HYPERMEDIA APPLICATIONS 2020

Usability Evaluation Study 1: Inspection

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1 – Abstract

This document reports the Inspection-based Usability Evaluation of the website of "Visit Monterosa" (https://www.visitmonterosa.com/). The analysed website provides extensive information about the Monterosa mountain including the description of the territory and environment, activities and attractions available in the zone with an interactive map of all the available tracks for skiing, news about the territory and the possibility to directly buy a lot of services. The contents include an analysis on through heuristic inspection of 2 expert evaluators and an overall evaluation of the product along with our conclusions. The Annex provides the individual scores of each inspector.

2 – INSPECTION METHOD

2.1 - Overview

The inspection process followed the following steps:

- **Heuristics Understanding:** In order to perform a satisfactory inspection of our website we recognize that a crucial point is to choice and understand carefully the heuristics, making sure they are significant and easy to give them an objective score. Heuristics were therefore discussed among the inspection team

- **Definition of metrics (scores):** inspectors defined the value range for scoring the heuristics, and the meaning of the numerical values

- **Definition of user goals:** agreement among all inspectors of the **main user goals** that all inspectors should have in mind while performing the inspection, imagining to be a user trying to achieve at least these goals.

    o "Having a general idea of what are the main services offered by the website"

    o "Planning a family visit"

    o "Searching information about the activities and skiing opportunities"

    o "Looking for accommodation in the area"

    o "Looking for the prices of the activity offered in the website"

- **Analysis and reporting of individual scores:** each evaluator explored the web site individually, but everyone had a precise task to analyze and focus on.

- **Analysis and definition of final scores (on each heuristics and on each category of heuristics):** the final score was made of each heuristic was made by an evaluator but the score of each point and the comment was discussed to try to find a precise analysis of the website .

- **Reporting:** organization of the material, decision on how to describe results (tables, screenshots, diagrams, etc.) and assignment of writing tasks (who writes which section)

2.2 - Heuristics

The selected heuristics are divided in three groups: Navigation, Content and Layout. Navigation focuses on how easy is for the user to move across the web site and find the content (s)he is looking for; Contents is about the quality of information and data provided by the site regardless the way they are presented; Layout stresses the visual image of the website and its effectiveness in terms of expressivity and ergonomic functions. The following list of heuristics was provided in the course's slides.

NAVIGATION:

- o **Interaction consistency:** do pages of the same type have the same links and interaction capability?
- o **Group navigation**: is it easy to navigate among group members and from a group introductory page to group members (and the other way around)?
- o **Structural Navigation**: is it easy to navigate among the semantic components of a Topic?
- o **Semantic Navigation:** is it easy to navigate from a Topic to a related one?
- o **Landmarks:** are landmarks useful to reach the key parts of the web site?

CONTENTS:

- o **Information Overload**: is the information in a page too much or too little and does it fit the page layout?

LAYOUT:

- o **Text Layout:** is the text readable? Is font size appropriate?
- o **Interaction Placeholder:** are textual or visual labels of interactive elements "expressive"? i.e., do they reflect the meaning of the interaction and its effects? Are they consistent?
- o **Spatial Allocation:** is the on-screen allocation of contents and visual appropriate for their relevance? Are "semantically related" elements close and "semantically distant" element far away?
- o **Consistency of Page Structure:** do pages of the same type have the same lay out (same visual properties of each component and similar lay-out organization of the various elements?)

2.3 - Scoring Method

The designed scoring provides a vote from 0 to 5 to each heuristic, meaning that a heuristic is fully satisfied if its score is 5 and is not satisfied at all in the case of a score of 0, with severe violations and issues detected.

The score assignment consists in responding to the questions reported in chapter 2.2 and filling the tables in the chapter 3.

3. Agreed scores on each individual heuristics

In this chapter of the relation is reported the evaluation agreed among all evaluators. Numeric evaluation has also been paired with short notes, that describe the reason of that score, where we felt it was needed. The individual evaluation made by each evaluator is reported in the Annex.

Navigation

NAVIGATION

Heuristics	Score	Comment
Interaction Consitency	4	*The site is overall consistent in this aspect, there are only too many similar interactions*
Group Navigation	5	*The group navigation is easy and intuitive enough for a new user to avoid confusion*
Structural Navigation	4	*Structural navigation is provided in different way but simple and without confusion.*
Semantic Navigation	5	*Semantic navigation is treated with attention. It is offered to the user a lot of possibility to move across similar contents.*
Landmarks	3	*Footer Landmark is with too much information, Shortcuts could be not necessary, and Header has not significant graphic improvements.*

INTERACTION CONSISTENCY

Pages of the same type are well structured in the same way, offering to the user a vast interaction opportunity. Each page has a header (fig. 1) divided into two submenus: the first allows to instantly change the contents of the site depending on whether the user is looking for information regarding the winter or summer period. It allows to change the language and navigate to the newsletter subscription page.

