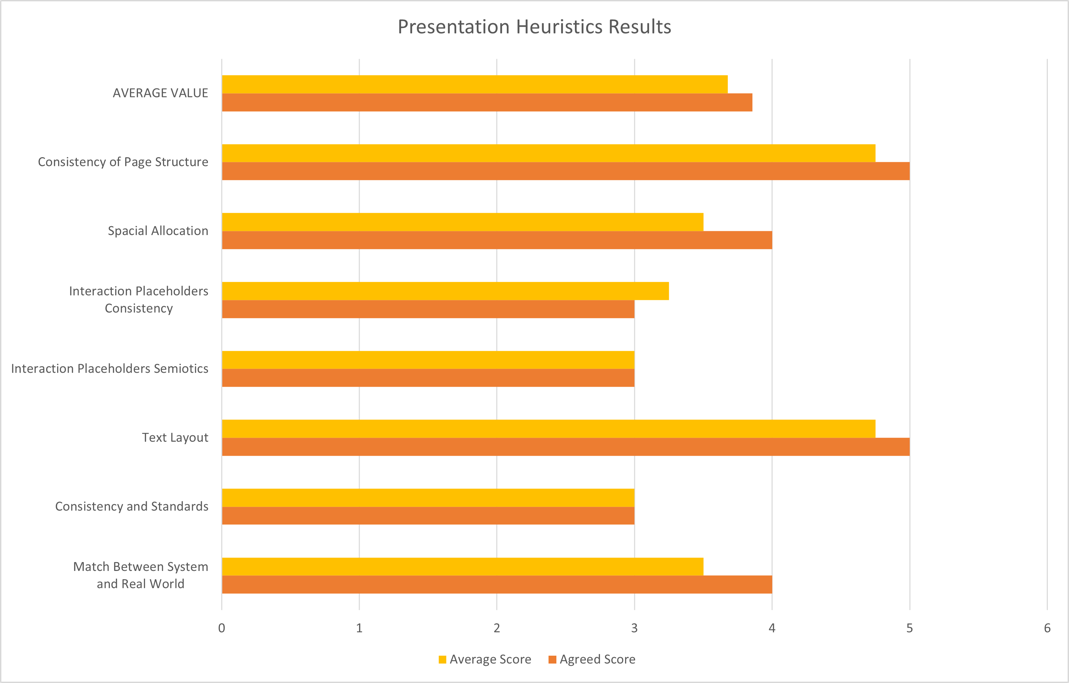
Graph 2: Content Heuristic Results

* **Presentation Heuristics**

This is the highest scoring group of heuristics. Presentation is most of the times clear and intuitive. Structure and layout are well thought and consistent and efficiently convey the message shown on the different pages. For example, each page shows the same principles: a large image that introduces the topic followed by a text paragraph and links to related pages. However, while its look certainly is worth of praise, site’s navigation definitely feels undermined by the problems previously highlighted.

****

Table 3



Graph 3: Presentation heuristic Results

# User Testing

## General Method (What is User Testing)

Usability properties are evaluated by observing how the system is actually used by some representative of real users. User behaviors are observed, recorded and then analyzed by expert researchers. User testing for Usability Evaluation is an example of Empirical Research. Empirical means gaining knowledge through facts. The goal of User Testing within usability is to uncover actual difficulties that users have when interacting with the application and to obtain systematic feedback on the effectiveness and efficiency of use of your product.

## User Testing Design

First thing, the users were asked to perform some pre-defined tasks on the website (see section 2.2.3). Second, after performing all the tasks, the users were asked to fill out a questionnaire about the website and their experience with it.

### User Profile Definition

The user profiles have been chosen in order to represent a small sample of the users that could be interested in visiting the website both for needs or interest.

The website analyzed is about the Courmayeur location in Italy, a tourist destination for people of different ages and kind: from young students to older workers; all these people could be interested in going to Courmayeur and so should need to also visit the website.

### Variables Definition

Some variables have been chosen to be measured during the execution of the tasks and by a subsequent survey for the testers. These variables have been collected in order to be analyze once the testing phase has ended and inferring results on the usability of the website. The usability variables include both quantitative and qualitative indicators and are reported in the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| Usability Variable | | Description | Type of Indicator |
| V1 | Effectiveness | Task success rate | Quantitative |
| V2 | Efficiency | Time needed to complete the task | Quantitative |
| V3 | Errors | Visit of wrong sections while completing the task | Quantitative |
| V4 | Satisfaction | Users’ feelings about the navigation experience | Qualitative |
| V5 | Disorientation | Difficulty in understanding how to move between the shown contents | Qualitative |
| V6 | Wandering periods | Difficulty to realize the next steps | Qualitative |
| V7 | Confidence with the design | Level of understanding on what the function of a component is | Qualitative |

Table 4: Variables description

### Tasks Definition

The tasks have been defined in order to make the user browse all the main section of the website and use all the provided functionalities. To do so, the number of tasks needed has been of six tasks.

Each task is defined proposing to the user a realistic scenario in which they could be, without giving to the user any indications of how to accomplish them (such as the buttons to click, the section where find something and similar).

The order of the tasks has been randomized for each user in order to minimize the learning effect. Moreover, it is tried to alternate harder task from the easier ones in order to avoid discouragement in the users. Every session starts from the homepage of the website.

While the user performs a task, the supervisors keep track of all the variables defined in section 2.2.2; in particular, the established time to perform each task has been fixed on 5 minutes.

The results of each task could be:

* **Successful**: the user has been able to complete the task within the time without needing any help.
* **Partial** successful: the user has been able to complete the task within the time but needing some supervisor help.
* **Failed**: the user has not been able to complete the task within the time even with the supervisor help.

Below the table containing all the task to propose to the users:

|  |  |  |
| --- | --- | --- |
| TASK | | DESCRIPTION |
| T1 | Accomodation Planning | You are a family (two adults and two children) on holiday with your grandfather and grandmother and want to book 2 separate rooms at the famous Hotel “Lo Scoiattolo” from 31 December 2022 to 2 January 2023. Check the availability. |
| T2 | Request Information | After browsing the site for some time, you cannot find information relating to the COVID-19 restrictions and you want to request information about the Green Pass at the C.S.C. (Courmayeur Service Center). Then you decide to fill out the form and submit it. |
| T3 | Wishlist | You have decided to spend your holidays in Courmayeur; Looking at the proposals on the website, you are interested in Cinema, Typical Products and Baby Club and decide to add them to your Wishlist, a function offered by the site.  After adding all three, you decide to cancel the Cinema because you might as well go elsewhere. Finally, send your Wishlist by e-mail. |
| T4 | How to arrive | You have to reach your friends for a weekend in Courmayeur by car and you want to know how to reach the place and how much it would cost to leave the car for 2 days in the Viale Monte Bianco P2 car park. |
| T5 | Events | You have learned that on April 2 your daughter's favorite author will be present at the event: "Authors at the top". You want to search for the number for information regarding the event. |
| T6 | Skipass | Skiing is your passion and you have decided to go skiing in the famous Courmayeur. Then go to the website and look for the Ski Pass rate table. |

Table 5: Task description

### Pilot Test

Before submitting the test to the recruited users, it has been simulated among the group members and through a candidate user. This candidate user did not take part in the test in order not to generate bias. In this way, it has been possible to minimize misunderstandings and prevent any errors in the formulation of the test from impacting the results of the study.

### Post-test Questionnaire

After the session, the recruited users are asked to complete a brief questionnaire. Such questionnaire is aimed to understand which part of the website are well developed from the user’s perspective and which ones are not. In this case the questionnaire has been proposed to the users using Microsoft Formsä software and all the data are collected anonymously. Questions proposed are both closes and open questions; the first ones are a simple index of agreement about some statements while the open question requires the user to provide an improvement they would like to see on the website.

The form has been proposed in Italian since not all the users were able to understand English.

