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USER EXPERIENCE DESIGN FOR IMPROVING BRAND AWARENESS IN THE AERONAUTICS INDUSTRY - CASE STUDY

Abstract: This paper analyzes user experience principles and methods and their importance regarding the establishment of a powerful brand. As a case study, the author conducts user experience analysis of the website belonging to RISE, a Romanian company in the aerospace industry. The study comprises includes methods such as heuristic evaluation, persona building and journey mapping, the System Usability Scale (SUS) survey and competitor benchmarking. The author identifies opportunities for improvement within the website and compiles a list of standard well performing design elements for use in the redesign of the website. As a fnal touch, the author prototypes wireframes for the redesign of the website and explains the thought process behind each.

Key words: UX design, User Experience, wireframing, brand design, redesign, aeronautics.

1. INTRODUCTION

The number of tools that people interact with grows larger by the day. Just like the initial industrial revolution led to a major increase in the diversity and availability of products, the technological revolution occurring in the present years, which is commonly known as The Fourth Industrial Revolution, has shifted public interest towards the simple, beautiful and intuitive. Products that once achieved success simply by accomplishing their intended objective are now obsolete, having been replaced by competitors that are easier to use or have a better overall design. A better User Experience is directly linked to higher sales. According to an article by UXPlanet [1], every 1$ invested in User Experience results in returns between 2$ and 100$. This estimation is frequently confirmed by experience, as was the case of ESPN, who increased their revenue by 35% after a homepage redesign, or Amazon, who reported that page loading speed decreases of as little as 100ms can cost them 1% of their revenue.

However, as the authors of Effective UI: The Art of Building Great User Experience in Software aptly point out [2], the push towards better User Experience did not come from a top-down, management perspective. Thanks to the diversity of products available on the global market, users are becoming less tolerant of the trouble that bad User Experience creates. The ubiquity of information has made it trivial to discover multiple options and choose the best one based on merit instead of impulse. A consequence of this, however, is that users also interact much more with brands than ever before. While browsing the web, users see brand elements such as logos, brand color, brand fonts and branded materials with a higher frequency than ever before. Previously, companies had to work hard to deliver promotional materials to their customers by any means possible: TV ads, newspapers and magazines, or even in-person representatives at conferences or in stores. Today, the opposite is happening: customers are actively searching for information on specific brands and products and expect to have it readily available online, on websites belonging to the brand. This shift in interaction patterns has made websites more important than ever. A properly optimized website can increase sales, build trust and inspire customer loyalty. A poorly-designed website, however, has the potential to strongly impact the brand image in a negative way, no matter how well the other elements of the brand are designed.

This paper aims to highlight the link between User Experience and Brand Image and to present a framework for analyzing the UX of a website. In order to better illustrate the process, I have also done a case study on the website of RISE, a Romanian company in the Aerospace Industry. It involves both the analysis of current UX practices, as well as suggestions for improvement. I have also produced a series of wireframes that follow the results of the analysis and the suggestions drawn from it and should serve as useful concepts for redesigning the website and improving User Experience.

2. STATE OF THE ART

2.1 User Experience

The term "User Experience" was coined in the early 1990s by Don Norman, a cognitive psychologist at Apple, who is now a co-founder of the Nielsen Norman Group. In his words, "User experience encompasses all aspects of the end-user's interaction with the company, its services, and its products". It studies how people use a product, how they feel during the interaction, and what can be done in order to improve it. It is a multidisciplinary field, which brings together engineering, design, and science, and applies itself to a wide array of products. The diagram in Figure 1 shows the multitude of fields that have applications in user experience design, such as: industrial design, human factors and ergonomics, computer science, communication design, motion design or information architecture.

The goal of user experience design is to enhance the experience that people have while using a certain product, to make the product easier and more pleasant to use and, ultimately, to increase sales or conversions and to fulfill the main objectives of the company. It aims to improve what user think, as well as what they feel,