The second submenu is divided into six main categories offering a wide choice of links that allow you to navigate through the pages of the website.

A drop-down menu with shortcuts persists on each page (fig. 1). However, the link to the pages contained here are already easily accessible from the menu of the header. For example, the link "WHERE TO STAY" is repeated and there was no need to make a shortcut, others like "WEBCAM" and "IN REAL TIME" are also easily accessible with the topbar dropdown on "Monterosa Ski" (fig. 2). This involves an overabundance of the same links; it can facilitate interaction between pages for a less experienced user but also be useless for many.

In the pages where forms are needed to filter the contents these always appear at the top (fig. 5) and on the right of the page always appear a form for a quick reservation.

In addition to the sponsors, we always find the footer (fig. 7) with links for social media, contacts, policies and a toolbar to search the site, this is a good habit to be at the top.

GROUP NAVIGATION

Thanks to the well-divided header, it is very easy, intuitive and immediate to navigate thought the site and move from one category of information to another. In addition, the drop-down menu (fig. 1) that contains the components of each group, collecting most of the information on the website, allows the user to move quickly from one content to another easily and without confusion.
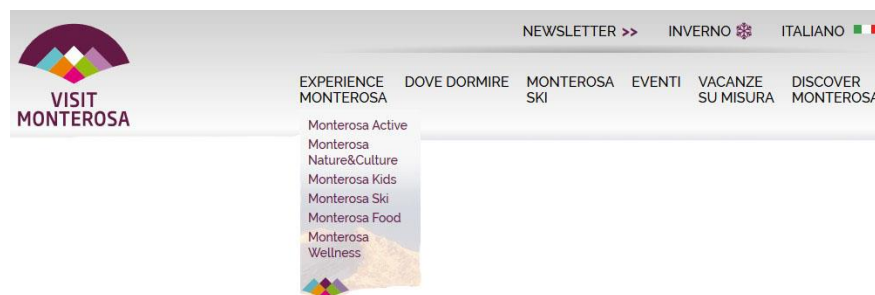

Figure 1

Figure 2

STRUCTURAL NAVIGATION

From the Homepage the main categories of information can be reached in different ways. Some services such as bars, guides, transport, ski equipment etc. can be reached with a scrolling menu (fig. 3) thanks to the logo and title is very intuitive and does not create confusion. The Monterosa's unique services on which you want to draw attention are divided into categories and a table of images with a title, which makes them well recognizable by the other components (fig. 4).

Figure 3

Figure 4

SEMANTIC NAVIGATION

The website, thanks to a form (fig. 5), offers to the user who is browsing the possibility to search for the same proposals for another valley or another location, guaranteeing to the user speed and ease of comparison. So, when the user reaches one result, the website provides some contents similar in interest, location or topic to what the user is viewing at the time (fig. 6).

Figure 5

Figure 6

LANDMARKS

Landmarks are provided in a header (fig. 1), divided in two headbar, a shortcuts drop-down menu (fig. 2) and footer (partially in fig. 7) of each page of the website. Much space of the footer (not reported in figure 7) is reserved for the sponsored municipalities and the official partners with the related. For the purpose of the user experience it is not necessary that they are part of the landmark and constant on each page, they could have been only on the homepage or on a dedicated page. Others space is reserved for contacts, social medias and policies. In addition, the search button is usually present in the header not in the footer, a user who is not very experienced at first may not find it or think that it is not there.

Shortcuts (fig. 2) could be not necessary, most of the links are already easily accessible from the header.

All landmarks are basically static, meaning they does not change between pages, which is fine, but could use a little graphic customization in order to give a more intuitive experience for the user, such as highlighting the group currently being visited by the user.
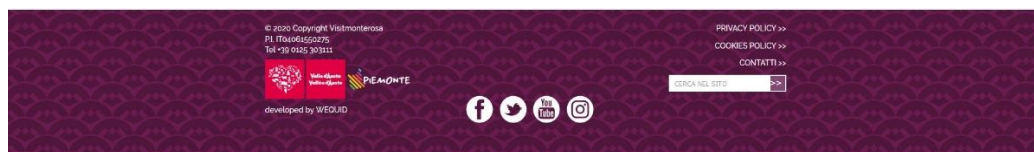

Figure 7

Contents

CONTENTS

Heuristics	Score	Comment
Information Overload	*4*	*The website organises the information in a consistent and clear way with some exception*

INFORMATIONS OVERLOAD

Even though the site has a lot of content and on average is well filled, it seems that some categories on the headbar are overfilled (Fig. 9) and you could lose the information that you would need. The shortcut is also not really useful and sometimes it could block the view of the content (Fig. 8).