Below the table with the proposed questions translated in English and the link to the Microsoft Formä questionnaire.

|  |  |  |
| --- | --- | --- |
| Assessment | | How much do you agree with the following statements?  (1= totally disagree, 5=totally agree) |
| *Content* | | The terminology used by the site is understandable and close to common language. |
| The site is intuitive: the labels and symbols used give a good idea of ​​their functionality. |
| The amount of information on each page is balanced: there is neither too much information nor too little. |
| Pages are never too long: don't scroll too far down to find what you're looking for. |
| *Navigation* | | Each section/page of the site gives a good idea of ​​its content thanks to text and images. |
| The site allows you to easily switch from one section to another |
| The site allows you to easily return to previous pages without using the functions offered by the browser (e.g., Google Chrome arrow to go back). |
| The menu bar (see image below) is clear and useful for navigation. |
| The search function offered by the site is useful for looking for what you do not find. |
| *Cognitive Effort* | | Learning to use the site is quick and easy. |
| The site gives awareness of the section in which you are at all times without feeling disoriented. |
| The Wishlist function offered by the site is useful and easy to use. |
| *Presentation* | | The text is always clear and legible (color, size, font). |
| The structure of the pages is consistent between pages of the same type and the same section. |
| Graphically the site is captivating. |
| *Comments* | | Would you change anything within the website? If so, explain what and why *(open question)* |
| *Overall rate* | | Overall, the site manages to fulfill its purpose: to provide information on Courmayeur and attract people to visit the town. *(1= poor, 5=very good)* |
| Overall, how would you rate your browsing experience on the Courmayeur Mont Blanc website? *(1= poor, 10=very good)* |
| Survey  Link | <https://forms.office.com/Pages/ResponsePage.aspx?id=K3EXCvNtXUKAjjCd8ope69z6czY72idLl_QmhH_QC8FURDY2QzhOOUZDSEZDNk5SNE9EWkYwVktVQS4u> | |

Table 6: Post-test questionnaire

## User Testing Execution

The usability tests have been performed in person. The users were allowed to use their own computer in order to make them feel more comfortable. It has been pointed to the users that was not a test about their capability of using the website but rather a test for the website.

### User profile recruited

It was possible to recruit all the prefixed profiles: young students, from different age and study program (Computer Science students, Business students but also High School students); young and older workers from very different environment of job.

It was also possible to cover a quite large age range: from 20 up to 60 years old.

Finally, it is highlighted that those users had different levels of confidence in using a computer and so in using a website. Therefore, it was possible to see how the website is browsed from an able user rather than a not very skilled user.

### Task Execution

First, the observer describes to the user the task to perform and, during that, observe the user in order to provide any assistance when needed or requested. While performing the task the observer has kept track of the defined variables (see section 2.2.2) in order to analyze those date once all the tests has been completed.

Users have been also encouraged to embrace the Think Aloud technique in order to overcome the problem of not being able to accurately analyze their behavior. Think Aloud is a method invented by psychologist Édouard Claparède, which consists of externalizing by voice what the user thinks and plans during task execution.

### Questionnaire

Once all the tasks have been completed, the link to the questionnaire has been provided to the users who could complete it both from their computer or smartphone. To fill in the questionnaire, it required in average 4 minutes for all the users. It was composed of 17 close questions and one open question.

Microsoft Formä allow to check all the answers, their average values between users and to read all the answers provided to the last open question. That was very useful to analyze data and draw conclusions.

### Data Analysis

In this section the data collected from the User Testing phase are shown and analyzed; both from the task execution part and questionnaire compilation.

* **Effectiveness**

How discussed in section 2.2.3 there were three possible outcomes for each task: Successful (S), Partial successful (P) and Failed (F). The effectiveness of the website is analyzed by detecting, for each assigned task, the success rate among the users; such rate is expressed as percentage of successful outcome on overall outcome. A task outcome is considered successful if carried out correctly and in a totally autonomous manner, within the prefixed time limit of 5 minutes.

Chart, bar chart

Description automatically generatedAll the outcomes of each user for each task are reported in the table below (*Table 7*).

Graph 4: Outcome for each task

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| User | T1 | T2 | T3 | T4 | T5 | T6 |
| 1 | S | F | S | S | P | S |
| 2 | F | S | F | P | S | P |
| 3 | S | S | P | S | P | S |
| 4 | P | S | P | S | P | P |
| 5 | P | S | F | S | S | P |
| 6 | S | S | F | S | S | P |
| 7 | S | S | F | S | S | S |
| 8 | S | S | F | S | S | S |
| 9 | F | S | S | S | S | S |
| 10 | S | S | S | P | S | S |
| 11 | P | F | P | P | P | P |
| 12 | S | S | S | S | S | S |
| 13 | P | S | P | P | S | S |
| 14 | S | S | S | S | S | S |
| 15 | S | S | F | S | S | S |
| 16 | S | S | S | S | S | S |
| 17 | S | S | S | S | S | S |
| 18 | S | S | P | S | P | S |
| 19 | P | S | S | S | S | S |
| 20 | S | S | F | S | P | S |
| Success Rate | 65% | 90% | 40% | 80% | 70% | 75% |

Table 7: Task outcomes for each user

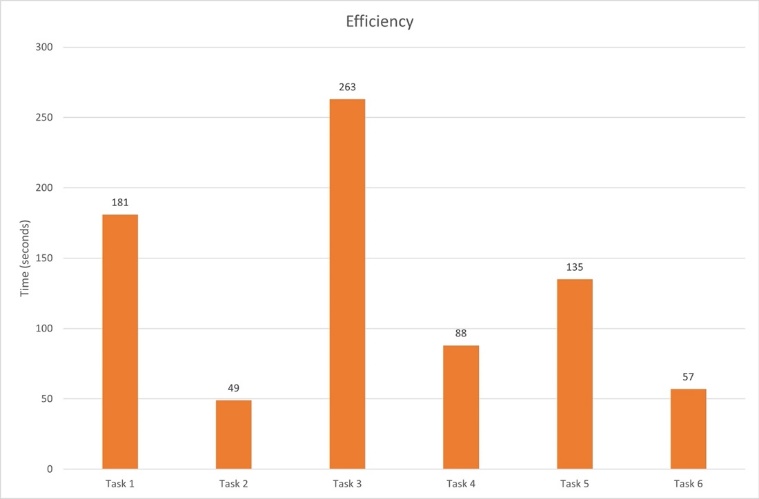
As shown in *Graph 1,* the task with highest success rate is the Task 2 (Request Information); indeed, for all the user was quite simple to find the Request information module since it is possible to reach such module from several ways but that could be a pro or a con in the implementation.

The hardest task to complete was the Task 3 (Wishlist), it was indeed the task with the highest failure rate and users found some difficulties in perform it: sometimes the hint to add something to the wishlist did not appear and they were not able to add an item to the wishlist; sometimes after adding everything requested by the task into the wishlist, they were not able to reach the wishlist section; finally, sometimes the wishlist turned out to be empty even if they had previously add item in it.

How is possible to notice the last three task have 0 failure rate since users were always able to properly complete them within the time but sometimes, they needed some help. This could be a sign that the functionalities used in those tasks are functional but maybe need some little improvements to be more intuitive.

* **Efficiency**

The variable efficiency is represented by the amount of time in which the user complete or not the task. For every task, each user had 5 minutes to finish it starting always from the homepage. The time is reported in the table 6 and it is computed the average time for the completion of each task. In certain case there is “>300” that representing the fact in which the user has not completed the task for time elapsed.

****

Graph 5: Average time for each task

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| User | T1 | T2 | T3 | T4 | T5 | T6 |
| 1 | 140 | 27 | >300 | 54 | 106 | 17 |
| 2 | >300 | 42 | >300 | 165 | 70 | 180 |
| 3 | 124 | 40 | 217 | 20 | 100 | 10 |
| 4 | 146 | 30 | 240 | 30 | 80 | 60 |
| 5 | 125 | 45 | >300 | 75 | 128 | 32 |
| 6 | 121 | 125 | >300 | 50 | 272 | 62 |
| 7 | 111 | 63 | >300 | 47 | 117 | 208 |
| 8 | 122 | 137 | >300 | 145 | 80 | 34 |
| 9 | >300 | 284 | 278 | 173 | 182 | 185 |
| 10 | 120 | 25 | 155 | 176 | 68 | 28 |
| 11 | 224 | >300 | 220 | 38 | 206 | 16 |
| 12 | 208 | 110 | 178 | 30 | 93 | 28 |
| 13 | 202 | 52 | 292 | 212 | 76 | 48 |
| 14 | 90 | 59 | 238 | 69 | 106 | 45 |
| 15 | 267 | 56 | >300 | 38 | 218 | 18 |
| 16 | 107 | 60 | 240 | 65 | 45 | 41 |
| 17 | 150 | 60 | 249 | 35 | 168 | 15 |
| 18 | 220 | 18 | 285 | 160 | 250 | 42 |
| 19 | 290 | 15 | 240 | 45 | 65 | 30 |
| 20 | 260 | 10 | >300 | 130 | 270 | 32 |
| AVG | 181 | 49 | 263 | 88 | 135 | 57 |

Table 8: Time on task in seconds

The most-time consuming task is the task 3. This was an expected result because the user had to find all the pages to add in the Wishlist. The experiment found that users can be confused by the Wishlist because it is a concept not very easy to understand by the unskilled user. Another problem found by moderators is the losing of time by users to search the information they needed. This problem happens due to the fact that the website is very dense of information and the user gets lost and spends time.