recognizing that the experience of using a product has both a rational side and an emotional one.
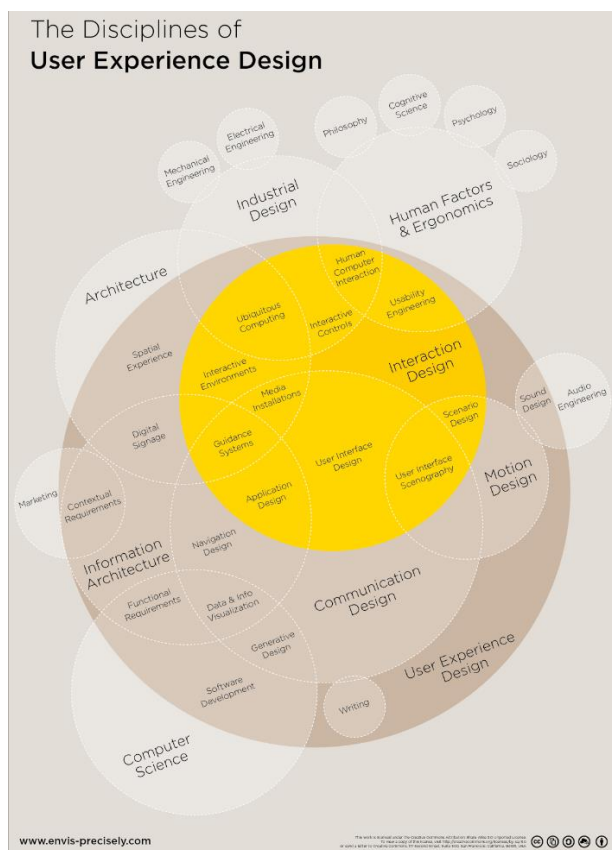
Figure 1 The disciplines of User Experience Design [3].

As such, user experience requires a good understanding of the user of the product, what they need, what they want, how they behave, and in which circumstances they will use the product. It is also an ongoing process, as user expectations change as often and as drastically as the market itself. A good example is the sudden rise of the iPhone, which imposed new UX standards upon the entire market of mobile phones: companies who adapted found themselves thriving in the new market; companies who did not, however, lost a significant part of their market share.

User experience is a field with accepts new ideas with open arms and, as a consequence, changes with astonishing speed. While there are certain general principles that are mentioned more than others, even they are known by different names in different resources. Additionally, compiling all of the current resources on user experience (a daunting task, even though the field is relatively new compared to most branches of engineering and design) would yield a list of principles too long to be effectively used in any single project. UXDesign.cc [4], one of the leading websites in this field, outlines four key rules that designers can use in order to choose the principles that best serve their product:

a. Small in number

Choosing a small number of principles ensures that they can be effectively and routinely used whenever the design of the product changes. This way, the entire team can develop the product according to these principles and can effectively test whether the product complies with them or not.

b. Differentiating

Principles should be chosen in alignment with the direction that the company is heading in. This way, products are in line with the company mission and values and serve a major role in promoting the company brand. Furthermore, the principles will be easier to comply with, being in agreement with company policies and decisions.

c. Unambiguous and actionable

Principles should help you decide quickly what the best course of action is. They are there in order to serve as guidelines whenever a decision has to be made. Any kind of disagreement regarding the actual meaning of a certain principle means that the wording of the principle was too vague or ambiguous and should be clarified as soon as possible.

d. Concise and memorable

Principles should be concise and clear, in order to be easily memorized. They should be easy to recall whenever a decision has to be made, in order to ensure that they are used as often as possible.

The methods that User Experience specialists use in order to improve UX across applications and websites are also numerous. I have extracted the list of methods specified in Table 1 from an article by the Nielsen Norman Group [5]. It groups potential user experience research methods based on the design stage in which they can be applied.

The list of methods in the table below is by no means exhaustive, however. Given the unprecedented popularity of the field, numerous other methods have been developed by researchers. After careful evaluation, I have extracted several methods that I have used for researching the user experience of the RISE website chosen as a case study. The following paragraphs describe each of these methods in brief, for better comprehension of the rest of the article:

Heuristic evaluation involves testing a product against a list of pre-established guidelines (heuristics). Evaluators use the product interface and rate its compliance with each guideline. Evaluators typically also assign severity values to the identified issues, in order to help developers prioritize fixing each of the vulnerabilities. If possible, it is preferred to have a group of 5-8 evaluators in order to minimize subjectivity and ensure an accurate, objective result.

Persona building is the process of identifying the target user of the product and describing them in as much detail as possible. Persona building can be done in multiple ways, from brainstorming based on previous experience, to user surveys and even market research, but the end result should be the same: the detailed profile of a single, ideal user of the application, which is most representative for the target market or demographic of the product. Items of special interest are the user's background, career, wants and needs, professional and personal context, and even habits or personal preferences. The more detailed the *User Persona*, the better the product can be optimized for them and the better experience they will have while using the product.

Table 1

User Experience Design Methods

Design Stage	Method
Discover	Field studies / User interviews
	Diary studies
	Stakeholder interviews
	Requirements & constraints
	Sales & support interviews
	Support call monitoring
	Competitive testing
Explore	Competitive analysis
	Design review
	Persona building
	Task analysis
	Journey mapping
	Human-centered design
	Design diversity exploration
	Pluralistic walkthrough
	Prototype feedback & testing
	Write user stories
	Card sorting
Test	Qualitative usability testing
	Training research
	User group outreach
	Social media monitoring
	Forum post analysis
	Benchmark testing
	Accessibility evaluation
	Test instructions & help
Listen	Surveys
	Analytics review
	Search-log analysis
	Usability bug review
	Feedback review
	FAQ Review
	Conference Outreach
	Q&A at talks and demos

Journey mapping is the natural follow-up method to Persona building. Once a clear User Persona has been defined, their ideal process of using the product can be mapped, in order to better understand the goals and structure of the product. This is known as the *User Journey* and, just like the User Persona, the more detail is captured within it, the better the experience can be tailored for our target user. The User Journey starts on the first interaction of the user with the product and ends when the user has achieved their objectives. It is also important to include the objectives of the company within the User Journey and make sure that these are accomplished within a typical user interaction.