Figure 9

Figure 8

Layout

LAYOUT

Heuristics	Score	Comment
Text Layout	4	*The text layout feels really good, it's not difficult to read and it's easy to understand where you have to focus*
Interaction Placeholder	4	*The display of contents is generally consistent with the relevance they have in a page*
Spatial Allocation	4	*The spatial allocation of text and contents reflects their relevance*
Consistency of Page Structure	5	*The page structure is well handled, with attention to consistency in all the pages*

TEXT LAYOUT

The text layout makes the reading of text easy, but there are few details that could help the pages to look nicer. One possible improvements could be justifying the text to obtain a more ordered page (ex.: fig.10).

Figure 10

INTERACTION PLACEHOLDER

The display of contents is generally consistent with the relevance they have in a page and the related ones are usually displayed one near to each other.

SPATIAL ALLOCATION

The spatial allocation of text and contents reflects their relevance, but the graphic result could be better and would need some improvements such as resizing images or adjusting some labels on top of the image as the example below (ex: fig. 11).

Figure 11

CONSISTENCY OF PAGE STRUCTURE

Pages belonging to the same groups or topics have similar layouts, with attention to integrity and consistency. All the contents are well described and always explain well what is it about.

4. Aggregated Results and Discussion

Results of inter-inspectors agreement about the score of each individual heuristics has been aggregated into a single value for each category of heuristics. This value is computed as the **average** of the individual heuristics scores, which represent our overall evaluation about how a specific usability aspect (e.g., navigation, content, etc.) is handled in the web site.

Navigation

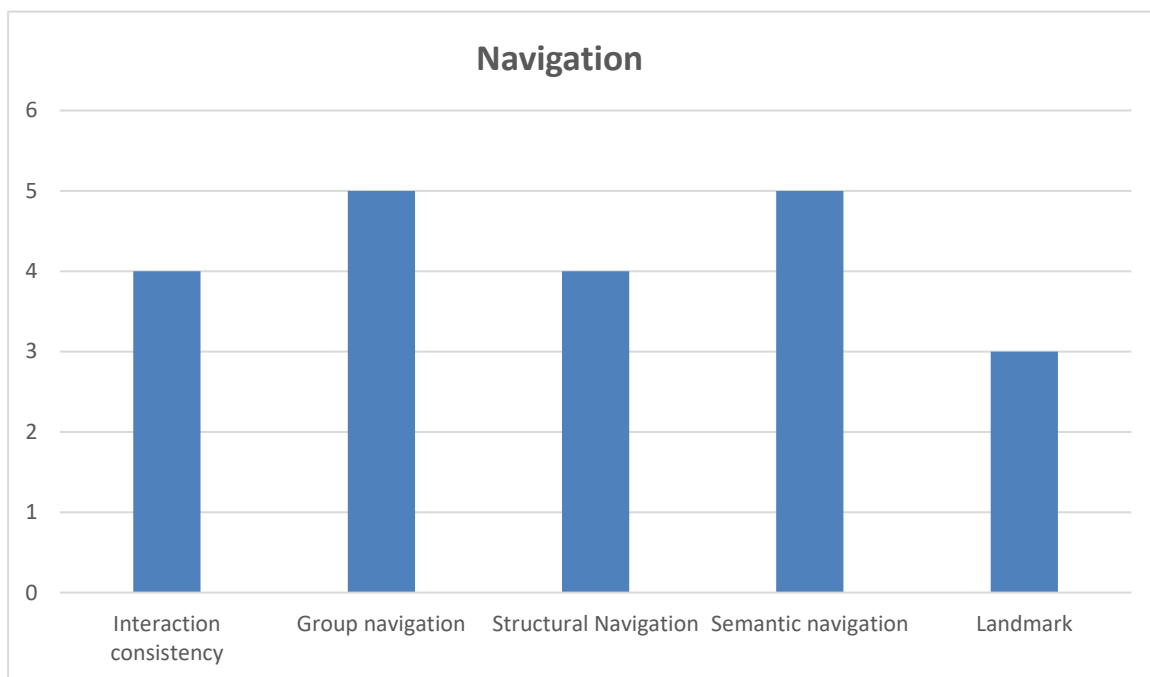The navigation analysis is composed of evaluating five elements.

Figure 12 - Grades of the navigation

Average: $(4 + 5 + 4 + 5 + 3) / 5 = 4.2$

The mathematical average gives a four point two out of five as a result that is the lowest in the three considered, meaning that overall the navigation in the site is good handled, but there is still room for improving it.

Contents

The contents analysis is composed of two evaluation elements, that represent the quality and quantity of the presented information.