* **Errors and confidence with design**

To count the number of mistakes computed by users navigating the website was used the error variable. In the table below are represented for each user the exact number of errors made for each task and the total number, among the user, of all errors for each task in order to highlight which task brought to most or least errors. That is even more evident in the pie chart.

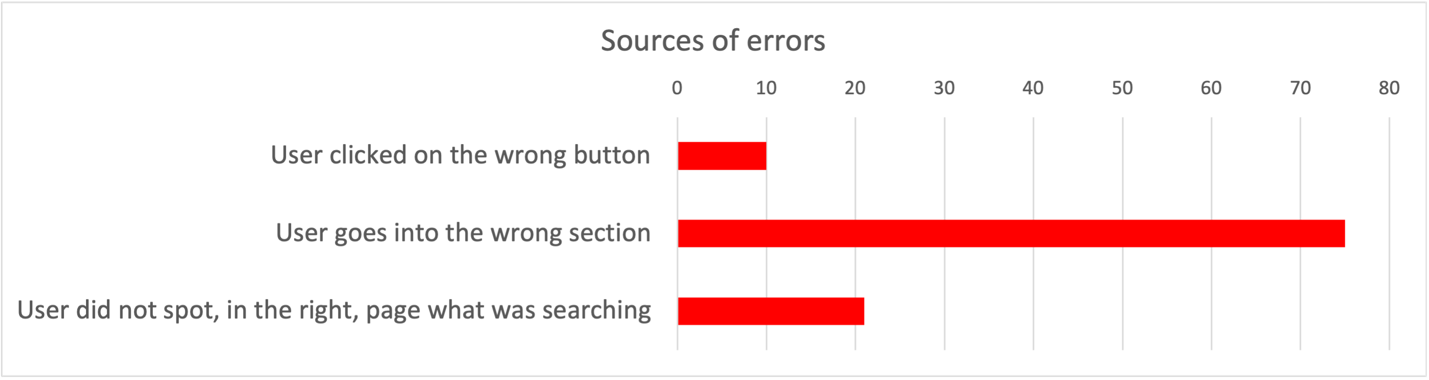


Graph 6: Pie chart representing the number of errors

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| User | T1 | T2 | T3 | T4 | T5 | T6 |
| 1 | 0 | 0 | 2 | 0 | 1 | 0 |
| 2 | 3 | 1 | 1 | 1 | 0 | 1 |
| 3 | 0 | 0 | 1 | 0 | 2 | 0 |
| 4 | 1 | 0 | 1 | 0 | 2 | 1 |
| 5 | 1 | 0 | 2 | 0 | 1 | 0 |
| 6 | 0 | 0 | 2 | 0 | 1 | 1 |
| 7 | 0 | 0 | 3 | 0 | 1 | 1 |
| 8 | 0 | 0 | 1 | 0 | 0 | 0 |
| 9 | 3 | 1 | 2 | 0 | 0 | 0 |
| 10 | 1 | 0 | 1 | 1 | 0 | 1 |
| 11 | 4 | 3 | 2 | 0 | 2 | 0 |
| 12 | 3 | 2 | 0 | 0 | 2 | 0 |
| 13 | 3 | 0 | 0 | 3 | 1 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 2 | 1 | 1 | 0 | 2 | 0 |
| 16 | 1 | 0 | 3 | 0 | 0 | 0 |
| 17 | 3 | 0 | 1 | 0 | 1 | 0 |
| 18 | 4 | 0 | 1 | 1 | 1 | 1 |
| 19 | 5 | 0 | 1 | 0 | 1 | 0 |
| 20 | 3 | 0 | 4 | 1 | 1 | 0 |
| Total errors | 37 | 8 | 29 | 7 | 19 | 6 |

Table 9: Errors count by the moderator

The most critical was the Task 1 (Accommodation planning) which is the one with the highest number of wrong actions or path. The most common mistake in this task was the click on the hotel page before setting up the date, the guests and the rooms. This is a heavy problem because the user after selecting the hotel is redirect on a page in which there is no more the possibility to set the date.



Graph 7: Main class of users’ errors

It was possible to identify three main kinds of error among the users, as reported in the above graph. The most common class of mistake made by users are those in which they search for something in the wrong section; it brings to spend time in the wrong page to understand that it is actually wrong with a consequential need to go back in the previous page. This made users lost a great amount of second and this often brought to a failed task.

* **Wandering periods**

For *wandering period,* it is mean a time laps in which the user is not able to understand where has to go in order to find what is searching. This could bring the user to random click in labels and symbols that sound like useful to the achievement of user’s goal. These attempts could turn in the good path as well as a wrong one. In any case this is not a good practice, and the developer of a website should minimize this behavior trying to keep the website as intuitive as possible.

During the test, the moderators carefully analyzed the expressions and reactions of the users. These data, together with the results of the post-test questionnaire have been very important in the evaluation of such variable. It was not possible to collect quantitative data about it, but the careful observations the executions bring to light that users had more wandering periods in performing tasks T1, T3 and T4. In Task T1 (Accommodation plan) users wandered in searching of the filter to check the room availability in the accommodation section: some of them did not see the button while others tried to set it after entering the hotel’s page. In Task T2 (Wishlist) users wandered in search of the particular activities they were asked to add in the Wishlist and for the Wishlist itself. In task T4 (Events) most of them had no idea of where to find the event calendar, trying to find it in the Entertainment section that had an Event page on it but that showed only a selection of events without no visible link to the calendar.

* **Disorientation**

From the data collected with the post-test questionnaire, combined with those collected by the moderators during the tests on users’ behavior, it emerges that, in general, the site does not guarantee easy navigation for the users when they are searching something in particular. It is clear from the graph below (*Graph 8*) how all the question related to the orientation variable have not a good score according to the users; most of them are also insufficient.

Graphical user interface, chart

Description automatically generated

Graph 8: Part of the questionnaire result (average scores)

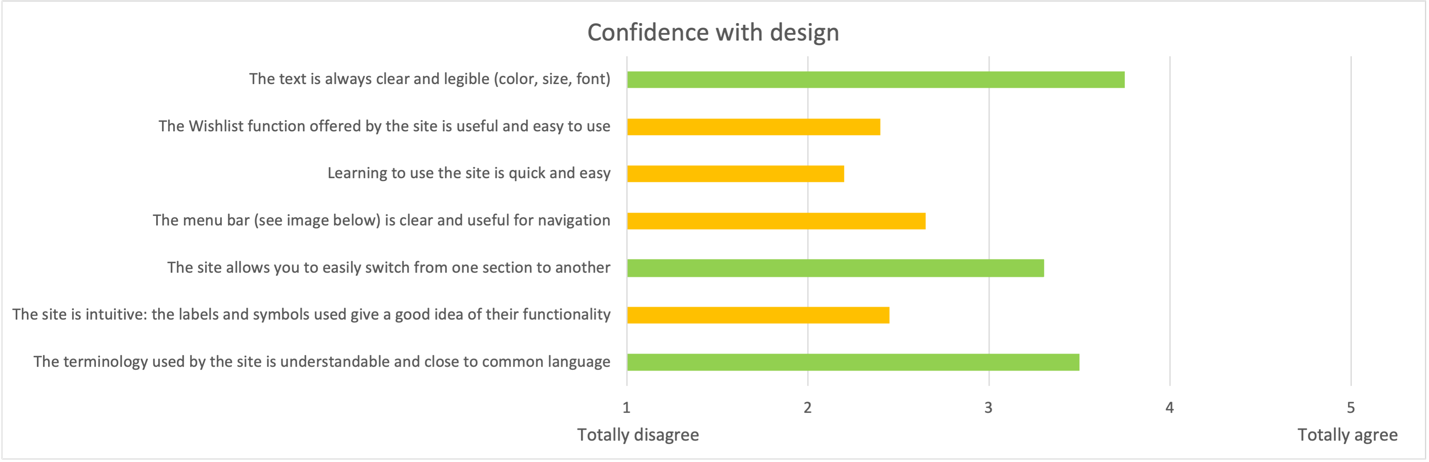
Among the most common problems are noted: disorientation of the user in browsing between different of same sections and not well understanding of the functionalities offered by the website. Let’s analyze two main problems. How it is possible to see in the graph above (*Graph 8*) the average of the second question (*The site gives awareness of the section in which you are at all times without feeling disoriented*) has an insufficient score; that is maybe due to the website does not highlight enough the section were the user is while browsing. In general, in any websites a function that comes in help when the user feels disoriented and cannot find something is the Search function; but here almost all users tested not even saw that the website offered such function. Moreover, those who found and used it did not mention it as a useful function. This result is also highlighted by the third question in the graph above.