The System Usability Scale is a standard questionnaire originally created by John Brooke in 1986, comprised of 10 questions, which evaluate the usability of a product based on several key indicators [6]. The system is graded on a scale of 1 to 5 for each question, where 1 means "strongly disagree" and 5 means "strongly agree". Given its small number of questions and simple, numerical responses, it can be easily administered to any number of participants, while its design delivers accurate results even with small sample sizes.

Competitor benchmarking involves analyzing other products on the market and identifying positive and negative features and characteristics that could help improve the target product. While products belonging to the competition are indeed the best candidates for analysis, the method can also be used on products in very different niches, if those products implement ideas that could be adapted for use in the target product.

2.2 Brand

According to the Merriam-Webster online dictionary, a brand is "a public image, reputation, or identity conceived of as something to be marketed or promoted". Being the public image of the company, customers recall the brand every time they do business with the company or encounter their symbols. It is comprised of all graphic elements presented publicly, such as logos, color schemes, symbols, fonts, or layouts, as well as of all guidelines based on which messages are designed, such as tone of voice, motto, company values, keywords, or catchphrases. However, while all of these brand elements represent the technical, concrete part of the brand, they are only half of the equation. The public image of a company and, therefore, the brand is also heavily influenced by immaterial elements, such as its history, its public reputation, and its actions. A company that offers quality products will sway public opinion to be more favorable to them and improve their brand. Conversely, a company that obviously cares only about its profit will have a negative public opinion that will negatively impact its brand.

One of the elements that are part of the brand is the company website. After the logo, the website is probably the second most popular point of contact between the customers and the company. Customers access the website in order to discover and interact with the brand, keep up with company news and discover its products and services. A well-designed website is, therefore, crucial in establishing a powerful brand that encourages customer loyalty. This is one of the key points of contact between user experience and branding. A positive user experience on the company website encourages positive feelings towards the brand and improves sales, as well as customer loyalty. A negative user experience affects the entire brand, leaving users dissatisfied and affecting marketing initiatives online as well as offline. The second point of contact between user experience and branding is the experience that customers have while using the actual products sold by the company. The same reasoning applies here: a good user experience with the product encourages users to continue to buy and may lead to them recommending the product to their friends and family. Negative experiences may lead to negative reviews, which will dissuade customers from buying, even before they've had the chance to test the product.

3. RESULTS

After analyzing various UX Research Methods from *The Complete Guide to UX Research Methods* [7], I have chosen four methods in order to evaluate the User Experience of the current RISE website. I have chosen these methods based on their effectiveness, but also on the means that I had at my disposal. However, before applying these methods, I had to establish the key principles of User Experience design that stand at the heart of the RISE website.

3.1 Choosing key principles of User Experience Design

I have chosen these principles based on the four rules outlined in Chapter 2.1. I have, however, taken the liberty to choose a longer list of principles in order to allow for a more in-depth heuristic evaluation in Chapter 3.2.

The UX principles I have chosen for the RISE website are the following:

1) Hierarchy [8]

Hierarchy on the web refers to the Information Architecture of an application. A hierarchical architecture involves organizing pages according to different levels of importance. The top-level usually translates into items that are visible on the top navigation bar without requiring any interaction. Lower-level items each have a parent assigned, which signifies their belonging to a specific group of pages. Lower-level pages belonging to a certain group are generally displayed in the navigation bar as a dropdown under the parent of the group. Multi-level dropdowns can be achieved this way, although it is generally recommended to keep navigation at a maximum of three dropdown levels. Items lower in the hierarchy, which are not available in the top navigation, can be found on the pages of their specific parents.

Another type of Hierarchy that is significant for User Experience is Visual Hierarchy. Good Visual Hierarchy allows for ease of scanning and improves comprehension. It involves assigning stronger contrast, larger font sizes, and thicker font weights to elements based on their relative importance on the page, in order to help them stand out.

Elements such as headers or buttons should be higher in the hierarchy and draw the user's attention, while footnotes and situational info should stay out of the way with small font sizes and relatively lower contrast.