Average: $(4) / 1 = 4$

Here the average it consist only on the analysis of the information overload, with a score of 4 points really that is a really good result. In fact, the site offers a vast amount of information about a various range of topics, taking of avoiding information overload.

Layout

The layout analysis is granted thanks to four elements of evaluation, about the graphical and spatial quality of the webpages.
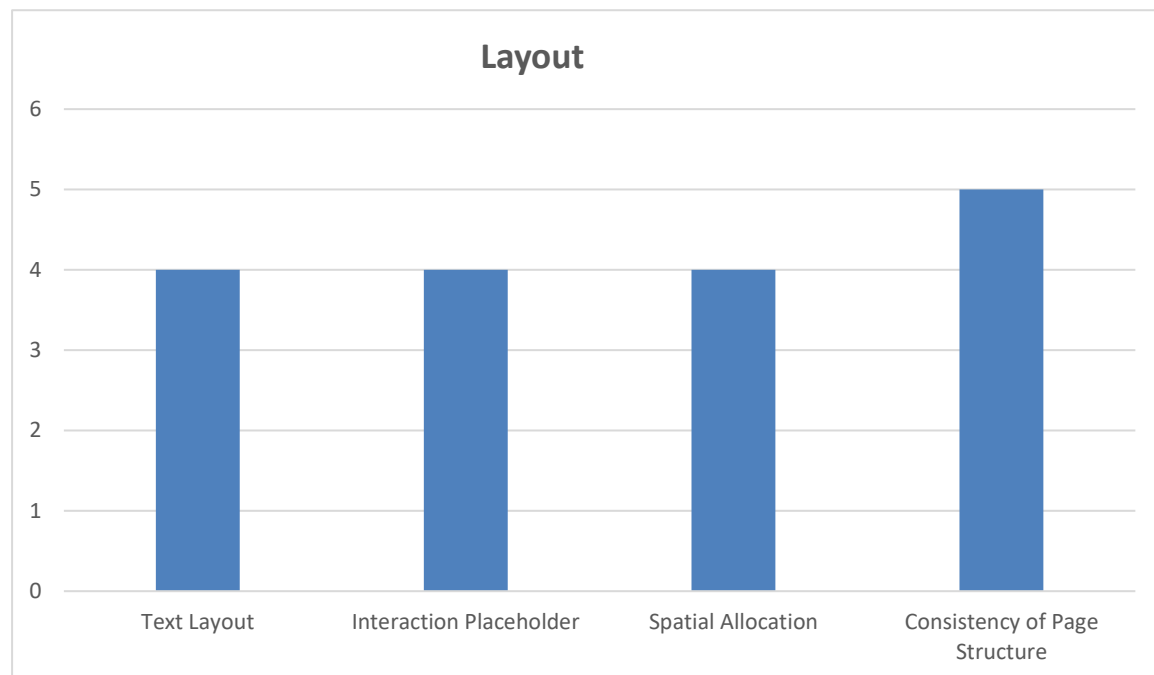

Figure 13 - Grades of the layout

Average: (4 + 4 + 4 + 5) / 4 = 4.25

The mathematical average is four point twenty-five, that is not the lowest score but it's the aspect in which the website should be improved.

5. Conclusions

In our opinion, the site is well structured from the usability point of view: even a user unfamiliar with the web and without much experience can navigate easily without encountering problems.

However, the iterative structures could have been better organized at the design level, in fact, as we have seen, there is an abundance of interactions for the same pages and too much variety of interaction methods. The amount of information and interactions on the Homepage is considerable, it could have been more "poor" and minimal and it would have worked the same.

The main difficulty that we faced during this project it was to understand which heuristic, or category of a heuristic, was "responsible" for some type of content because sometimes they were very similar to each other and pretty difficult to distinguish.

ANNEX

In this section we provide further information that have been left out in the previous section for tidiness reasons or to avoid information overloads and report the individual scores on each heuristics reported by each inspector. The following tables are the grades that every inspector had for each section.

NAVIGATION

Heuristics	Score	
	Bianco Luca	Consonni Luca
Interaction Consistency	*4*	*4*
Group Navigation	*4*	*5*
Structural Navigation	*4*	*4*
Semantic Navigation	*5*	*5*
Landmarks	*4*	*3*

CONTENTS

Heuristics	Score	
	Bianco Luca	Consonni Luca
Information Overload	*4*	*5*

LAYOUT

Heuristics	Score	
	Bianco Luca	Consonni Luca
Text Layout	*4*	*5*
Interaction Placeholder	*4*	*4*
Spatial Allocation	*4*	*4*
Consistency of Page Structure	*5*	*5*

Even though the analysis and the grades where made with decimal number, on the report the grades are provided with rounded number since is more readable and it's easy to understand what is the meaning and the "weight" of the grades; this led sometimes in some grades that didn't show completely the what the inspector meant.