The periods of greatest stress and fatigue are occurred during the execution of task T1 and T3. This, since users have wasted a lot of time looking for specific section or the correct function. More than one has struggled to find the Baby Club and very few succeeded without a suggestion from the moderator.

* **Confidence with design**

Unlike the wandering periods, a user shows confidence with the design when knows exactly where has to find what is searching. Consequently, the user clicks in the right labels or links and uses the functionalities offered by the website in the right way. This confidentially can be achieved by several means like the language, which should be near as much as possible to the users’ language or making explicit the functionalities offered by the system.

It has been possible to evaluate the degree of confidence observing the users during the tests and the analysis with the data gained by the questionnaires. The results showed that users are able to understand the language used by the website and to navigate between its main section.



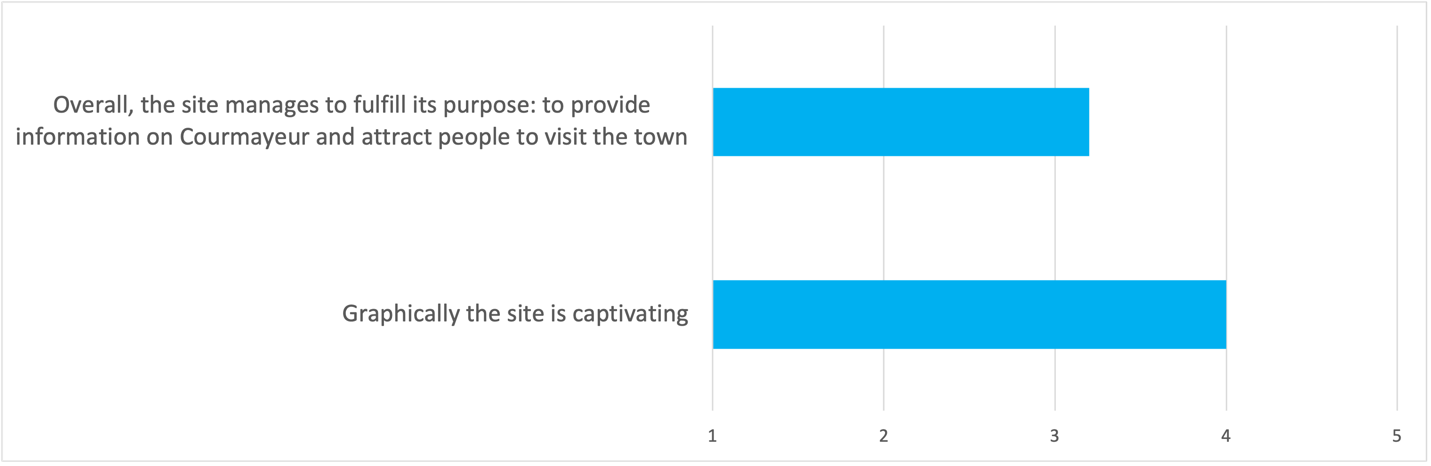
Graph 9: Part of the questionnaire results (average scores)

The users showed some troubles when they have to search something in particular. Although it is quite easy to understand what a section has in it, on the other hand it is hard to get in which section found a specific item. When the users were asked to find something barely demonstrated confidence with the design, resulting often in trying to find something by attempts.

Observing the survey results in the *Graph 6* above, many users assert that is difficult to learn how to use the website maybe because of it is not very intuitive in searching what is needed, always according to the users. This analysis shows that the website in quite useful to get an idea about the location of Courmayeur but not so useful in searching something of interest that the user is searching.

* **Satisfaction**

The most appreciated feature by the user about the website was for sure the graphic design. Indeed, once open, the website, shows an attractive and pleasant design. The colors chosen are consistent with the characteristics as well as the fonts. Of course, the choice of using the photo of Courmayeur helps the website in being more attractive showing the beauty of the location. For this reason, the website, according to the users, succeeds in attracting people in visiting the location of Courmayeur.



Graph 10: Part of the questionnaire results (average scores)

Besides the graphic design the satisfaction proved by the users is on average not sufficient. To the user has been asked to provide an overall score on their experience with website and, how Is possible to see in the *Graph 8* below, it was insufficient: the mean value was of 5,85 out of 10. Although some users gave a positive grade to their experience, some of them are severely low. In particular, the users giving low grade were the older ones who have not a high level of confidentiality with the digital systems. However, this cannot be a justification for the web developers: the website could certainly of interest also for older users, therefore it must reach sufficient levels of usability even for them.



Graph 11: users’ overall satisfaction

Finally, it is provided, in *Table 10,* all the suggestions provided by users. They have been important data to draw up all the considerations written in this chapter.

|  |  |
| --- | --- |
| Would you change anything on the website? If so, what? | |
| User 1 | I’m an inexpert user and for me the website is too complex, so it would be simpler. |
| User 2 | Yes, I would put the Baby Club page in the entertainment section. |
| User 3 | The Wishlist function is not so intuitive. The window showing its option could let recall an advertisement banner and could mislead the user who could not see it. |
| User 4 | Some texts are not well readable (maybe because are small and white on a light blue background). Moreover, I would improve the “How to reach us” section because it is not immediate to find the means list with their respective reach ways. |
| User 5 | The “Book now” button bringing to an external website (booking.valledaosta) decreases the value of the possibility to check the availability directly from the Courmayeur website. |
| User 6 | Difficulties in reading some light blue words on a white background. Homogeneity of the language either in Italian or in English. The Wishlist doesn’t work. Difficulties in understand the difference between the “Sport” and “Ski and Snowboard section”. |
| User 7 | The website is not so understandable, and information are hard to find. I would semplicate the search by grouping the information in typologies all in the same bar (instead that something above, something on the right, something below…). |
| User 8 | Poor information section, missing FAQs and recommended searches. |
| User 9 | The calendar about events is not so visible. |
| User 10 | Surely the contents organization. The menu does not provide so much information and the content search does never provide informative answers. |
| User 11 | Increasing the differentiation between different sections in order to distinguish the season activities from the basic functions of the website itself. Deleting the horizontal bar in the homepage and organizing better the menu which seems quite better to search the information you want. |
| User 12 | The meaning of “wishlist” should be clearer. |
| User 13 | Clearer icons. |
| User 14 | Wishlist doesn’t work. I went on “Tariffe e Impianti” from the menu but I was sent to a wrong page. Image choice is great, but they are too big |
| User 15 | I’d give the possibility of checking for hotel rooms directly on the site without exiting it (by using a plugin for example), this won’t create confusion and it’d be useful for faster research. I’d work on that too, right now the research list is too standard and narrow. I would insert the parking section in a separate menu voice, without having to scroll down on the homepage. I would remake the white function bar in the upper part. It ruins the aesthetics, and its icons aren’t clear at all. |
| User 16 | Not immediate at all, you waste a lot of time finding the information that you need. |
| User 17 | I’d make it easier and more intuitive. |
| User 18 | Wishlist doesn’t work and the menu is misleading. You need too much time finding sections and breadcrumbs are missing. |
| User 19 | They should work on the organization and layout of some windows (sometimes I felt lost). The small wishlist icon isn’t clear and I didn’t notice it. Anyways, I’ll probably go visit Courmayeur since the food section intrigued me. |
| User 20 | Research function isn’t efficient. |

Table 10: Post-test comments of the users

# Conclusions

This chapter contains the conclusions of the usability report relating to the Courmayeur website. The considerations made in the following sections represent the basis on which the system can be improved to provide a better user experience.

## Comments on results

The user testing matches in part with the results of the inspection mostly about the aesthetic of the website. During UT few more issues emerged not spotted with the inspection method: for example, most of the users faced a serious bug in the wish list that also adding pages and sections it always remains empty. Another problem highlighted by the testing was the difficulty in finding specific items in the sections: this led us to the conclusion that the section in which items are located could be designed in a more intelligent way.