2) Consistency with standards [8]

Given that users access a multitude of pages on the internet every day, they have learned to interact best with elements that are present on the majority of websites. Such elements informally find their way into the common standards of web design and help prevent the frustration of having to learn a new way to interact with every single page on the internet. Staying consistent with these standards ensures that users can interact intuitively with your page and fulfill their objectives with as little frustration as possible.

3) Consistency within the website

Just like the standards mentioned before, defining certain standards for your own website helps users navigate it much more easily. Once a user arrives on a website, they scan it and quickly memorize key layouts and color schemes. Using them on multiple pages lets them correctly decode information, without having to process different layouts and schemes, in order to discover the meaning behind each.

4) Confirmation

A realistic assumption in User Experience is that users will never perform a task exactly as intended. They will make mistakes, they will choose different paths to accomplish objectives and they will do actions that might seem unintuitive to the designer. Therefore, it is the responsibility of the designer to prevent users from making mistakes. One way to accomplish this is to require confirmation for any kind of destructive or irreversible action. When users encounter confirmation modals, they have to think twice about the action they are undertaking and it also ensures that they did not simply trigger the action as a result of an erroneous click or keyboard tap.

5) User Control

User Control involves making it as easy as possible for the user to control where they are in the application and what they are doing. On one hand, users should have the ability to recover from any error or mistakes, by using a back or undo button. Cancel buttons are another useful addition, whenever actions require more than a simple click.

Another common way to enhance user control is to allow keyboard-only interaction with the application. Advanced users tend to find it easier and faster to interact with websites and applications without using the mouse and expect to have this functionality available in every application.

6) Accessibility

The principles of User Control should also include users with disabilities. As these users tend to access the web through the means of special devices, such as screen readers, applications and websites should allow for seamless integrations with such devices, in a way that keeps most of the core functionality intact.

7) Intuitive

A well-designed application or website does not require the user to study a manual, or learn anything new. Given that user interaction with most websites is very limited in time, people will generally not go through the pain of learning new skills in order to make use of any single application. Interfaces should, therefore, use standard, common elements, that users already know how to handle, making the user feel powerful and smart. The interaction with the website becomes effortless and fast and user satisfaction is enhanced.

8) Larger targets (Fitts' Law)

A good way to enhance usability is to design interactive elements so that they have a higher surface area, in order to increase the ease and speed of use. After using this principle, the team behind the website Medium explained the principle in a very

straightforward manner: "The time required to move and interact with a target area is a function of the distance and size of the target. The closer and larger the target, the faster the action". This principle is especially useful on mobile devices, where the surface area of every interaction is increased because it depends on the size of the user's finger. Larger elements can easily be clicked no matter the user's physiology [9].

9) Good contrast

Elements that are supposed to draw attention should be designed to stand out. Text should be easily readable. Contrast is generally achieved through combinations of color: properly combining the color of an element with the color of the background yields strong contrast. While the specific value of contrast for a given element is a matter of Visual Hierarchy, every element should have at least enough contrast to confer legibility.

Additionally, color should also immediately allow the user to distinguish primary and secondary actions and to identify interactive elements, through mechanisms such as hover states and focus outlines.

10) Maintaining focus (Hick's Law)

The time it takes a user to make a decision depends on the number of choices available; the higher the number of choices, the longer the decision time. The website should guide the user towards an objective without overwhelming them with choice, while providing strong visual cues to direct their interaction.

11) Aesthetics

Beautiful designs spark positive feelings in users and give users a more enjoyable experience while browsing. While aesthetics are sometimes a matter of personal taste, they can generally be derived from the User Persona, in order to determine a general idea about the preferences of the target audience.

12) Scannability

According to Steve Krug in the famous UX book "Don't make me think" [10], users rarely read every single word on the page. Instead, they "scan, satisfice and muddle through", choosing the first option that vaguely resembles what they are looking for, hastily reading only highlighted information and guessing based on the limited understanding that they develop afterward. As such, websites should be designed mainly for this type of interaction. Images and titles should confer most of the information that users need in order to interact properly with the application, while the rest of the text should be there only for the small percentage of users who have the patience or the time to read it.

3.2 Heuristic evaluation

In order to evaluate the user experience of the current RISE website, I have done a heuristic evaluaion based on a list of principles that I found to be relevant for the RISE brand. I have analyzed these principles in chapter 3.1, in order to provide a better overview of what they entail. I have organized them into Table 2 and graded the compliance of the current RISE website with each principle, using a scale from 1 to 10, where 1 means

entirely uncompliant and 10 means entirely compliant. Below the table, I present the reasons for which I have chosen the respective grades for each principle.