## Suggestions for improvements

After having completed the Inspection and having analyzed the data collected during the User Testing, it is feasible to expose a global evaluation of the website. Both experts and recruited users agree that Courmayeur.it is high-grade in terms of design. However, it presents many weaknesses that have been already highlighted during the Inspection. Also, users felt disoriented and frustrated while performing some tasks.

We highlighted some suggestions of those problems for each main category:

|  |  |  |  |
| --- | --- | --- | --- |
| Category | Problem | Priority | Suggested Solution |
| Navigation | The breadcrumbs implemented in the system is quite useless; It is barely visible, and it is too synthetic. | High | * It should be bigger and fixed in the upper left part of each page without disappearing when scrolling. * It should consider more levels of depth: 3 levels should be good |
| Menu is too messy and has in it too many links; many of these links are also duplicated. | High | * Eliminate the duplicated link, better organization of the sections in it, improve its design in term of text layout. |
| Search function could be more useful: it shows many results, and it is not immediate to find what the user is searching; moreover, it does not provide neither suggestion or error recognition and recovering | Medium | * Implement the suggestion when the user is typing. * Implement the recognition of typos and following correction. * Reduce and improve the results shown giving more immediate instances, maybe using images. |
| The landmarks in the upper right part of the website are not immediate to be found and, in general, they aren’t very understandable; some of the symbols are misleading and they disappear when scrolling. | Medium | * Adding labels or using bigger and more immediate symbols (for the language not the world but a flag, for the weather not a single cloud but a cloud with the sun). |
| Content | The wishlist function offered by the website presents several problems.  For an inexpert user the function provide by such wishlist could be not so immediate.  It is hard to find the button to add an item to the wishlist when the suggest does not appear.  The link to the wishlist is not so easy to find.  Often even adding items to the wishlist it turns out to be empty. | Low | * Better explain in the suggestion which is the functionality of the wishlist * Make the button to add an item to the wishlist more visible. * Resolve the bug of the empty wishlist |
| The Events Calendar page is hard to find. It is possible to reach it only through a small voice in the menu or through a barely visible button in the correlated section of a page | Medium | * Put the event section near to the main section of the website or make its voice in the menu more visible |
| Some pages contain to many information, and this could result in an overload for the users. In particular, the homepage and the weather page are very messy. | Medium | * Better weigh up the contents in a page showing only what is needed * Provide an image viewer in order to insert smaller image to expand when need and make the page lighter |
| The “Request information” module and the “How to reach us” section are present at the end of each page: these functions are not needed in every moment and their presence in all the pages make the overload increase | Low | * Remove these sections in the bottom part of the pages * Make for them a proper section * Make it possible to reach these sections through an easy to find symbol or label |
| Some users could miss a FAQ section that could be useful for an information website such this | Low | * Add a FAQ section |
| Presentation | Some texts could not be so immediate to see for some users due to their size or their color in respect to their background | Low | * Change the size of some text * Better balance between background and text when the background is a photo |
| The correlated items to the current page are placed in the bottom part of the page. Some users could miss it | Low | * Place this section on the upper part of the page or in a right column |

## Personal Observations

With this assignment we have understood how to make a report to discuss about the usability of a website. In general, the work was very interesting mostly for the cooperation of the team and also it gave us the possibility to describe thoroughly the website of an important tourist destination like Courmayeur. It has been interesting to learn how to analyze a website from an expert point of view learning that some website that are aesthetically appealing, once analyzed could show their issues. The Courmayeur website open in a first place seemed a well-developed website, but once analyzed it has been possible to discover a series of issues that otherwise would not be noted.

Draw up this report made us understand what to look out when designing a website: which errors prevent, which design practice carry on and which no. This will be for sure a step forward in developing our own website. Overall, this experience was appreciated by all of us.

# Individual Annex

This section contains the complete reports of individual inspections on the usability.

## Individual inspector: Davide Carini

### Visibility of System Status

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Visibility of System Status | 1 |
| Comment | The breadcrumb is not enough visible and it’s difficult for the user to find it in the page (it is not in a strategic point). Another problem is that it’s difficult to understand when the user is in the homepage because there isn’t nothing that show it.  In certain cases, the breadcrumb are too synthetics (in the screenshot 1 the page “mountain-climbing” is under the page “Sport” but it is attached to the homepage).  Graphical user interface, website  Description automatically generatedScreenshot 1: [https: /www.courmayeurmontblanc.it/it/alpinismo-d-inverno](https://www.courmayeurmontblanc.it/it/alpinismo-d-inverno) | |

### Match between System and the Real World

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Match between System and the Real World | 4 |
| Comment | There are many problems in the translation that can make difficult the comprehension of certain part of the text for not Italian people (see screenshot 2).  Nevertheless, the photos used on the website describe well the page in which are put in.  Graphical user interface, application  Description automatically generatedScreenshot 2: menu panel | |

### User control and freedom

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | User control and freedom | 4 |
| Comment | The webpage permits the user to save an interesting page in the Wishlist (see screenshot 3). The user can also delete the element that it’s added to the list (see screenshot 4).  Graphical user interface, website  Description automatically generated  Screenshot 3: Button to save the page in the Wishlist  Graphical user interface  Description automatically generated with medium confidence  Screenshot 4: <https://www.courmayeurmontblanc.it/it/wishlist> | |

### Consistency and standards

|  |  |  |  |
| --- | --- | --- | --- |
| Heuristic Type | Heuristic | | Score |
| Nielsen | Consistency and standards | | 4 |
| Comment | | A small problem is showed in the screenshot 5. In this case the significant of the icons are not so intuitive. Usually for the language of the website is used the flag not the symbol of the planet. The other standards are all respected (search box, back-to-top indicator, exit button, share icons, etc.)  A picture containing icon  Description automatically generated  Screenshot 5: icons panel | |

### Error prevention

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Error prevention | 3 |
| Comment | In the module to compile for receiving information the check of the correctness of the email structure and the filling of all fields is done only after the user clicks on the “send request” button (screenshot 6).  Graphical user interface, application, email  Description automatically generated  Screenshot 6: <https://www.courmayeurmontblanc.it/en#section-form-info> | |

### Recognition rather than recall

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Recognition rather than recall | 1 |
| Comment | When the user writes in the search textbox is not provided any suggestions that minimize the user’s memory (see screenshot 7)The same thing happens in the request information form. For example, during the insertion of the city there is not a list that helps the user (see screenshot 8 ).    Screenshot 7: search textbox  Graphical user interface  Description automatically generated  Screenshot 8: [https://www.courmayeurmontblanc.it/en#section-form-info](https://www.courmayeurmontblanc.it/en%23section-form-info) | |

### Flexibility and efficiency of use

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Flexibility and efficiency of use | 4 |
| Comment | The user can navigate with the top menu bar. There is the problem of too many repetitions (see screenshot 9) that can disorient the user.  Graphical user interface, website  Description automatically generated  Screenshot 9: menu top bar and menu panel | |

### Aesthetic and minimalist design

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Aesthetic and minimalist design | 2 |
| Comment | The homepage is too dense of information that can confuse users that visit the webpage. There are too many different elements put together. Another big problem is the menu panel that is too long and complex (see screenshot 10).  The only thing well described are texts that are coincided and really clear.  Graphical user interface, application  Description automatically generated  Screenshot 10 : menu panel | |

### Help users recognize, diagnose and recover from errors

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Help users recognize, diagnose and recover from errors | 1 |
| Comment | The diagnostic of the error is not well implemented. In the “request information” form when the user types the email incorrectly it does not understand what the type of error is. Neither the search box provides support to the user. | |

### Help and documentation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Help and documentation | N/A |
| Comment | **-** | |

### Interaction consistency

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Interaction consistency | 5 |
| Comment | Pages of the same type have the same links thanks to the menu panel that it’s very useful to this scope. | |

### Group navigation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Group navigation | 1 |
| Comment | Breadcrumbs are not very useful because they can only permit the user to go back to the homepage. So, the flow of pages is very limited. | |

### Structural Navigation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Structural Navigation | 5 |
| Comment | The division of each page is well defined and each of them can easily navigated by users. | |

### Semantic Navigation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Semantic Navigation | 4 |
| Comment | When the heuristic is applicable it is easy to move from one topic to another. For example, in the screenshot 11 when the user is on a restaurant it can easily move to another one.  A picture containing text, person, mammal, male  Description automatically generated  Screenshot 11 : <https://www.courmayeurmontblanc.it/en/servizi/-bar-ristorante-le-vieux-grenier> | |

### Landmarks

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Landmarks | 3 |
| Comment | The most useful landmark that helps the user to reach the homepage is not very visible because it is a small logo (see screenshot 12) place on the left of the menu bar. Incomprehensible the choice to use as landmark to the homepage the small logo rather than the big logo placed at the center page.    Screenshot 12: <https://www.courmayeurmontblanc.it/en> | |

### Information overload

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE content | Information overload | 1 |
| Comment | The main page is overpopulated of different sections and big pictures that can confuse the user during the interaction with the webpage. | |

### Text-Layout

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Text-Layout | 5 |
| Comment | The text is always clear and visible also when it has a photo as background (see screenshot 13).  A picture containing text, snow, outdoor, mountain  Description automatically generated  Screenshot 13: <https://www.courmayeurmontblanc.it/en/sport> | |

### Interaction placeholders-semiotics

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Interaction placeholders-semiotics | 4 |
| Comment | The main icons (share, back to top, search) are correctly represented. There are some problems with the 2 icons (see screenshot 5) that are difficult to interpret. | |

### Interaction placeholders-consistency

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Interaction placeholders-consistency | 3 |
| Comment | In “sport” page there are 2 buttons called “events calendar” and the lowest is linked to the correct page but the highest redirects the user to an error page (screenshot 14). There is a problem also in “Tariffe e impianti” link that doesn’t related to a correct link (screenshot 15). In some pages the 2 buttons “Service” and “Request Info” are connected to the same form (screenshot 16).  Background pattern  Description automatically generated with medium confidence  Screenshot 14: [https://www.courmayeurmontblanc.it/en/sport#section-events-cluster-list](https://www.courmayeurmontblanc.it/en/sport%23section-events-cluster-list)  Graphical user interface, text, application  Description automatically generated  Screenshot 4: <https://www.courmayeurmontblanc.it/en/undefined>  Graphical user interface, application  Description automatically generated  Screenshot 16: <https://www.courmayeurmontblanc.it/en/servizi/ristorante-les-dames-anglaises> | |

### Spatial allocation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Spatial allocation | 4 |
| Comment | The initial big photo can impress the user and it can attract potential visitors to visit Courmayeur that is the main purpose of the website. There are spatial problems in some sections of pages. For example, in screenshot 17 it’s reported the footer that is too big for what it contains.  A picture containing background pattern  Description automatically generated  Screenshot 17: <https://www.courmayeurmontblanc.it/en> | |

### Consistency of Page Structure

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Consistency of Page Structure | 5 |
| Comment | All the pages of the website share the same skeleton composed of a big picture that appears immediately to the user, a text for explanation and a footer that is always the same. | |

## Individual inspector: Riccardo Pestrin

### Visibility of System Status

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Visibility of System Status | 2 |
| Comment | Breadcrumbs are incomplete and hard to find. Sometimes important sections are missing ad you can only go back by hitting the undo button.  Many pages are wrongly placed and not indicated on the main section bar, like in the image below.      *Screenshot 1:* [*https://www.courmayeurmontblanc.it/it/sport/skirama*](https://www.courmayeurmontblanc.it/it/sport/skirama) | |

### Match between system and the real world

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Match Between System and Real World | 4 |
| Comment | All the images and terms used are well explained to the user. However, the site lacks proper translation in English or French. | |

### User control and freedom

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | User Control and Freedom | 2 |
| Comment | Since this site is intended as an information tool, there’s no real implementation of an undo and a redo functionality apart from the Wishlist section, where the user can choose to save future events, info and news regarding Courmayeur.    *Screenshot 2: Add to the wish list box* | |

### Consistency and standards

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Consistency and Standards | 3 |
| Comment | The site is generally well put together in terms of consistency. However, there are a few standards that are not respected and could be improved. For example, the “Top Attività” section is sometimes shown as a bullet list and, in other pages, as a series of interactive boxes.    *Screenshot 3:* [*https://www.courmayeurmontblanc.it/it/mont-blanc*](https://www.courmayeurmontblanc.it/it/mont-blanc) | |

### Error Prevention

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Error Prevention | 2 |
| Comment | There are many pages that don’t work, like “tariffe e impianti” in the menu section. The error appears only after the user has clicked on the link, there’s no way of knowing which pages work.    *Screenshot 4 : menu panel* | |

### Recognition rather than recall

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Recognition Rather than Recall | 2 |
| Comment | The information on the site is quite accessible, but on the search bar and the FAQ box information previously inputted by the user is not saved. The map section is rather confusing and there aren’t labels that indicate what is going on unless you click on each signpost.    *Screenshot 5* | |

### Flexibility and efficiency of use

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Flexibility and Efficiency of Use | 3 |
| Comment | The information is sometimes redundant, and a few pages can be found only by a specific path which are hard to find and to memorize. Apart from these issues, navigation is quite straightforward.    *Screenshot 6:* [*https://www.courmayeurmontblanc.it/it*](https://www.courmayeurmontblanc.it/it) | |

### Aesthetic and minimalist design

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Aesthetic and Minimalist Design | 3 |
| Comment | The site is too crammed with information which undermine its aesthetics. The images and color choices are well put together.    *Screenshot 7 :* [*https://www.courmayeurmontblanc.it/it*](https://www.courmayeurmontblanc.it/it) | |

### Help users recognize, diagnose and recover from errors

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Help users recognize, diagnose and recover from errors | 1 |
| Comment | Error messages are always displayed with an error code, such as “404” and without any indication whatsoever on what the cause of the problem might be.    *Screenshot 8 : error page* | |

### Help and documentation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Help and Documentation | 5 |
| Comment | Information request box, contacts and documentation are always found at the bottom of each page.    Screenshot 9 : footer | |

### Interaction Consistency

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Interaction Consistency | 4 |
| Comment | The same categories pages are consistent among each other, for example when you click the “sport” section the main description and image are the same for all the other categories that you can choose below.    *Screenshot 10 :* [*https://www.courmayeurmontblanc.it/it/sport*](https://www.courmayeurmontblanc.it/it/sport) | |

### Group Navigation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Group Navigation | 3 |
| Comment | Hierarchy is well established in the site but its translation into visuals isn’t always well executed. After selected one of the main sections, the user must scroll down until interactive boxes are shown. There aren’t any criteria involving the order of appearance of those “cards” which, if clicked, open a related topic. One other problem is the aforementioned lack of consistent breadcrumbs. | |

### Structural Navigation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Structural Navigation | 3 |
| Comment | Topics are well defined, but it’s not always easy to navigate between the sections because of problems highlighted in previous heuristics.    *Screenshot 11: menu bar* | |

### Semantic Navigation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Semantic Navigation | 3 |
| Comment | It’s easy to move forward, related topics are shown as big interactive boxes. However, going back isn’t as simple due to the incompleteness of breadcrumbs    *Screenshot 12:* [*https://www.courmayeurmontblanc.it/it/beat/cinema*](https://www.courmayeurmontblanc.it/it/beat/cinema) | |

### Landmarks

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Landmarks | 4 |
| Comment | Landmarks are accessible and easy to use, even though the developers should increase the number of them. | |

### Information Overload

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Content | Information Overload | 2 |
| Comment | The site as previously mentioned is too crammed with information and the way this information is shown isn’t consistent. We have text, boxes, links, images of different size and shape that don’t follow any specific rule making the site hard to navigate. | |

### Text Layout

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Text layout | 4 |
| Comment | The font size is generally suited, but sometimes it should be bigger.    *Screenshot 13* | |

### Interaction placeholders-semiotics

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Interaction placeholders-semiotics | 2 |
| Comment | Many of the animations are very basic and they lack proper expression, as shown with the screenshot below. The home button and various selectors don’t have animations at all. This is concerning because some buttons work and sone don’t, but you can’t tell because there’s lack of visual feedback.    *Screenshot 14*  *(All three icons do not have any animation or visual feedback, however, while the first two are interactive, the third one isn’t)* | |

### Interaction placeholders-consistency

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Interaction placeholders-consistency | 3 |
| Comment | The visual effects and animations are inconsistent from one to another. Sometimes images that represent a section don’t match the meaning of the text as shown below.    *Screenshot 15* | |

### Spatial allocation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Spatial allocation | 2 |
| Comment | There’s no real rule or consistency regarding the used space. For example, sometimes section boxes have different dimensions without any reason to do so. Text is not always aligned and formatted in a proper way    Screenshot 16 | |