Table 2

Heuristic Analysis of the RISE website

UX Principles	Considered on the current RISE website (points)
Hierarchy	4
Consistency with standards	5
Consistency within website	6
Confirmation	N/A
User control	9
Accessibility	9
Intuitive	3
Larger targets	5
Good contrast	4
Maintaining focus	3
Aesthetics	5
Scannability	2

- **Hierarchy**: the website has a very confusing structure, especially noticeable in the top navigation. Multiple levels of drop-downs combine links from seemingly different categories and users have to guess where they could find a specific link. Moreover, the site combines English and Romanian languages in a random manner, certain pages being available in both languages, while others only in a single language.
- **Consistency with standards**: the website does use a few standard elements such as the page hero section with text overlaid above an image, standard drop-down navigation bar, or single-column blog structure, but presents most of the content in a very linear textual way.
- **Consistency within website**: most pages begin with the same hero structure, however fonts, colors and sizes differ strikingly from one page to the other. On some pages the text has contrast, while on others the text is entirely unreadable and the color scheme is completely different from the rest of the website.
- **Confirmation**: this principle does not apply for this site since the user can only access static pages.
- **User control**: users can easily use the native browser back button if necessary and they can also successfully navigate using only the keyboard.
- **Accessibility**: given that the site uses few images and a lot of simple text, it is easily accessible by people with disabilities through the use of technologies such as screen readers.
- **Intuitive**: it is exceedingly difficult to understand what the website is about. It is a challenge to discover what

the company intends to sell or even what it does. The text-only structure of the website fails to properly convey even basic information about the company.

- **Larger targets**: the main links in the top navigation bar and the images on the blog archive page are the only links which have a size larger than a regular line of text. Other links on the website are purely textual and are difficult to click on, especially on mobile.
- **Good contrast**: while some elements on the website, such as the page title or the navigation bar, have enough contrast, there are long stretches of text that have a low font size and a color which renders them very difficult to read. Significant problems with contrast are also encountered in the case of links, which appear as yellow text on a white background.
- **Maintaining focus**: stemming from the confusing structure of the website, the attention of users fails to be directed towards any particular destination. The user has many equally important choices in the top navigation bar and the website doesn't seem to have any particular goal for the user.
- **Aesthetics**: the design of the homepage uses clean lines and strong (if overused) negative space. However, secondary pages contain merely a column of text with no spaces between paragraphs and a very large width. Additionally, competing and inconsistent color schemes across the website reduce its aesthetics and make it look rushed.
- **Scannability**: an outer lack of images, symbols, icons or even lines on pages make the content impossible to scan which forces users to read every single word in order to try to understand the message. This effort is generally too big for an average user, who would abandon the page before fulfilling their objectives.

3.3 Survey on System Usability Scale (SUS)

In order to evaluate the usability of the website, I have used a standard System Usability Scale questionnaire [11], like the one in Table 3. Each of the ten questions was graded on a scale from 1 to 5, where 1 means strongly disagree and 5 means strongly agree. I have distributed the questionnaire as a survey on Google Forms to a group of 21 aerospace engineers. This is a relatively small sample size, but nonetheless sufficient for the SUS Method. I have chosen them based on their likeliness to buy products and services from RISE.

After conducting the survey, I have gathered the following results:
o item 1, score 2.48
o item 2, score 2.71
o item 3, score 2.38
o item 4, score 1.00
o item 5, score 1.90
o item 6, score 4.05
o item 7, score 3.76
o item 8, score 3.71
o item 9, score 2.10
o item 10, score 1.05

The SUS Score is calculated with the Formula 1 below:

$$SUS\ Score = (X + Y) \cdot 2.5 \qquad (1)$$

Table 3
Standard System Usability Scale

		Strongly disagree 1	2	3	4	Strongly agree 5
1	I think that I would like to use this system frequently.	O	O	O	O	O
2	I found the system unnecessarily complex.	O	O	O	O	O
3	I thought the system was easy to use.	O	O	O	O	O
4	I think that I would need the support of a technical person to be able to use this system.	O	O	O	O	O
5	I found the various functions in this system were well integrated.	O	O	O	O	O
6	I thought there was too much inconsistency in this system.	O	O	O	O	O
7	I would imagine that most people would learn to use this system very quickly.	O	O	O	O	O
8	I found the system very cumbersome to use.	O	O	O	O	O
9	I felt very confident using the system.	O	O	O	O	O
10	I needed to learn a lot of things before I could get going with this system.	O	O	O	O	O

where

$$X = \sum(Odd\ numbered\ items) - 5 \qquad (2)$$

$$Y = 25 - \sum(Even\ numbered\ items) \qquad (3)$$

In the case of our analysis, the value of X was 7.62, the value of Y was 12.48. Therefore, the SUS Score for the current RISE website is 50.24.

In order to interpret these results, I have compared the SUS Score with the guideline of the interpretation of SUS Score in Table 3.