### Consistency of Page Structure

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Consistency of Page Structure | 4 |
| Comment | Pages do have consistency. In general, we have a big image that present the section, followed by a description and then links to other pages | |

## 

## Individual inspector: Antony Pascalino

### Visibility of System Status

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Visibility of System Status | 2 |
| Comment | Often is not clear in which section of the website you are because the corresponding landmark is not underlined. The breadcrumb, which includes also the back button, is too synthetic and barely visible: scrolling the page it disappears.  Graphical user interface  Description automatically generated  Screenshot 1: <https://www.courmayeurmontblanc.it/it/beat/cinema> | |

### Match between system and the real world

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Visibility of System Status | 4 |
| Comment | The matching is almost fully satisfied, sometimes changing page a loading symbol appears, but using the website in another language several sections are not properly translated.  Immagine che contiene testo  Descrizione generata automaticamente  Screenshot 2 | |

### User control and freedom

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | User control and freedom | 4 |
| Comment | The website is mainly a website about information so doesn’t need to provide specific control functions to the user. The only control actions the users can do are requiring information and build their own wish list: the first one is simply about filling out a module and the wish list properly allow the user to add and remove element.  Graphical user interface  Description automatically generated  Screenshot 3 : <https://www.courmayeurmontblanc.it/it/wishlist> | |

### Consistency and standards

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Consistency and standards | 2 |
| Comment | The function of some icons is not immediate to understand; for instance, the geolocation symbol could let think about the function “How to reach us”, instead it opens a map with random point of interest. The same for the cloud symbol that nowadays could let thinking about cloud services and not about the weather and surely about webcams that are in the same page.  A picture containing icon  Description automatically generated  Screenshot 4: menu bar | |

### Error Prevention

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Error prevention | 3 |
| Comment | Because the action performed by the user are limited, the errors that can be prevented are few. However, they are not well handled. Filling out the form to require information, making mistakes only highlights the wrong labels of red without explaining what is wrong; moreover, no confirmation message appears when clicking on INVIA RICHIESTA (Screenshot 5).  Moreover, the breadcrumb makes impossible to go back at the exact point of the previous page; for instance, browsing on the event section and clicking on a particular event, there is no way then going back at the previous point. There are some buttons bringing to other section of the same page or “CALENDARIO EVENTI” button brings to the starting point of the section, making the entire research useless (Screenshot 6).  Graphical user interface, text, application, email  Description automatically generated  Screenshot 5  Immagine che contiene testo  Descrizione generata automaticamente  Screenshot 6 | |

### Recognition rather than recall

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Recognition rather than recall | 3 |
| Comment | Filling out the Require Information form no suggestion appear, neither for CITTÀ or NAZIONE and since no control is applied before sending the form it should be sent with typos. In the “Ospitalità” section it is possible to select the date of the visiting, the numbers of rooms and of people, in order to filter the accommodations showed up.  Graphical user interface, application, website  Description automatically generated  Screenshot 7 | |

### Flexibility and efficiency of use

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Flexibility and efficiency of use | 4 |
| Comment | The landmarks, once well understood where they bring, could speed up the navigation of a user that visited the website a few times. Also, the “AGGIUNGI ALLA WISHLIST” button, present in every page, allow to rapidly add a page to the own wish list for the experienced user but a suggestion about it for the inexperienced user also appears sometimes.  Immagine che contiene testo  Descrizione generata automaticamente  Screenshot 8 | |

### Aesthetic and minimalist design

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Aesthetic and minimalist design | 3 |
| Comment | All the pages of the website have on the bottom part the RICHIESTA INFORMAZIONI module and a map showing how to reach the place by different means (Screenshot 9). They are clearly not always needed by the user and make the page messier and longer, even worse the users that need them may not find them right away.  Also, the button GOOD TO KNOW is always present in every page and it could be useful if only said something useful: it only shows a link to the RICHIESTA INFORMAZIONI section, again. (Screenshot 10).  Immagine che contiene mappa  Descrizione generata automaticamente  Screenshot 9  Immagine che contiene testo  Descrizione generata automaticamente  Screenshot 10: Good to know box | |

### Help users recognize, diagnose and recover from errors

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Help users recognize, diagnose and recover from errors | 2 |
| Comment | If the user uses the search function, and makes a typo, the feature does not recognize the error and it does not provide any suggestion.  Logo, company name  Description automatically generated  Screenshot 11 | |

### Help and documentation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Help and documentation | N/A |
| Comment |  | |

### Interaction Consistency

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE | Interaction consistency | 5 |
| Comment | Thanks to the landmarks, from each page the user is able to reach other sections of the website. Each page has links to the related pages.  Each restaurant/service page has a module to require information directly to the provider and links to the provider’s social network pages.  Graphical user interface, application, website  Description automatically generated  Screenshot 12 | |

### Group Navigation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE | Group navigation | 3 |
| Comment | Using the landmarks, it is easy to navigate belong the main groups of the website. However, some sections are not so easy to be found, like for instance the “Ristoranti and servizi”, “Calendario eventi” and “Ospitalità” sections. In these sections, it is possible to browse all the proposed solutions and opportunities; but the browsing could be improved: only one filter per time can be applied and going back after visiting a specific item the previous filters are deleted and the search must begin again from the start. (Screenshot 13)  In the “Ospitalità” section, there is the possibility to filter the results according to the date, the numbers of people and the numbers of required rooms, but this option is not so visible since the button says only “Imposta una data” and says nothing about the number of hosts; only after setting a date it also shows the option to choose the number of rooms and people. (Screenshot 14)  Graphical user interface, application  Description automatically generated  Screenshot 13  Graphical user interface, application  Description automatically generatedChart  Description automatically generated  Screenshot 14 | |

### Structural Navigation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE | Structural navigation | 4 |
| Comment | In main pages of the website there is, in the bottom of the page, the “Ed altro” part which consists of links to other pages of the same section. The links provide the title, an image and a brief description. Nevertheless, it does not provide any order of the pages (previous/next) so the user has to remember which page has already visited and which not. (Screenshot 15)  A similar solution is used in the “Ristoranti e servizi” section where, once on the page of a particular service/resturant, on the bottom of the page there is a selection of other pages; also here there is no order, it is quite messy and suggest even the same page where the user already is. (Screenshot 16)  Graphical user interface, website  Description automatically generated  Screenshot 15  Graphical user interface, website  Description automatically generated  Screenshot 16 | |

### Semantic Navigation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE | Semantic navigation | 4 |
| Comment | Browsing the website is common to see some referments to topics related to the current page: for instance, in the “Sci e snowboard” page is present a referment to the weather and prices pages (Screenshot 17); in the bottom part of some pages there is often a section showing the related events or services, with the proper link to the section. (Screenshot 18)  Graphical user interface, text, application, email  Description automatically generated  Screenshot 17  Immagine che contiene testo, diverso, screenshot  Descrizione generata automaticamente  Screenshot 18 | |

### Landmarks

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE | Landmarks | 4 |
| Comment | The landmarks accomplish their function allowing the user to jump from one section to another. In particular, the Courmayeur main symbol is useful to return to the homepage from any page.  However, the landmarks on the upper left part are not immediate to understand where they will bring and the “Pianifica la tua vacanza” landmark hides in it other three landmarks that could not be found so easily when searched.  Also, the “Menu” landmark could be better: it opens a quite messy window in which all the other landmarks are repeated uselessly.  A screenshot of a computer  Description automatically generated with medium confidence  Screenshot 19 | |

### Information Overload

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE | Information overload | 3 |
| Comment | The information showed in the different parts of the website seem to be the right amount in general. Only few pages contain an overload of information such for example the weather page with too many messy webcams window and the Menu window that appears once clicked on the relative landmark.  Graphical user interface, website  Description automatically generatedTable  Description automatically generated  Screenshot 20 | |

### Text Layout

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE | Text layout | 5 |
| Comment | The layout of the text is really appreciable, the choice of colors and fonts is coherent with the website style and every word is well contrasted with the background. The only minimum imperfection found is that sometimes in the homepage when the background photo changes, the landmarks texts are not so legible, but it does not depend on text but instead from the particular photo.  Immagine che contiene testo, neve, esterni  Descrizione generata automaticamente  Screenshot 21 | |