Table 3
SUS Interpretation [11]

SUS Score	Grade	Adjective Rating
> 80.3	A	Excellent
68 - 80.3	B	Good
68	C	Okay
51 - 68	D	Poor
< 51	E	Awful

With a SUS Score of only 50.24, we can establish that the usability performance in the aspects of effectiveness, efficiency, and overall ease of use of the current RISE website is very poor.

3.4 User Persona and User Journey

In the case of RISE, we have established the User Persona and the User Journey by relying on the experience of the company. As such, the ideal user is an aerospace engineer or business owner, aged 24-60 involved in searching for and buying products and services from external companies. They are technical people who can easily understand complex technical details and enjoy comparing structured information in order to make the best purchase.

The journey of such a user on the website begins when they access the first page, usually by finding it as a result on a search engine. The user then proceeds in analyzing the products and services that the company offers, likely navigating constantly between pages.

Information on these pages should be thorough but well structured in order to allow for easy scanning and comparison. Images and graphics help a lot in this case offering much more information than simple text and being easier to grasp. Also, each of the pages visited at this stage sjould contain a call to action leading the user to the contact page where they can take the first step towards buying. Interested users will either use this call to action, the top navigation bar, or the footer navigation in order to find the contact form. Once on they arrive on the contact page, they will expect a clear and short contact form which they will submit with details about their project and products or services that they are interested in.

3.5 Competitor benchmarking

In order to better understand customer expectations in the field, but also to find find fresh ideas for design and standard elements which have been tried and tested for specific purposes, I have conducted competitor benchmarking by studying websites from the aerospace field, but also from outside of it. I have found these websites through highly rated reviews which attest their exemplary design and user experience. In the following list, I have presented each of them together with their most iconic design elements which could be used in the redesign of the RISE website.

- EASA's website [12] caught my attention with its very scannable and well organized mega menu, that associates a descriptive icon to each menu link. I have presented the mega menu in Figure 2.

Figure 2 Mega menu on EASA website.

Another well designed element on the EASA website is the footer, presented in Figure 3. Footer navigaton is clean, organized in four columns, each with a well-contrasting title. The use of negative space as well as the color scheme improve legibility. The final footer column contains social media links which represent a powerful way to increase brand awareness.
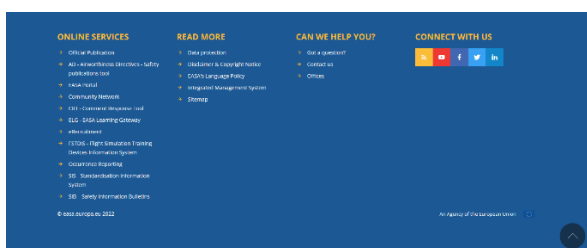

Figure 3 EASA footer design.

- The NASA website [13] is a good benchmark of how websites in the aerospace industry look like. The overview pages about the NASA missions are brief and information is divided into paragraphs accompanied by suggestive pictures and videos. The design itself looks a bit dated, as can be observed in Figure 4, but the information is still well presented.

Figure 4 NASA Mission overview page.

- Septentrio is a company that sells GNSS products, useful both in aerospace and beyond. Given that RISE is also a distributor of Septentrio products, I have chosen to analyze their website design [14] and choose good candidates of elements to borrow. The logistics page presented in Figure 5 is very well structured, contrasting different ideas by alternating the image-text position.
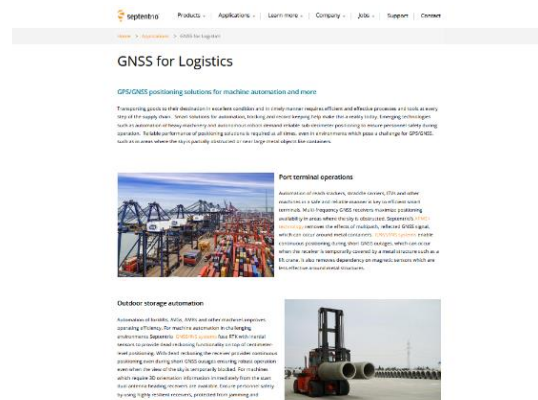

Figure 5 Logistics page on Septentrio website.

Another standard element used by Septentrio, shown in Figure 6, is the product card that shows very little detail at first, but allows for further discovery upon hovering with the mouse cursor.
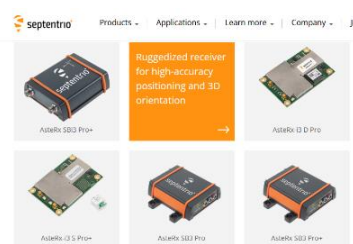

Figure 6 Product cards on Septentrio website.

• The Porsche website [15] is an impeccable example of product presentation. Both the carousel list of products presented in Figure 7 and the in-depth presentation of each product are very exquisite, with high quality images and short, but comprehensive descriptions.
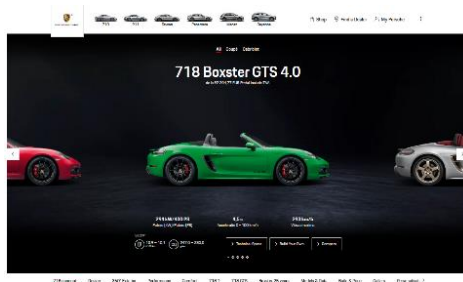

Figure 7 Product presentation on Porsche website.

• The website of Dassault Aviation [16] hase a very clean and crisp design, eith good use of negative space and high quality pictures, a well-structured mega menu, great use of brand colors and simple geometrical shapes to build interest, as shown in Figure 8.
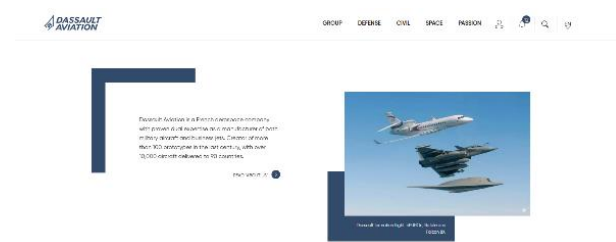
Figure 8 Clean webpage design from Dassault Aviation.

• Dala [17] stands out through the use of an interactive background animation presented in Figure 9, which made their website one of the most modern websites of 2021, according to a leaderboard compiled by Awwwards.com [18].
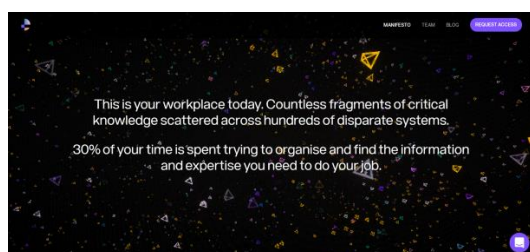

Figure 9 Interactive background animation on Dala website.

3.6 Prototyping (Wireframes)

In order to fix the user experience problems of the current RISE website, and to help RISE improve their brand through a modern website which offers a good user experience, I have designed wireframes for every page of the website. These wireframes have been further used by my collaborator on this project, Vlad Țurcanu, who has designed and implemented a new website for RISE.

Figure 10 Wireframe for the top navigation bar.

The top navigation bar that I have designed for the new RISE website is visible in Figure 10 . It features a standard drop-down menu which avoids multiple levels of nesting theough the use o a mega-menu. For example, the Products & Services section, which would have traditionally used additional drop-downs for the Products and for the Services sections, is now entirely visible from the first drop-down. Visual hierarchy is established through the use of a heavier font wheight for the titles.

Figure 11 Wireframe for the footer.

Illustrated in Figure 11 is the wireframe for the new RISE footer. I have based this design on the EASA website footer, organizing it in columns and including links towards the social media pages of the company. The bottom part of the footer contains copyright information as well as the terms of use, privacy policy and GDPR information concerning the website. The footer is shown on every page of the website in order to improve navigation and consistency and to give the users more control over their interaction with the website.
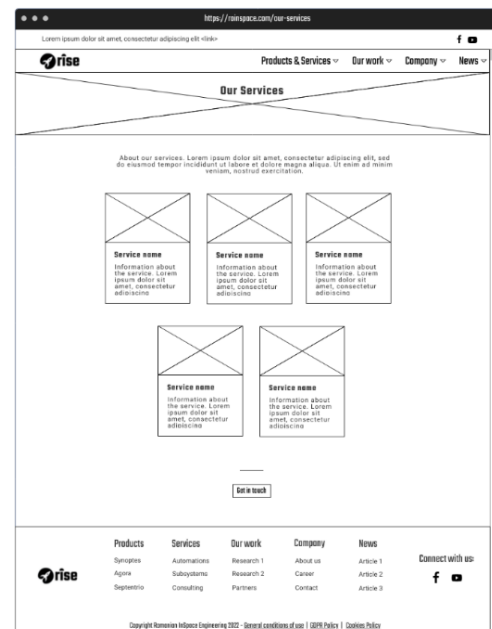

Figure 12 Wireframe for the Services Page.

I have presented the wireframe for the Services Page in Figure 12. As the main purpose of this page is to list all of the services offered by the company and to give a

brief overview of each one, I have chosen to employ card layouts for each service and to organize them in a grid structure for easy scanning and comprehension.

Similar to the Porsche website, this design can be scaled in the future to include technical details about each item within its related card. The final call-to-action, labeled in Figure 13 as *Get in touch*, directs users towards the Contact Page and stands out through the use of negative space, shape and contrast.
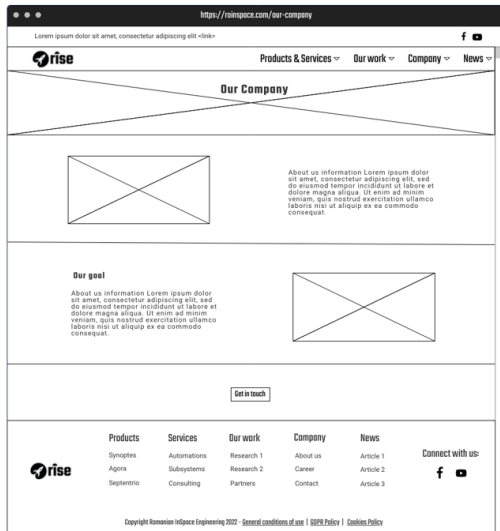

Figure 13 Wireframe for the Company Page.

The Company Page illustrated in Figure 13 uses a clean structure with suggestive images or graphics and supporting text. Sections can be easily added as the company grows and the final call-to-action serves as a link towards the Contact Page. As in the case of the Services Page, the upper part of the page features a hero section which overlays the page title on top of a suggestive animation, just like in the case of Dala (Figure 10).
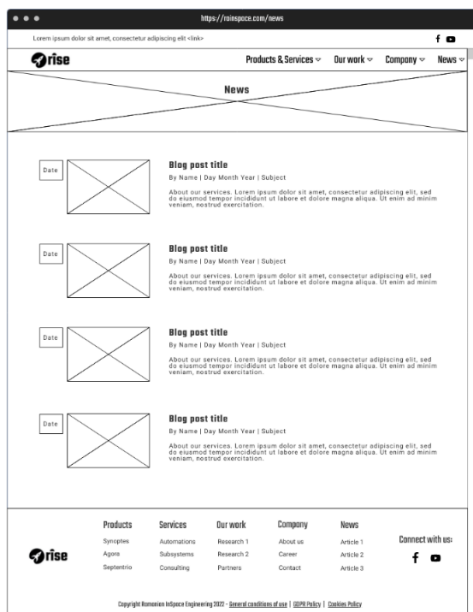

Figure 14 Wireframe for the News Page.

The News Page presented in Figure 14 serves as the company blog and its objective is to allow the company to share news, ideas and success stories in a clear, friendly format. The top hero section uses the same type of animation as the other second-level pages introducing the list of articles with powerful contrast. Each article has an associated thumbnail image which best explains what the article is about. The article title and short excerpt, together with additional details, such as author or category are placed to the right of the thumbnail image, while the date will be highlighted in the left, in stronger contrast in order to bring balance to the design.
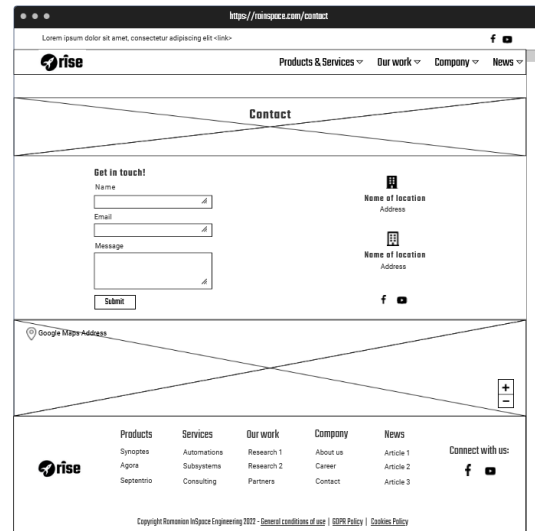

Figure 15 Wireframe for the Contact Page.

The Contact Page shown in Figure 16 is the most important page on the website. Here is where the customer initiates the first interaction with the company, which should be as intuitive and as pleasant as possible. The contact form on the left side of the page is as simple and unambiguous as possible, requiring only the user's name, email and message in order to allow for quick submission. It is powerfully separated from the rest of the content through the use of negative space in order to draw the user's attention towards it. The top title *(Get in touch)* outlines the function of the form, while the *Submit* button below it stands out as the main action on the page, using a combination of color and contrast. The right side of the page lists contact information for the two headquarters of the company, while the bottom maps widget shows these locations marked on the map.

4. CONCLUSION

In this paper I have conducted a study concerning the UX design of a website belonging to a Romanian company in the aerospace industry. I have described widely-adopted UX principles and methods and established connections between the brand of a company and the user experience it delivers through its website and products. In my research I have used methods such as heuristic evaluation based on a list of common UX principles, persona building and journey mapping, survey

on System Usability Scale (SUS) and competitor benchmarking.

I have outlined the major design and user experience problems on the website, in order to identify opportunities for improvement. Based on the results of this study I have prototyped wireframes for every page on the website and explained how they can improve the current design.

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