### Interaction placeholders-semiotics

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE | Interaction placeholders-semiotics | 3 |
| Comment | Besides the upper right landmarks, there are not so many symbols around the website. Somewhere the are arrows that are rightly used to navigate among the items in a page. However, there are some symbols which meaning could be misunderstood: the plus symbol on correlated items of a page (Screenshot 22) could let think about adding the items to a certain kind of list, instead it is only a link to that item’s page; the geolocation symbol near the Request Information (Screenshot 23) has nothing to do with position, it wrongly opens in another panel of the browser the exact identical page; to identify the link to an external website is used a symbol figuring a square with an outcoming arrow (Screenshot 24), its meaning and function could be not so immediate to understand for every user and could be misunderstood with “share” button.  Graphical user interface  Description automatically generated  Screenshot 22  Immagine che contiene testo  Descrizione generata automaticamente  Screenshot 23  Immagine che contiene testo  Descrizione generata automaticamente  Screenshot 24 | |

### Interaction placeholders-consistency

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE | Interaction placeholders-consistency | 4 |
| Comment | The placeholders are mainly shared across all the pages: same buttons among the pages are in the same positions. Nevertheless, some symbols position could be improved; for instance, the arrow to navigate among the correlated items of a page are put below the items instead of next to and not scrolling enough the page could let miss them.  Graphical user interface, application, website  Description automatically generated  Screenshot 25 | |

### Spatial allocation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE | Spatial allocation | 5 |
| Comment | The spatial allocation heuristic is almost fully satisfied. All the elements in the pages are near only if correlated, both images and descriptions. There is any information where it is not needed or useful. | |

### Consistency of Page Structure

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE | Consistency of page structure | 5 |
| Comment | The heuristic is almost satisfied; every section of the website has the same design: a specific photo that identify the section, a description and the links to other contents related to that section; sometimes on the right column, when useful, there are also further information.  Also in the Events section, every event page has the same coherent design.  A person skiing down a slope  Description automatically generated with low confidence  Screenshot 26 | |

## Individual inspector: Daniele Casciani

### Visibility of System Status

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Visibility of System Status | 1 |
| Comment | Breadcrumb labels are not so evident on the page and they don’t show sufficient information about the trail that user has taken in the case reported below, seems that the “apres-ski” section can be reachable direct from the home and there is no mention about the “intrattenimento” page from which I’m passed before.  A picture containing text, person, indoor  Description automatically generated  Screenshot 1: <https://www.courmayeurmontblanc.it/it/beat/apr%C3%A8s-ski> | |

### Match between System and the Real World

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Match between System and the Real World | 2 |
| Comment | The first problem that can be noticed concerns the translation; in the example report below we are considering the Italian version of the site, however there several of English terms, such as those highlighted in red (screenshot 1.2), that make labels less understandable.    Screenshot 2: menu panel  It’s important to note, instead, that the images describe well the respective sections, facilitating the orientation of the user. | |

### User control and freedom

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | User control and freedom | 2 |
| Comment | The webpage permits the user to save an interesting page in the Wishlist. The user can also delete the element that it’s added to the list (see Screenshot 3). However, it is possible delete an element only from “Wishlist” page since there isn’t any undo and redo provided to the user immediately (see screenshots 4-5).  Graphical user interface  Description automatically generated with medium confidence  Screenshot 3: <https://www.courmayeurmontblanc.it/it/wishlist>  Graphical user interface, website  Description automatically generated  I can add to the wishlist  Screenshot 4: <https://www.courmayeurmontblanc.it/it/sport>  Panda Non soGraphical user interface, website  Description automatically generated  How can I come back?  Screenshot 5: <https://www.courmayeurmontblanc.it/it/sport> | |

### Consistency and standards

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Consistency and standards | 3 |
| Comment | The icons highlighted below are not very understandable and don’t respect the platform standards. Usually for the language of the website is used the flag not the symbol of the planet, and the same for the cloud that is famous for other reasons. The other standards are all respected (search box, back-to-top indicator, exit button, share icons, etc.)  A picture containing icon  Description automatically generated  Screenshot 6: icons panel | |

### Error prevention

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Error prevention | 4 |
| Comment | in general, each link is accompanied by a good label that explains quite clearly where the user will be redirected. however, there are no confirmation options before commit an action (add/delete from wishlist, send a request…) | |

### Recognition rather than recall

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Recognition rather than recall | 2 |
| Comment | As can be seen from the screenshots, the heuristics is present but in part, completely absent in the search bar, more than discreet as regards the booking procedures.    Screenshot 7: search textbox  Graphical user interface, website  Description automatically generated  Screenshot 8: <https://www.courmayeurmontblanc.it/it/ospitalita-7> | |

### Flexibility and efficiency of use

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Flexibility and efficiency of use | 1 |
| Comment | The presence of the landmark is good even if they are not always visible, such as when you scroll down the page.  The page is not flexible or more customizable by an advanced user that is limited to the base functionality.      Screenshot 9: <https://www.courmayeurmontblanc.it/it> | |

### Aesthetic and minimalist design

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Aesthetic and minimalist design | 0 |
| Comment | the site is, decisively, not minimal; in general, the pages are rich and dense of information that are not essential to the user. | |

### Help users recognize, diagnose and recover from errors

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Help users recognize, diagnose and recover from errors | 1 |
| Comment | It’s satisfied, in part; in the info form for example if an erroneous input is inserted the site is limited to just highlight the form parts with errors (not always), while no messages or suggestions are provided to the user.  It’s important to note instead, a good handling of exception in case of the classic “page not found”(see screenshot below).    Screenshot 10: <https://www.courmayeurmontblanc.it/it>  Graphical user interface, application  Description automatically generated  Screenshot 11: <https://www.courmayeurmontblanc.it/it/lo-matson> | |

### Help and documentation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| Nielsen | Help and documentation | N/A |
| Comment | Completely absent from site. | |

### Interaction consistency

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Interaction consistency | 4 |
| Comment | The pages always present the same structure and same possible interactions (for example: send a request for more info, start a booking procedure…). | |

### Group navigation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Group navigation | 1 |
| Comment | The navigation through different categories can be good but go from a member to another one can be more difficult, since the bad path breadcrumbs and the chaotic division of category and sub-categories. | |

### Structural Navigation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Structural Navigation | 3 |
| Comment | In some pages, such as the home (screenshot below), present too many components that makes more difficult the navigation and finding what you are looking for.  Graphical user interface, website  Description automatically generated  Screenshot 12: [www.courmayeurmontblanc.it/it](file:///C:\Users\DAVO_\Desktop\www.courmayeurmontblanc.it\it) | |

### Semantic Navigation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Semantic Navigation | 5 |
| Comment | The back bottom is well implemented, and the user is able to navigate easily in both directions.    Screenshot 13 | |

### Landmarks

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Navigation | Landmarks | 3 |
| Comment | There are a set of useful landmarks, even if someone is not so intuitive; In addition, they are not visible every time but just on the top of the page. They are good but require some adjustment.    Screenshot 14: <https://www.courmayeurmontblanc.it/it> | |

### Information overload

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE content | Information overload | 1 |
| Comment | Big pictures and huge amount of (not required) information are present in all the page, which worsens the experience of the user.    Screenshot 15: <https://www.courmayeurmontblanc.it/it> | |

### Text-Layout

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Text-Layout | 5 |
| Comment | Text and font are well choised, they make the pages clearly readable. | |

### Interaction placeholders-semiotics

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Interaction placeholders-semiotics | 3 |
| Comment | Partially explained, sometime more details about the function are needed to be more understandable by the user; Some function is not clear what it does (screenshot below)    Screenshot 16 | |

### Interaction placeholders-consistency

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Interaction placeholders-consistency | 3 |
| Comment | Partially satisfied but needs more work. In fact, there are icon that don’t return the correct meaning of them and, in addition, are not well explained by a correct label; some position can be reviewed too. | |

### Help and documentation

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Spatial allocation | 3 |
| Comment | Element’s allocation is good but can be improved, looking at the home, for example is evident that the different categories can be more relevant to the user instead of some suggestions (“lasciamoci ispirare”) to him; however, the second are located in a more relevant position. | |

### Consistency of Page Structure

|  |  |  |
| --- | --- | --- |
| Heuristic Type | Heuristic | Score |
| MILE Presentation | Consistency of Page Structure | 5 |
| Comment | In general, yes, the structure of the pages is always the same, which is very good for a better navigation feedback by the user. | |

# User Testing Annex

In this section is reported for completeness a summary of the survey with the exact average for each statement. All the 20 forms are not added to lighten the report.

Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, text, application, email, website

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated